Herd Behavior in Financial Markets: A Review

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Motivation

• Does herding exacerbate volatility, destabilize markets, and increase the fragility of the financial system?

• Key objectives
  – Provide multiple definitions of herding, focusing on rational herd behavior.
  – Discuss empirical strategies to identify herding.
  – Review existing evidence on herding in financial markets.
Observable Signals vs Actions

• There is a critical difference between observing the signals of others and merely observing their actions.

• In the latter, behavior is idiosyncratic, with early choices determining the choices of all successors.

• A key element to herding is the discreteness of the action choices. For cascades to arise, signals must not be conclusive.
What Happens in a Cascade?

• Once a cascade starts (i.e., people act in herds), public information stops accumulating.

• As soon as the public pool becomes even modestly more informative than the signal of a single agent, agents defer to the actions of predecessors and a cascade begins.

• Participants who know they are in a cascade also know that the cascade is based on little info relative to the info of private individuals.
Novel Insights

- Headstrong people may be exceptionally useful citizens.
- Simultaneous voting, or voting in inverse order of rank, has desirable anti-herding consequences.
- If obtaining signals is costly, then cascades may form instantly.
Identifying Cascades

• The critical issue is whether we can prove that agents ignored private signals in favor of imitating public actions of others (intentional herding).

• For example, how do we know that the agents did not receive correlated signals and act accordingly (spurious herding)?

• Fundamentals must be factored out correctly.
Empirical Evidence

• Lakonishok, Shleifer, and Vishny (1992)

\[ H(i,t) = |p(i,t) - p(t)| - AF(i,t) \]
\[ p(i,t) = B(i,t)/(B(i,t) + S(i,t)) \]
\[ AF(i,t) = E[|p(i,t) - p(t)|] \]

• Excess probability of pension funds being on the same side of the market

• Not much evidence in pension funds, or in later studies on mutual funds.
Papers To Be Discussed Later

• Graham (1999)
  – Investment newsletters herding on Value Line
• Welch (2000)
  – Herding among security analysts
• Kim and Wei (1999)
  – Herding among offshore hedge funds
• Each is somewhat truer to the herding model than the LSV measure.
Relevance for Financial Markets

• Since cascades aggregate very little info, at some later date, changes in behavior may occur without a readily apparent reason.
• Shifts in behavior may be driven by an expectation that the payoff value has changed (only slightly).
• Cascades can form quickly, persist, and then shatter easily.
Issues for Further Discussion

• Is there a role for government?
  – Bank runs are not herd behavior, but consider how governments prevent them.
  – Can incentive schemes be designed to induce people to use their own private information? Subsidize individuality?
  – What if would-be imitators observe not only the actions taken by earlier agents but also the consequences of those actions?