

Date: Tuesday, October 4 2005

Time: 4:15 p.m. – 5:30 p.m.

Place: 106 Business Building

# PRESENTATION ANNOUNCEMENT

**"Intermediation in an Incomplete Market: Implications for Securitization"**

**To be presented by**

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(Joint work with Vishal Gaur and Marti G. Subrahmanyam)

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**Abstract.** This paper studies the impact of financial innovations on real investment decisions. We model an incomplete market economy comprised of firms, investors and an intermediary. The firms face unique investment opportunities that are not spanned by the traded securities in the financial market, and thus, cannot be priced uniquely using the no-arbitrage principle. The specific innovation we consider is securitization; the intermediary buys claims from the firms that are fully backed by cash flows from the new projects, pools these claims together, and then issues tranches of secondary securities to the investors. We first derive necessary and sufficient conditions under which pooling provides value enhancement, and the prices paid to the firms are acceptable to them compared to the no-investment option or the option of forming alternative pools. We find that there is a unique pool that is sustainable, and may or may not consist of all projects in the intermediary's consideration set.

We then determine the optimal design of tranches, fully backed by the asset pool, to be sold to different investor classes. We show conditions under which the prices of these tranches are or are not spanned by the set of admissible market pricing kernels. Our paper provides a rationale for securitization in incomplete markets without using transaction costs or information asymmetry. It derives the conditions under which securitization leads to the financing of more projects. Thus, the value of securitization arises from an improvement in the spanning of the market, not from exploitation of arbitrage opportunities, which were hitherto present in the market. Our framework can be extended to analyze several applications in financial economics, e.g., the structure of venture capital firms and the valuation of real options.

**Bio-sketch:** Dr. Sridhar Seshadri is the Toyota Professor of Information, Operations and Management Science, at the Leonard N. Stern School of Business, New York University. He received his Bachelor of Technology degree in 1978 from the Indian Institute of Technology, Madras, India, his Post Graduate Diploma in Management in 1980 from the Indian Institute of Management, Ahmedabad, India, and his Ph.D. degree in Management Science in 1993 from the University of California at Berkeley. He is a Fellow of the Institution of Engineers (India).

His primary area of expertise is Stochastic Modeling and Optimization with applications to distribution system, manufacturing system, and telecommunications system design, database design and finance. His current research interests are in the areas of risk management for supply chains and performance measurement, optimization and control of stochastic service systems.

He serves as an Associate Editor for **Naval Research Logistics** and a senior editor for the **Production and Operations Management Journal**. He is the Area Editor for Inventory, Reliability and Control for **Operations Research Letters**. He is on the editorial board of the **International Journal of Productivity and Quality Management**.