

The Hong Kong University of Science and Technology
Department of Information Systems,
Business Statistics and Operations Management

Seminar Announcement

*How Inventory Is (Should Be) Financed: Trade Credit in
Supply Chains with Demand Uncertainty and Costs of
Financial Distress*

by

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Date: Friday, 5 February 2010

Time: 11:00 am – 12:30 pm

Venue: Room 4379, ISOM Conference Room (Lift 17/18)

~~~~~ All interested are welcome ~~~~~

**Abstract:**

As an integrated part of a supply contract, trade credit has intrinsic connections with supply chain contracting and inventory management. Using a stylized model that explicitly captures the interaction of firms' operations decisions and financial risks, this paper attempts to develop a deeper understanding of trade credit from an operational perspective. Revolving around the question of what role trade credit plays in channel coordination and inventory financing, we demonstrate that with demand uncertainty, trade credit enhances supply chain efficiency by serving as a risk-sharing mechanism. Two forces determine the optimal trade credit terms: the sales motive (increasing sales through risk-sharing) and the financing motive (minimizing costs of financial distress through financial diversification, that is, employing multiple financing sources). Facing a trade credit contract, the retailer finances his inventory using a portfolio of cash, trade credit, and short-term debt, and the structure of this inventory financing portfolio depends on the retailer's leverage and bargaining power. Additionally, our model suggests that financial diversification provides an alternative explanation for the decentralization of some supply chains and the use of factoring in accounts receivable management. Finally, using a sample of firm-level data from Compustat, we find that the inventory financing pattern our model predicts exists in a wide range of firms.

**Biography:**

Song (Alex) Yang is a PhD candidate in Management Science/Operations Management at The University of Chicago Booth School of Business. His research interests include operations-finance interface, supply chain management, dynamic pricing and revenue management, stochastic modeling and optimization, and financial engineering and risk management. His previous work appears in *Journal of Banking and Finance*. Alex Yang completed his MS in Industrial Engineering at Northwestern University in 2004, and his Bachelor of Engineering (with Honors) at the Department of Automation, Tsinghua University in 2003. He has held positions at United Airlines, XO Capital Group, and Citadel Investment Group, and is expecting to receive his MBA at June 2010.