

# Chapter 11

## The Paradox of Crowd Wisdom: When Collective Intelligence Fails in Financial Markets

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### ABSTRACT

*The notion of “wisdom of crowds” postulates that collective decision-making often outperforms individual judgements. However, in financial markets, this collective intelligence can falter, leading to inefficiencies and anomalies. This study investigates the factors contributing to the failure of collective intelligence in financial markets, specifically examining information cascades, cognitive biases, market sentiment, herding behaviour, and market performance. Using the Adaptive Market Hypothesis (AMH) as a theoretical framework, the research explores how these factors interact and impact market efficiency. Employing panel data regression and quantile regression, the study provides a comprehensive analysis of market dynamics across different conditions. The findings underscore the crucial roles of investor education and regulatory environment in moderating and mediating these relationships, offering valuable insights for policymakers, financial managers, and investors in enhancing market stability and efficiency.*

### INTRODUCTION

The field of collective intelligence, commonly known as the “wisdom of crowds,” suggests that when individual judgements are combined, the resulting decisions can be better than those made by any individual in the group. This notion has been

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widely applied in different sectors, including as prediction markets, decision-making processes, and financial markets. Nevertheless, in the realm of financial markets, the phenomenon known as the paradox of crowd wisdom arises when the combined intellect of a group fails to generate accurate results, resulting in inefficiencies and abnormalities.

Financial markets are intricate systems that are impacted by several factors, with the actions of market players playing a pivotal role in deciding market results. This study examines the factors that contribute to the breakdown of collective intelligence in financial markets (Kameda et al., 2022). It specifically investigates the impact of variables such as information cascades, cognitive biases, market sentiment, herding behaviour, and market performance. These characteristics have the potential to skew both individual and collective decision-making processes, ultimately impacting the efficiency of the market, which is the variable being studied in this research.

Information cascades arise when individuals, even if they possess private information, imitate the actions of those who came before them. In financial markets, this phenomenon can result in the magnification of incorrect information, as investors disregard their own understanding in favour of conforming to the majority. These cascades can generate a misleading perception of agreement and result in market inefficiencies by causing asset prices to deviate from their underlying values. Cognitive biases, which are naturally present in human decision-making, add complexity to the situation. Biases like as excessive self-assurance, the tendency to seek out information that confirms pre-existing beliefs, and the inclination to hold onto losing investments can distort the assessments made by individual investors. When these prejudices are combined among a significant number of individuals, the outcome is frequently a warped collective intellect that inadequately represents the underlying market principles.

Market sentiment, which refers to the collective mindset of investors on market conditions, also has a crucial impact. Factors unrelated to economic fundamentals, such as news events, geopolitical developments, or social media trends, can influence sentiment. Excessive optimism or pessimism in market mood can result in bubbles or crashes, respectively, which in turn can weaken market efficiency. Herding behaviour, characterised by investors imitating the moves of their peers, intensifies these problems. Herding in financial markets can result in the emergence of speculative bubbles and abrupt market declines. Conforming to popular opinion can lead to prices straying considerably from their true worth, leading to times of severe unpredictability and inefficiency.

The market performance, as indicated by metrics such as stock returns and volatility, represents the combined influence of these factors. During instances of heightened volatility or exceptional returns, the disparities between collective decisions and market fundamentals become more evident, emphasising the constraints of crowd

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