Improve Retirement Income Adequacy through a Behavioral Economics Lens

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Sibson Consulting

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Why Is Retirement Readiness Important?

- Economic Realities:
  - Social Security benefit levels are not sustainable given current tax rates
  - Defined benefit pension plans are on the decline
  - A small percentage of Americans:
    - save enough for retirement
    - are expert investors
- What Happens with Non-Retirement Ready Workforces?

Impact on Workers	**Older:**	Unable to Retire
	Younger:	Deferred Opportunities
Impact on Employers	▪ Higher Labor Costs ▪ Safety & Productivity Concerns ▪ Higher Mid-career Turnover Costs	

Case Study in Retirement Readiness:
Auto Enroll and Escalation (Large Insurance Company)

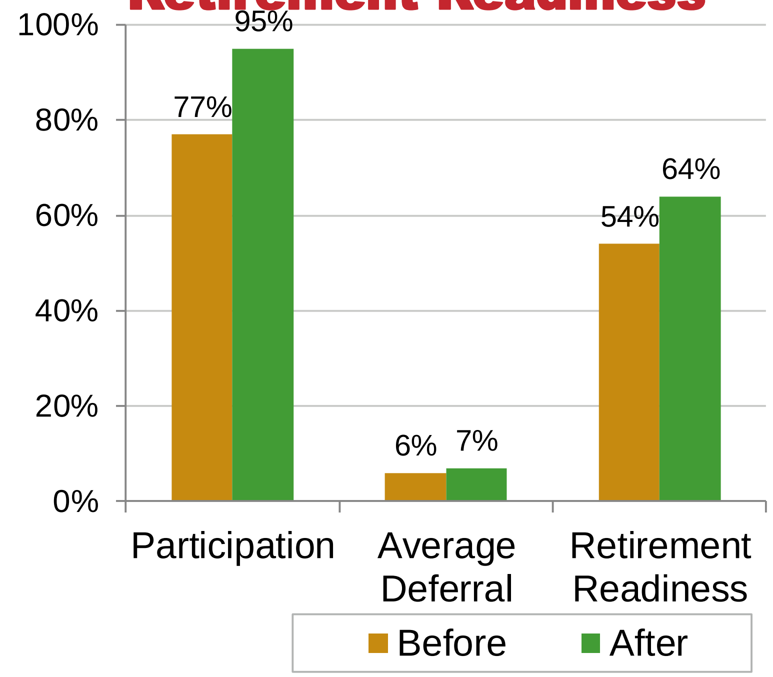
Plan Configuration

- Defined Benefit Pension Plan
  1.25% x Final Avg. Pay
- Defined Contribution Plan
  50% Match up to 6 % of Pay

New Default Configuration

Current Year Contribution Rate	New Year Default Contribution Rate
0%, 1% or 2%	3%
3% - 5%	4% - 6%
6% +	No Change

Participation and Retirement Readiness



Results Over a Six Year Period

- Dramatic increase in 401(k) participation!
- Increase in average deferrals!
- Increase in retirement readiness!

Source: Academy of Behavioral Finance & Economics 2014

Exercise 1:
Who Do You Select as a Mutual Fund Manager?

	Manager A	Manager B
Assets Under Management	$20 Billion	$7.2 Million
Clients	Over 100, including sophisticated investors and well-known families	11 Doctors
Results	Average annual 10 years of 25%; volatility 2% / year	Average annual 6 years of 25%; volatility 14% / year
Portfolio	Basket of S&P 100 stocks with options strategy	30–40 stocks
Offices	New York and London	Omaha, Nebraska

Answer

Manager A
Bernie Madoff, 2001

Manager B
Warren Buffett, 1962

HERDING BIAS: Gravitating to an investment opportunity based principally on the fact that many others are doing so.

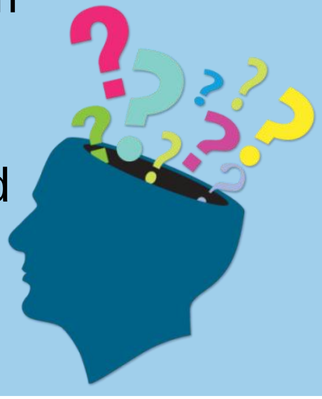
Have You Seen These Behaviors?

Participants

- Spend little time planning for retirement, reviewing progress and a majority regret their decisions
- Don't optimize employer matching contributions
- Under-choose target date funds
- Under-select annuities
- Over-react to the latest DJIA report
- Few participants access the substantial resources available for:
  - financial goal setting
  - analyzing investment alternatives
  - developing tax strategies
  - learning smart consumer practices

Investment Committees

- Think participants make decisions rationally and with relative competence (just like committee members)
- Try to educate participants while conveying a neutral point of view and thereby under-emphasize intelligent choices
- Focus on "how we did lately" and "what is the near term investment outlook"
- Make investment manager picks based on charisma



How People Decide

- **Rational thinking is part of the process**
  - People are motivated differently
  - People have differing levels of competence, confidence and time availability to improve their health and their consumer choices
  - People use mental shortcuts and rules of thumb to evaluate choices
  - People are influenced by content and by framing
  - People think rationally at times, intuitively at all times and emotionally with every choice they make.

"…to make a decision, emotion is the necessary trigger. Without emotion, one would be reduced to the state of an idiot savant who goes on endlessly calculating without the ability to make a choice."

* *Perceptions of Financial Risk: Axioms and Affect*, Robert A Olsen. The Icfai University Press (2008).

Behavioral Economic Tool Kit

1) Behavioral Biases as Barriers and as Bridges to Retirement Readiness
2) Choice Architecture
3) Designing Defaults
4) Hyperbolic Discounting and Consumption v. ROI Framing
5) Workforce Segmentation and Variable Messaging
6) Improving Committee Operating Models to Minimize Behavioral Risk

What's Going On When Plan Participants Make Sub-optimal Decisions: Human Nature!

Mental Shortcuts as BARRIERS TO CHANGE	Examples with Retirement Plans
Complexity Aversion and Clue Seeking Bias	Look at all of these investment options. Well, the Company must have put the Money Market Fund at the top of the list for a good reason. I will choose it.
Hyperbolic Discounting	I can spend that 3% of salary on vacation in Orlando or put it away in the 401(k). What is the big deal anyway about compound interest?
Sentinel Event Bias	My former boss chose the annuity at retirement and died young. I won't make the same mistake—give me the lump sum!

Behavioral Biases Can Be Tapped to Improve Choice-Making

Mental Shortcuts as BRIDGES TO CHANGE	**Examples with Retirement Plans**
Availability Heuristic	Everywhere I look I see messages about "saving for tomorrow," "tax deferral" and "rising investor confidence."
Clue Seeking Bias	Nudging & Simplicity (use obvious cues) A. Wealth Building Fund for People Your Age B. Balanced Fund C. Click here for: **Participant Directed (Expert Investor) Options**
Overvaluing Low Probability Events	Are you concerned about: • outliving your financial nest egg? • dying young and losing most of your pension? Click here for the **Value Preservation Option**!

Everybody Loves Choice!

	6 kinds of jams	24 kinds of jams
Shoppers who stopped	**40%**	**60%**

Source: Iyengar & Lepper (2000)

Complexity Aversion is Paralyzing

	6 kinds of jams	24 kinds of jams
Shoppers who stopped	40%	60%
Shoppers who bought jam	30%	3%

Source: Iyengar & Lepper (2000)

Complexity aversion is a significant behavioral barrier to mitigating longevity risk; annuity product portfolios are complicated.

Countering Complexity Bias

TWO APPROACHES TO CONFIGURING DISTRIBUTION OPTIONS

Typical Retirement Plan Election Language	Simplified Retirement Election Language
• If you are married when your benefit begins, your benefit will be paid to you as a Qualified Joint and Survivor Annuity. A Qualified Joint and Survivor Annuity provides reduced, equal monthly payments to you during your lifetime and, if your spouse lives longer than you, to your spouse for your spouse's lifetime. Although your monthly benefit payments are reduced, the payments to you and the survivor benefit for your spouse have the same actuarial value as the Single Life Annuity described above. If you are married and your spouse consents, you may elect to receive one of the optional forms of payment described below. All of the optional forms of payment have the same actuarial value as the Single Life Annuity. • **Single Life Annuity:** Monthly Benefit = $1,000 • Joint and Survivor Annuity = $667, reducing to a $500 survivor benefit	Choose one of the following monthly income streams for your retirement benefit: ☐ $667 monthly income while you and your spouse are both living. $500 monthly income for your spouse after you pass away. ☐ $1,000 monthly income while you and your spouse are both living. $0 monthly income for your spouse after you pass away. *Under this option, your spouse must sign a notarized consent form.*

Framing to Increase Savings Rates

Typical DC Plan Choice Structure:
50% Match up to 6% of Pay

Employee Deferral	Company Match	Total Contribution
0%	0.0%	0.0%
2%	1.0%	3.0%
4%	2.0%	6.0%
6%	3.0%	9.0%
8%	3.0%	11.0%
10%	3.0%	13.0%
12%	3.0%	15.0%

BEHAVIORAL ECONOMIC SOLUTION

Revised DC Plan Choice Structure: 50% Match up to 6% of Pay			
Employee Savings Rate	**Employer Contribution**	**Total Contribution**	**Lost Employer Match**
12%	3%	15%	0%
10%	3%	13%	0%
8%	3%	11%	0%
6%	3%	9%	0%
4%	2%	6%	1%
2%	1%	3%	2%
0%	0%	0%	3%

Implied Messages

- Any contribution other than 0% is good
- The right amount to save is 6% because the company caps its match at 6%
- A total contribution at 9% of pay is sufficient for retirement readiness

Techniques

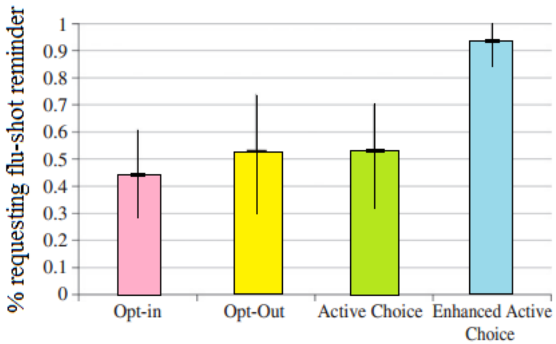
- Anchor attention toward the higher savings rates.
- Emphasize loss with lower savings rates.

Choice Architecture and Enhanced Active Choice

How you configure choices impacts decisions:

- **Opt - In:** Do you want to be reminded to rebalance your 401(k)? Email us!
- **Opt - Out:** We will remind you to rebalance unless you say no.
- **Active Choice:** Do you want to be reminded to rebalance? Yes or No
- **Enhanced Active Choice:** Do you want to be reminded?
  If you say "No," chances are: Yes or No
  - you will forget to rebalance,
  - you will lose your "vigilant investor rating,"
  - your investments may suffer.

Enhanced Active Choice and Flu Shot Compliance



Keller et al. (2011), *Enhanced active choice: A new method to motivate behavior change*, Journal of Consumer Psychology

Defaults v. Active Choice

- State University Retirement System of Illinois
  - 3 complicated retirement plan options (defined benefit, hybrid, defined contribution)
  - new hires must decide within 6 months
  - decision is permanent
- 22% Default
- Who is less likely to default?
  - risk takers
  - financially literate
  - advanced degrees in subject matter area
  - females
  - wealthier individuals
  - those lacking confidence in state legislature

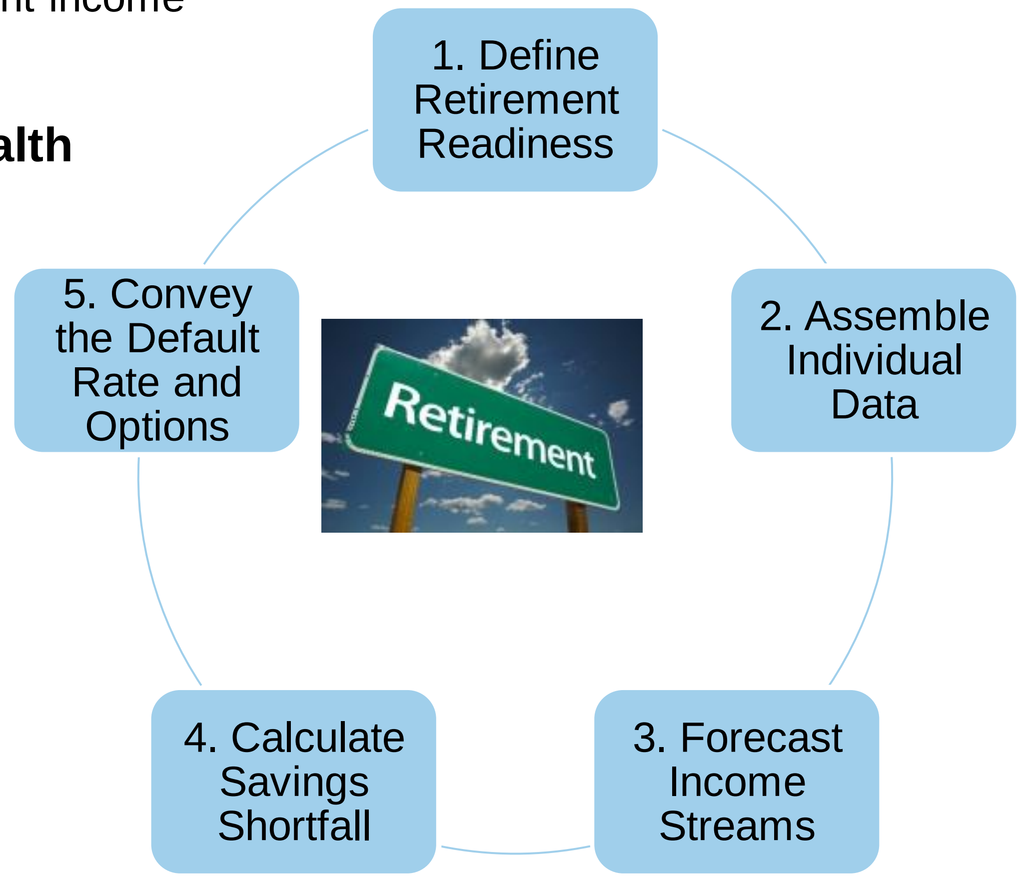
Why People Default?	
Deficient Information	43%
Clue Seeing Bias	9%
Deliberate Choice	24%
Procrastination	24%

Do people regret the plan choice they made?	
Active choosers	16%
Defaulting people	35%

Source: *The Downside of Defaults*, Jeffrey R. Brown, Anne M. Farrell, Scott J. Weisbenner, NBER, December 2012

How Personalized Defaults Work?

- **Define standard(s) for retirement readiness.**
  - retirement income > 70% of pre-retirement income
  - wealth > 11 times final average earnings
- **Assemble data on accumulated wealth for each individual.** (i.e. DC retirement plan balance, personal savings)
- **Forecast income streams for each individual.** (i.e. social security and pension income)
- **Calculate needed future savings for each individual to be retirement ready.**
- **Set each individual's default contribution rate for the next plan year at an amount that generates a "retirement-ready" future.**
  (as with all defaults, individuals can change their mind.)



Exercise 2:
You Meet a Generous Benefactor, He Says:

- Congratulations, you have won a prize. I have a $100 bill in my right pocket; I have a bank cashiers note payable for $120 in 365 days.

- Which do you prefer:
  - A $100 bill at this very moment.
  - A $120 cashiers note payable in 365 days from a reputable, solvent, convenient bank

Exercise 2:
You Meet a Generous Benefactor, He Says:

- Other Audience Responses:

Which do you prefer:

- ❑ $100 now
  (human resource generalists and most Americans)
- ❑ A $120 cashiers note payable in 365 days
  (actuaries, investment managers and advisors)

- Hyperbolic Discounting: In consumer choice-making, the preference of smaller - immediate rewards over later - larger rewards to a much greater extent than a present value analysis would indicate.

- Experts Certainty Bias: The tendency of experts to:
  - ignore data contrary to their informed experience and
  - believe that most people analyze choices just as they do.

Countering Hyperbolic Discounting
(Encouraging People to Save)

How do we help a 30 year old view what their life will be like at age 70?

Participants who saw their ***current*** selves contributed 4.4% toward retirement

Participants who saw their ***future*** selves contributed 6.2% toward retirement

Source of Data: “Increasing Saving Behavior Through Age-Progressed Renderings of the Future Self,” Hal E. Hershfield, et al, *Journal of Marketing Research* Vol. XLVIII, S23–S37, November 2011

Employees are Savvy Consumers; not Great Investors

1. **Construct a bridge between life today and in retirement!**
2. **Focus as much on consumption as asset accumulation**

Save 9% of pay

Eat steak and lobster; live the good life!

Travel to exotic locations; live the good life!

Save 6% of pay

Eat hamburger.

Travel to a nearby resort.

Save 2% of pay

Eat processed bologna for the rest of your life.

Vacation at your local community center.

Sub-optimal Investment Decisions

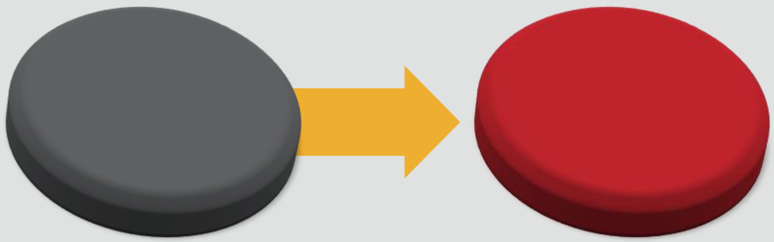
Countering Regret Aversion

With Panic Comes a Shift in Investment Style

Investor Style and Recent Performance

- Capital Preservation v. Yield Seeking Style
- Substantial Recent Loss or Gain Relative to Benchmark

Investment Objective: **ASSET PRESERVATION**	Investment Objective: **YIELD SEEKING**
When Recent Returns are Well **BELOW** Target	When Recent Returns are Well **ABOVE** Target

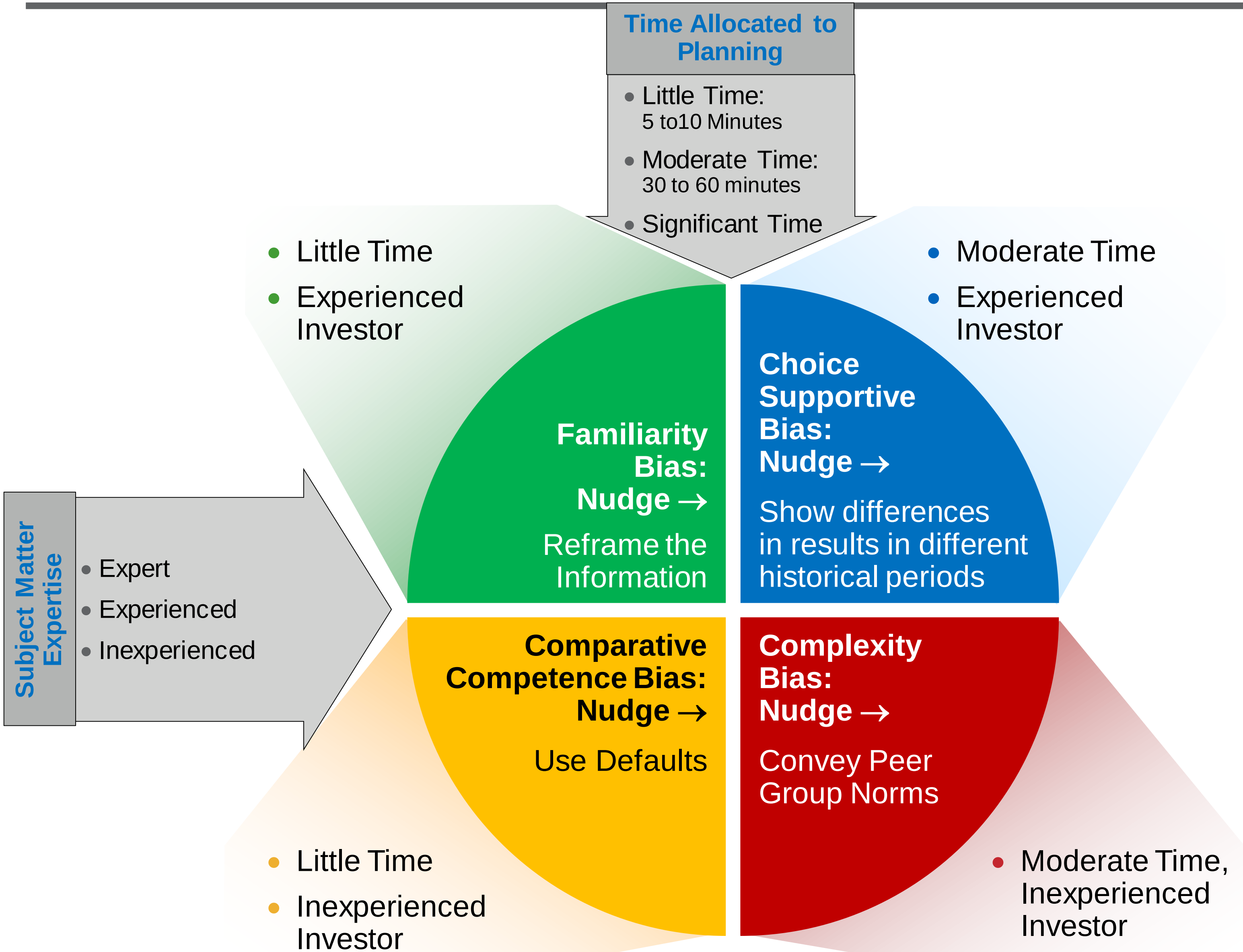


Potential Nudge: Auto-rebalance with messages of vigilance

Potential Nudge: Lost opportunity regret with messages of opportunity

Source: Adapted by Sibson Consulting from Xi Zou, London Business School. Sibson uses "investor style" in a narrower context than Zou's uses of "Prevention" and "Promotion" biases in a broad "life motivation" context (Personal Communication, 2013).

Variable Messaging v. “One Size Fits All” Communication

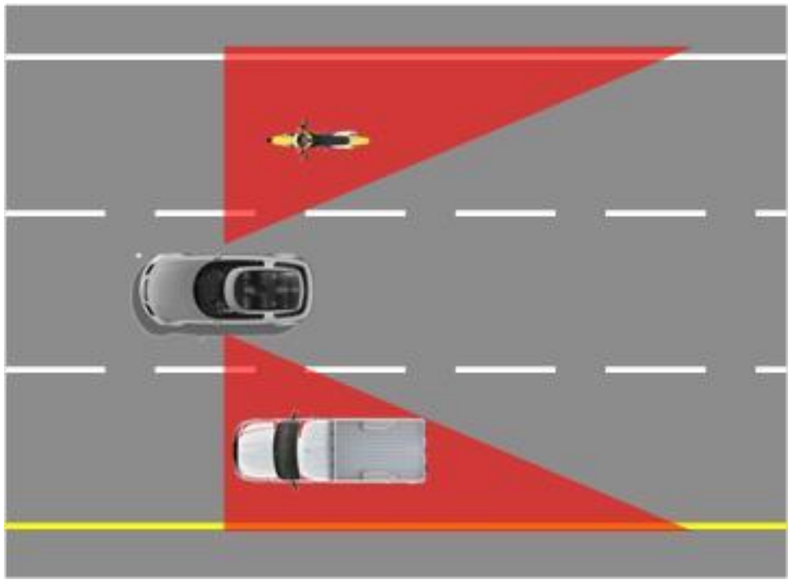


Source: Sibson Consulting 2014

Committee Biases

Expert's Certainty Bias

"Sure, a lot of people are prone to biases, but not us."



IDEA: Team building exercises.

Availability Heuristic

"The good news is everywhere; the S&P 500 continues to rise; the DJIA is at an "all time" high. The forecast is bullish. I know we are outside of IPS guidelines; so let's change the guidelines."

IDEA: Assign a committee member to take a contrarian view.

Suggestions for Investment Committees
Creating High Performing Teams

Form Committees with Diverse Perspectives

Conduct Periodic Training on Bias Avoidance and Framing Effects

Align Advisors' Framings with Investment Policy

Execute an Operating Model Designed to Avoid Making Suboptimal Decisions

Key Takeaways

- There are a number of documented behavioral biases that impact human behavior
- These biases have a substantial influence upon investment and financial decisions
- They impact individuals, Committees, and Markets
- There are ways to minimize the impacts for your participants and plan assets
  - Understand these biases and how they operate
  - Appropriately frame information
  - Apply contrarian thinking
  - Create high performing teams
- Have a frank and thoughtful discussion about your organizational goals, benefits philosophy and ethical concerns about influencing workforce behavior

Appendix

Motivations, Emotions and Engagement Triggers

Emotion is critical to decision making; recognize that different people are motivated differently.

Motivation Basis	Emotional Triggers Leading to a Response	Methods to Gain Attention
Intrinsic Reward Seekers	Appeal to Intellect and to Personal Curiosity	Inspire Thinking about New Possibilities
Extrinsic Reward Seekers	Appeal to Financial Gain and Personal Vanity	Provide Incentives and Socialization
Disengaged	▪ Instill Fear ▪ Convey Hope	Intervention

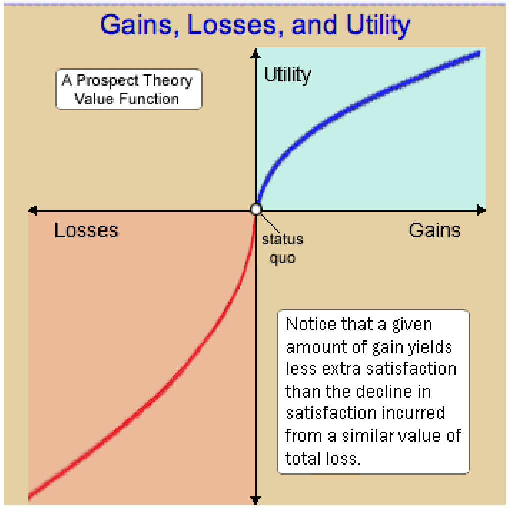
Source: Sibson Consulting

Behavioral Economics and Choice Reconfiguration

- Influence attitudes about "saving and investing." Add "consumption" frames of reference
- Initiate behavior change with pledges and pre-commitments
- Couple economic incentives with easy election processes
- Frame and time choices to counter:
  - procrastination
  - hyperbolic discounting
- Leverage:
  - optimism bias
  - loss aversion and lost opportunity regret
- Counter probability neglect with emotional stories
- Recognize the power of defaults and of small, relevant active choices
- Create variable choice architectures based on individual preferences and expertise

PRE-COMMITMENT STRATEGIES

Loss Aversion



Source: Prospect Theory; Daniel Kahneman

How to Influence Participant Behavior Change to Improve Retirement Readiness & Financial Wellbeing

Establish Personal Relevance	Trigger Emotional Reactions	Define Clear Choices and Convey Value	Ask a Small Related Request	Channel to the Best Resource
Establish personal relevance by using familiar references and consistent branding. Nudge formal and informal leaders who are admired and liked.	Trigger emotional responses (hope, fear, excitement, adventure, love, greed, caring).	Define clear choices about trade-offs between financial options and quality of life. Convey value in making smart choices: ✓ live well ✓ care for others	Ask employees to complete a small task related to a larger goal: ✓ pledge to save more for tomorrow ✓ visit the retirement planning website ✓ pay back the loan to yourself quickly	Channel employees to the best **high quality / easy-to-use** resource available: ✓ retirement calculators ✓ pre-retirement counselors ✓ financial advisors Design and frame defaults carefully.

Reinforce Positive Behaviors

Exercise 3:
Apply Evaluation Criteria to Select a Fund Manager

SCENARIO:

Select Mutual Fund X or Y based on these evaluation criteria and scoring.

	Performance History (50%)			**Style Consistency & Management** (50%)		
	Trustee 1	**Trustee 2**	**Trustee 3**	**Trustee 1**	**Trustee 2**	**Trustee 3**
Fund X	7	7	9	9	8	7
Fund Y	8	8	7	7	9	8

COMMON SELECTION RULE:

Select Highest Weighted Average Score

Fund X Average = **7.83**, Fund Y Average = **7.83**

- Now, what do you do?

Investment Committee Decision Rules

Common Rule Used for Resolution:

- Select the Proposal Winning "Majority of Criterion"

	Performance History (50%)			**Style Consistency & Management** (50%)		
	Trustee 1	**Trustee 2**	**Trustee 3**	**Trustee 1**	**Trustee 2**	**Trustee 3**
Fund X	7	7	9	9	8	7
Fund Y	8	8	7	7	9	8

Fund Y wins the majority of the contests.

	Trustee 1		**Trustee 2**		**Trustee 3**	
	Perf (50%)	**Mgmt** (50%)	**Perf** (50%)	**Mgmt** (50%)	**Perf** (50%)	**Mgmt** (50%)
Fund A	7	9	7	8	9	7
Fund B	8	7	8	9	7	8

EVEN THOUGH THE SCORING IS IDENTICAL:
Grouping at Trustee Level: Fund A wins
Grouping at Criterion Level: Fund Y wins

IDEA: When scoring is close, determine if there is a framing effect.