## "Natural Experiments and the Limits of Arbitrage"

I discuss in this lecture how natural experiments involving demand shocks in asset markets have greatly enhanced our understanding of asset price fluctuations. I first show that the first-generation natural experiments, including S&P 500 index inclusion, Siamese twin companies, closed-end funds, equity carve-outs and Chinese A-B shares, establish the case for the limits of arbitrage in financial markets. I then examine a set of second-generation natural experiments that better identify and measure the potentially destabilizing impact of institutional and speculator demand. First, I show how quantitative portfolio rules widely followed by institutions induce regression discontinuity experiments. These regression discontinuity experiments allow for a sharper identification strategy of how demand shocks influence asset prices than has previously possible. Second, I exploit the rise of hedge funds over the last ten years to gauge how the demand for shorting can destabilize asset prices. Third, I utilize international variation in the legal costs of conducting stock repurchases and variation in firm financial constraints to identify the effect of corporate buying on stock prices. These second-generation experiments particularly point to the importance of institutional rules on asset pricing.

Readings (Downloadable from my website <a href="https://www.princeton.edu/~hhong">www.princeton.edu/~hhong</a>)

Rules and Regression Discontinuities in Asset Markets, (with Yen-cheng Chang, Shanghai Advanced Institute for Finance), Princeton University Working Paper, April 2011.

"Firms as Buyers of Last Resort" (w/ Jialin Yu, Columbia University and Jiang Wang, MIT), Journal of Financial Economics, April 2008.

"Do Arbitrageurs Amplify Economic Shocks?" (w/ Tal Fishman, Princeton University and Jeffrey Kubik, Syracuse University), forthcoming Journal of Financial Economics, January 2011.

## "Disagreement and Credit Bubbles"

In this lecture, I first review work done on asset pricing models based on differences of opinion, which arise when investors agree to disagree about fundamental value. This differences-of-opinion assumption is a reduced form for bounded rationality, model-based learning or psychological biases such as overconfidence. approach yields simple and tractable models that better match stylized facts about asset price and trading volume dynamics than those based on risk sharing or liquidity. Changes in opinions can lead to large trading volume. When there are short-sales constraints, dispersion in opinion leads to overpricing and asset price bubbles in which investors value an asset not only for its fundamental value but also for its resale option. Corrections to over-pricing arise due to increased supply. Crashes can periodically arise as hidden information regarding pessimists' valuations due to short-sales constraints are revealed when optimists' valuations fall. Leverage can amplify deviations of price from fundamental value as pessimists lend money to optimists. Disagreement and bubbles tend to arise during times of technological innovations. And diffusion of opinions with the spread of news leads to rich price-and-volume dynamics that match the earnings and price momentum anomalies.

I then develop a first taxonomy of bubbles that distinguishes equity from credit bubbles. Equity bubbles are loud in that price is high and so is trading volume and price volatility. I then show in this same disagreement framework that credit bubbles are quiet---price is high but trading volume and price volatility are low. Since debt up-side pay-offs are bounded, debt is less sensitive to disagreement about underlying asset value than equity and hence has a smaller resale option and lower price volatility and turnover. Large debt mispricing requires, in contrast to equity, either greater leverage or investor optimism. An increase in optimism makes debt but not equity bubbles quieter. Even holding fixed average optimism, an increase in disagreement with enough leverage can lead to a large and quiet debt mispricing.

Readings (Downloadable from my website <a href="https://www.princeton.edu/~hhong">www.princeton.edu/~hhong</a>)

"Disagreement and the Stock Market" (w/ Jeremy Stein, Harvard University), Journal of Economic Perspectives, Spring 2007.

"Asset Float and Speculative Bubbles" (w/ Jose Scheinkman and Wei Xiong, Princeton University), Journal of Finance, June 2006.

"Quiet Bubbles" (w/ David Sraer, Princeton University), January 2011.

## "Social Responsibility and the Stock Market"

I answer three long-standing questions on the relationship between social responsibility and the stock market. First, do firms that do good do well? Or do firms that do well do good? Second, are managers doing good with other peoples' money? Or is it that managers believe, perhaps falsely, that goodness pays? Third, what are the returns to socially responsible investing? Debates on these questions have been ongoing since the seventies when Milton Friedman declared that the only social responsibility of corporations is to make money. Despite hundreds of academic and practitioner studies since then, no definitive answers have been forthcoming because of the difficulty of establishing causation. I resolve this issue by developing a set of new natural experiments. I conclude that corporate social responsibility is very costly as firms only do good when they have enough financial slack. A large part of corporate goodness spending is due to agency problems. I then show that the long-horizon returns to socially responsible investing are poor even as short-horizon returns might be ambiguous. There are no free lunches when it comes to social responsibility and the stock market.

Readings (Downloadable from my website <a href="https://www.princeton.edu/~hhong">www.princeton.edu/~hhong</a>)

"The Price of Sin: The Effects of Social Norms on Markets" (w/ Marcin Kacperczyk, NYU), Journal of Financial Economics, July 2009.

"Red and Blue Investing: Values and Finance" (w/ Leonard Kostovetsky, Rochester), forthcoming Journal of Financial Economics.

"Financial Constraints on Corporate Goodness" (w/ Jeffrey D. Kubik, Syracuse University and Jose Scheinkman, Princeton University), January 2011.