

## DIRECTED RISK RESEARCH PROPOSAL

<b>Risk Theme</b>	Credit Risk
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**Client Info:** *(only applicable if proposal is in response to a client problem statement)*

<b>Problem Title</b>	Sovereign credit ratings: modelling credit ratings and sovereign default rates		
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<b>University</b>		<b>Classification</b>	None
<b>Problem Nr.</b>	PS16006	<b>Type</b>	Technology-Pull
<b>Proposal Nr.</b>	RP16012	<b>Date</b>	18 July 2016

**PROJECT TITLE:** Sovereign credit ratings: modelling credit ratings and sovereign default rates

### PROJECT GOAL:

Analysing the determinants used by the credit rating agencies to determine sovereign credit ratings and to develop a methodology to be used in determining a country's sovereign rating - taking into account a combination of quantitative and qualitative determinants.

### PROJECT SCOPE

As emerging markets expands and globalisation increases, the global financial market has become more and more interconnected. This has led to an increase in demand for accurate information across the borders and consequently the demand for sovereign rating. A sovereign credit rating is an assessment of a country's ability and willingness to fulfil their debt obligations on time. This rating is determined by taking into account a combination of qualitative and quantitative determinants. The aim of the project is to analyse the determinants used by the credit rating agencies (S&P and Moody's) in their sovereign ratings and then to provide a transparent methodology of generating sovereign credit ratings.

### PROJECT OBJECTIVES

We focus on analysing the quantitative determinants used by Moody's and S&P in determining their sovereign ratings. This can be achieved by using and comparing a range of regression techniques. Once the significant determinants have been identified, we evaluate the predictive power of the model through out-of-sample testing and cross validation. Using the above results, we will propose a methodology for determining a sovereign rating by including significant qualitative and quantitative determinants.

## RESEARCH OUTPUTS / DELIVERABLES

<b>PUBLICATIONS:</b>	<b>Name(s) / Title(s)</b>
Articles	1

## APPROACH TO BE FOLLOWED

- 1) Study relevant literature (e.g. Cantor & Packer (1996). Determinants and impact of sovereign credit rating. Federal Reserve Bank of New York Economic Policy Review, (October), 1– 15.)
- 2) Gathering of data on economic variables and credit ratings
- 3) Perform regression analysis to identify significant variables.
- 4) Check the predictability of model against actual sovereign credit.
- 5) Generate a model for determining sovereign credit ratings.

## STRATEGIC VALUE TO DIRECTED RISK RESEARCH

This research will contribute conceptually and materially towards competency in the financial services industry in South Africa. It will contribute to a better understanding of sovereign credit ratings, which underlies and influences assumptions and decisions in the financial services sectors.