

References

- Ameriks, J., & Zeldes, S. P. (2004). How do household portfolio shares vary with age? Working paper, *Columbia University Graduate School of Business*, 1-87. Retrieved from https://www0.gsb.columbia.edu/mygsb/faculty/research/pubfiles/16/Ameriks_Zeldes_age_Sept_2004d.pdf
- Anderson, L. R., & Mellor, J. M. (2008). Predicting health behaviors with an experimental measure of risk preference. *Journal of Health Economics*, 27, 1260-1274. Retrieved from https://www.researchgate.net/profile/Jennifer_Mellor2/publication/5229940_Predicting_Health_Behaviors_with_an_Experimental_Measure_of_Risk_Preference/links/54105c060cf2df04e75d4c36/Predicting-Health-Behaviors-with-an-Experimental-Measure-of-Risk-Preference.pdf
- Benartzi, S., & Thaler, R. H. (1995). Myopic loss aversion and the equity premium puzzle. *Quarterly Journal of Economics*, 110 (1), 73–92. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.522.6508&rep=rep1&type=pdf>
- Goldstein, D. G., Johnson, E. J., & Sharpe, W. F. (2008). Choosing outcomes versus choosing products: Consumer-focused retirement investment advice. *Journal of Consumer Research*, 35(3), 440-456. Retrieved from <http://www.jstor.org/stable/10.1086/589562>
- Hibbard, D. R., & Buhrmester, D. (2010). Competitiveness, gender, and adjustment among adolescents. *Sex Roles*, 63, 412-424. Retrieved from http://s3.amazonaws.com/academia.edu.documents/2603771/Hibbard_and_Buhrmester_Sex_Roles_Article.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1488589475&Signature=y6Wz7%2FNCim5GARYgoq%2ByU48pWzg%3D&response-content-

disposition=inline%3B%20filename%3DCompetitiveness_Gender_and_Adjustment_Am.pdf

Holt, C. A., & Laury, S. K. (2002). Risk aversion and incentive effects. *The American Economic Review*, 92(5), 1644-1655.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, 47(2), 263-292. Retrieved from <http://hassler-j.iies.su.se/COURSES/NewPrefs/Papers/KahnemanTversky%20Ec%2079.pdf>

Levin, I. P., Schneider, S. L., & Gaeth, G. J. (1998). All frames are not created equal: A typology and critical analysis of framing effects. *Organizational Behavior and Human Decision Processes*, 76(2), 149–188. Retrieved from http://worthylab.tamu.edu/Courses_files/03_Levinetal_1998.pdf

Mudrack, P. E., Bloodgood, J. M., & Turnley, W. H. (2011). Some ethical implications of individual competitiveness. *Journal of Business Ethics*, 108, 347-359. Retrieved from https://www.researchgate.net/profile/William_Turnley/publication/254426814_Some_Ethical_Implications_of_Individual_Competitiveness/links/00b7d52a0e2dea117d000000.pdf

Rothman, A. J., & Salovey, P. (1997). Shaping perceptions to motivate healthy behavior: The role of message framing. *Psychological Bulletin*, 121(1), 3-19. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.385.3819&rep=rep1&type=pdf>

Smither, R. D., & Houston, J. M. (1992). The nature of competitiveness: The development and validation of the competitiveness index. *Educational and Psychological Measurement*, 52, 407-418.

Tversky, A., & Kahneman, D. (1986). The behavioral foundations of economic theory: Rational choice and the framing of decisions. *The Journal of Business*, 59(4), part 2, 251-278.

Retrieved from

<http://pages.ucsd.edu/~cmckenzie/TverskyKahnemanFramingDecisions1986.pdf>

Tversky, A., & Kahneman D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323. Retrieved from

http://psych.fullerton.edu/mBIRNBAUM/psych466/articles/Tversky_Kahneman_JRU_92.pdf

Yi, S., & Baumgartner, H. (2008). Motivational compatibility and the role of anticipated feelings in positively valenced persuasive message framing. *Psychology & Marketing*, 25(11),

1007-1026. Retrieved from [http://web.a.ebscohost.com.er.lib.k-](http://web.a.ebscohost.com.er.lib.k-state.edu/ehost/pdfviewer/pdfviewer?sid=419cd265-ba56-4c86-bd4a-bdee8b66c10b%40sessionmgr4010&vid=1&hid=4209)

[state.edu/ehost/pdfviewer/pdfviewer?sid=419cd265-ba56-4c86-bd4a-bdee8b66c10b%40sessionmgr4010&vid=1&hid=4209](http://web.a.ebscohost.com.er.lib.k-state.edu/ehost/pdfviewer/pdfviewer?sid=419cd265-ba56-4c86-bd4a-bdee8b66c10b%40sessionmgr4010&vid=1&hid=4209)

Appendix A

Imagine that, when you started at your new job, you have to decide how to allocate retirement contributions you and your company are making to your company-sponsored retirement account. You're depositing 5% of your income, and the company is giving a 5% matching contribution, which comes to about \$5,000 a year. You ask a financial advisor from the company running the retirement account for advice on how to allocate the money. After going through some background information, the financial advisor says, "Here's my suggestion that I think will meet your needs and help you retire comfortably. Put some or all of the money in an emerging markets fund. There's a chance you could earn around 15% return on your investment. But there's also a chance you could lose around 15%. To put that in perspective for you, most investments are in the range of gaining or losing about 6%. So the risk is pretty high. The other is an index fund that typically matches what the markets do (if the Nasdaq goes up, the fund does too). How you invest your money is up to you. The emerging markets fund is high risk, but it could be worth it. You'd be able to retire comfortably and meet your needs. You tell me how much you'd like to put in the emerging markets fund, and we'll put the rest in the index fund."

Directions: Please indicate how much of the \$5,000 you would place in the emerging markets fund. Whatever you don't invest in the emerging markets fund will be placed in the index fund.

1. \$ _____
2. What could the return on your investment in the emerging markets fund be?
 - a. 15%
 - b. 7%
 - c. 3%

Imagine that, when you started at your new job, you have to decide how to allocate retirement contributions you and your company are making to your company-sponsored retirement account. You're depositing 5% of your income, and the company is giving a 5% matching contribution, which comes to about \$5,000 a year. You ask a financial advisor from the company running the retirement account for advice on how to allocate the money. After going through some background information, the financial advisor says, "Here's my suggestion that I think will meet your needs and help you retire comfortably. Put some or all of the money in an emerging markets fund. There's a chance you could earn around 7% return on your investment. But there's also a chance you could lose around 3%. To put that in perspective for you, most investments are in the range of gaining or losing about 6%. So the risk is pretty low. The other is an index fund that typically matches what the markets do (if the Nasdaq goes up, the fund does too). How you invest your money is up to you. The emerging markets fund is low risk, but it could be worth it. You'd be able to retire comfortably and meet your needs. You tell me how much you'd like to put in the emerging markets fund, and we'll put the rest in the index fund."

Directions: Please indicate how much of the \$5,000 you would place in the emerging markets fund. Whatever you don't invest in the emerging markets fund will be placed in the index fund.

1. \$ _____
2. What could the return on your investment in the emerging markets fund be?
 - a. 15%
 - b. 7%
 - c. 3%

Imagine that, when you started at your new job, you have to decide how to allocate retirement contributions you and your company are making to your company-sponsored retirement account. You're depositing 5% of your income, and the company is giving a 5% matching contribution, which comes to about \$5,000 a year. You ask a financial advisor from the company running the retirement account for advice on how to allocate the money. After going through some background information, the financial advisor says, "Here's my suggestion that I think will help you beat the market and come out on top. Put some or all of the money in an emerging markets fund. There's a chance you could earn around 15% return on your investment. But there's also a chance you could lose around 15%. To put that in perspective for you, most investments are in the range of gaining or losing about 6%. So the risk is pretty high. The other is an index fund that typically matches what the markets do (if the Nasdaq goes up, the fund does too). How you invest your money is up to you. The emerging markets fund is high risk, but it could be worth it. You could beat the market and have more money than most people will in their retirement. You tell me how much you'd like to put in the emerging markets fund, and we'll put the rest in the index fund."

Directions: Please indicate how much of the \$5,000 you would place in the emerging markets fund. Whatever you don't invest in the emerging markets fund will be placed in the index fund.

1. \$ _____
2. What could the return on your investment in the emerging markets fund be?
 - a. 15%
 - b. 7%
 - c. 3%

Imagine that, when you started at your new job, you have to decide how to allocate retirement contributions you and your company are making to your company-sponsored retirement account. You're depositing 5% of your income, and the company is giving a 5% matching contribution, which comes to about \$5,000 a year. You ask a financial advisor from the company running the retirement account for advice on how to allocate the money. After going through some background information, the financial advisor says, "Here's my suggestion that I think will help you beat the market and come out on top. Put some or all of the money in an emerging markets fund. There's a chance you could earn around 7% return on your investment. But there's also a chance you could lose around 3%. To put that in perspective for you, most investments are in the

range of gaining or losing about 6%. So the risk is pretty low. The other is an index fund that typically matches what the markets do (if the Nasdaq goes up, the fund does too). How you invest your money is up to you. The emerging markets fund is low risk, but it could be worth it. You could beat the market and have more money than most people will in their retirement. You tell me how much you'd like to put in the emerging markets fund, and we'll put the rest in the index fund."

Directions: Please indicate how much of the \$5,000 you would place in the emerging markets fund. Whatever you don't invest in the emerging markets fund will be placed in the index fund.

1. \$ _____
2. What could the return on your investment in the emerging markets fund be?
 - a. 15%
 - b. 7%
 - c. 3%

Directions: For each question below, you're presented with two options (A or B). Each option shows the odds of winning a certain dollar amount. Please choose which option (A or B) you would prefer by placing an X in the column to the left of your desired option.

	Option A		Option B
	10% chance of winning \$2.00, and a 90% chance of winning \$1.60		10% chance of winning \$3.85, and a 90% chance of winning \$0.10
	20% chance of winning \$2.00, and an 80% chance of winning \$1.60		20% chance of winning \$3.85, and 80% chance of winning \$.10
	30% chance of winning \$2.00, and 70% chance of winning \$1.60		30% chance winning \$3.85, and 70% chance of winning \$.10
	40% chance of winning \$2.00, and 60% chance of winning \$1.60		40% chance of winning \$3.85, and 60% chance of winning \$.10
	50% chance of winning \$2.00, and 50% chance of winning \$1.60		50% chance of winning \$3.85, and 50% chance of winning \$.10

	60% chance of winning \$2.00, and 40% chance of winning \$1.60		60% chance of winning \$3.85, and 40% chance of winning \$.10
	70% chance of winning \$2.00, and 30% chance of winning \$1.60		70% chance of winning \$3.85, 30 % chance winning \$.10
	80% chance of winning \$2.00, 20% chance of winning \$1.60		80% chance of winning \$3.85, and 20% chance of winning \$.10
	90% chance of winning \$2.00, and 10% chance of winning \$1.60		90% chance of winning \$3.85, and 10% chance of winning \$.10
	100% chance of winning \$2.00, and 0% chance of winning \$1.60		100% chance of winning \$3.85, and 0% chance of winning \$.10.

Directions: Please select the degree (1-5) to which you agree (1= strongly disagree, 3= neutral, 5= strongly agree) with the following 20 questions.

	SD	D	N	A	SA
1) I like competition.	1	2	3	4	5
2) I find competitive situations unpleasant.	1	2	3	4	5
3) I don't like competing against other people.	1	2	3	4	5
4) I enjoy competing against an opponent.	1	2	3	4	5
5) I try to avoid competing with others.	1	2	3	4	5
6) I get satisfaction from competing with others.	1	2	3	4	5
7) I dread competing against other people.	1	2	3	4	5
8) I am a competitive individual.	1	2	3	4	5
9) Competition destroys friendships.	1	2	3	4	5
10) I will do almost anything to avoid an argument.	1	2	3	4	5
11) I try to avoid arguments.	1	2	3	4	5
12) I often remain quiet rather than risk hurting another person's feelings.	1	2	3	4	5
13) In general, I will go along with the group rather than create conflict.	1	2	3	4	5
14) I don't enjoy challenging others even when I think they are wrong.	1	2	3	4	5
15) I would like to be on a debating team.	1	2	3	4	5
16) Games that have no clear-cut winner are boring.	1	2	3	4	5
17) It's usually not important to me to be the best.	1	2	3	4	5
18) I often try to outperform others.	1	2	3	4	5
19) When I play a game I like to keep score.	1	2	3	4	5
20) I don't like games that are winner-take-all.	1	2	3	4	5

Directions: Please answer the questions.

1. What is your gender? (Circle one.)
 - Male
 - Female
 - Other
 - Prefer Not to Disclose
2. What is your age (in years)? _____
3. To which racial or ethnic group(s) do you most identify? (Circle all that apply.)
 - African-American (Non-Hispanic)
 - Asian/Pacific Islanders
 - Caucasian (Non-Hispanic)
 - Latino or Hispanic
 - Native American, Aleut or Aboriginal Peoples
 - Other
 - Decline to answer
4. If you are an undergraduate student, what is your grade classification? (Circle one.)
 - Freshman
 - Sophomore
 - Junior
 - Senior
5. Do you currently invest money in a retirement account? (Circle one.)
 - Yes
 - No
6. Do you currently invest money in an investment account that is not a retirement account?
(Circle one.)
 - Yes
 - No
7. What is your employment status? (Circle one.)
 - Unemployed
 - Employed part-time, 1-20 hours per week on average

Employed part-time, 21-39 hours per week on average

Employed full-time, 40 or more hours per week on average