

DISSERTATION DEFENSE

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The Effects of Contracting and Labor Search on Risks in Financial Markets

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My research employs theoretical modeling and quantitative analysis to study the interaction between market frictions and risks in the areas of Banking and Asset Pricing. Specifically, I examine how frictions in contracting and search affect systemic risk and asset prices.

Sparked by the recent crisis, linkages among financial firms are identified as a major source of systemic risk. In chapter one, “**Distress Dispersion and Systemic Risk in Networks**,” I present a model in which the cross-sectional dispersion of financial distress endogenously generates inefficiencies in network formation, creating excessive systemic risk. Financial firms face costly liquidation and strategically trade assets, thereby forming links. A link with a distressed firm can be socially costly as it increases system-wide liquidation risk. The model reveals that, when the dispersion of distress is high, the network composition is distorted in two ways: there are too many links with distressed firms and too few risk sharing links among non-distressed firms. The inefficiency arises from an externality due to contract incompleteness in the bilateral trades. Using insights from the model, I discuss policy implications for financial stability. I also show empirical evidence that the distress dispersion across financial firms provides a novel indicator for systemic risk.

Similar to the financial system, the interactions between frictions and risks also apply to the labor market. In chapter two, “**Asset Pricing with Dynamic Labor Contract**,” I study asset prices in a two-agent production economy in which the worker has private information about her labor productivity. The shareholder offers an incentive compatible long-term labor contract, which partially insures the worker against labor income risk. I compare the model's performance to settings with a competitive labor market, and with static labor contracts. My model successfully matches both asset returns data and business-cycle features, including a countercyclical and high equity premium, a low risk-free rate, procyclical labor input, and countercyclical labor share. The results highlight that the dynamic contracting feature in labor relations is quantitatively important in determining asset prices.

Risk allocation implied by labor market frictions also affects asset prices at the cross section. In the data, sorting firms according to their loadings on the aggregate vacancy-unemployment ratio, defined as the labor market tightness, generates a spread in future returns of 6% annually. To rationalize the finding, in chapter three, we propose “**A Labor Capital Asset Pricing Model**” (joint with Lars-Alexander Kuehn and Mikhail Simutin) and show that labor search frictions are an important determinant of the cross section of equity returns. In this partial equilibrium labor market model, heterogeneous firms make dynamic employment decisions facing labor search frictions. The insight is that loadings on labor market tightness proxy for priced time variation in the efficiency of the aggregate matching technology. Firms with low loadings are more exposed to adverse matching efficiency shocks and require higher expected stock returns.