

Understanding Loss Aversion as a Hurdle in Successful Investment and Developing a Coffee Can Investing Approach to Overcome the Bias

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Abstract: Loss aversion, an aspect of behavioral finance, is a bias that explains why people perceive the pain of losing a certain amount of money is double than the pleasure of gaining the equivalent amount of money. Loss aversion is widely used by insurance companies who trick you into buying insurance for an event that is likely not to happen. Since loss aversion makes a person overestimate their losses, people who exhibit more loss averse behavior tends to miss out on various profitable investment opportunities as they are unable to take the required risks. In this study, the researcher's aim is to first establish the presence of loss aversion among various college going students and then work out on different methods (such as framing) on how this bias can be minimized and help an individual remove this obstacle and be another step closer towards successful investment. Though loss averse behavior can be seen in every individual to a certain extent, a person who is extremely loss averse may suffer from making day to day decisions and even personal financing would be a herculean task for the said person. The study then looks into the concept of Coffee Can Investing and how it can play a vital role in diminishing the effects of Loss Aversion. Coffee Can Investing comes under the category of value investing wherein companies are identified which have consistently outperformed the index and delivered astonishing returns to the shareholders.

Keywords: loss aversion, behavioral finance, bias, framing, coffee can investing, value investing.

2. Introduction

Behavioural Finance is one field that has gained momentum in the last decade. The focus of behavioural finance is in understanding the irrational behaviour of the human mind when dealing with money whether in a casino or in stock market. Often an individual, while taking a decision doesn't act rationally and hence fails to maximise his/her returns. Behavioural finance helps in understanding such biases that act as a hurdle in getting most out of every investment opportunity.

Some of these biases are mental accounting, endowment effect, confirmation bias, anchoring bias, overconfidence bias and loss aversion. The effects of mental accounting are clearly visible amongst the gamblers in a casino who don't know when to stop placing their bets, apart from greed and thrill, compelling arguments have been made that the money gained from gambling is not 'hard-earned' and therefore we are willing

to bet these winnings again for the possibility of increasing the returns. Valuing an owned product higher than its market price is caused due to endowment effect. This effect can be seen in the case of collectible products where the owner of a collectible item usually has a higher asking price than the buyers are willing to offer.

Confirmation bias arises when a person chooses to only focus on the information that appeal to their preconceived notions which leads them to disregarding the truth. An investor suffers from confirmation bias when he buys a stock only because it has a low PE ratio (PE ratio is the ratio between the price at which a stock is trading and Earning Per Share of that stock. Usually, it is considered that a low PE stock is undervalued and is expected to rise in price and a high PE stock is overvalued and is expected to fall in the near future. However, for many reasons, which would not be covered in this study, investing solely on the basis of PE ratio will lead you towards investing in stocks which have low growth prospects) in the hope that the stock will rise in future but ignores the crucial data about the company which depicts a low growth future for the firm.

Anchoring bias is experienced when your decisions are influenced by the pre-existing information or the first information acquired. If stock A is trading at INR 20,000 and stock B is trading at INR 3,000 it would seem like stock B is cheap but if you were to look at a Stock C first which trades at INR 100 and then look at stock B, the stock B suddenly appears to be the expensive option. This bias is also experienced by analysts using DCF valuation (Discounted Cash Flow valuation is a common valuation technique wherein the analyst predicts the future cash flows of a company and discounts it back to ascertain the current value of the future cashflows which is then used to value the company accordingly) who adjust the model by taking into consideration the current market price of the company. These adjustments are made in case there is a stark difference between the predicted stock price and the actual stock price.

Overconfidence bias arises when an individual perceives his/her skills to be greater than the actual level of their abilities which creates a false sense of knowledge and intellect. James Montier conducted a survey of 300 fund managers who were

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asked whether they consider themselves above average or not. 76% of the respondents believed that they were above average while the rest refused to accept that they were below average or in other words, no one believed that they were below average which is statistically not possible. Montier, James, *Behaving Badly* (February 2, 2006).

The feeling of loss is considered to be so painful by the investors that they are willing to take higher risks when it comes to minimizing loss but this is not the case for profits where the investors do not take enough risks to maximise their returns. For decades, the Indian households' go to investments have been Fixed Deposits and Gold which shows the low risk seeking behaviour for maximising the returns. Loss aversion is also the reason why retail investors hold on to the losing stocks for an extended period of time hoping that it would rise again and sell their winning stocks very soon fearing that the uncertain future might wipe off their profits. In both the cases,

whether holding on to losers or quickly selling winners, the retail investor either incurs increasing losses or fails to maximise their profits from the winning stocks.

This study will be focused solely on loss aversion and elaboration of Coffee Can style of investing that could possibly help in minimizing the adverse effects of this bias.

The motive behind this study is to gain knowledge of the intersection between psychology and finance, understand the biases encountered by retail investors and propose a suitable strategy to minimise these biases which can then lead to potential maximization of the returns. The future of the research studies conducted for behavioural finance is to help the investors in identifying various biases that they encounter so that a better decision can be made and help the financial institutions in better analyses of companies so that they can maximise their returns and grow the assets under management.

2. Review of Literature

Table 1
Review of literature

S.No.	Author	Title	Criticism	Suggestion/Comment
1.	(Zhang & Zheng, 2015)	A study of the investment behaviour based on behavioural finance	Focus was only on 4 biases and hence other biases were ignored while analysing the data	The study aimed at analysing 1000 questionnaires and identifying the rationality of Chinese investors.
2.	(Abdellaoui, Bleichrodt, & L'Haridon, A Tractable Method to Measure Utility and Loss Aversion under Prospect Theory, 2007)	A Tractable Method to Measure Utility and Loss Aversion under Prospect Theory	There is no information about how reliable is the proposed method	The study has proposed a new method to measure the utility and loss aversion under prospect theory. These measurements can help in empirical studies and analysing practical situations.
3.	(Howard, 2012)	Behavioral Finance: Contributions of Cognitive Psychology and Neuroscience to Decision Making	N/A	The researcher has used a 5-paradigm model to aid his study. These paradigms are Rules of thumb, Rational being theory, Behavioral finance, neuroscience, unconscious.
4.	(Duxbury, 2015)	Behavioral Finance: Insights from experiments I: Theory and financial markets	The discussions section of the topic was left out	This study reviewed a series of experiments to test certain aspects of theories like CAPM, separation theorem. Further, experiments were conducted to provide an explanation in the behaviour of financial markets.
5.	(Mitroi & Oproiu, 2014)	Behavioral finance: new research trends, sociconomics and investor emotions	The researchers, however didn't mention the extent of the impact of biasness.	The researchers in this study, evaluated the impact of psychological biasness on risk return optimisation.
6.	(Bondt, Muradoglu, Shefrin, & Staikouras, 2008)	Behavioral Finance: Quo Vadis?	N/A	The aim of this qualitative study was to compare the neoclassical finance theories with behavioural finance and assess the strengths and weaknesses of behavioural finance
7.	(Sadi, Asl, Rostami, Gholipour, & Gholipour, 2011)	Behavioral Finance: The Explanation of Investors' Personality and Perceptual Biases Effects on Financial Decisions	N/A	This is a quantitative study conducted to analyse the relationship between five personality traits and perceptual errors through hypothesis testing.
8.	(Statman, 2008)	Countries and Culture in Behavioral Finance	The researcher has failed to account the personality traits while assessing his hypothesis.	This study successfully displayed that the risk perception of investors varies from culture to culture.
9.	(Andersson, Holm, Tyran, & Wengström, 2013)	Deciding for others reduces loss aversion	N/A	The researcher through a survey has established how the impact of loss aversion can be reduced when decisions are made on behalf of someone else.
10.	(Alquraan, Alqisie, & Shorafa, 2016)	Do Behavioral Finance Factors influence Stock Investment Decisions of Individual Investors? (Evidences from Saudi Stock Market)	The researchers argue that loss aversion has a positive effect on the investors.	The researchers have studied the impact of various psychological biases on the investment decisions made by the investors.

11.	(BIRĀU, 2012)	The impact of behavioral finance on stock markets	N/A	The researcher here argues that behavioral finance is an effective way of understanding financial markets in complementary to traditional finance theories. Both approaches should be used simultaneously and one approach is not better than the other.
12.	(Jahanzeb, Muneer, & Saif-ur-Rehman, 2012)	Implication of Behavioral Finance in Investment Decision-making Process	There is no practical experiment conducted by the researcher, he has merely mentioned the biases.	The researcher has explained the various biases faced by an investor.
13.	(Boda & Sunitha, 2018)	Investor's psychology in investment decision making: a behavioral finance approach	N/A	The study aims at analysing the psychology and rationality of retail investors and how it affects the movement of the market.
14.	(Abdellaoui, Bleichrodt, & Paraschiv, 2007)	Loss Aversion Under Prospect Theory: A Parameter-Free Measurement	N/A	The aim of the study was to measure the loss aversion at an individual level by using non-parametric methods. Sufficient attention is given to prospect theory as an emerging dominant descriptive theory of decision under risk.
15.	(Yazdipour, 2010)	Predicting firm failure: a behavioral finance perspective	N/A	This paper argues that the success or failure of a firm, irrespective of its size, can be more effectively predicted when the heuristics of the entrepreneur are taken into account.
16.	(RICCIARDI, 2008)	The Psychology of Risk: The Behavioral Finance Perspective	N/A	This section provided an overview of the different types of behavioural finance issues faced by investors that influence their risk perception.
17.	(Shiller, 2006)	Tools for Financial Innovation: Neoclassical versus Behavioral Finance	N/A	The researcher has pointed out the two main revolutionary theories in finance and how these theories can be effectively used together.
18.	(KHAN, 2015)	Impact Of Availability Bias And Loss Aversion Bias on Investment Decision Making, Moderating Role of Risk Perception	N/A	The study was conducted to map the effects of availability bias and loss aversion on investment decisions and whether or not these biases affect the risk perception of the investor
19.	(Arora & Kumari, 2015)	Risk Taking in Financial Decisions as a Function of Age, Gender: Mediating Role of Loss Aversion and Regret	The male respondents were almost 4 times the female respondents and therefore accurate conclusions for the impact of gender cannot be drawn	The researchers conducted a survey and then analysed it to measure the effects of age and gender on the risk-taking ability for an investor
20.	(Kandpal & Mehrotra, 2018)	Role of Behavioral Finance in Investment Decision – A Study of Investment Behavior in India	The researchers have not focused on the psychological biases that affect the decisions.	The study conducted aimed at analysing the investment pattern by people from different age groups in India and the various factors that influence their decisions
21.	(Sharma, 2016)	Role of Behavioural Finance in the Financial Market	N/A	This paper was focused on portraying the limitations of traditional finance and the importance of behavioural finance.
22.	(Polman, 2012)	Self-other decision making and loss aversion	Respondents didn't know the person for whom they were making decisions	A series of experiments were conducted by the researcher to analyse the theory that loss aversion reduces when decisions are made for someone else.
23.	(Ainia & Lutfi, 2018)	The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making	The researchers failed to show the effect of loss aversion on the returns	The researchers conducted a survey to analyse the effects of loss aversion, risk tolerance, risk perception and overconfidence on the returns from investing
24.	(Chaudhary, 2013)	Impact of Behavioral Finance in Investment Decisions and Strategies – A Fresh Approach	N/A	This paper focused on the real-life applications of behavioural finance on the markets. Further certain methods are also suggested to control such biases.
25.	(Bortoli, Jr, Goulart, & Campara, 2019)	Personality traits and investor profile analysis: A behavioral finance study	The sample was undergraduate students who had similar characteristics and knowledge.	The researchers collected data through a survey to evaluate whether and how the personality traits of the individuals influence their investment decisions.
26.	(Uniyal, Ranjan, & Mukherjea, 2018)	Coffee Can Investing: The Low-Risk Road to Stupendous Wealth	N/A	The authors highlight the mechanisms of Coffee Can Investing in the Indian markets and how such a portfolio can maximise the returns of a retail investor by investing into high quality companies that continue to deliver high ROCE and revenue growth year after year.
27.	(Mukherjea, 2016)	The Unusual Billionaires	N/A	The author goes into the financial and operating details of 7 Coffee Can Stocks (Asian Paints, HDFC Bank, Axis Bank, Marico, Berger Paints, Page Industries and Astral Poly), highlighting their economic moats and what traits are found common in the management and culture of these companies.

3. Research Methodology

A. Research Gap

After analysing the above research papers, following research gap is observed,

- a. Lack of effective strategies in dealing with Loss Aversion especially in the context of financial markets.
- b. Enough research is not done on Coffee Can Investing yet.

B. Research Objectives

- a. To study the effect of loss aversion on college going students in their investing activities.
- b. To analyze the coffee can style of investing and how it can lead to minimization of the effects of Loss Aversion.

C. Research Methodology

1) Type of Research

Through reading a number of studies on “Loss Aversion” and various books on “Coffee Can Investing”, I have come to a conclusion that majority, if not all, the studies associate that an increase in loss averse behavior may lead to decreasing the profits of an individual when the said person is involved in investing/trading of securities. However, Coffee Can Investing can be useful in providing a mechanism to drastically reduce these effects. In this study, my focus will be on verifying the statement that a majority of the individuals are loss averse. Since I will be testing an already framed hypothesis, I believe “Deductive Research” would be the most appropriate type of research for my topic.

2) Type of Research Design

Non-experimental Survey Research and Descriptive research design were used for this study. Survey research is a systematic research method for collecting data from a representative sample of individuals using instruments composed of closed-ended and/or open-ended questions, observations, and interviews. Since, the population was college students, questions were circulated among them to gather information as to how they infer financial information and take their decisions. This research design helps in understanding the thoughts, behaviors and attitudes of the respondents which was very useful for this study.

Descriptive research design was used for collecting data on Coffee Can Investing and analyzing the data to ensure that it reduces the effects of Loss Aversion.

3) Research Hypothesis

“The majority of individuals involved in trading/investing activities in financial markets are loss averse and Coffee Can Investing can help in reducing such bias.”

4) Population for the research

College going students and other individuals of around the same age who have an interest in financial markets were taken as the population for this research. Since this research took place during the period of lockdown, online methods of communication were opted in order to reach out to them.

5) Sampling considerations

Population – Population refers to any group of people or objects that form the subject of study in a particular survey and are similar in one or more ways. College going students and other individuals of around the same age who have an interest in financial markets were taken as the population for this research study.

Elements – An element comprises a single member of the population. So, each college student would be an element of the study.

Sampling Frame – Sampling frame comprises all the elements of a population with proper identification that is available to us for selection at any stage of sampling. Database was available of the name and roll number of all the students in Symbiosis Centre for Management Studies, Pune belonging to the batch 2019-22. This database was the sampling frame.

Samples – It is a subset of the population. It comprises only some elements of the population. Every student who responded to the questionnaire was a part of the sample of the study.

Sampling Unit – A sampling unit is a single member of the sample. Each student who responded to the questionnaire is considered to be sampling unit.

Sample Size – The population size is of 350, so inputs from a minimum of 50 students is kept as the sample size.

Sampling Error – This error arises when a sample is not representative of the population. Since the responses were collected via online media, the control over the students who responded to the survey was very low. The majority of students may not be familiar with the financial markets or may not have adequate knowledge or etc.

Sampling Techniques – Simple Random sampling technique was followed for the study because of the small size of population of the study. This technique was also followed because it was possible to make a list of the elements in the population.

6) Variables

Since the study is not quantitative in nature, the variables cannot be defined.

7) Scales

Nominal Scale was used for measurement. The respondents were presented different scenarios and on the basis of that, they had to make their financial decision by choosing any one of the options provided. Since these options couldn't be ranked, they were assigned a numerical value which was not comparable. The only arithmetic operations that can be carried out on the Nominal Scale are the count of each category which was useful in determining the attitudes of the majority sample.

8) Instruments

Since the study was done in the period of lockdown as a result of which personal meetings were not possible, a questionnaire was circulated through online media across the population to collect their responses.

9) Tools

The nature of the study being deductive and quantitative, spreadsheet software such as Microsoft Excel was used to represent the data and perform the required analysis.

4. Data Analysis and Interpretation

For the survey, two situations were presented to the respondents to study their behaviour on such situations. One situation was to study the behaviour of the respondents and the action that they will take in a profit earning scenario while the other situation assessed their action in a loss-making scenario.

Situation 1: Would you rather receive Rs. 900 for sure or have a 90% chance at winning Rs. 1000 and 10% chance at nothing?

Situation 2: Would you rather lose Rs. 900 for sure or have a 90% chance at losing Rs. 1000 and 10% chance at losing nothing?

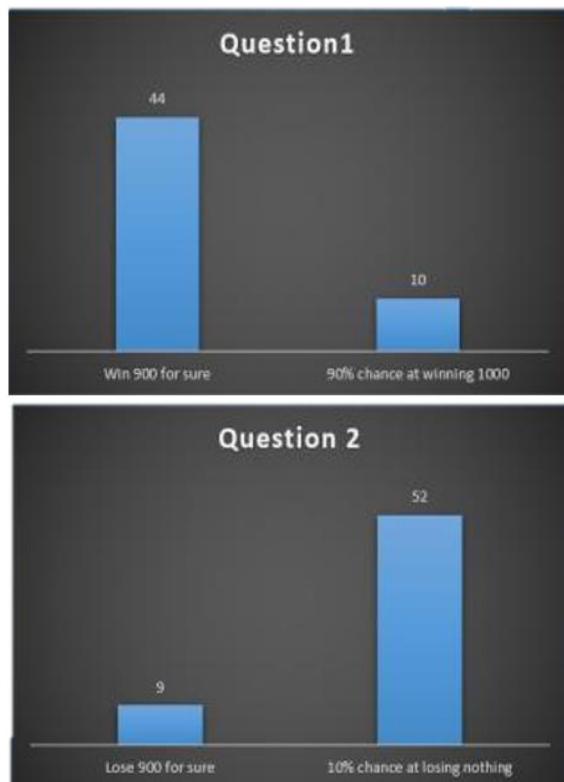


Fig. 1. Questionnaire responses from a survey of 75 finance students/professionals

In Question 1 (Would you rather receive Rs. 900 for sure or have a 90% chance at winning Rs. 1000), 44 out of 54 wanted to gain a sure amount of 900.

In Question 2 (Would you rather lose Rs. 900 for sure or have a 90% chance at losing Rs. 1000 and 10% chance at losing nothing), 52 out of 61 were willing to take a chance of 10% at losing nothing even though they may end up losing 1000.

The gain of 900 is pretty lucrative and most want to assure this. Hence taking a 10% risk at losing everything doesn't seem rational.

Now here is when things get interesting, when the question was presented in terms of losses, suddenly 85% were willing to take the risk!

In theory the amount of pain that is incurred on losing 900 should be equal to the pleasure gained by earning 900 hence, the respondents shouldn't have switched their answers in the second situation. But in reality, the perceived pain of losing 900

was much more than the pleasure of gaining 900. So, the respondents were willing to take the risk to lose nothing even though they could end up losing 1000.

This behaviour when people aren't willing to take a risk at increasing their returns but are willing to do so when it comes to minimizing the losses is known as 'Loss Aversion'.

As per Loss Aversion (in the context of the questions), the pain felt at losing 900 is twice than the pleasure of gaining 900.

5. Findings

A. Loss Averse Behaviour in Investing

So, from the data analysis of the sample in the study, the null hypothesis cannot be rejected and it is justified that the majority of the students in the sample portray a loss averse behaviour which omits them in taking risks for increasing their returns and therefore becomes a possible hurdle in their investing activities.

When a person sells his investment as soon as he/she books a profit in fear of losing the current profits he/she is said to be loss averse. Similarly, a person is loss averse when they decide to hold on to their loss-making investments in hope that these investments may grow up in value in the near future.

Both these scenarios lead to making an unwise financial decision that will obstruct the investor in gaining maximum returns from the investment. A loss averse individual would prefer investing in Gold and Fixed Deposits because these investments are considered to be one of the safest instruments and offer a fixed return without incurring any potential risk. However, a well-informed investor would never entertain the thought of investing every penny in either of these asset classes. The simple reason behind this being that FDs (as on May 2021) offer an interest rate of 4-5 % and gold returns can be expected from anywhere between 5-10% as historically the returns fall within this bracket in a given year. Such returns fail to beat the inflation (the most common measure of inflation in India is Wholesale Price Index which currently stands at 10.5%). Therefore, while FDs and Gold are considered to be a safe investment, especially in India, investing in these assets virtually leads to losing money as they fail to beat inflation. Hence, every investment should at least reap a minimum return of that of inflation.

B. How to reduce loss aversion?

A renowned phrase in trading "Hold on to your gains and cut all your losses" can be helpful in reducing loss averse behaviours.

The way a transaction is structured can have a major effect on how someone perceives a situation. A person's reaction or decisions might be influenced by framing a question in terms of gain or loss. When presented with a decision that may be influenced by loss aversion, try wording the question in a different way to emphasize the transaction's possible gain.

Asking ourselves what the worst outcome would be if the course of action was adopted is a simple method to combat loss aversion. This usually aids individuals in putting loss and the powerful sentiments that come with it into perspective, allowing them to better rationalise whether or not making a

decision is worthwhile.

These are some of the methods that can be used to reduce loss aversion but some of these methods cannot be applied when it comes to investing. For instance, cutting losses is a good strategy but when should you cut your losses? Similarly, for how long should you hold on to your gains before booking them? And since you can't precisely evaluate your losses or gains from an investment, how are you supposed to take a rational decision instead of making an educated guess?

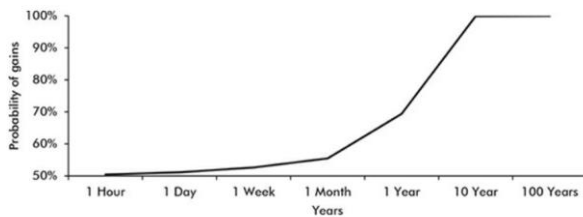
C. Coffee Can Investing

Robert Kirby began his career at Capital in 1965 as the main investment manager of Capital Guardian Trust, where he advised high-net-worth clients on investments and managed their portfolios. He penned a fascinating statement over twenty years later that introduced the world to the concept of the 'Coffee Can Portfolio.'

In a memo written in 1984, Robert Kirby described an incident involving his client's husband. The gentleman had bought the stocks recommended by Kirby in 5000-dollar increments but, unlike Kirby, did not sell anything from the portfolio. Over a ten-year period, this practise (of buying when Kirby bought and not selling afterwards) resulted in huge wealth growth for the client. The majority of the money was created as a result of one position converting to a gigantic holding worth over US\$8,00,000, which resulted from 'a zillion shares of Xerox.' Kirby invented the name "Coffee Can Portfolio" after being impressed by this "buy and forget" approach. The word "coffee can" refers to the Wild West, when Americans stored their possessions in a coffee can and put it under a mattress until the widespread use of banking institutions. (Uniyal, Ranjan, & Mukherjea, 2018).

D. How Coffee Can stocks help in reducing loss aversion and maximizing returns?

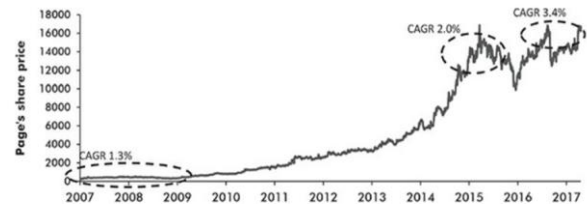
Profitability over a longer period of time is more likely: Equities, as an asset type, are prone to significant short-term volatility, as is well known. While the Sensex, for instance, has delivered over 15% CAGR throughout the last twenty-five years, there have been periodic periods of exceptionally high drawdowns. In 2008, for example, an investor who bought around the market's peak in January would have lost more than 60% of their money in less than a year. Thus, while the chances of benefitting from equities investments are relatively high over longer time horizons, the same cannot be stated for shorter time frames. (Uniyal, Ranjan, & Mukherjea, 2018).



Source: Bloomberg, Ambit Capital
 Fig. 2. Probability of gaining with respect to the period of investment (in years)

The power of compounding: When you hold a stock portfolio for ten years or longer, compounding begins to work its magic. Over time, winning stocks come to dominate the portfolio, while losing stocks continue to decline until they are no longer relevant. As a result, the positive contribution of winners surpasses the detrimental impact of losers, allowing the portfolio to compound handsomely. (Uniyal, Ranjan, & Mukherjea, 2018)

Neutralizing the negative effects of 'noise': The most effective strategy to eliminate the 'noise' that conflicts with sound investment decisions is to invest and hold for the long run. Deep-seated psychological disorders frequently overshadow this commonsense counsel. It's one thing to suggest that we should disregard the market noise; but another to overcome the psychological impacts of such a noise. What investors require is a method that allows them to decrease noise, allowing them to make more sensible decisions. For instance, over the long term, Page's stock price has weathered short-term setbacks to finally compound at a 45 percent CAGR from March 2007 to June 2017.



Source: Bloomberg, Ambit Capital
 Fig. 3. Stock performance of Page Industries for the period 2007-17

However, as seen in the graph above, there have been several long periods in the last 10 years when Page's stock price has not produced outstanding gains (circled in the exhibit above). Despite being flat over these times, Page has outperformed the market in the subsequent years, with a ten-year compounded annualised investment return of 45 percent (from March 2007 to June 2017). At its most basic level, this is why investing for longer time horizons works—once you've found a fantastic franchise and are confident in your ability to hang on to it for a long time, there's no use in trying to schedule your entry or exit perfectly. When you try to time that entry/exit, you face the risk of 'noise' dictating your financial decisions instead of trusting the fundamentals.

Transaction costs: A fund manager who holds a stock portfolio for more than ten years avoids the temptation to buy and sell in the near term. This method lowers transaction costs, which improves total portfolio performance over time. Assume that you invested \$100 million in a hypothetical portfolio. Suppose you churn this portfolio at a rate of 50% annually (implying a normal position is held for 2 years) and it compounds at the same pace as the Sensex Index. Over a ten-year period, assuming a total price impact cost and brokerage cost of 100 basis points for each trade, this portfolio would earn a CAGR of 13.3 percent. The identical portfolio, if left alone, would have delivered 14.5 percent CAGR returns. Over a ten-year period, this translates to nearly 9% of the final corpus

(about US\$35 million in value terms) being lost to churn. Due to significant turnover, a US\$100 million portfolio that would have grown to US\$382 million over ten years actually grows to US\$347 million. The rewards that the broking community obtains for assisting the investor in churning his portfolio account for the shortfall in the return. (Uniyal, Ranjan, & Mukherjea, 2018)

E. Shortlisting Coffee Can stocks in India

To shortlist Coffee Can Stocks in India, utilize the following basic investment filters. To begin, limit your search to companies with a minimum market value of Rs. 100 crore, as data on companies with lesser market capitalizations is dubious. In India, there are approximately 1500 publicly traded companies having a market capitalization of more than Rs. 100 crore. Then seek for companies that have grown revenue by at least 10% each year over the last decade while also achieving a Return on Capital Employed (pre-tax) of at least 15%. (Uniyal, Ranjan, & Mukherjea, 2018)

What is Return on Capital Employed (ROCE) and why is it important? A business invests money in assets, which create cash flow and profits. The company's entire capital is made up of both equity and debt. ROCE is a metric that assesses a company's capital mobilization efficiency. It is measured as the ratio of EBIT in the numerator to capital employed (the total of loan liabilities and shareholder's equity) in the denominator. The greater the ROCE, the more efficient the firm's capital allocation.

Why would you use a 15% ROCE filter? A minimum return of 15% is recommended because that is the very minimum required to beat the cost of capital. When the risk-free rate (8 percent in India) is added to the equity risk premium of 6.5 to 7%, the cost of capital falls within that range. To compensate for India's credit rating, the equity risk premium is computed as 4% (the long-term US equities risk premium) plus 2.5 percent (BBB-as per S&P). The risk premium is affected by a country's credit rating, as a higher rating (e.g. AAA, AA) suggests better economic stability of a country, lowering the risk premium for investing in that country, and vice versa.

Why do you have to employ a 10% sales growth filter every year? Over the last ten years, India's nominal GDP growth rate has averaged 13.8%. Nominal GDP growth differs from real GDP growth in that it is not adjusted for inflation, whereas real GDP growth is. In simple terms, it is (GDP) measured at current market prices (GDP being the monetary value of all finished products and services produced inside a country's borders during a certain period of time). A competent company operating in India should be able to achieve annual revenue growth of at least that much. However, just a few publicly traded corporations have been able to do so. As a result, this threshold value is lowered to 10% i.e., look for companies that have grown their sales by at least 10% per year for the past ten years.

Modify the ROE and sales growth filters for financial services stocks as follows. A 15% return on equity, ROE is preferred over Return on Assets because it is a more accurate indicator of a bank's (or other lender's) potential to earn better

income on a given equity capital basis over time. Loan growth of at least 15%, given that India's nominal GDP growth has averaged 13.8 percent over the last 10 years, loan growth of at least 15% indicates the ability of a bank to lend across economic cycles. Strong lenders fare better during downturns, as their competitive advantages in sourcing lending opportunities, credit appraisal, and loan collection ensure that they can keep growing profitably either through market share gains or by raising the stakes in sectors that are more resilient during a slump. (Uniyal, Ranjan, & Mukherjea, 2018).

6. Discussion

A. Coffee Can Portfolio historic returns for the period 2000-2017

The following tables summarize the back testing of the Coffee Can Stocks. The back testing has been divided into two sections, portfolios which have competed their tenure of 10 years and portfolios which haven't. These portfolios consist of companies which fit into the criteria of Coffee Can style of investing by managing to deliver high ROCE and revenue growth for at least a 10-year period (some of these companies have been highlighted in the next section). These companies also have a proven management and Board of Directors who are professionally appointed (as compared to appointing family members and friends which is not so uncommon). These companies believe in hiring the best talents of the country and providing them an environment to grow by providing them authority and responsibility to execute various projects so that they can take on leading positions in the company in future. For instance, Asian Paints are well recognized within the industry for providing an attractive employee culture. They believe in recruiting from the top IIM's and even though they don't provide the best packages, they have managed to retain these talents by enabling them to grow and thrive in a sustainable environment. Amit Syngle, the current MD/CEO of the company, joined the company as a management trainee and after 29 years of service was promoted to his current post. Amit Syngle's journey portrays the belief of management in rewarding employees and promoting professional hiring throughout the organization. (Mukherjea, 2016).

Table 2

Results of back-testing of the completed eight iterations of the Coffee Can Portfolio (i.e., these portfolios have run their complete course of ten years)

Kick-off year	All-cap (start)	All-cap (end)	CAGR Return	Outperformance relative to Sensex	Large Cap (start)	Large Cap (end)	CAGR Return	Outperformance relative to Sensex
2000	500	3831	22.6%	6.6%	400	3338	23.6%	7.6%
2001	600	9802	32.2%	11.7%	300	3622	28.3%	7.8%
2002	800	7631	25.3%	5.1%	500	4176	23.6%	3.5%
2003	900	10,117	27.4%	7.2%	600	7790	29.2%	9.0%
2004	1,000	16,480	32.7%	12.9%	500	3660	22.0%	2.3%
2005	900	6659	22.2%	6.0%	500	2976	19.5%	3.4%
2006	1,000	6376	20.4%	9.0%	600	2918	17.1%	3.7%
2007	1,500	9030	19.7%	10.4%	1000	4690	16.7%	7.4%

Source: Bloomberg, Capitaline, Ambit Capital

Note: Portfolio at start denotes an equal allocation of Rs 100 for the stocks qualifying to be in the CCP for that year. Each portfolio kicks off on 1 July of the kick-off year and ends ten years later.

B. Detailed Coffee Can Portfolio for the period of 2015-2017

The following Coffee Can Portfolios are the latest portfolios which have been disclosed by Saurabh Mukherjea, founder and Chief Investment Officer of Marcellus Investment Managers.

As on 2017, the 2015 portfolio has provided a CAGR of 17.7% and outperformed the BSE Index by 11.1% and the 2016 portfolio has provided a CAGR of 18.1% and outperformed the BSE Index by 2.8%.

Since this data was recorded at 2017, data for the returns of the 2017 portfolio is not available

Table 3

Results of back-testing of the incomplete nine iterations of the Coffee Can Portfolio (i.e., these iterations have not run their complete course of ten years)

Kick-off year	All-cap (start)	All-cap (end)	CAGR Return	Outperformance relative to Sensex	Large Cap (start)	Large Cap (end)	CAGR Return	Outperformance relative to Sensex
2008	1100	6471	21.8%	10.0%	800	3808	18.9%	7.1%
2009	1100	5657	22.7%	11.2%	900	3264	17.5%	6.0%
2010	700	2621	20.8%	10.7%	300	1041	19.4%	9.3%
2011	1400	3105	14.2%	3.9%	400	1037	17.2%	6.9%
2012	2200	6650	24.8%	10.9%	500	1165	18.4%	4.6%
2013	1800	5709	33.5%	19.7%	600	1438	24.4%	10.7%
2014	1700	3424	26.3%	18.1%	700	1322	23.6%	15.4%
2015	2000	2772	17.7%	11.2%	1,200	1504	11.9%	5.4%
2016	1700	2009	18.1%	2.8%	800	981	22.6%	7.3%

Source: Bloomberg, Capitaline, Ambit Capital

Note: Portfolio at start denotes an equal allocation of Rs 100 for the stocks qualifying to be in the CCP for that year. The portfolio kicks off on 1 July of the kick-off year. CAGR returns for portfolios since 2008 have been calculated till 30 June 2017.

Table 4
Portfolio performance of CCP 2015

Stock	Total Shareholder Return (TSR)* CAGR	PAT CAGR FY 2015-17	Contribution to portfolio value at start	Contribution to portfolio value at end
eClerx Services	8.7%	24.1%	5%	4%
Astral Poly	32.9%	38.0%	5%	6%
GRUH	31.6%	20.6%	5%	6%
Finance V-Guard	64.8%	46.4%	5%	10%
Industries LIC Housing	29.4%	17.9%	5%	6%
Finance HCL	-2.4%	8.6%	5%	3%
Technologies Berger Paints	32.3%	33.7%	5%	6%
Marico	20.2%	18.0%	5%	5%
Page	6.1%	16.5%	5%	4%
Industries Axis Bank	-4.6%	-27.1%	5%	3%
Amara Raja	-2.0%	7.9%	5%	3%
Batteries Britannia	16.9%	13.3%	5%	5%
Industries Cadila	21.3%	13.8%	5%	5%
Healthcare GlaxoSmith Consumer Healthcare	-6.1%	6.1%	5%	3%
Colgate-Palmolive	5.1%	1.6%	5%	4%
Lupin	-24.5%	3.2%	5%	2%
Cera	20.5%	19.9%	5%	5%
Sanitaryware ITC	26.8%	3.2%	5%	6%
HDFC Bank	25.5%	19.4%	5%	6%
Asian Paints	21.4%	17.9%	5%	5%
Total	17.7%		100%	100%
Portfolio Sensex TSR*	6.5%			

Source: Bloomberg, Ambit Capital

Note: Value at start denotes an equal allocation of Rs 100 in each stock at the start of the period. Value at end is the value of each stock at the end of the period. Thus, for this period, the value of the portfolio rose from Rs 2000 at the start to Rs 2772 at the end. *Total Shareholder Return (TSR) and Sensex TSR include dividend received and reinvested.

Table 5
Portfolio performance of CCP 2016

Stock	Total Shareholder Return (TSR)* CAGR	PAT CAGR FY 2016-17	Contribution to portfolio value at start	Contribution to portfolio value at end
eClerx Services	-7.8%	-2.5%	6%	5%
Astral Poly	41.8%	43.3%	6%	7%
GRUH	58.6%	21.8%	6%	8%
Finance LIC Housing	50.4%	16.5%	6%	7%
Finance HCL	19.8%	17.6%	6%	6%
Technologies Relaxo	-3.0%	2.2%	6%	5%
Footwear Repco Home	7.3%	21.8%	6%	5%
Finance Page Industries	19.9%	15.0%	6%	6%
Axis Bank	-3.8%	-52.7%	6%	5%
Amara Raja	-2.5%	-2.7%	6%	5%
Batteries Britannia	32.3%	7.3%	6%	7%
Industries Cadila	61.1%	-23.1%	6%	8%
Healthcare Lupin	-31.5%	13.1%	6%	3%
Cera	20.6%	16.6%	6%	6%
Sanitaryware HDFC Bank	41.6%	19.2%	6%	7%
Asian Paints	11.0%	11.1%	6%	6%
Dr Lal PathLabs	-7.3%	16.5%	6%	5%
Total Portfolio	18.1%		100%	100%
Sensex TSR*	15.3%			

Source: Bloomberg, Ambit Capital

Table 6
Portfolio performance of CCP 2017

Company Name	Amount Invested (Rs)	Market Cap (Rs Cr)	Market Cap (\$ Mn)
HDFC Bank	100	4,55,427	71,160
HCL Technologies	100	1,21,180	18,934
Lupin	100	44,633	6,974
LIC Housing Finance	100	33,505	5,235
Page Industries	100	19,581	3,059
GRUH Finance	100	18,486	2,888
Amara Raja Batteries	100	13,355	2,087
Abbott India	100	9,054	1,415
Astral Poly	100	8,204	1,282
Dr Lal PathLabs	100	6,682	1,044
Repco Home Finance	100	4,064	635
Muthoot Capital Services	100	729	114

Source: Ambit Capital, Bloomberg. Market capitalization data is as on 30 August 2017.

7. Conclusion and Recommendations

It is evident that the research done under behavioural finance has increased in the last decade. A lot of research is focused on the impact of various biases on investment decisions and how these biases can be minimized. Coffee Can Investing in Indian markets is not discussed in detail yet. It would be beneficial to do an extensive research on this topic as it provides an effective mechanism to maximise returns and minimise risks.

Loss aversion is a cognitive bias that describes why, for individuals, the pain of losing money is psychologically twice as powerful as the pleasure of gaining. Loss aversion can significantly impact our own decisions and lead to bad decision-making. As individuals, it's evident that we don't want to incur losses. But the fear of incurring losses prevents individuals from taking even well-calculated risks, with potential for worthwhile returns.

Loss-aversion is particularly common concerning how we spend and manage our own money. Financial decisions can be particularly impactful to our lives, and if an individual cannot make sound, calculated decisions with their finances, their choices can be detrimental. The basic principle of loss aversion can explain why penalty frames are sometimes more effective than reward frames in motivating people (Gächter *et al.*, 2009) and has been applied in behaviour change strategies.

Coffee Can style of Investing can be effectively used to minimise the negative impacts of Loss Aversion. While analysing stocks using this method, past 10-year performance of a company is taken into consideration which helps in understanding the business model of a company and study how it performs not only during periods of boom but also during economic slowdown. Coffee Can stocks usually are able to avoid huge losses during recession and also recover at a better rate when compared to the Nifty index. Investing on these stocks will be solely on the basis of your analysis and not because of market noise.

Further, a 10-year lock in period (should be at least a minimum of 5 years) means that once invested, you should not disinvest for at least the lock in period. This relieves a retail investor from checking up on his investment on a daily basis and getting confused as to whether he/she should hold on to the gains or cut his losses. This 10 Year lock in period is suitable in the context in Indian financial markets as this is a sufficient window to enjoy the bull runs in the economy as well as sustain any economic slowdown. This period also allows the retail investor to enjoy the compounding effects on the investment.

Hence, after identifying an investment opportunity and then holding on to it for at least the duration of the lock in period helps in minimization of the effects of Loss Aversion by maximizing the returns and minimizing the risks undertaken. The retail investor doesn't need to worry about when to book the losses and when to reap the gains when the tenure of investment is fixed, this frees him/her up from analysing the day-to-day movement of the share price which is almost impossible if not impossible (as the share price is a function of not only the financial performance of the company but also the investor sentiments, expected growth, demand of the shares and various other factors). If you would know that the share price is going to increase tomorrow you would never sell your investment and if you would know that it is going to decrease the next day you would never buy it. As this is impossible to know, it doesn't make sense for a long-term investor to keep a track of the daily returns of the investment instead, the retail investor should be more focused on the quarterly and annual reports of the company.

Coffee Can Investing still remains a topic which is not researched about enough, especially for the Indian markets. Future studies can be done on understanding the effects of Behavioural Finance on long-term investors, analysing the performance of Coffee Can companies with respect to a benchmark, analysing the metrics used to identify the Coffee Can companies – how accurate are these measures in providing a clear picture about a company. Another field of study could be research on the various strategies that can be implemented

by retail investors who have limited capital in order to maximize their returns.

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