Essays On Banking, Credit, and Default

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A B S T R A C T

The 2007-08 financial crisis has led to a spurt in research that has focused on creditors' expectations / beliefs. While much of the recent work on the role of "expectations" have been situated in the stock and bond markets, it is only natural to wonder whether such a phenomenon could exist in the banking sector. If so, what implications does this have for credit, investment, and financial stability in the economy? These are the questions I have tried to answer through my research.

In *Chapter 1: Banking with Bias*, we use the construct of "expected loss" from loan loss provisions to examine banks' expectations and uncover the presence of overreaction. If times are bad, banks tend to believe the future will be worse, and if times are good, they believe the future will be better. As a result of this kind of thinking, banks neglect risks when times are good and underperform in the future. We measure banks' unjustified belief (or sentiment) and show that an improvement in belief is associated with a rise in credit growth, relaxation of lending standards, and poor performance in subsequent years. But despite the neglect of risks, shareholders fail to discipline the banks and earn predictably lower returns in subsequent one to three years.

To study the implications of the overreaction bias on credit cyclicality and financial stability, we modify a rational expectation general equilibrium set-up using the methodology of diagnostic expectations. In response to a financial shock, overreaction bias accentuates the procyclicality of credit and induces sub-optimal monitoring. Banks increase risk-taking during good times and curtail risk-taking in bad times. We also numerically establish that for the recently introduced cyclically-adjusted provisioning rules to have the desired effect on financial stability, the extent of cyclical adjustment should be revised upwards on account of overreaction in expectations.

Standard structural models use the market value of equity and estimated volatility to infer the underlying credit risk associated with bank assets and solve for the implied probability of default. What if observed variables are not reflective of credit risk instead distorted by bias? In *Chapter 2: Bias in Expectation and Bank Default Risk*, We modify a structural model making it more apt for banks. We introduce provisions to assess credit risk, estimate the risk-neutral probability of default and show that default predictions are well explained by this novel measure. Building on our earlier finding of overreaction in banks' expectations, we show that it leads to excess provisioning in bad times and reduces default risk when bank loans are in distress.

Chapter 3: Stress Test and Cheap Talk: Communicate without Commitment studies the credibility problems financial regulators often face in disclosing stress test results. Since the regulator has motivations for manipulating the expectations of market participants, it cannot credibly reveal the results. However, some information can be revealed credibly by making an imprecise announcement: announcing only the ranges in which the results lie. In the interest of credibility, the regulator needs to reveal information with less precision when the results are too good or bad. When the result moves away from both extremes, information can be revealed credibly with more precision. Importantly our results do not rely on the regulator's commitment to speaking the truth, unlike existing works that use "Bayesian persuasion" where commitment is an implicit assumption.