# Research Digest

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## Asset Bubbles and Rat Races

***A new Minneapolis Fed staff report by Veronica Guerrieri and her coauthor examines the effect of portfolio managers' reputation-seeking on asset prices.***

During the financial crisis of 2007-09, macroeconomists came under fire for ignoring the importance of financial markets and particularly the role of financial intermediaries, such as investment banks and portfolio fund managers, in fueling asset price bubbles.

Recent Minneapolis Fed research by Veronica Guerrieri of the University of Chicago and Péter Kondor of the Central European University ("Fund Managers, Career Concerns, and Asset Price Volatility," SR 446 online at minneapolisfed.org) focuses on this relationship and suggests that financial professionals' concern about their reputations and careers plays a direct role in asset price volatility.

The authors start with two observations about financial markets. First, the risk premium—the higher average return on risky securities like junk bonds compared with risk-free assets like government bonds—increases during recessions and decreases in economic upswings. Second, investors often don't handle their portfolios themselves, but hire fund managers to do the job for them. In essence, Guerrieri and Kondor put forward a theory that makes use of the second fact to explain the first.

They start with a model in which investors can park their money in either a risk-free asset that pays a low but guaranteed rate or invest it in a risky bond that might pay a higher return but also might end up worthless if the bond issuer defaults. Investors outsource this decision to fund managers, whose pay is based directly on the portfolio's return.

The model gets interesting when some managers know more than others. The authors assume some managers know for sure whether the risky bond will default, but

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others know only the probability that it might. This is akin to knowing a coin will land heads-up versus only knowing that you have a 50-50 shot.

Naturally, investors want to hire better-informed managers, not the less-informed, but they can't tell the difference beforehand. So at the end of every period, investors compare their manager's performance to the best manager's and attribute returns to the skill of their manager. If their manager was too exuberant and put their money in risky bonds that defaulted, or played it too safe and missed out on the relatively higher average returns, investors will fire the old manager and hunt for a new one.

It is therefore in every fund manager's interest to maintain a reputation—deserved or not—for being savvy about asset quality. The economists' model demonstrates that such career concerns "distort their investment decisions and magnify asset price volatility." Guerrieri and Kondor call this price distortion a "reputational premium."

Here's how it works: In financial recessions, default risk is high. To compensate uninformed managers for investing in risky assets—because their reputations will be damaged if the assets default—the reputational premium is positive, so the return on such assets has to be high. (And by definition, assets with high returns are those with low prices.)[1]

During boom times, the opposite occurs: Default risk is low, so the "reputational premium" is low, and even negative. Smaller returns are required to induce fund managers to buy assets, so managers tend to buy higher-priced assets than they would in the absence of career concerns. Thus, the model replicates the countercyclical risk premium, and procyclical price movements, seen in the real world. That is, during a recession, the risk premium rises and asset prices fall, and vice versa during an economic boom: The premium falls and prices rise.

Indeed, the economists illustrate this with some empirical observations from recent financial swings. "Our model suggests," they write of the dot-com bubble, "that hedge funds were willing to buy technological stocks at highly inflated prices because of their fear of losing reputation and hence funds if they missed the high returns generated by the bubble. This is consistent with the additional fact … that the largest hedge fund, Tiger Fund, which refused to invest in technology stocks, experienced severe fund outflows in 1999 compared to its main competitor who did invest in technology stocks, Quantum Fund."

Guerrieri and Kondor expand their model to incorporate the tendency for high risk of default today to imply high risk tomorrow, and likewise for low risks. This "persistent default risk" makes asset prices even more volatile, but it adds a second effect as well.

With persistent risk, a smaller share of uninformed managers keep their jobs in high-risk times, so future prices will reveal more. This makes the cost of getting fired greater, which increases the reputational premium. The price of the risky bond can change even if the actual probability of default doesn't change, indicating that some movements in asset prices

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are not driven by fundamentals.

To reiterate, this phenomenon can help account for financial crises. In periods such as the tech stock boom of the 1990s and the housing boom of the last decade, the yield spreads between high-risk and low-risk securities tend to drop very low and then skyrocket with the onset of crisis. The model explains that feature in terms of reputational effects.

While far from the only theory of excess asset price volatility or risk premium swings, this new research is the first to explain these phenomena in terms of fund managers' career concerns. And given the list of intriguing extensions and applications the authors discuss, it won't be the last.

*—Joe Mahon*

[1] An asset's return is the financial benefit it yields compared with its price: Return=Yield/Price. So, the lower the price, the higher the return, and vice versa.

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