INSTITUTIONAL CHANGE, REGULATION, AND RISK-TAKING BEHAVIOR IN BANKING SYSTEMS: MACROECONOMIC IMPLICATIONS WITH A SPECIAL REFERENCE TO THE INDIAN ECONOMY, 1950-2007

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DISSERTATION ABSTRACT

Banks are one of the oldest and most regulated set of financial intermediaries in national economies, capitalist or otherwise. The recent sub-prime crisis has again brought to the fore the debate on the relationship between the activities of banking systems and macroeconomic outcomes and the role played by regulation in shaping the former. The interplay of regulatory policies and the profit motive of banks has recently come to the forefront with the numerous occurrences of banking crises globally since the 1970's. The focus of researchers and policymakers over the last 3 decades has been on obtaining an understanding of the role and workings of the banking system to aid the formulation of regulatory policies for maintaining banking system stability and in the process contribute to the maintenance of macroeconomic stability.

The history of banking system behavior suggests that the constraints operating upon the risks that banking systems assume and the activities undertaken have been changing over time. We briefly survey the developments in banking system activities across different economies and the role played by regulatory policies and institutional frameworks in guiding the same during the 20th century. Following up on this survey, we put forth a set of stylizations depicting different stages of evolution of banking systems with a discussion on the nature of risk choices and operative constraints during each stage of evolution. This discussion is a detailed extension of Victoria Chick's research on the evolutionary patterns of banking systems.

This dissertation is an attempt to examine the nature of relationship between the activities of banking systems and macroeconomic outcomes. More specifically, we focus on the nature of risk choices of banks and the relation of the same to macroeconomic activity, a topic that has not received much systematic attention in extant literature. In an extension to the Keynesian body of literature on macroeconomic behavior, we study the nature of the goods market equilibrium and the financial markets equilibrium in a monetary economy in which the

banking system plays a central role through its ability to create money. A key outcome of this approach to modeling the goods and financial markets is the latter amplifying the instability in the former. This result is driven by the roles of expectations of producers and providers of financial capital and the portfolio choices of households. In the financial markets, given capital constraints on banks and fulfillment of expectations, a central role has been accorded to liquidity preference of banks in shaping their portfolio choice and pricing decisions. The explicit consideration of the liquidity preference of banks is a departure from much of the extant literature that has followed Keynes' General Theory assumption of the unchanged liquidity preference of banks. The emphasis on the capital constraint is primarily on account of its dominance during the most recent stage of evolution of banking systems in the evolutionary stylization developed in this dissertation.

The cross-country survey of institutional frameworks and banking system risk-taking behavior is suggestive of a diminishing influence of regulation on such risk-taking over time, an issue that has been hotly debated during the current crisis in banking systems in developed economies. However, there have been few systematic studies that have attempted to explore the influence of regulatory policies on banking system risk taking. We explore the methodological inadequacies of extant studies and suggest an alternative approach to exploring the influence of regulation on banking system risk choices. The central argument is that if the objective of regulation is to bring forth a set of desired behavioral patterns from banks, the objective of regulatory changes is to change extant behavioral patterns. Therefore, the influence, if any, of such regulatory changes would be reflected in structural breaks in risk choices of the banking system. We put forth a set of indicators to capture various aspects of risk taking behavior of banking systems and evaluate various approaches for dating structural breaks. The choice of different structural break tests is shown to be critically dependent on the presence of a unit root or otherwise in various risk indicators.

Lastly, the dissertation explores various facets of banking system risk choices in the Indian scenario and the evolution of the same in the light of changing institutional constraints and imperatives since independence. More precisely, we examine in detail the dynamics of this relationship for the period 1950-2007 by undertaking a detailed study of institutional changes and the structural breaks in risk taking patterns of the Indian banking system. We observe that the defining period for banking system behavior was the period of reforms undertaken during the early 1960's while in contrast, the episode of bank nationalization in 1969 did not bring about much change in risk taking behavior of the Indian banking system, though that was the primary stated objective. The most interesting aspect of risk taking behavior of the Indian banking system is the increased risk-aversion during the 1980's, a period of piecemeal reforms in the industrial and financial sectors. We argue that these outcomes are typical for profit maximizing banks operating with low capitalization and numerous restrictions on asset-liability choices and pricing of the same. However, the behavior is puzzling in the Indian context as almost the entire banking system was under public sector ownership during the 1980's. Further, we take a re-look at the widely held view of the liberalization episode of the early 1990's being followed by the "flight to quality" behavior of the Indian banking system. The evidence suggests that risk aversion of the Indian banking system actually reduced since liberalization with not much support for the "flight to quality" arguments in the post-liberalization scenario.