

## 1 Introduction

Financial markets are commonly modeled as a set of independent actors who combine public and private information in order to make investments. A minimum of information sharing is expected, perhaps by analyzing an individual's past spending, but for the most part private information remains so. At no point does all private information become public, creating an even playing field where rational agents will make identical decisions. The market is always characterized by information asymmetries.

Naturally, these models carry the assumption that individuals' choices are strongly guided by their private information. The publicly known data is what prevents them from making poor decisions, keeping them updated with how market action has changed the dynamics of the system. On the other hand private information gives investors an edge, helping them make a decision that is likely to succeed. Wherever it applies, one expects players to make choices based upon their private data, rather than the publicly known information. At any rate, this is what a large number of investment models are based on—an assumption that rational participants are guided above all else by their private information.

However, this assumption has been contradicted by empirical studies. Numerous studies, have confirmed that investors do not always act as individuals, guided by private information, but rather exhibit a tendency for collective action[?, 174]. Investors, in practice, herd. They are influenced by the actions of other participants to the point of abandoning their private knowledge and converging on a single decision.

Reasons for herding are myriad, and will not be discussed here. Additionally, we elide discussion of the outcomes of herding, of when herding may become a rational decision. Rather, we concern ourselves with modeling herd behavior in investment markets. In particular, we analyze the manner in which previous studies have characterized herding, note where they have succeed, and identify where they may be improved.

## 2 Background

Herding, as defined by

## **3 Review**

### **3.1 Source A**

#### **3.1.1 Summary**

#### **3.1.2 Relation to coursework**

#### **3.1.3 Weaknesses**

#### **3.1.4 Questions**

### **3.2 Source B**

#### **3.2.1 Summary**

#### **3.2.2 Relation to coursework**

#### **3.2.3 Weaknesses**

#### **3.2.4 Questions**

## **4 Proposal**

## **5 Analysis**

## **6 Conclusion**

## **References**