# 4. Conclusion

I reviewed an investor coordination game, as analyzed in Morris and Shin (2004), and added a biased rating. When observing a positive bias, investors know that the signal is sugarcoated and that the underlying state is actually worse. Hence, investors adjust their beliefs by subtracting the bias. With lower conditional expectations more investors foreclose raising the default point.

The bond price influences the expected payoff. An increase in the bond price reduces the payoff and makes foreclosing more profitable. Hence, the foreclosure rate and the default point increase.

When considering the impact of a rating on the pricing of debt, neglecting the rating leads to an overpricing of bad borrowers and an underpricing of good borrowers. Omitting the rating, in good states, decreases the conditional expectations of investors. The negligence causes a higher foreclosure rate at the cost of the good firm, which has to compensate for the higher perceived risk through a higher yield. However, in bad states ignoring the rating increases the conditional expectations of investors. Resulting in a lower foreclosure rate, benefiting the bad borrower, who pays a lower yield.

Firms evolve continuously with the consequence that a divergence emerges between the rating and the underlying fundamental state. When the firm evolves positively the rating still indicates a lower fundamental state. As a consequence more investors foreclose compared to a situation where the rating is adapted. On the other hand, when the fundamental state of the firm deteriorates the rating still indicates a higher fundamental state and less investors foreclose. This time lag between rating updates distorts the posterior expectations. It thereby benefits firms with deteriorating fundamentals and punishes firms with improving fundamentals. In addition to the rating, market based risk models, that allow daily assessments of risk, can prevent from big disparities that can emerge between rating updates.

A rating claims to assess the credit quality of a firm. Since the issuance coordinates investors' beliefs and alters their behavior, the rating agency must take its own influence into account. Neglecting the endogeneity of the rating necessarily leads to a wrong assessment. Especially for bad borrowers the coordination effect and, hence, the rating's influence on the default probability and the bond price plays a major role.

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