



Why Doesn't Your Retirement Plan Work

13 Traps that Limit the Effectiveness of Your Plan

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Agenda

- Explanation of Behavioral Biases
- Factors that Impact Retirement Plan Effectiveness
 - Level of contributions
 - Investment returns
 - Utilization of lifetime income (including longevity protection)
 - Length of the contribution and retirement period
- Cures that Work
- Inverting your Retirement Plan

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Erik is the Managing Principal for Multnomah Group. He is a member of Multnomah Group's Investment Committee and leads the firm's tax-exempt practice, focusing on higher education and healthcare organizations. Erik consults regularly with clients on a variety of retirement plan related topics to help manage their fiduciary risks. He has been a speaker at local, regional, and national conferences on retirement plan issues.

Prior to founding the Multnomah Group in 2003, Erik served as a Vice President of Retirement Services and led the Portland, Oregon practice of a national retirement services firm. In that position Erik was a founding member of the firm's national Investment Committee and had oversight for business development in the western United States.

Erik is a member of the CFA Institute, the CFA Society of Portland, the CFA Society of Seattle, the American Society of Pension Professionals and Actuaries, the Portland Chapter of the Western Pension & Benefits Council, and the Society for Human Resource Management. Erik holds a B.B.A. from the University of Iowa.

Behavioral Biases

Behavioral economics and the related field, behavioral finance, study the effects of social, cognitive, and emotional factors on the economic decisions of individuals and institutions and the consequences for market prices, returns, and resource allocation. The fields are primarily concerned with the bounds of rationality of economic agents.

“I can calculate the motion of heavenly bodies, but not the madness of people.”

- *Sir Isaac Newton, response to the 1720 collapse of the “South Sea Bubble”*

“Financial losses are processed in the same areas of the brain that respond to mortal danger.”

- *Jason Zweig, Your Money and Your Brain (New York: Simon & Schuster, 2007)*

Scott A. Bosworth, *Behavioral Biases and Investment Implications*, Dimensional Fund Advisors, September 10, 2009.

Establishing Purpose

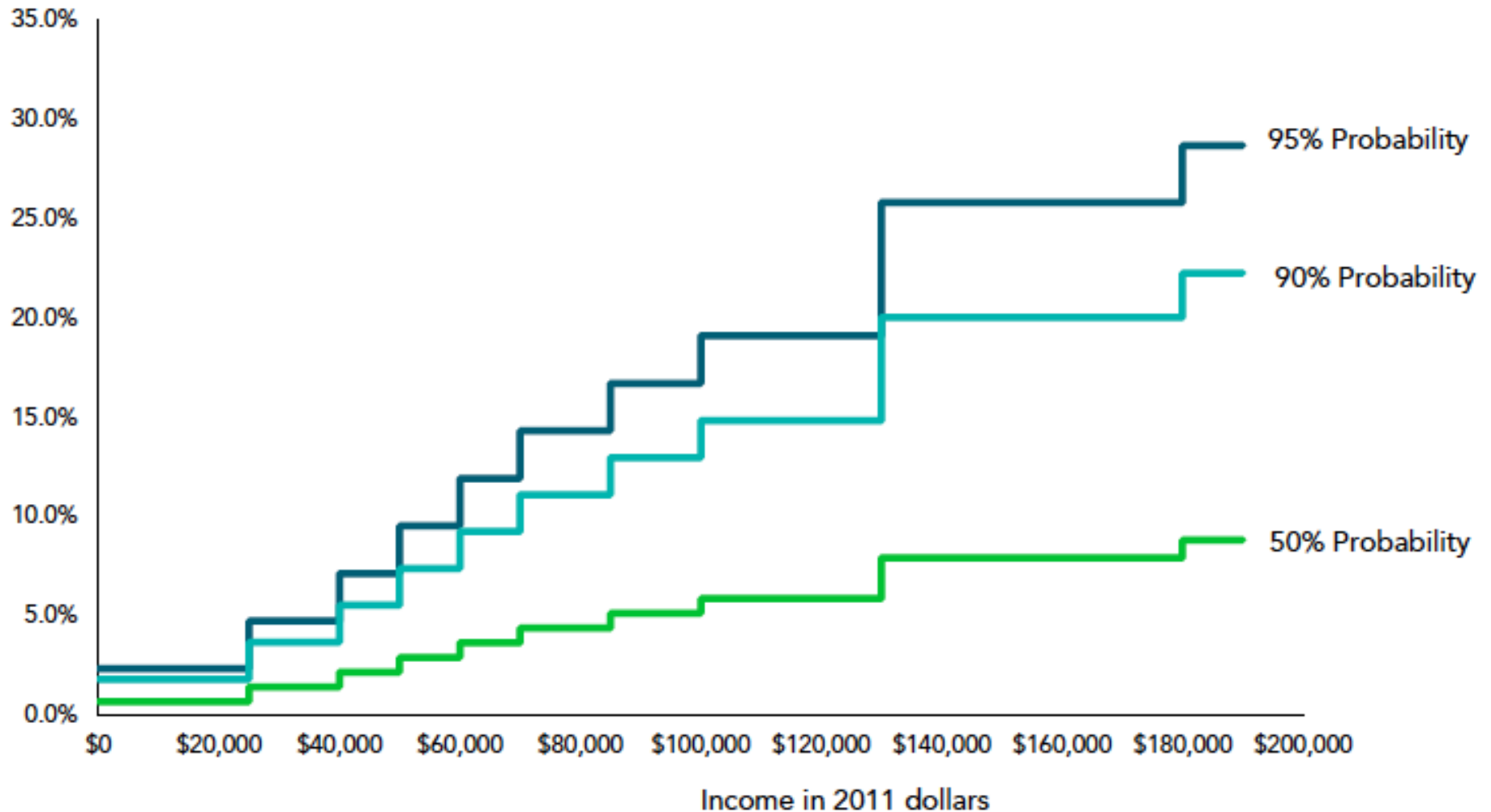
The four main factors that determine retirement income adequacy in DC plans:

1. Level of contributions
2. Investment returns
3. Utilization of lifetime income (including longevity protection)
4. Length of the contribution and retirement period

Confirmation Bias

We love to agree with people who agree with us... and unfortunately there is an unlimited amount of data and “experts” to support nearly any position. As a result, more and more information is unlikely to change beliefs participants already possess.

Level of Contributions

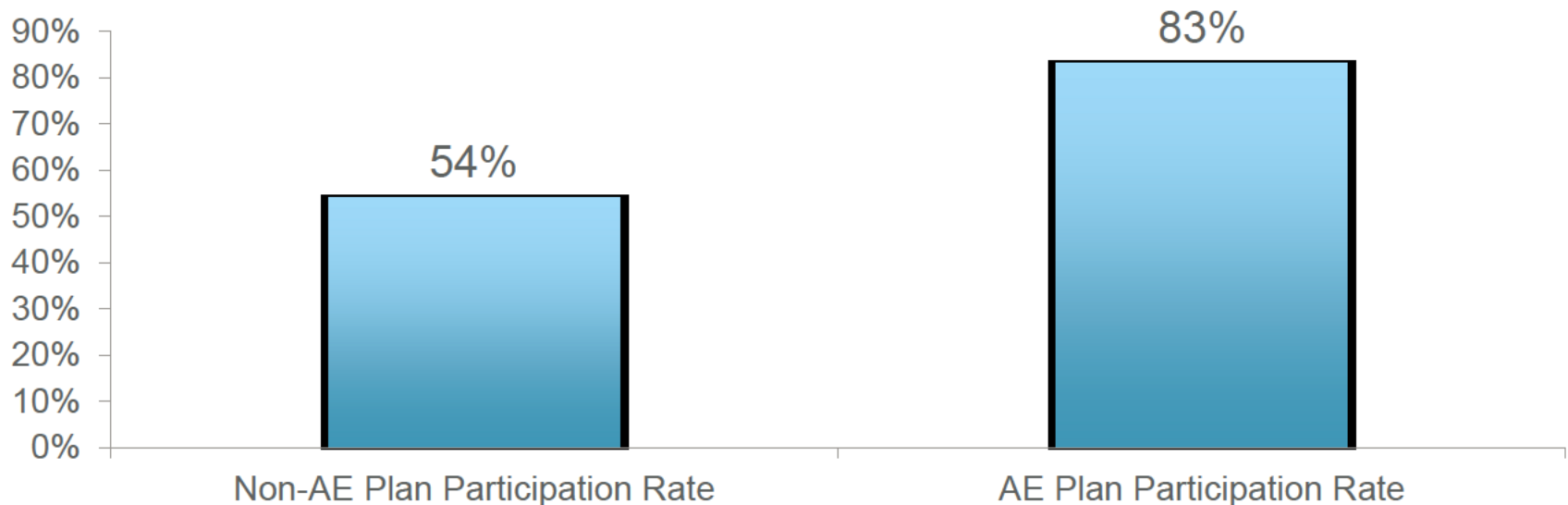


"How Much Should I Save for Retirement?" Massi De Santis, PhD and Marlena Lee, PhD, Dimensional Fund Advisors, LP, June 2013

Status-Quo Bias

Humans dislike change, which often leads us to make choices that guarantee that things will not change. Deferral percentages don't change. Portfolios don't rebalance. Investment strategies do not adjust. If it ain't broke, don't fix it. However, status-quo bias often means that we fail to determine if it is in fact broken.

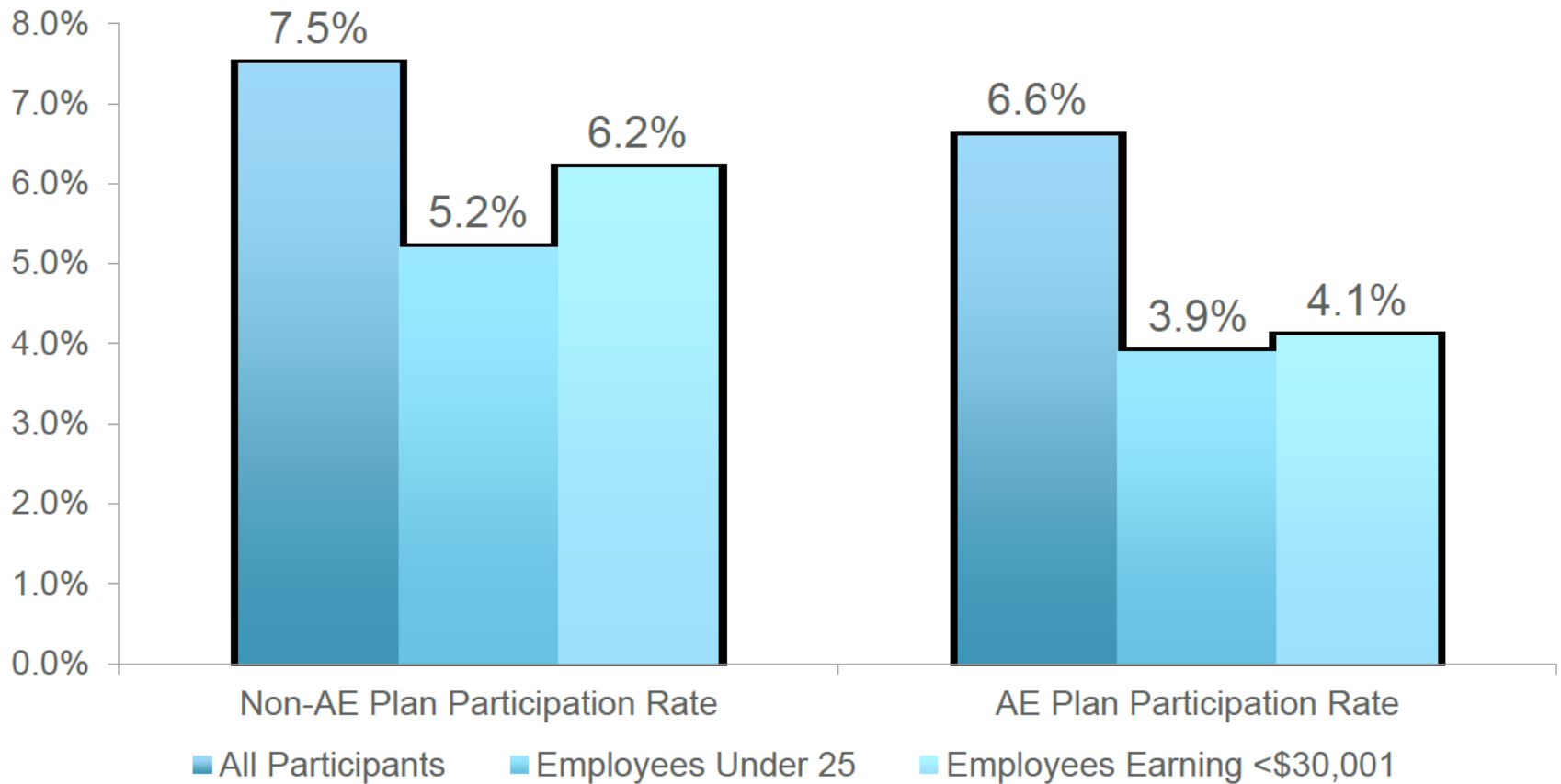
The Impact of Automatic Enrollment on Participation Rates in Corporate DC Plan¹



¹Plan Design Trends in Higher Education, Multnomah Group, March 2013.

Status Quo Bias

The Impact of Automatic Enrollment on Contribution Rates¹

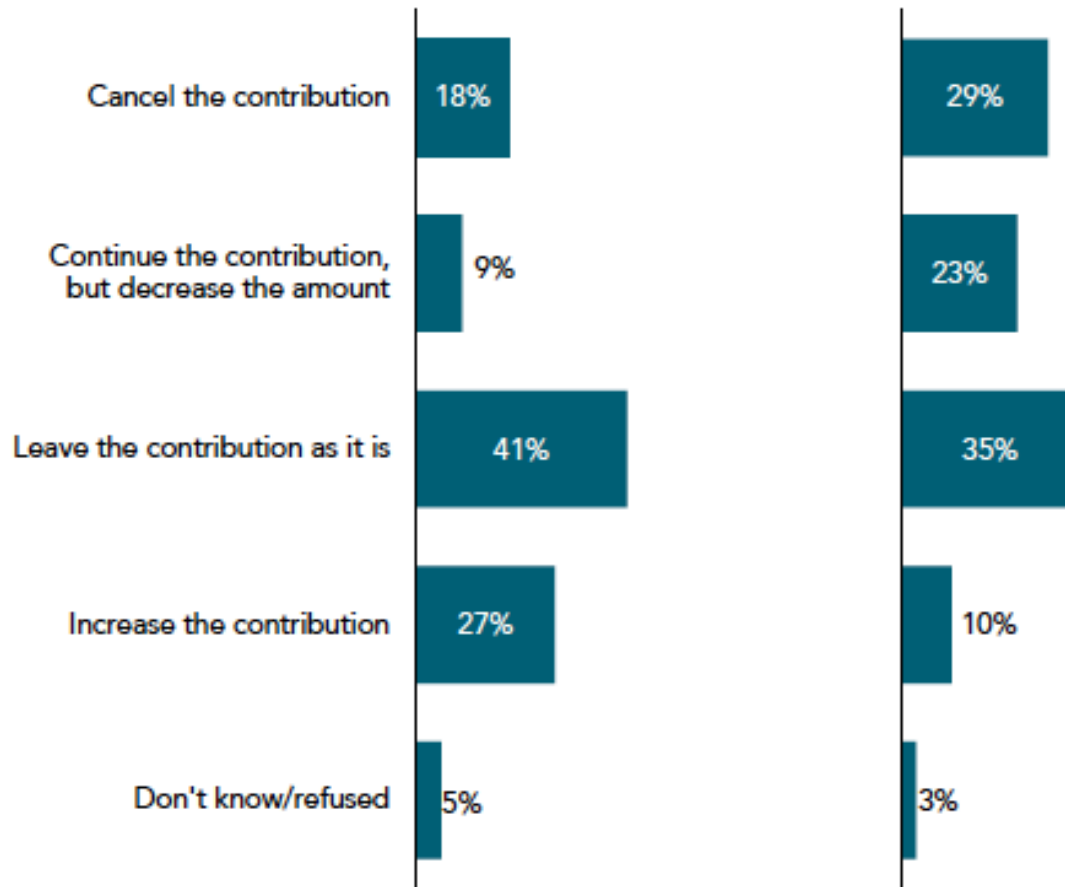


¹Vanguard 2013

Automatic Enrollment Rates

WITHHOLDING 3% OF PAY

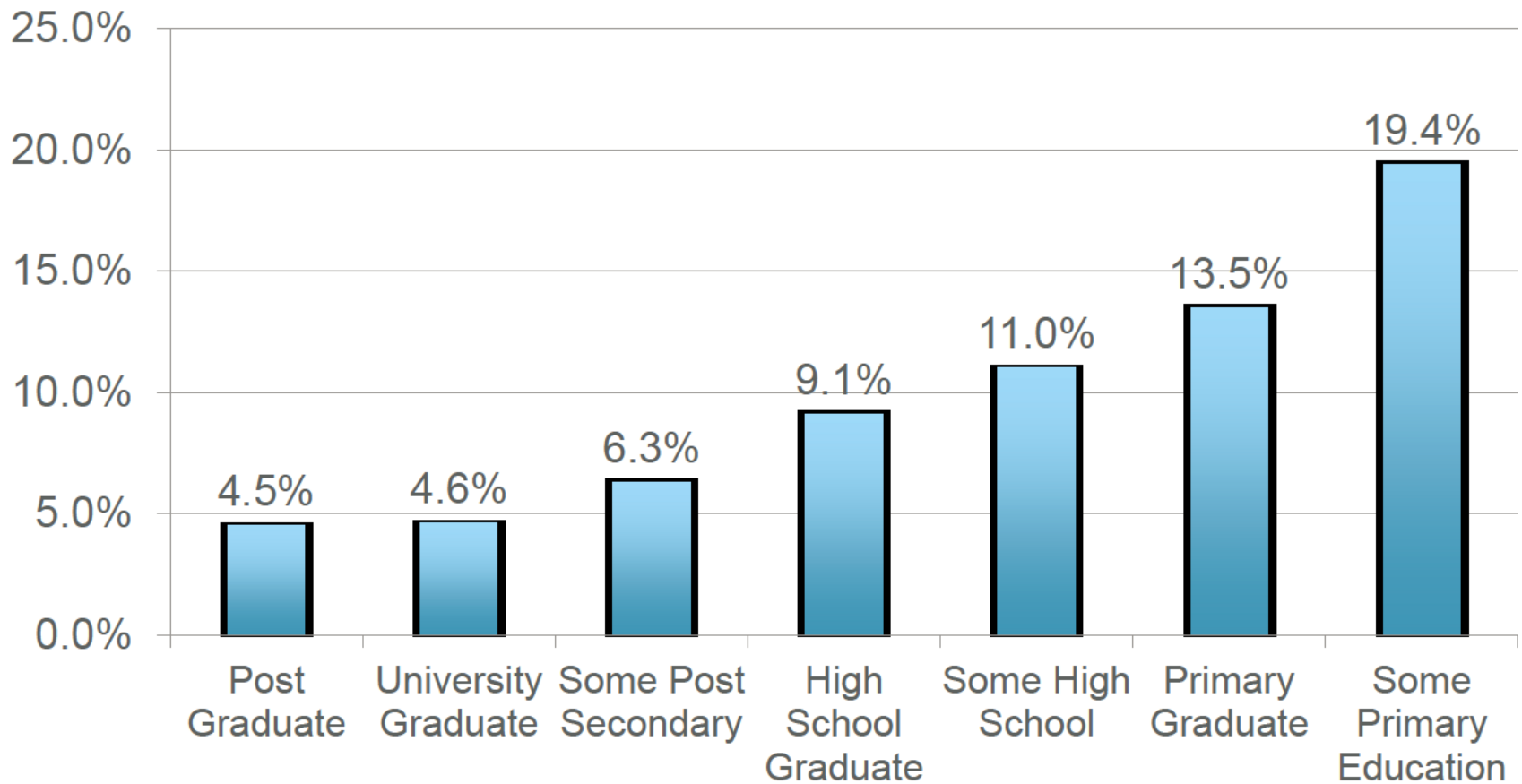
WITHHOLDING 6% OF PAY



2013 Retirement Confidence Survey, EBRI

Bandwagon Effect

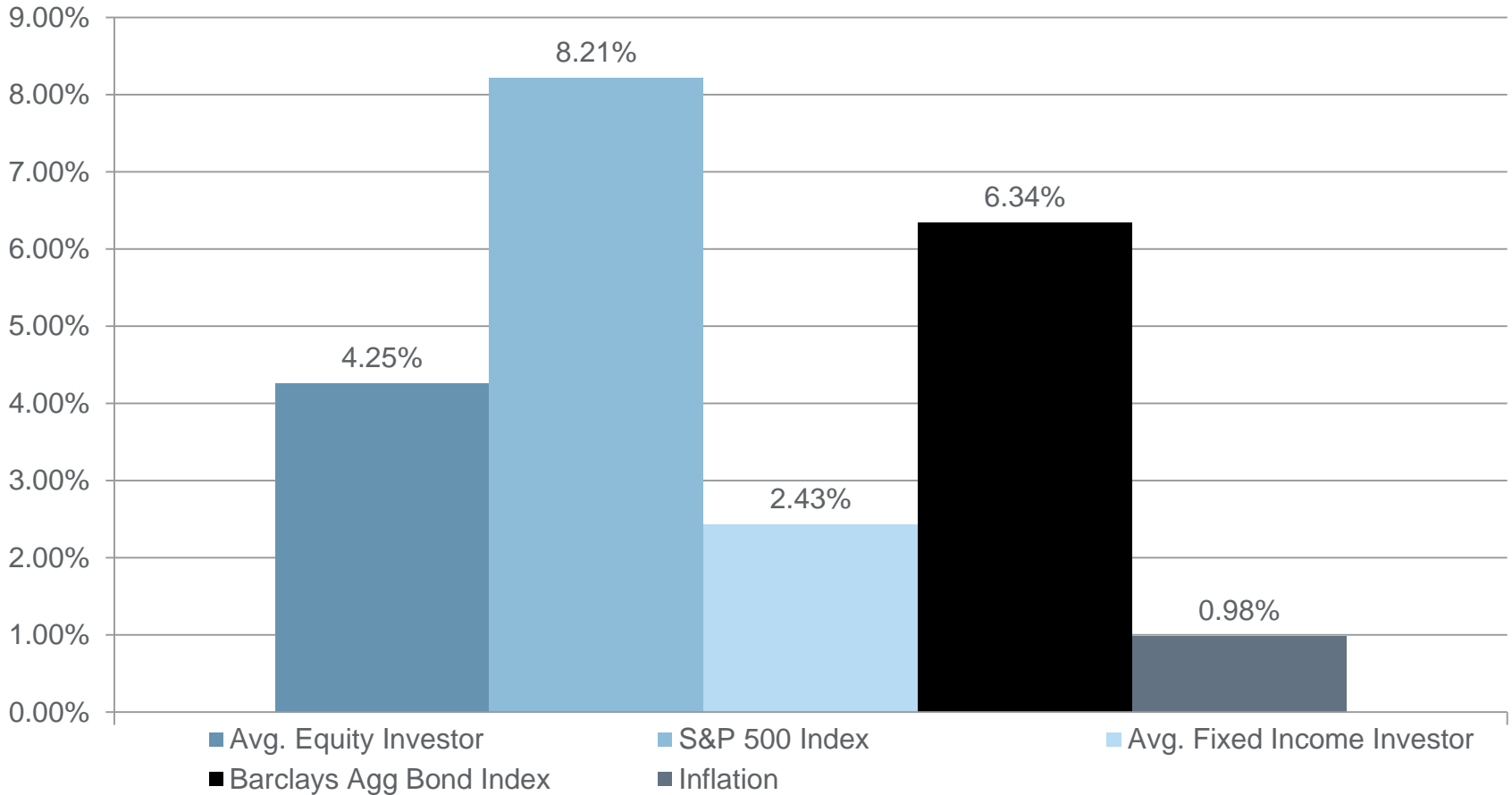
% Agree with “I always vote for the probable winner in an election”



TGI Brasil Study 2003

Investment Returns

Annualized Returns for the 20 Years Ended 12/31/2012



Source: Dalbar, Inc. 2013 Quantitative Analysis of Investor Behavior

Overconfidence

Bias in which someone's subjective confidence in their judgments is reliably greater than their objective accuracy.

	Market	Portfolio
June 1998	13.4%	15.2%
February 2000	15.2%	16.7%
September 2001	6.3%	7.9%

Kenneth L. Fisher and Meir Statman, "Bubble Expectations," Journal of Wealth Management 5, no. 2 (Fall 2002): 17-22

Hindsight Bias

- Past events seem easy to predict
- The future, therefore, seems easy to predict
- Hindsight is not 20/20

Scott A. Bosworth, *Behavioral Biases and Investment Implications*, Dimensional Fund Advisors, September 10, 2009.

Familiarity Bias

Highest Return



Lowest Return

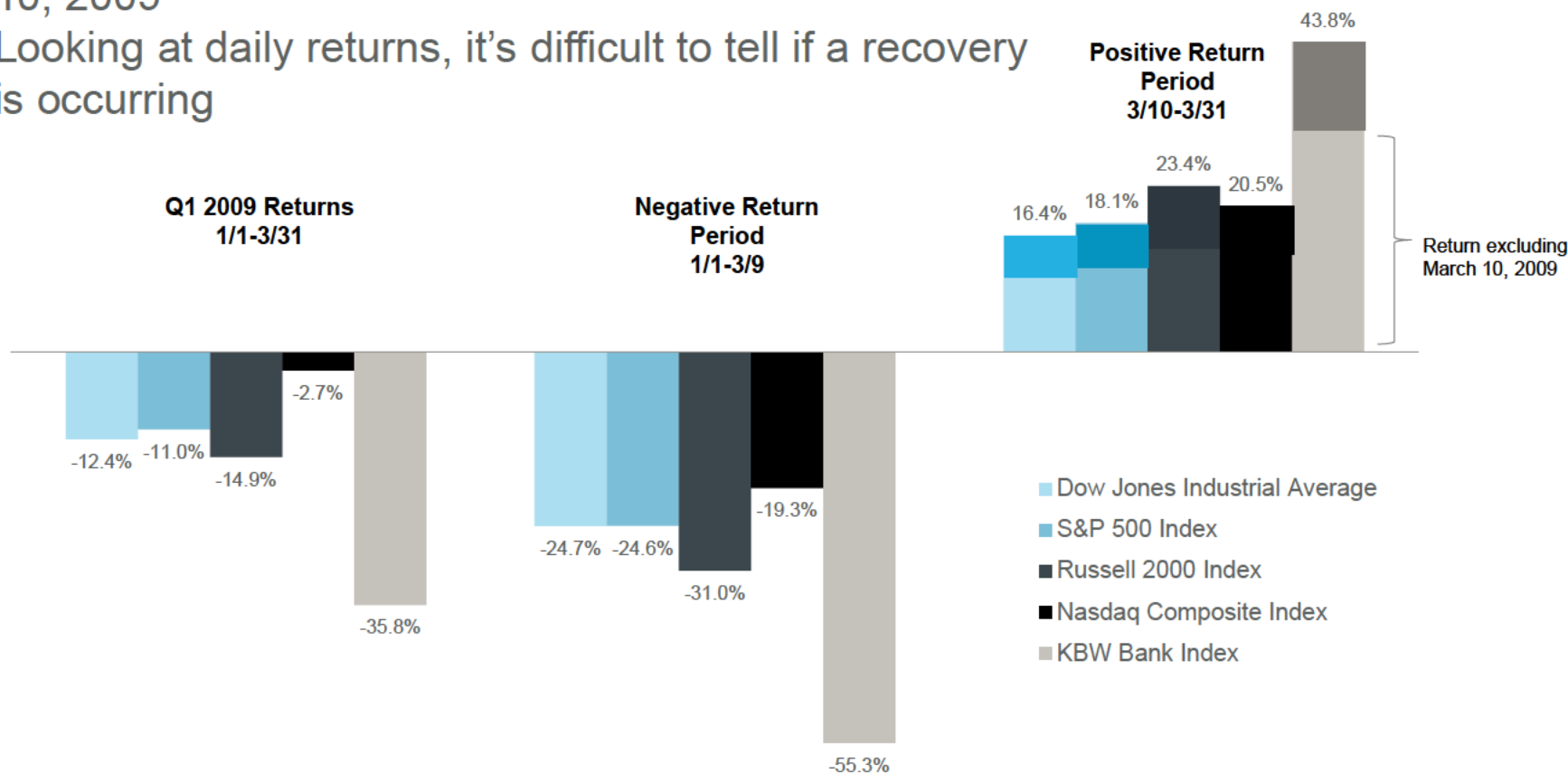
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
	61.93	82.58	54.05	3.63	-6.31	50.32	38.05	40.83	39.41	32.88	-16.09	61.85	30.53	18.46	32.39
	49.92	25.07	45.67	1.41	-6.63	41.04	23.25	14.75	21.76	27.51	-23.35	53.60	24.87	13.39	29.05
	38.70	23.95	38.42	1.31	-9.09	37.62	19.24	8.11	19.74	17.18	-28.11	50.17	24.16	11.90	24.56
	31.22	23.46	26.76	0.86	-13.09	34.83	17.94	6.03	17.57	16.56	-38.17	35.63	23.38	5.05	19.32
	17.79	17.65	7.24	-7.11	-21.08	32.09	15.39	5.96	15.44	12.58	-38.39	33.97	23.16	4.06	16.46
	13.86	12.79	0.29	-12.77	-23.84	26.07	14.39	5.17	15.12	11.95	-39.41	24.05	14.46	0.64	15.28
	10.28	1.81	-14.16	-14.86	-23.78	24.71	12.53	3.69	14.98	8.05	-41.22	20.97	13.39	-0.38	13.30
	8.54	-2.89	-25.78	-16.67	-23.58	19.84	10.10	3.01	11.90	0.20	-41.99	15.62	11.81	-0.71	10.08
	-7.05	-6.66	-35.38	-17.44	-37.31	18.87	3.51	-1.40	10.87	-8.69	-48.14	14.55	7.31	-14.12	4.32
	-15.90	-14.64	-40.14	-28.40	-38.33	17.43	0.79	-6.04	6.65	-17.88	-51.35	11.76	5.11	-16.51	2.19

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Morningstar SEC/Basic Materials	-7.05	23.95	-14.16	0.86	-9.09	37.62	17.94	5.96	14.98	27.51	-48.14	53.60	24.87	-14.12	16.46
Morningstar SEC/Consumer Cyclical	49.92	23.46	-40.14	-17.44	-37.31	19.84	14.39	-6.04	39.41	0.20	-38.17	35.63	23.16	0.64	32.39
Morningstar SEC/Consumer Dfnsve	31.22	17.65	-25.78	3.63	-23.78	41.04	15.39	-1.40	11.90	-8.69	-41.22	50.17	30.53	4.06	24.56
Morningstar SEC/Energy	17.79	-2.89	7.24	1.41	-6.31	17.43	10.10	3.01	15.12	12.58	-16.09	15.62	14.46	13.39	10.08
Morningstar SEC/Financial Svc	-15.90	25.07	45.67	-14.86	-6.63	26.07	38.05	40.83	19.74	32.88	-38.39	33.97	23.38	5.05	4.32
Morningstar SEC/Healthcare	10.28	1.81	26.76	-7.11	-13.09	32.09	12.53	6.03	17.57	-17.88	-51.35	14.55	11.81	-16.51	29.05
Morningstar SEC/Industrials	38.70	-6.66	38.42	-12.77	-21.08	18.87	3.51	8.11	6.65	8.05	-23.35	20.97	5.11	11.90	19.32
Morningstar SEC/Technology	8.54	12.79	0.29	1.31	-23.58	34.83	19.24	5.17	15.44	11.95	-39.41	24.05	24.16	-0.71	15.28
Morningstar SEC/Communication Svc	61.93	82.58	-35.38	-28.40	-38.33	50.32	0.79	3.69	10.87	16.56	-41.99	61.85	13.39	-0.38	13.30
Morningstar SEC/Utilities	13.86	-14.64	54.05	-16.67	-23.84	24.71	23.25	14.75	21.76	17.18	-28.11	11.76	7.31	18.46	2.19

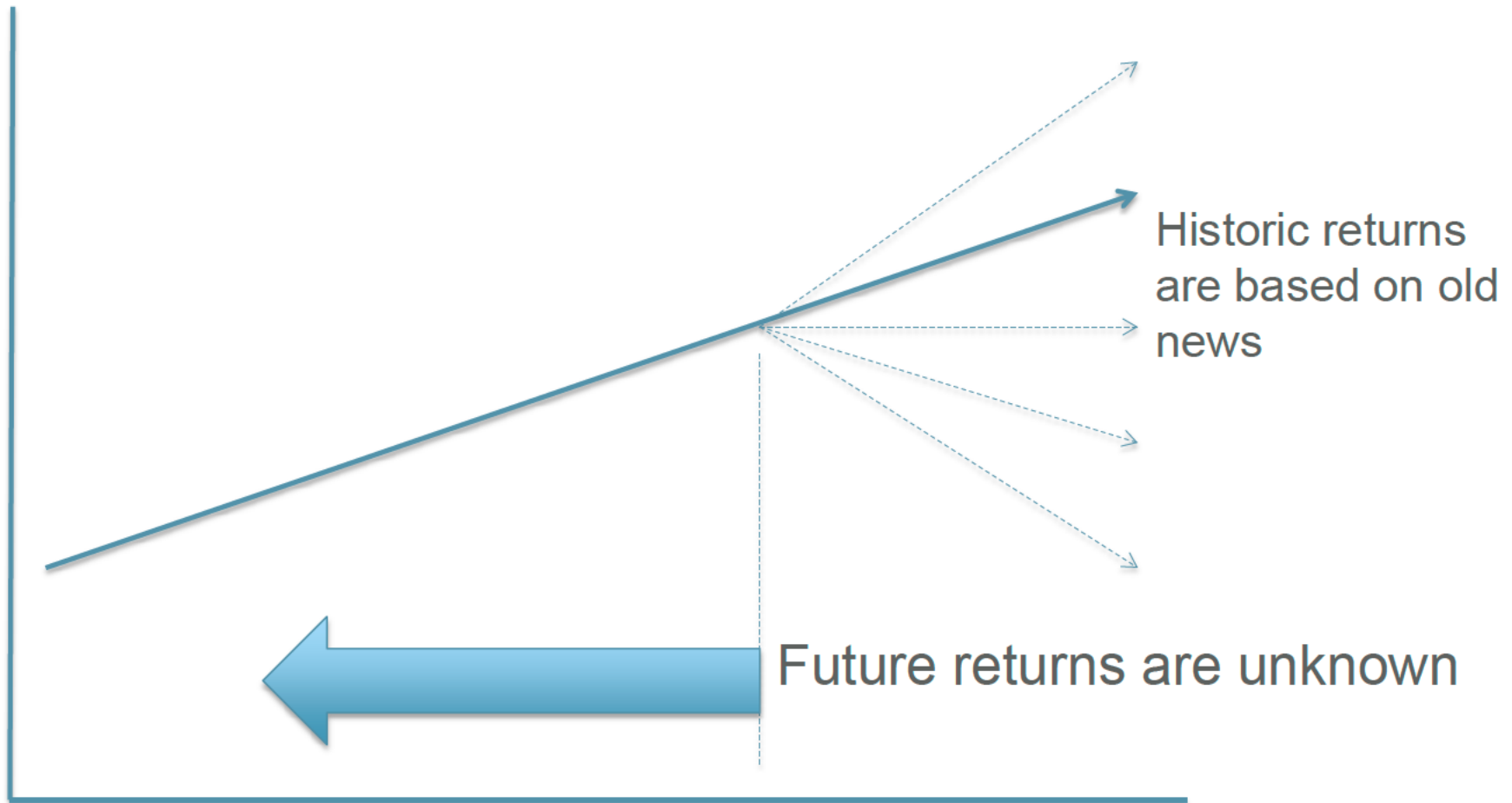
Mutual fund universe statistical data and non-Dimensional money managers' fund data provided by Morningstar, Inc. Morningstar's Sector Index family consists of 11 sector indices that track the US equity market using a consumption-based analysis of economic sectors in a comprehensive, non-overlapping structure. Index constituents are drawn from the available pool of US-domiciled stocks that trade on one of the three major US exchanges. Real Estate Sector Index is not included in the above illustration. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Regret Avoidance

- March 9, 2009 was the low closing date for four of the five featured indices year-to-date
- The Dow Jones Industrial Average rose 5.8% on March 10, 2009
- Looking at daily returns, it's difficult to tell if a recovery is occurring



Extrapolation



Scott A. Bosworth, *Behavioral Biases and Investment Implications*, Dimensional Fund Advisors, September 10, 2009.

The Stock Market's Reaction

Date	Event	First Trading Session Response				Subsequent Market Behaviour		
		Prior Day Close	Close	Change	Percent Change	One Month	Six Months	One Year
September 11, 2001	World Trade Center towers destroyed	9,605.51	8,920.70	-684.81	-7.13%	-3.66%	11.12%	-8.71%
January 16, 1991	US launches bombing attack on Iraq	2,508.91	2,623.51	114.60	4.57%	16.97%	18.93%	29.52%
August 2, 1990	Iraq invades Kuwait	2,899.26	2,864.60	-34.66	-1.20%	-8.74%	-4.67%	4.95%
March 30, 1981	President Reagan shot by John Hinckley Jr.	994.78	992.16	-2.62	-0.26%	1.95%	-14.33%	-16.90%
August 9, 1974	President Nixon resigns	784.89	777.30	-7.59	-0.97%	-14.71%	-8.87%	5.98%
November 22, 1963	President Kennedy assassinated in Dallas	732.64	711.48	-21.16	-2.89%	6.57%	15.37%	24.99%
October 22, 1962	Cuban missile crisis	568.60	558.06	-10.54	-1.85%	15.55%	27.41%	33.89%
September 24, 1955	President Eisenhower heart attack	487.44	455.55	-31.89	-6.54%	0.04%	12.48%	5.72%
June 25, 1950	North Korea invades South Korea	224.30	213.90	-10.40	-4.64%	-4.49%	7.34%	15.13%
December 7, 1941	Japan attacks Pearl Harbor, Hawaii	115.90	112.52	-3.38	-2.92%	-0.86%	-6.19%	2.88%

In US dollars. Dow Jones data provided by Dow Jones Indexes.

Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated.

There is always the risk that an investor may lose money

Neglecting Probability / Gambler's Fallacy

Participants love to worry about market crashes and anticipate hundreds of market crashes that never occur. Trying to avoid the 100 year flood can also prevent a participant from saving and accepting the investment risk that comes with adequately preparing for retirement.

- Investors buy high and sell low
- Returns are more dependent on investor behavior than fund performance
- Buy-and-hold investors typically earn higher returns over time than those who time the market

Scott A. Bosworth, *Behavioral Biases and Investment Implications*, Dimensional Fund Advisors, September 10, 2009.

Post Purchase Rationalization

After we buy something that's not right, we convince ourselves it is right.

Most people refuse to accept they've made a mistake, especially with a big purchase. Once you've made a decision, you convince yourself it was the right one, and also start to value it more because you own it.

Committee Impact:

- Retention of bad investment products within defined contribution arrays
- Resistance to adjust strategies and approach to new information
- Hesitance to review vendor buying decisions

Negativity Bias

Have you watched the news recently? People pay more attention to bad news and in the global economy there is always bad news somewhere. We also perceive negative news as being more important than good news and as a result we invest accordingly. This goes back thousands of years when heeding bad news might save your life, now we run the risk of dwelling on negativity at the expense of good news. We have been preparing for rain so long we never noticed the sun.

“You make more money selling advice than following it. It’s one of the things we count on in the magazine business – along with the short memory of our readers.”

Steve Forbes, Excerpt from the presentation at The Anderson School, University of California, Los Angeles, April 15, 2003

Decide Investment Menu Structure

- Tiered Methodologies are Preferable
 - Simplifies Decision-Making
 - Employee communication is clearer
 - Decision-making is easier
 - Offers Meaningful Choices to Participants
 - Acknowledges participants are different
 - No one-size-fits-all limitation
 - Participants want different options
-
1. Get rid of extraneous and redundant investment options
 2. “Concretize” - frame consequences for decisions that participants make
 3. Categorize - the human brain can handle categorization more easily than choice
 4. Condition for Complexity - gradually increase complexity and choice as participants demonstrate engagement

Index Tier Option

- Ability to Build Globally Diversified Index Portfolio
- Low Cost
- Broad Diversification
- Style Specific Actively Managed Funds for Active Participants
- Optional Self-Directed Brokerage Account for Most Active Participants

Asset Allocation Funds (i.e. Target Maturity, Target Risk, etc.)

Core Index Funds

Active Style Funds

(Optional) Self-Directed Brokerage Account / Mutual Fund Window

Utilization of Lifetime Income

The “Current Moment” Bias

We can't imagine ourselves in the future. Accordingly, most would rather experience pleasure in the moment and defer the pain for later. This may be the most destructive of the behavioral finance problems for participants.

Illusion of Control

Illusion of control is the tendency for people to overestimate their ability to control events, for instance to feel that they control outcomes that they demonstrably have no influence over.

Utilization of Lifetime Income

- Providing participants with more flexibility and control
 - Bonus annuities
 - Limited penalty-free withdrawals
 - Partial annuitization
- Framing
 - Downplaying investment attributes
 - Educating participants on inflation and its impact on purchasing power
- External factors
 - Participants report that fear of counterparty risk plays a large role in their annuitization choices
 - Negativity Bias
 - Probability Bias

Pre-Retiree Needs

Viewing the participant as a whole

1. Bringing retirement plan projections to a fine point
 - External assets
 - Spousal income
 - Spending needs
 - Healthcare costs/resources
 - Understanding federal and state resources
2. Advice for participants on how to secure and protect accumulated savings
 - Asset allocation
 - Liquidity constraints
 - Comprehensive retirement planning
3. Transitioning accumulations to income
 - Annuity options
 - Income planning

Length of the Contribution and Retirement Period

Employees whose primary retirement plan is a DC plan tend to retire one to two years later than employees covered by a pension plan.

Center for Retirement Research, "The Recent Trend Towards Later Retirement," March 2007

Individuals covered only by a DB plan are 87% more likely to retire in any given year than individuals only covered by a DC plan.

Rui Yao and Eric Park, University of Missouri, "Do Market Returns Affect Retirement Timing?" 2011

A 1% increase in the S&P 500 Index in any given year increases the probability that the pre-retiree will retire in that year by 2.5%.

Rui Yao and Eric Park, University of Missouri, "Do Market Returns Affect Retirement Timing?" 2011

By 2020, 20% of the workforce is projected to be 65 and older. The only projected growth in the labor force for 2020 will be in employees 55 and older.

Bureau of Labor Statistics

The ability to retain young talent is impacted by the prospect of career and professional advancement.

Costs are Real

Workers' compensation claim duration is 25% longer and benefit payments are 56% higher.

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Disability premiums are 15 times higher and disability instances are 42% higher among workers ages 65 and older.

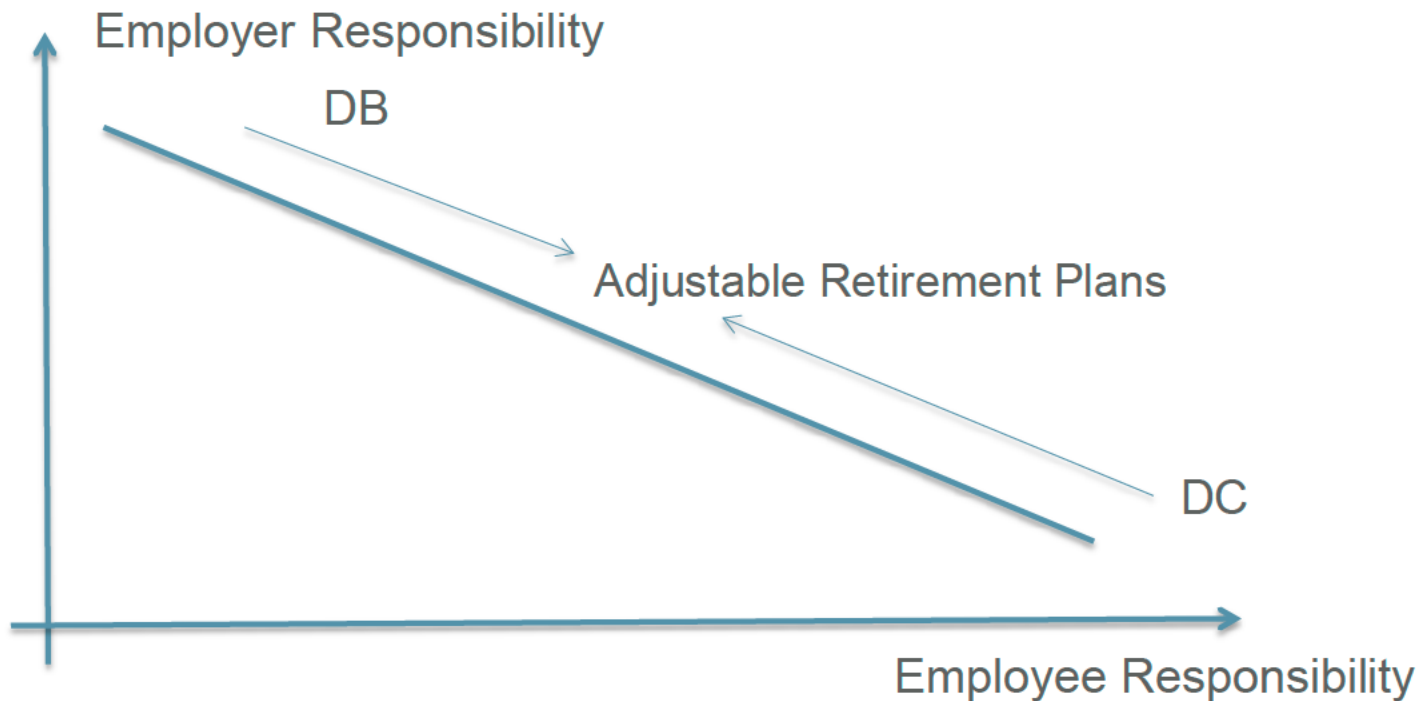
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Delayed retirements may also increase employers' healthcare costs. Healthcare costs for a 65-year-old worker are twice those of a worker between the ages of 45 and 54.

U.S. Department of Health and Human Services, "National Health Care Expenditure Sheet." Data as of 2004

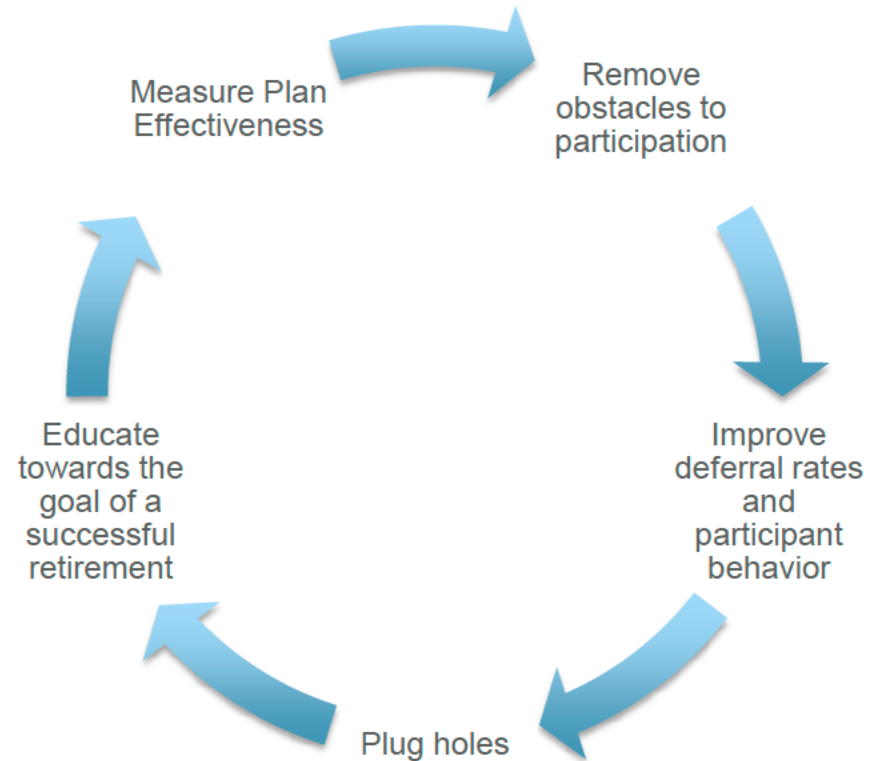
Invert Your Retirement Plan

- Establish Goals and Measure Attainment
 - Retirement Adequacy vs. Contribution Rates
 - Participant Performance vs. Investment Performance
- Focus on Least Sophisticated Participants
 - Sophisticated participants optimize plan performance and features



Five Steps to Improving Your Plan and Your Institution

1. Evaluate the Current Retirement Readiness of Your Institution as a Benchmark
2. Determine Obstacles to New Hire Participation
3. Develop Mechanisms to Move New Hires Towards Adequate Income Replacement
4. Plug the Holes
 - Current loan demographics
 - Hardship withdrawal impact
5. Build the Communication Plan to Support the Objective
 - Develop an Education Policy Statement
 - Early emphasis on savings
 - High-touch participant advice and financial planning for pre-retirees



Disclosures

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