

# NEUROTRANSMITTERS AND INVESTMENT DECISION MAKING: A REVIEW

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## ABSTRACT

*Neurofinance is an interdisciplinary research in the field of behavioural finance in which the developments and effects of neurotransmitters in investment decision making have gained recognition in recent days. This review emphasizes the significance of neurotransmitters in behavioural psychology, neurochemical perspective, emotional intelligence and its application on investment decision making.*

**Keywords:** Investment, Decision making, neurotransmitters, Behavioural Finance.

## INTRODUCTION

Every day, people make decisions, large and small, important and less important in their financial planning. Cognitive Psychology and economics attempt to understand how people think about their choices on various investment avenues. Now-a-days stock markets turnout to be people oriented based upon their emotions, behaviour, perception, sentiments and mood and these factors influence investment decision making and hence impact the stock prices. While institutional investors are the individuals with large amount of funds, which they need to invest in various stock market (Huyghebaert & Hulle, 2004). Financial practitioners such as financial planner, suggest best output to an individual, group or an organization provide basis for the inception of behavioural finance (Ricciardi & Simon, 2000).

Behavioural finance is an area which focuses on the behaviour of the investors and their decision making. Among behavioural finance, neurofinance is an emerging study area that encounters to acknowledge the investment decisions and bridges a human mind and its choices in the financial market (Miendlarzewska et al., 2017; Kumar & Sireesha, 2017).

Recently in developing countries most of the research studies are insisted to connect the investor's decision making with the various neurotransmitters. The main objective of this paper is to review articles related to role of neurotransmitters in investor's decision making.

### Application of Neurotransmitters in Investment Decision Making

Neurotransmitters are the substance messengers in the human brain which generate signals from neurons to neurons (Blobe et al., 2000). Neurotransmitters consisting of dopamine, serotonin, epinephrine, and norepinephrine, probably relate to the individual investor behavioural elements. The human brain's strong signal shows a way to confirm and acknowledge the individual investment decision. In last 10 years, cognitive neuroscience concepts are applied in area of social sciences due to increase in the interest regarding the research related to cognitive neuroscience especially in the field of finance which are new forms of study that are rapidly evolving and challenging to the financial market and investment

(Tseng, 2006); Schultz (2007) reviewed that a neurotransmitter system is involved in the transmission of time-specific information about a restricted spectrum of external events. Kuhnen & Chiao (2009) researched and found that dopamine and serotonin neurotransmitters were essential risk factors in investment decisions. Ahmad, Mumtaz (2018) explored inner view of investor's behavior and their decision's in the stock market of Pakistan and combined model of neurofinance and behavioral finance using the constructs such as neurotransmitters, emotional intelligence and personality of investors. Primary data was collected from the investors of Pakistan stock exchange using PLS SEM model. The study concluded that the neurotransmitters dopamine and epinephrine have significant relation with investment decisions of individual investors. Khan & Mubarak (2020 ) developed a reliable and a valid three stages qualitative study involving item generation in stage 1, item purification in stage 2 and items validation in stage 3 using exploratory and confirmatory factor analyses which resulted in eight sub-constructs of neurotransmitters scale which was used to assess decision making during financial investment.

## CONCLUSION

These approaches brought new advances to the financial decision-making research on logical decision making process which cannot be measured by the traditional finance approach. This study highlights the crucial role of the biological system and the influence of neurotransmitters in financial decision making. This concept warrants further studies on a large scale to understand the neurotransmitter related financial decision making.

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