Secondary-Market Capital Prices and Financial Frictions In Real Business Cycles

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Abstract

Secondary market capital prices are procyclical and volatile. This paper quantifies the role of financial frictions in amplifying secondary market capital price changes in response to aggregate productivity shocks. To do so, I develop a quantitative industry equilibrium model of investment and capital reallocation with heterogeneous firms, endogenous entry and exit, and heterogeneous capital durability. I calibrate the model to match key moments in the dynamics of the universe of U.S. firms. Financially constrained firms are net buyers of less durable capital because of its lower upfront cost despite its lower future resale value. Financially constrained firms are more responsive to aggregate productivity shocks than less financially constrained firms, so financial frictions amplify movements in secondary market capital prices. I decompose secondary market capital price volatility into 83 percent fundamental volatility and 17 percent amplification from financial frictions. I then explore two related questions. First, I decompose aggregate output volatility into 63 percent when secondary market capital prices are held fixed and 24 percent with fundamental volatility in secondary market capital prices, leaving the remaining 13 percent related to the financial amplification of secondary market capital prices. Second, I find that pecuniary externalities associated with secondary market capital prices are countercyclical. This suggests that policies such as investment subsidies, which may alleviate these externalities, should be countercyclical.

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