**Outline of proposal for Simulation in the Social Sciences**

Brandon Chen z3154958, PhD student in Finance

 The adoption of agent-based modelling in investigating the dynamics of economic landscape has become popular in recent years. This approach breaks away the conventional method in answering economic issues by using statistical modelling (parametric or non-parametric). The key advantage of availing agent-based modelling is the researchers can observe how economic agents interact with each other in the complex market environment without resorting to analytical solution before carrying out empirical statistical test.

 In this proposal we discuss how such agent-based modelling can be brought into to shed some light on the issue of corporate control and the association between stockholding concentration and CEO compensation. Though the issue of the potential impact of varying level of investors’ share ownership on corporate control is not new in the financial economic literature, the concept that more concentrated share ownership would enhance the monitoring mechanism and therefore better discipline the CEO may not necessarily be correct in practical sense. For that to be the case, investors would have to be assumed to have long-term horizon and be active in the management affairs. However, in reality investors are very likely trading profit maximisers, looking for opportunities to trade with each other. Recent literature suggests the existence of multiple blockholders (investors with, say, more than 5% of the shares in a company) may also discipline the behaviour of managers by trading on information. Based on the belief that blockholders tend to be informed traders. Our approach by bringing in agent-based modelling can hence deepen our understanding of:

1. How different mix of informed/uninformed traders affects the performance of a firm;
2. How different mix of informed/uninformed traders affects CEO incentives;
3. What may be the equilibrium (stable state) mix (of informed/uninformed traders) as a result of repeated rounds of interaction between these two groups of traders.

 Our proposed methodology sets up a new framework in linking the studies of market microstructure and corporate finance by availing the agent-based modelling. Such new framework not only helps resolve the issue of different monitoring mechanisms but also elucidate the factors determining the grants of CEO (equity-based) pay.