

**Stony Brook University  
The Graduate School**

**Doctoral Defense Announcement**

**Abstract**

**Essays on Contracting with Liquidity-Constrained Agents**

**By**

**Hsien-hung Chiu**

In this dissertation, I study two contracting problems when the agents are liquidity-constrained. The first one concerns an optimal mechanism design problem with liquidity-constrained agents. The second one considers a signaling model in which the seller signals the quality of its product by providing financing and credit subsidies when buyers are liquidity-constrained.

In the first part, I study a mechanism design problem when a mechanism designer (the seller) faces multiple agents (buyers) with privately known budget constraints. In contrast to the case with commonly known budget constraints, I first show that the exclusion of low valuation buyers is optimal as long as the differential between high valuation and low valuation is sufficiently large. I also show the conditions under which, in some optimal contracts, budget constraint considerations dominate valuation considerations. Moreover, when there is a positive correlation between valuation and budget, these conditions are independent of the number of agents. When there is a negative correlation between valuation and budget, however, we find that the optimal contract might depend on all the parameters and the number of agents.

In the second part, I study the relationship between seller financing and quality assurance and investigate the questions of why a seller is willing to provide financing to buyers and why the interest rate of seller financing is usually lower than the rate in the financial market. I show that seller financing can be used as a signal of product quality, since a low quality product is more likely to be defective. I characterize the perfect Bayesian equilibrium using the "intuitive criterion" as an equilibrium refinement. Signaling by seller financing is necessary in the model with homogenous buyers. With heterogeneous buyers, signaling by cash price alone is possible but signaling by seller financing is more efficient as long as the cost of funds to the seller or the cost difference is not large.

**Date:** July 20, 2007

**Time:** 1pm

**Place:** SBS 6F, Library

**Program:** Economics

**Dissertation Advisor:** Sandro Brusco