

Analysis of Investment Preferences During COVID-19 Lockdown

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Abstract

This report analyzes survey data collected via Google Forms during the COVID-19 lockdown. The objective is to explore investment behavior, preferences, and factors influencing investment decisions among respondents. The analysis includes data cleaning, exploratory data analysis (EDA), and insights derived from demographics and investment patterns.

1 Introduction

- Purpose of the analysis: understand investment trends during lockdown.
- Dataset: self-reported survey responses from [number] respondents.
- Scope: analysis focuses on demographics, investment behavior, preferences, and motivations.
- Identify relevant insights from the perspective of a bank, focusing on strategies to maximize profitability while simultaneously delivering value to clients.

2 Dataset Description

The dataset consists of survey responses collected from [number] respondents, covering various aspects of investment behavior and preferences. The key columns in the dataset can be grouped into five categories:

1. **Demographics:** Includes basic information about respondents, specifically **GENDER** and **AGE**.
2. **Investment Behavior:** Captures whether respondents invest in different investment avenues, whether they participate in the stock market, and which investment avenue they primarily use.

3. **Investment Preferences:** Contains rankings assigned by respondents to investment types such as Mutual Funds, Equity Market, Debentures, Government Bonds, Fixed Deposits, Public Provident Fund, and Gold.
4. **Factors and Objectives:** Includes investment objectives, reasons for investing, frequency of monitoring investments, and expected returns.
5. **Sources of Information:** Records the various sources respondents consult to gather investment information.

This structure allows for detailed analysis of demographic influences on investment behavior, preferences, and decision-making factors.

3 Data Cleaning and Preparation

Several preprocessing steps were carried out to ensure the dataset was consistent, accurate, and ready for analysis. First, missing values were handled either by dropping incomplete rows or by filling them with default values, depending on the importance of the information. Categorical variables were standardized (for example, gender responses were normalized to “Male” and “Female”) to avoid duplication of categories. Numeric conversion was applied to age and ranking columns to enable statistical analysis. For demographic analysis, ages were binned into five groups: 18–25, 26–35, 36–45, 46–60, and 60+. Columns that allowed multiple responses (such as investment duration) were transformed using multi-label binarization. Finally, derived variables such as each respondent’s top-ranked investment were created to facilitate preference-based comparisons.

4 Exploratory Data Analysis (EDA)

4.1 Demographics

- **Gender Distribution:** Number of male vs female respondents. There are 15 female respondents and 25 male respondents.
- **Age Distribution:** Histogram of ages and counts per age group.

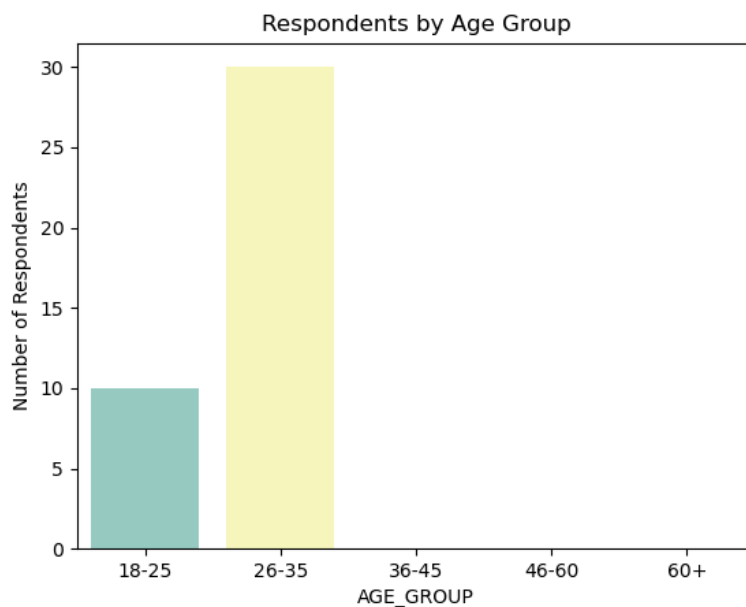


Figure 1: Histogram of ages and counts per age group.

- **Age vs Gender:** Cross-tab analysis to show gender composition within age groups.

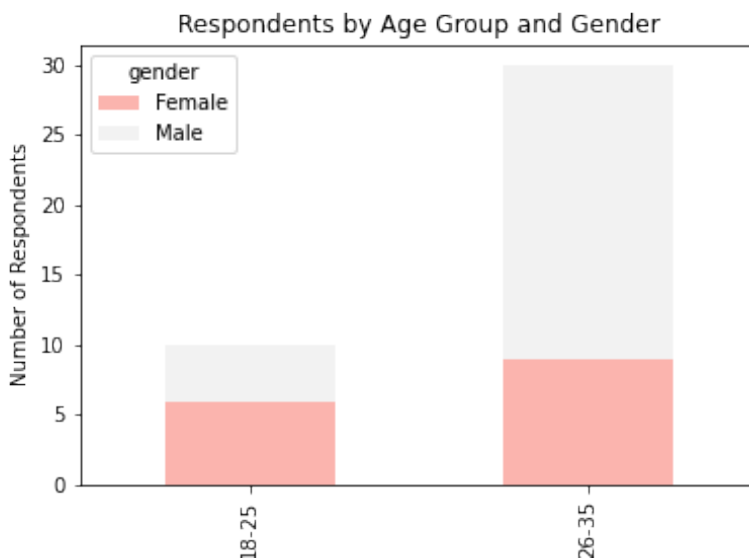


Figure 2: Respondents by Age Group and Gender

4.2 Investment Behavior

- Percentage of respondents investing in various avenues and the stock market
- Popularity of each investment type

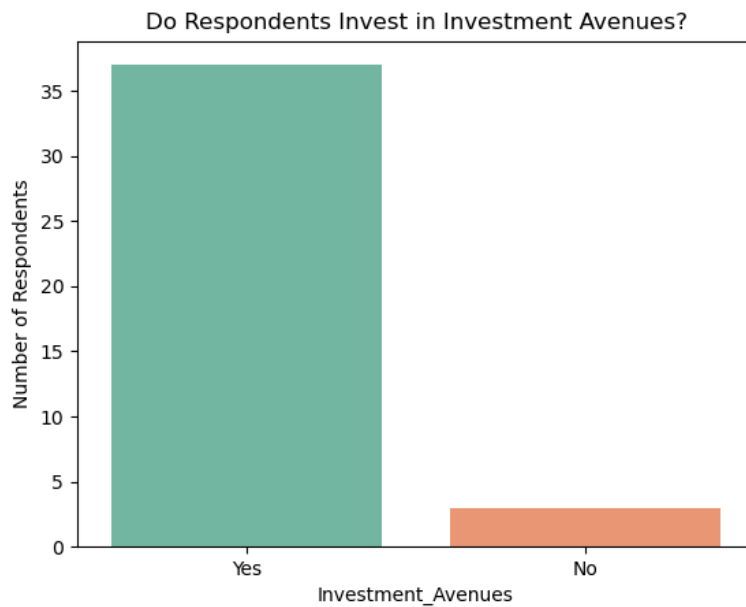


Figure 3: Investment Behavior of Respondents

4.3 Investment Preferences

- Average ranking of investment types

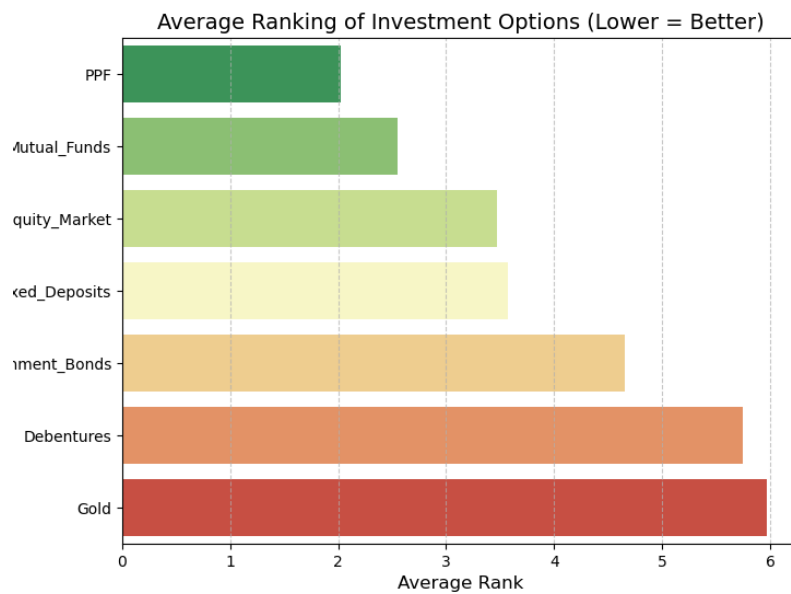


Figure 4: Investment Preference Rankings

- Top-ranked investments overall and by demographic

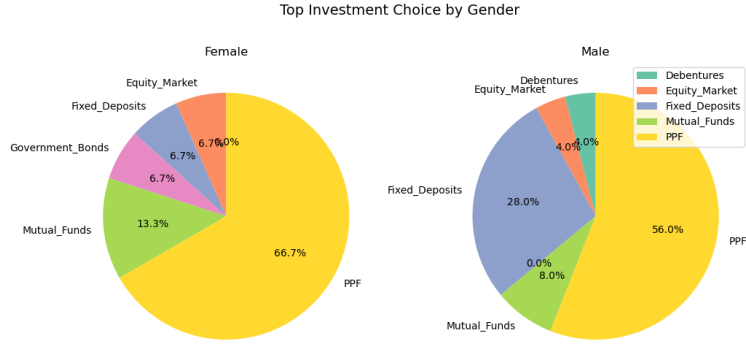


Figure 5: Investment Participation by Gender

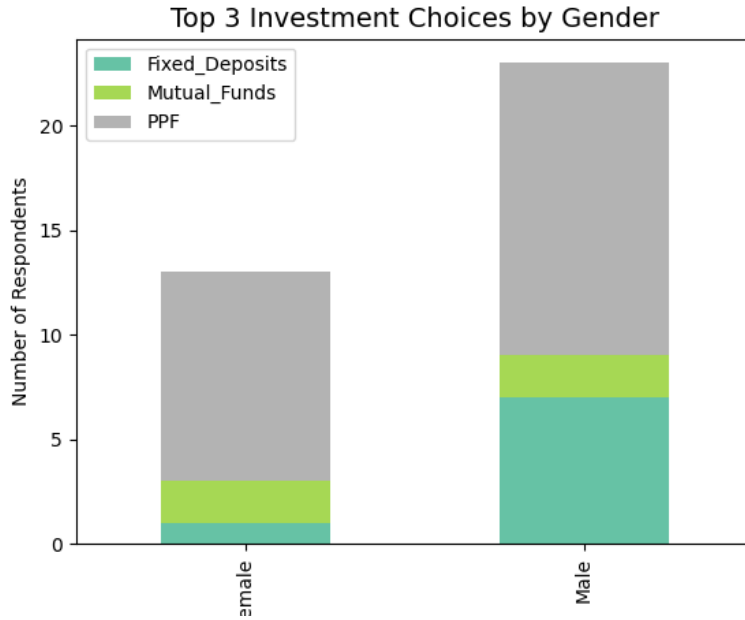


Figure 6: Top 3 Investment Choices by Gender

4.4 Factors and Objectives

- Common factors considered while investing
- Typical investment objectives (growth, liquidity, retirement)

4.5 Monitoring and Expected Returns

- Frequency of monitoring investments
- Expected returns across investment types and demographics
- Duration preferences

4.6 Sources of Information

- Most commonly used information sources
- Correlation of sources with investment preferences

4.7 Motivations for Specific Investments

- Reasons for investing in Equity Market, Mutual Funds, Bonds, Fixed Deposits

4.8 Top 3 Investment Options and Bank Profitability

Based on survey responses, the top three investment options preferred by respondents are Public Provident Fund (PPF), Fixed Deposits (FDs), and Mutual Funds.

1. Public Provident Fund (PPF): PPF is a government-backed, long-term savings scheme offering attractive interest rates and tax benefits under Section 80C. It has a 15-year lock-in period, making it suitable for long-term goals like retirement. Returns are guaranteed and risk-free, appealing to conservative investors.

2. Fixed Deposits (FDs): FDs are offered by banks and financial institutions. Investors deposit a lump sum for a fixed tenure at a predetermined interest rate. They are low-risk, provide assured returns, and are highly liquid, with premature withdrawals possible at a penalty.

3. Mutual Funds: Mutual funds pool money from multiple investors to invest in stocks, bonds, or other securities. Managed by professional fund managers, they offer diversification, liquidity, and potential for higher returns compared to traditional savings. Risk and return depend on the type of fund (equity, debt, hybrid, etc.).

Bank Profitability Perspective: From a bank's perspective, profitability varies across these options:

- **Fixed Deposits (FDs):** Most profitable. Banks lend FD funds at higher interest rates and earn the interest spread, making them a stable source of low-cost funding.
- **Public Provident Fund (PPF):** Least profitable. Banks act mainly as intermediaries, earning minimal service fees; interest is paid by the government.
- **Mutual Funds:** Banks may earn distribution fees, but the main profits go to asset management companies. Banks with asset management arms may earn management fees.

Summary: Fixed Deposits are the most profitable for banks due to direct lending and interest spreads, while PPFs are primarily beneficial for investors. Mutual funds offer some bank revenue but mainly benefit fund managers.

5 Limitations of the Dataset

- Sample may not be representative of the general population of investors
- Self-selection bias due to voluntary survey responses
- Overrepresentation of certain demographic groups (e.g., 26–35 males)

6 Conclusions and Insights

- Key patterns in demographics, investment preferences, and behavior
- Observed trends and correlations
- Recommendations for further research or larger-scale surveys

7 References

- Google Forms survey platform
- Pandas and Seaborn libraries for data analysis