**Problem Statement**: We are Machine Learning Bank and we are evaluating our lending portfolio for international credit risk from various countries. We have to lend an amount ( ex: $500 million USD ) and our lending risk has to be within a certain percentage in order to hedge our risk. We will build a machine learning model for a fictious country (G20 Average) for training and testing purposes. We will also compile data from countries that have defaulted in the past such as Argentina in 2002 and Russia in 1998. We will determine the features listed below for the countries that have defaulted and then compare the machine learning results with the where countries we are evaluating lending to are heading. The G20 Average country and the historical default country will become our benchmark country for determining which countries are worth leading to. The following parameters will determine our risk profile requirements:

**Machine Learning Features**:

* GDP growth rate
* Unemployment rate
* Labor force participation rate
* Ease of doing business
* Inflation rate
* Bank lending rate
* Consumer Confidence
* Corporate Tax Rate
* Gold Reserve
* Population
* GDP Deflator
* Corruption Index

**Label(Outcome)**:

Default risk

While the team has not made a formal decision on which particular algorithm it would use , it finds the article (<https://medium.com/microsoftazure/neural-networks-for-forecasting-financial-and-economic-time-series-6aca370ff412>) as a good reference point to start with. The team can further customize the machine learning aspects based on its initial stab at the problem statement.