**PROBLEM STATEMENT**

You are given with a list of ‘All Equity’ and ‘Open Ended’ Indian Mutual Funds of different Fund Houses and data of few parameters related to those Mutual Funds.

The period has been considered from January 2013 (as from that the date new regulation on Mutual Fund have been implemented). You have been given with the complete NAV data of 8 (Eight) Mutual Fund Houses (Aditya Birla Sun Life, ICICI Prudential, HDFC, Reliance, SBI, Sundaram, Tata, UTI). Out of all the Mutual Funds Products of different MF Houses, 34 ‘Open Ended’ and ‘All Equity’ Mutual Fund Products of our choice have been selected and some more detailed data for those have been given in a separate file( MF\_IIT\_Data\_V1.csv).

1. Please compare the performance of the Fund Houses (SBI, Tata, UTI, ICICI) in terms of
2. ‘Asset Sizes’ or ‘AUM – Assets under Management’
3. and their (AUM) Growth
4. ‘NAV (Net Asset Value)’ of Funds or NAV per unit
5. and their (NAV or NAV per unit) Growth
6. Find if and how the following influencing factors (or variables) like ‘Age of the Fund’, ‘Age of the Fund House’ ‘Minimum Investment’, etc, are impacting the said performances. To get better outcome, you also need to consider few Macro Economic Parameters like ‘Daily US$ to Indian Currency Exchange Rate’, ‘Daily Index of Indian Stock Market’, ‘Daily Index of US Stock Market (S&P, NASDAQ)’, ‘Index of various Commodity or Metal Markets’, ‘Indian GDP (Quarterly Data is available)’, ‘Indian CPI (Monthly Data available)’, ‘monthly or quarterly Per Capita Income’, ‘monthly or quarterly Per capita Expense’, Industry / Sector Beta in Stick market (while considering Mutual Funds having concentration of a specific Industry Sector like Banking, Pharma, FMCG, Technology, etc.

You may choose to use data of few more similar (open ended and all equity) Mutual Funds of the same Fund Houses to arrive at the conclusion or improvement of outcome. However, you are requested to take data from Jan 2013 and preferably from the data given for 8 Mutual Fund Houses.

You are free to consider any other variables / parameters related to Mutual Funds, or Fund Houses, or Indian Mutual Fund Eco-System, and/ or any other Indian or Global Macro Economic parameters for further fine tuning or enhancing accuracy (or confidence) level of your result and conclusion.

Note 1. Hint 1 : You may need to consider few variables post transforming them mathematically (x to Log x, X^2, Sqr-Rt of x, etc.). Hint 2: You may also need to consider few lag variables (with respect to time).

Note 2: You may please refer the sites “Money Control”, “AmfiIndia”, “NSE India”, etc. Also for macroeconomic data you may pelase refer “World Bank Data – [www.worldbank.org](http://www.worldbank.org)”, “RBI – [www.rbi.org.in](http://www.rbi.org.in)”, “MOSPI – [www.mospi.nic.in](http://www.mospi.nic.in)” , “ [www.data.gov.in](http://www.data.gov.in) “