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ONE HUNDRED DOLLARS NOW OR A HALF MILLION DOLLARS LATER?

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One Hundred Dollars Now or A Half Million Dollars Later?

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Introduction

Most people do not think about retirement savings early enough and miss years of compound interest earnings (Figure 1). The prospect of millions of seniors living well below the poverty level is not ideal. The purpose of our study is to determine if different methods of envisioning the future can prompt millennials to increase their savings early in life.

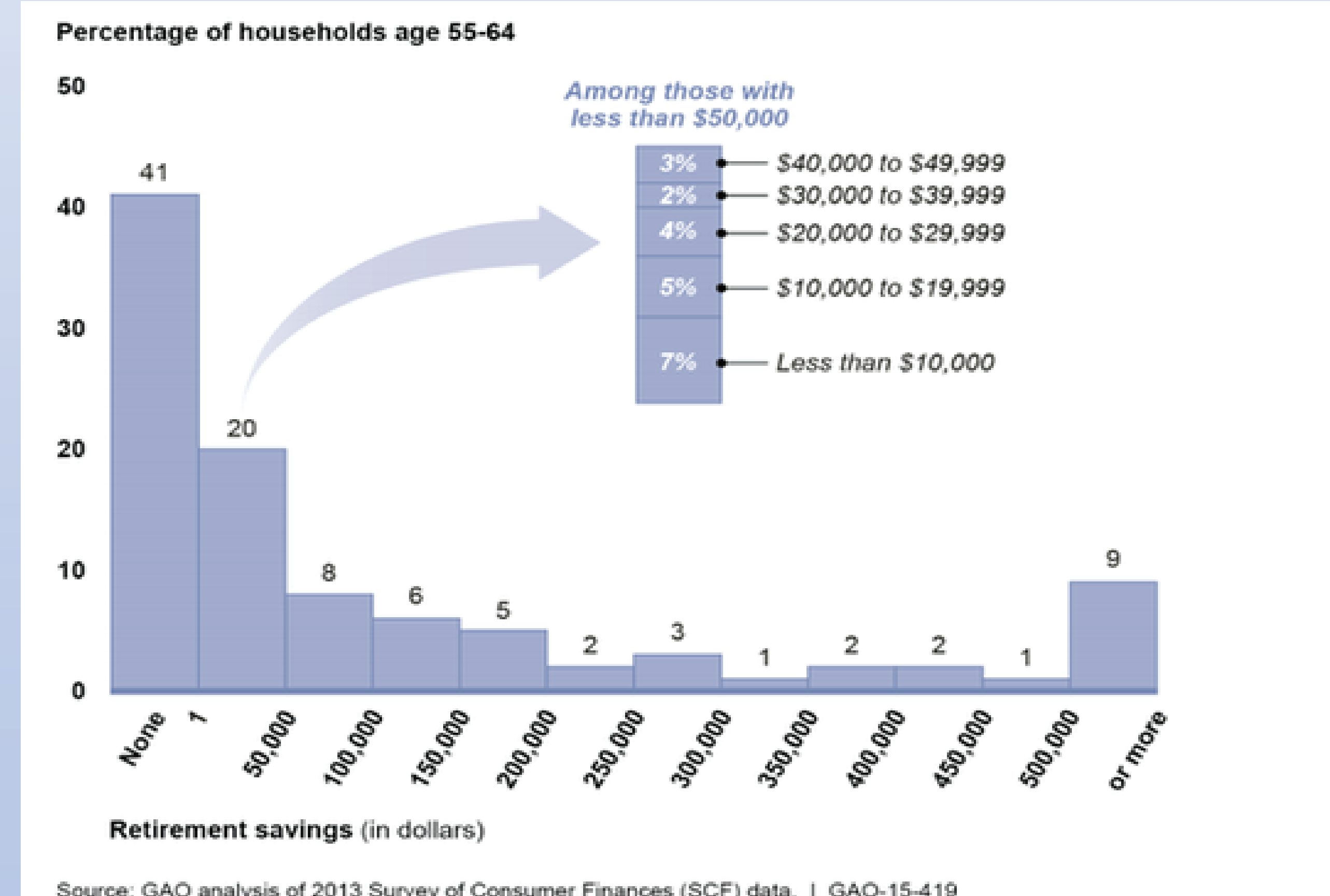


Figure 1. Distribution of Retirement Savings Amounts among Households Age 55-64

Many of us use Forecasting to determine how much you could accumulate with a set monthly savings rate. As an alternative, land-use planners use a Backcasting approach to envision future scenarios (How much money do I need to live comfortably in retirement) to look backward from the future state and easily identify strategies to achieve those goals. Both land use management and retirement planning require trade-offs between short-term sacrifices and long-term gains; therefore, we want to see how each of these approaches influences their decision in financial investment.

H: A backcasting mindset will result in higher savings than a forecasting mindset

Methodology

Study 1:

Subjects: 71 Students enrolled in a Personal Finance course at Augustana College.

Manipulation: Subjects were randomly assigned students to either backcasting or forecasting mindset based upon survey questions from Ebert, 2009.

Dependent Variable: An investment question offering them options to be paid now or save a portion of their payment for two weeks and receive a higher return. The students were compensated for their participation for at least \$2. In a second survey two weeks later, subjects were assigned into the other mindset and again offered the same investment question.

Study 2:

Subjects: 41 random students walking by the College coffee lounge.

Manipulation: Half of the students were randomly assigned to either backcasting or forecasting mindset.

Dependent Variable: Similar to Study 1 for 20 of the subjects. For the remaining 20, we expressed the investment question amount into the percentage of interest they will earn ("Receive \$1 now and earn 150% interest per week") compared to the number of dollar ("Receive \$1 now and \$3 later"). This group was only surveyed once, but they had to return to the coffee lounge the following week to receive the rest of their payment.

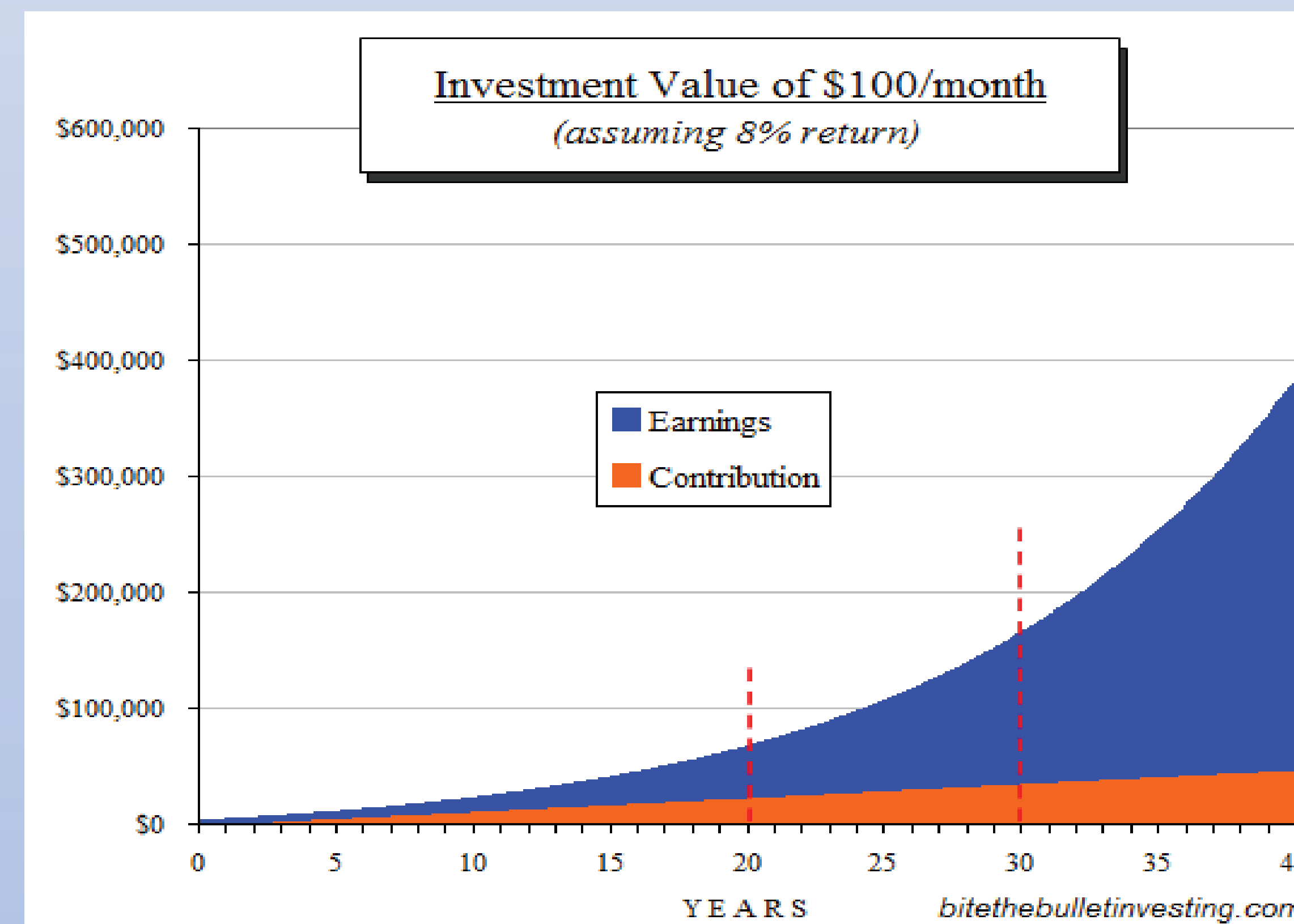


Figure 2 & 3. Backcasting vs Forecasting visual example

Results & Discussion

Study 1: Out of 71 participants, 7 were removed for not coming back for the second survey.

Manipulation Check: Five common questions following the manipulation questions were used as a manipulation check. Paired-sample t-tests were conducted and we found that two questions show significant differences between backcasting and forecasting mindsets: Question 9 ("How do you feel about the results of the previous term at school?"), and Question 11 ("How would you rate your performance in school by far?"). This provides a weak indication of a successful manipulation.

Hypothesis Tests: T-tests indicate no significant difference in mean current payment between backcasters and forecasters. Similarly, there was not a significant difference between two conditions in the second round of surveys. We also did not find any significant difference in the course sample between week 1 and week 2.

Discussion: We considered possible three possible factors that may have resulted in our results. One, because the class was primarily business majors, they may have been more conscious of quantitative decision. In addition, because we conducted the surveys during class time, this may have implied greater possibility that they would receive their money at the time of the second survey.

Study 2:

Manipulation Check: We found a significant difference between mean amount people receive between the two conditions in the percentage sample, percentage backcast (M=1.2, SD=.42), percentage forecast (M=1.6, SD=.52), $t(18)=-1.89$, $p=.074$. It shows that our manipulation was partially successful (see Figure 4)

Hypothesis Tests: There was no significant difference in the mean amount subjects wanted to receive now between the dollar value lounge sample and the course sample in the first week. However, we did notice more variety in the money received now between the dollar lounge group and the percentage lounge group. For dollar sample (M=1.26, SD=.43), and for percentage sample (M=1.4, SD=.50). Although this is not a significant differ-

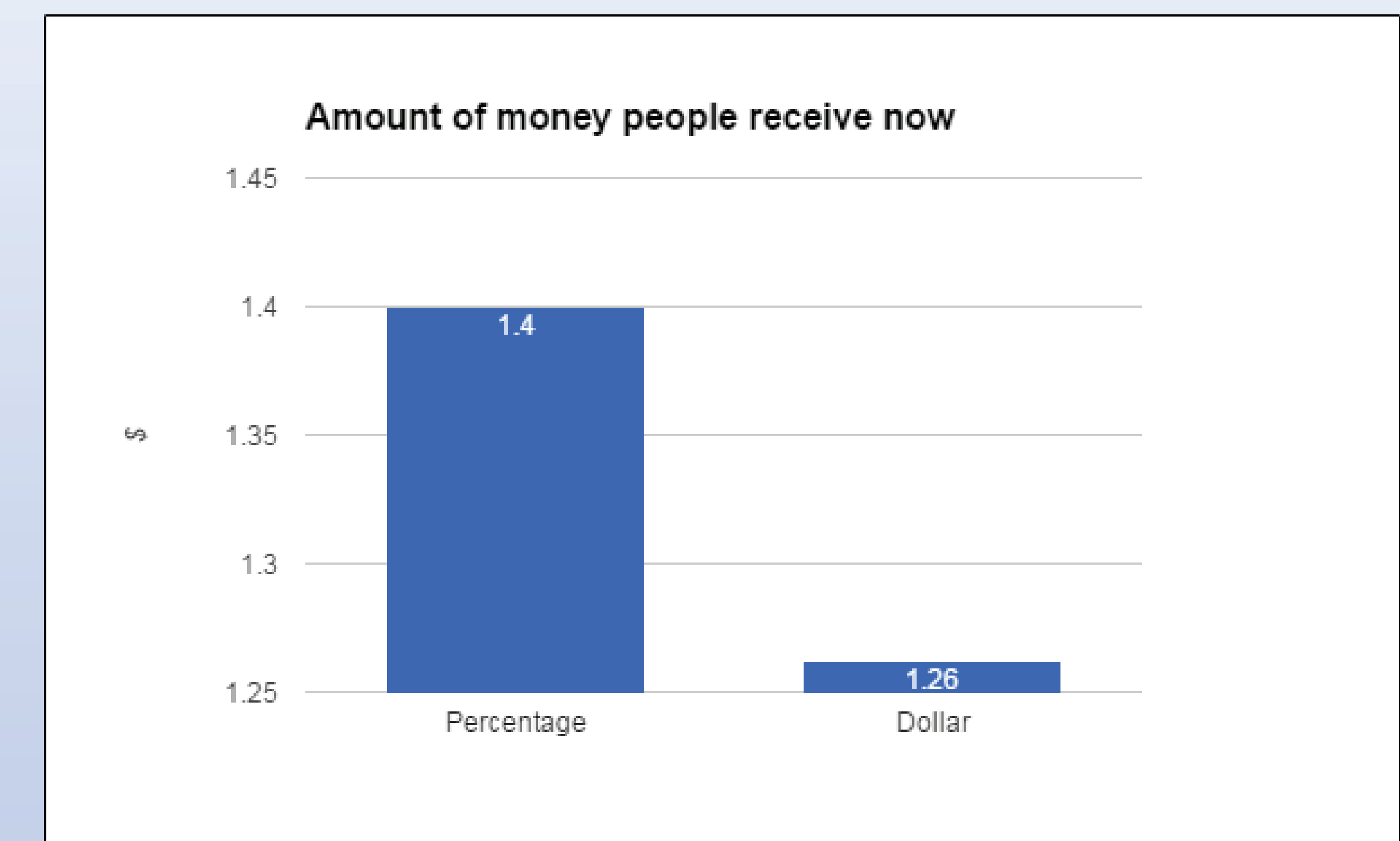


Figure 4. Mean difference of the amount of money people receive now

ence ($t(39)=.948$, $p=.349$), given our small lounge sample size (20 people each sample group), we feel this is a path to pursue in future research.

Figure 5 shows that there is a larger difference in the investment between backcasters and forecasters in the lounge sample than in the course sample, although not quite significant. This means that in the lounge setting, people who were in the backcasting mode chose to receive less money now to earn higher interest rate than people who are in forecasting mode. This may have been due to a more diverse group of students, and the increased element of risk involved in receiving the future payment. Because these factors more closely replicate the real world of retirement planning, we will continue to pursue similar samples in future research.

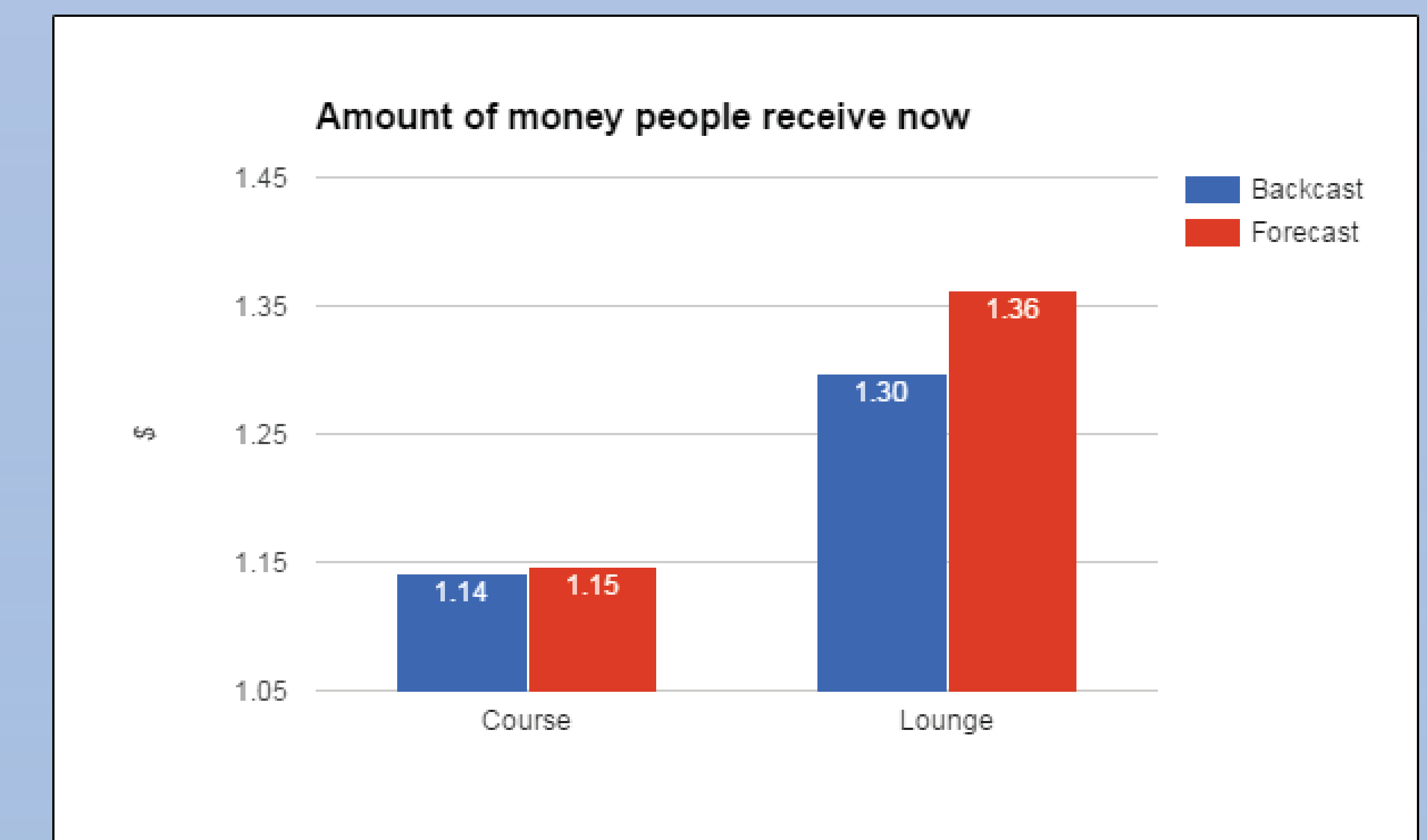


Figure 5. Mean difference between backcasting and forecasting

Conclusion

Our initial experiments provide some initial support for the importance of envisioning a future scenario in the willingness to make a current sacrifice for some future gain. Future research will explore using videos to produce stronger manipulations, incorporating some level of risk for the future return, and sampling a diverse group of millennials. Hopefully this stream of research will enable marketers of financial savings and investment product to develop impactful marketing campaigns to reach young investors before it is too late.

References

- EBERT, J. J., GILBERT, D. T., & Wilson, T. D. (2009). Forecasting and Backcasting: Predicting the Impact of Events on the Future. *Journal of Consumer Research*, 36(3), 353-366.
- Figure 1. Distribution of Retirement Savings Amounts among Households Age 55- 64. GAO analysis of 2013 SCF data, retrieved from <http://www.gao.gov/assets/680/670153.pdf>
- Figure 2. In an ING campaign, bright orange numbers represent the money people need for retirement. Reprinted from <http://www.nytimes.com/2008/03/13/business/media/13aco.html>
- Figure 3. <http://www.getrichslowly.org/blog/2015/10/13/starting-to-save-for-retirement-at-40/>

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