

Final Year Project Showcase Batch-2018 Year 2022

Department: Economics and Management Sciences		
Programme: Economics & Finance		
1	Project Idea	To measure the credit risk and determine its sensitivity towards the macroeconomic indicators (Macro stress testing for credit risk).
2	Process	Establishing the NPL (Non-Performing Loans) ratio (as credit risk indicators) as a function of macroeconomic indicators/variables (i.e. GDP, CPI, LSM etc.) Time-series model development for evolutions of macroeconomic indicators.
3	Outcome	In case of Pakistan's banking sector, NPL ratio is most sensitive to LSM, PSX and CPI volatility.
4	Evidence (Theoretical Basis)	Banking sector profitability is affected if NPL ratio increases. Economic conditions have effects on NPL as in recessions NPL ratio increases. Our project consist of explanatory research as we determined empirical link between NPLs and macroeconomic indicators/variables. NPLs are modeled as function of 6 significant macroeconomic variables (which reflects the economic conditions) through regression equation. Impulse on macroeconomic variables are then captured in NPL ratio. ARIMA structured time-series models are developed for estimating evolutions in macroeconomic variables. At last, sensitivity analysis is made using NPL model and macroeconomic variables are forecasted for analyzing expected one period ahead NPL ratio.
5	Competitive Advantage or Unique Selling Proposition	
a	Attainment of any SDG (e.g. How it is achieved and why it is necessary for the region)	SDG#08: Decent work and Economic Growth Banks are financial intermediary. Savers deposit their money and are benefitted by interest to keep their money's worth for future consumption. Investors borrows to invest in multiple avenues, industries which increases the productivity, employment and growth of economy. But banks have public money and they have to return if claimed so they also need to assess the payback capability of borrowers. Banks with effective and efficient management, allocates the money to best channels which contributes towards economic growth, productivity, employment and hence also bank's
b	Any Environmental Aspect (e.g. carbon reduction, energy-efficient, etc.)	N/A
c	Cost Reduction of Existing Product	By measuring the expected credit risk, bank can devise strategies to maintain its profit level and overcome losses in recessions as incurred by NPLs.
d	Process Improvement which Leads to Superior Product or Cost Reduction, Efficiency Improvement of the Whole Process (e.g. What is the issue is	Macro stress testing provides the showcase for volatility in economic indicators and its impact on NPL ratio. As NPL ratio decreases, bank's profitability increases and so good returns to depositors. It attracts more depositors, so availability of funds to borrowers increase for investments. Hence,



	current process and what improvement you suggests)	economic growth prevails and economic expansion starts. As profitable banks also invest in other avenues like govt. securities, industries, real-estate etc. which further boost-up the process.
e	Expanding of Market share (e.g. how it expand and what is the problem with the current market	As most people are rational and risk averse they find avenues with good returns and low risks. If banks have good financial health and low risk, they deposits their money to earn interest and keep money's worth. Banking sector can assess the expected credit risks and devise strategies to minimize the risk and maintain good profits. It leads to expansion in financial markets.
6	Target Market (Industries, Groups, Individuals, Families, Students, etc) Please provide some detail about the end-user of the product, process, or service	Banks have customized loans as their credit products. It includes loans for education expenses, housing finance, portfolio investments and other loans. End-user for credit products can be students, families, industries or other individuals.
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