

HOW REAL RETIREMENT SPENDING PATTERNS CHANGE TRADITIONAL RETIREMENT WITHDRAWAL STRATEGIES

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*Nerd's
Eye View*
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Advancing Knowledge in Financial Planning...

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How Real Retirement Spending Patterns Change Traditional Retirement Withdrawal Strategies

Retirement Income Planning Approaches

- Simple projections
- Historical analysis
- Monte Carlo



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Simple Projections

- Replacement rate
- Constant real spending
- Straight-line investment growth
- Variation in some spending categories

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Historical Analysis

- Safe Withdrawal Rate (SWR) approach
- Captures historical volatility
- Focuses primarily on distribution
- Project retirement saving/spending annually
- Ignores *earning* and *spending* volatility

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Monte Carlo Simulation

- Incorporates random variables
- Most commonly investment returns
- Probability of success in accumulation and decumulation
- Returns typically assumed to be independent of one another



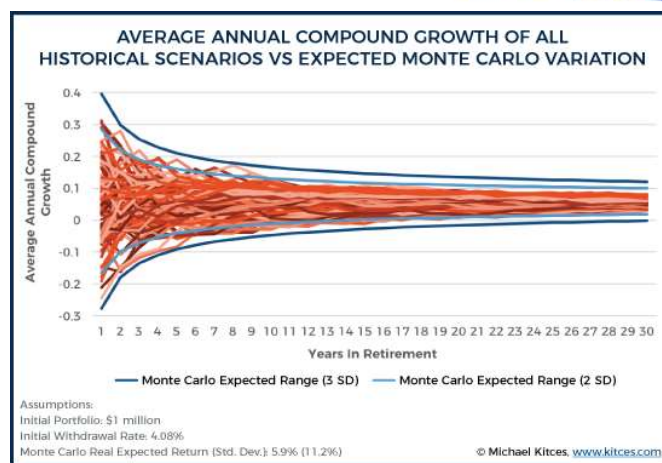
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Traditional Retirement Spending Assumptions

- Fixed rate of annual growth (COLA)
- Ignores spending volatility



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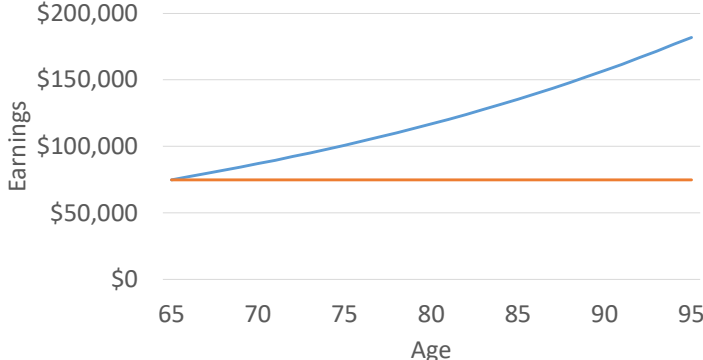
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Traditional Retirement Spending Assumptions



Age	Nominal Spending	Real Spending
65	\$75,000	\$75,000
70	\$90,000	\$75,000
75	\$105,000	\$75,000
80	\$120,000	\$75,000
85	\$135,000	\$75,000
90	\$150,000	\$75,000
95	\$180,000	\$75,000

— Nominal Spending — Real Spending



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Prior Research: Historical Retirement Spending

- Ty Bernicke (Bernicke & Associates)
 - 2005 study in the *Journal of Financial Planning*
 - Consumer Expenditure Survey
 - Cross-sectional
 - Real retirement spending declines by 15% every 5-years
 - Retiree in late 70s spending less than ½ of what they were spending in late 50s



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Historical Retirement Spending

- Center for Retirement Research (Boston University)
 - Consumer Expenditure Survey
 - Real retirement spending declines by 1% per year
- David Blanchett (Morningstar)
 - RAND Health and Retirement Study
 - Spending rate changes at various rates throughout retirement

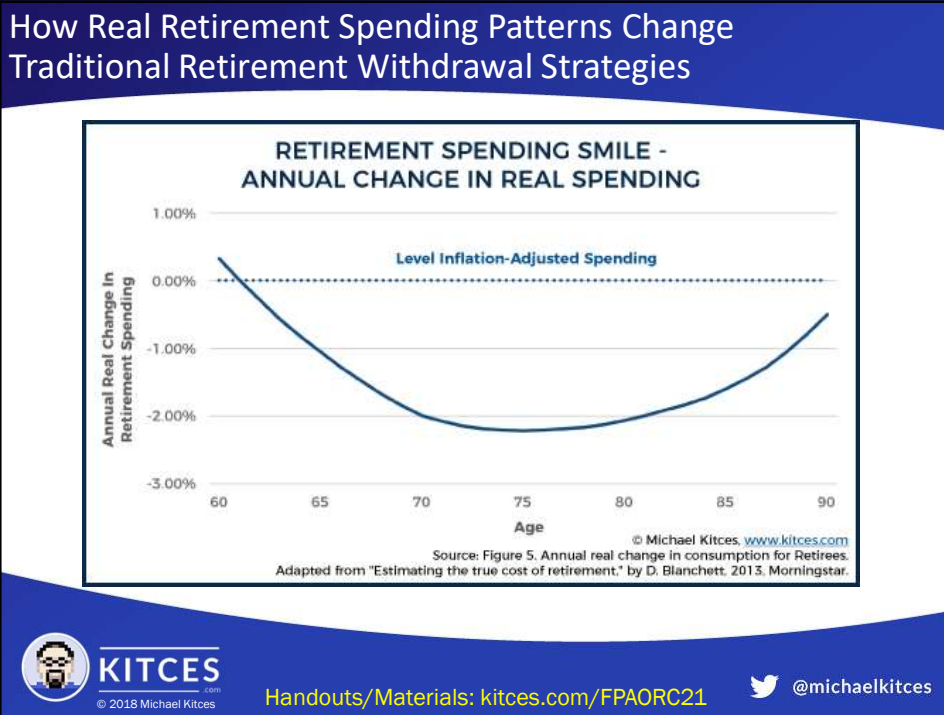


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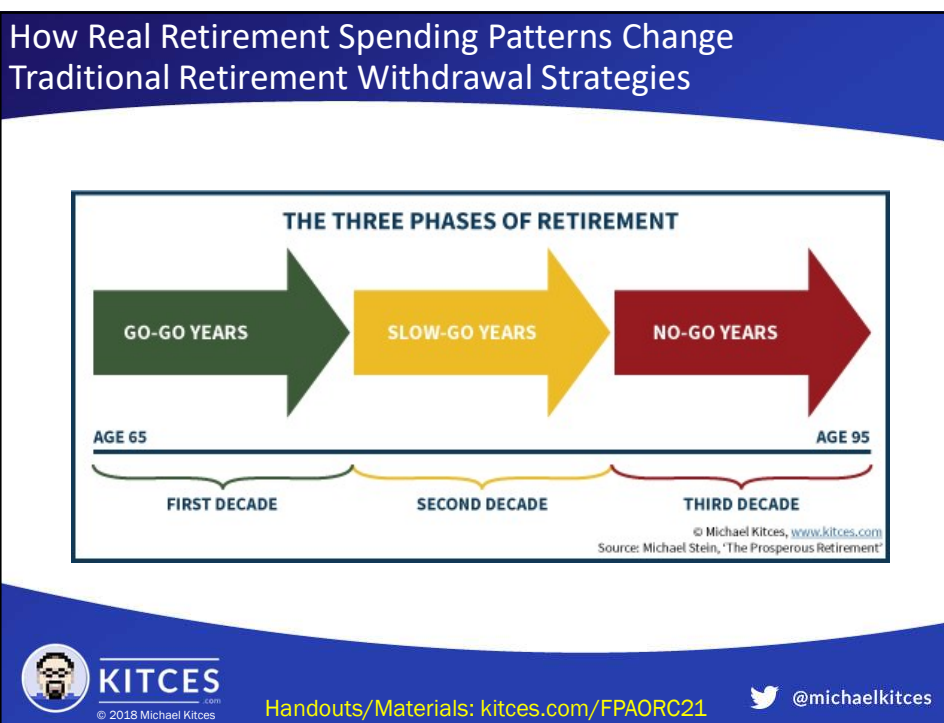
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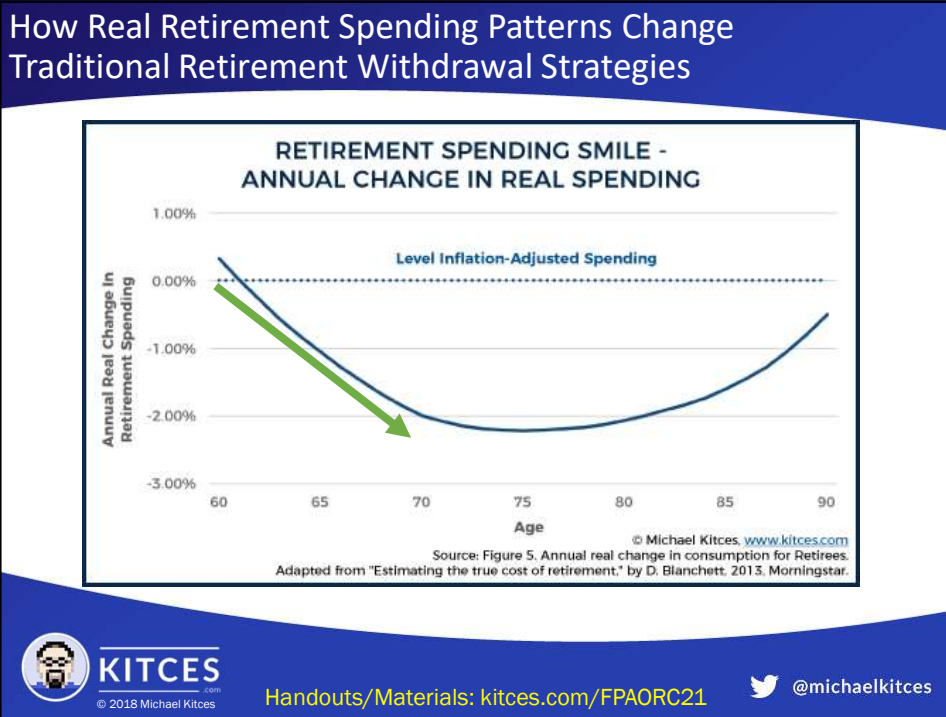
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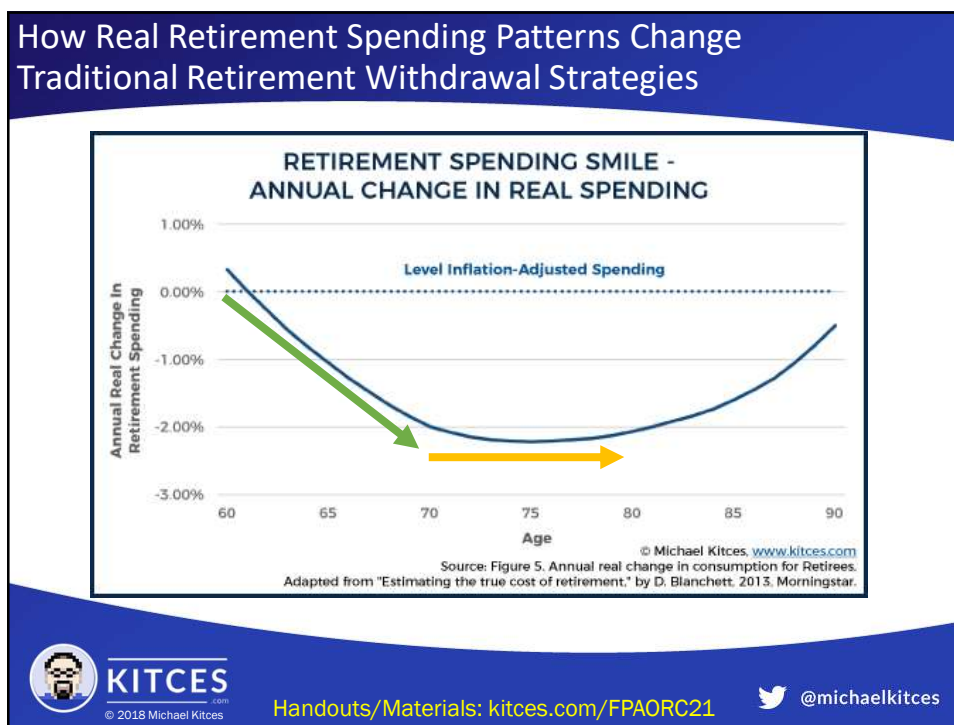
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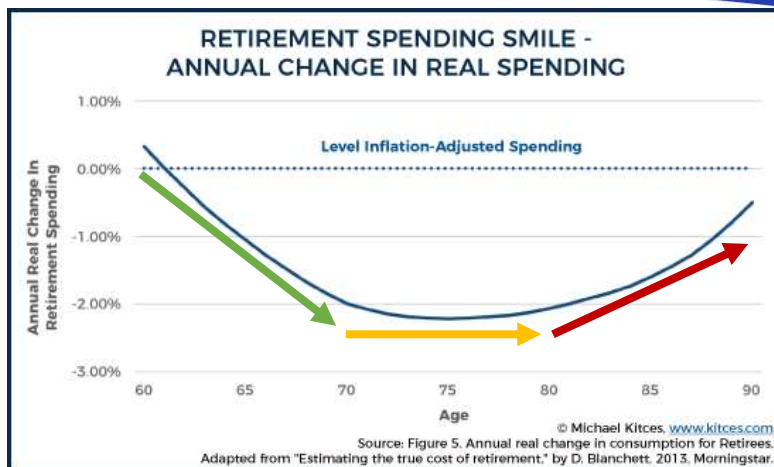


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Client Perceptions of Spending Changes

- Nominal versus real changes
- Declining real spending does not mean declining spending



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RELATIVE COMPOSITION OF CONSUMER HOUSEHOLD SPENDING OVER TIME

Percent of Total

Average Household Age

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Source: Figure 2. Changing expenditures over time. "Estimating the true cost of retirement," by D. Blanchett, 2013, Morningstar.



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COMPOSITION OF SPENDING AMONGST AFFLUENT RETIREE HOUSEHOLDS, BY AGE

Age

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Source: Exhibit 2. Average spending patterns of various age groups, Chase households \$1MM-\$2MM in assets. "Spending in retirement," by K. Roy, and S. Carson, 2015, J.P. Morgan Retirement Insights.



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Retiree Specific Adjustments

- JP Morgan Study
 - 40% of affluent retirees are “foodies”
 - 30% are “homebodies”
 - 5% are globetrotters



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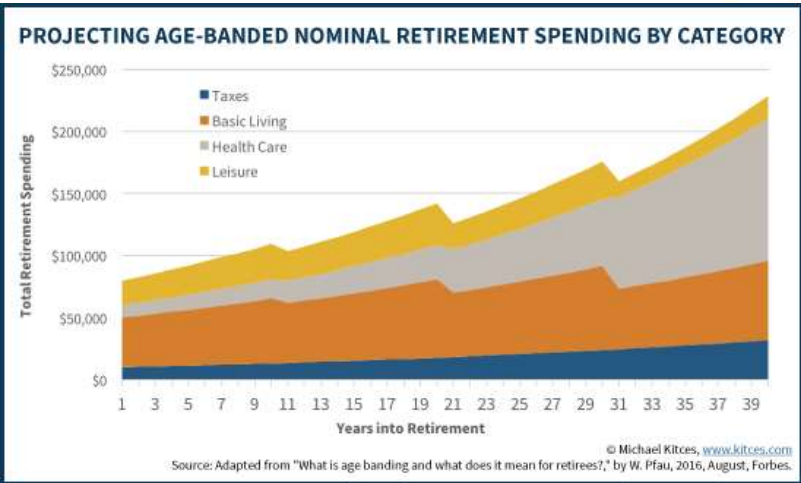
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PROJECTING AGE-BANDED NOMINAL RETIREMENT SPENDING BY CATEGORY




Years into Retirement	Taxes	Basic Living	Health Care	Leisure	Total
1	\$10,000	\$40,000	\$10,000	\$15,000	\$75,000
5	\$10,000	\$45,000	\$15,000	\$20,000	\$90,000
10	\$10,000	\$50,000	\$20,000	\$25,000	\$105,000
15	\$10,000	\$55,000	\$25,000	\$30,000	\$120,000
20	\$10,000	\$60,000	\$30,000	\$35,000	\$135,000
25	\$10,000	\$65,000	\$35,000	\$40,000	\$150,000
30	\$10,000	\$70,000	\$40,000	\$45,000	\$165,000
35	\$10,000	\$75,000	\$45,000	\$50,000	\$180,000
39	\$10,000	\$80,000	\$50,000	\$55,000	\$195,000

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Source: Adapted from "What is age banding and what does it mean for retirees?," by W. Pfau, 2016, August, Forbes.



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Analysis: Impact of Realistic Assumptions on Safe Withdrawal Rates

- 30-year retirement horizon
- 60/40 portfolio rebalanced annually


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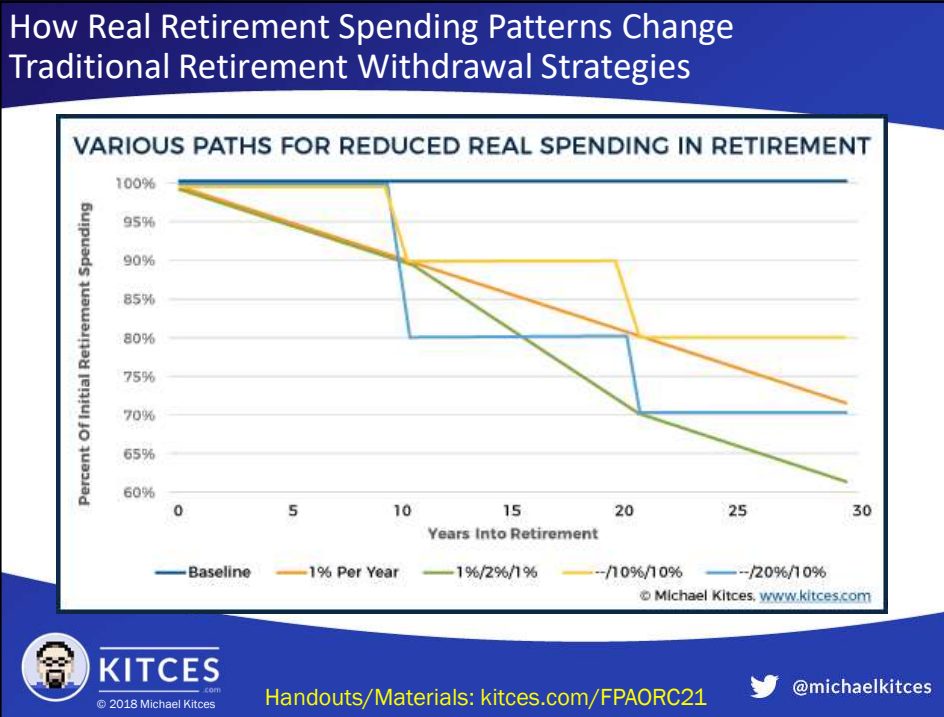
Analysis: Impact of Realistic Assumptions on Safe Withdrawal Rates

- Four spending patterns:
 - 1% annual real reduction for 30-years
 - 1% annual real reduction (1st decade), 2% annual real reduction (2nd decade), 1% annual real reduction (3rd decade)
 - 10% real reduction after each decade
 - 20% real reduction after first decade, 10% real reduction after the second

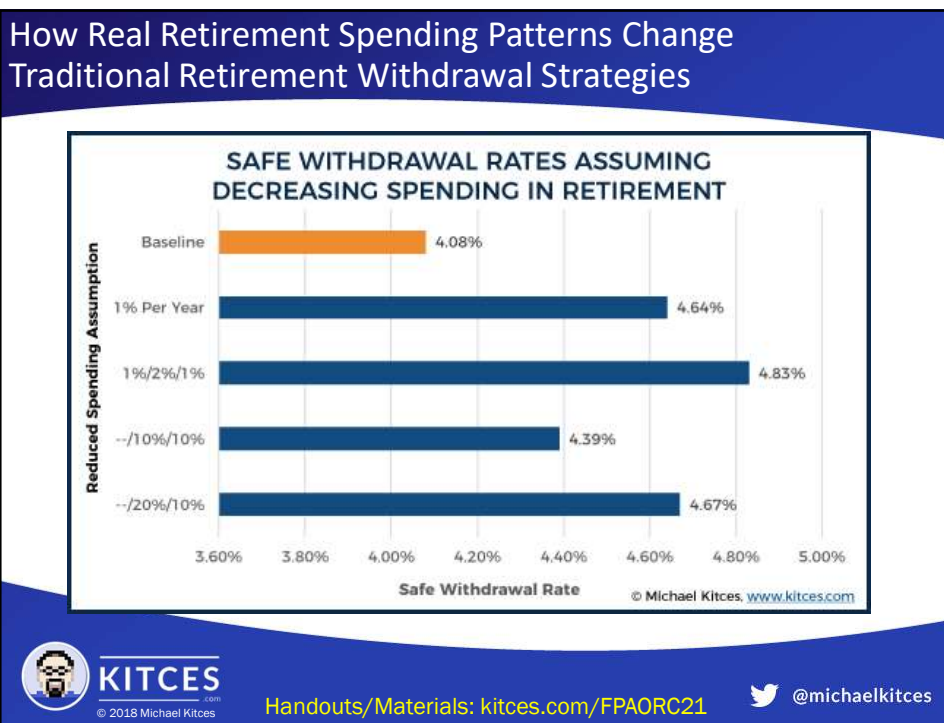

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Overall Impact

- SWR increase of 0.32 percentage points to 0.75 percentage points
- SWR increase of 8% to 18%
- \$4,008 per \$100k of retirement assets to \$4,390 - \$4,830 per \$100k



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Alternative Approach to Adjusting Spending

- Market driven spending reduction triggers
- Small-but-permanent cuts vs. large-but-temporary



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SPECTRUM OF DYNAMIC WITHDRAWAL RATE SPENDING STRATEGIES




Fixed [Inflation-Adjusted] Dollar Withdrawals

Low Initial Withdrawal Rate
High Spending Stability




Dynamic Spending Decision Rules



Fixed Percentage Withdrawals


High Initial Withdrawal Rate
Low Spending Stability

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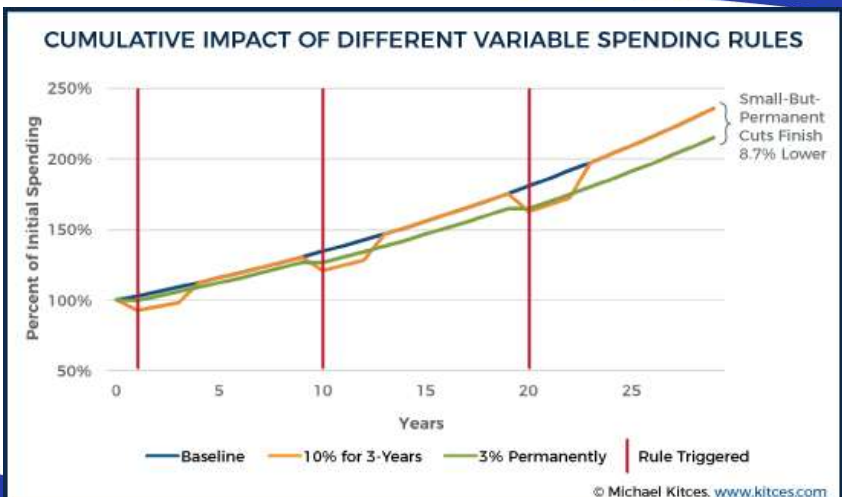
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CUMULATIVE IMPACT OF DIFFERENT VARIABLE SPENDING RULES




Small-But-Permanent Cuts Finish 8.7% Lower

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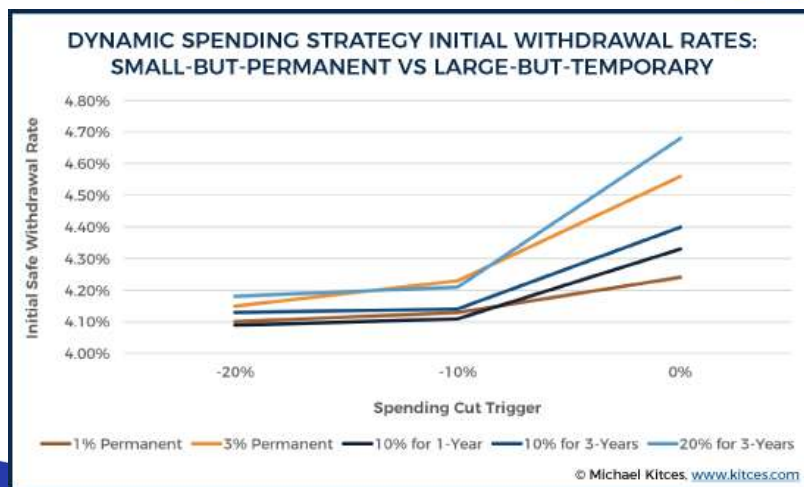
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Dynamic Spending Strategies

- Guyton-Klinger Decision Rules
- Kitces' Ratcheting SWR
- Finke, Pfau, and Williams (2012): Risk tolerant individual may prefer 5-7% withdrawal rate with a guaranteed income of \$20k



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A Caution Against “Overfitting”

- Long-term patterns can be insightful
- A client’s momentary situation may be capturing too much error/noise



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The Value of Heuristics and Bias

- Sometimes “less is more”
 - Observations are sparse
 - There is significant noise in observations

$$\text{Total error} = (\text{bias})^2 + \text{variance} + \text{noise}$$



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A Caution Against “Overfitting”

London's daily temperature in 2000

(A)

Model performance for London 2000 temperatures

(B)

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The Gaze Heuristic

1. Fix your gaze on the ball,
2. start running, and
3. adjust your running speed so that the angle of gaze remains constant



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Catching a ball on an upward trajectory

1. Fix your gaze on the ball,
2. start running,
3. and adjust your running speed so that the image of the ball rises at a constant rate



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Value of Heuristics and Bias

- Sometimes less data/analysis can lead to better decision maker
- Heuristics/bias can allow us to ignore many factors yet still receive an equally (if not better) result



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Key Takeaways and Planning Implications

- Important to consider retirement spending trajectory in any type of analysis
 - Constant real spending is often *not* accurate
 - For affluent clients, tends to overstate retirement income need



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Key Takeaways and Planning Implications

- Opportunity to incorporate client-specific risk preferences
 - Willingness to accept/tolerate some uncertainty:
 - Can lead to higher withdrawal rates
 - Influences ideal allocation

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Key Takeaways and Planning Implications

- Financial planning tools can be lacking
 - Don't just accept the default assumption
 - Can inflate spending at rate lower than inflation
 - Can decrease spending in "chunks"

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Key Takeaways and Planning Implications

- Realistic assumptions can be limiting in many other areas
 - Savings assumptions
 - Income-growth over the lifecycle
 - Allocation
 - Taxes
 - Life expectancy
 - Good example, see Blanchett, Finke, Pfau (2017)

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Key Takeaways and Planning Implications

- Best assumptions are realistic to your client
 - To the extent your client's unique dynamics can be captured, that is often the best route

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Summary

- Real spending through retirement is not flat
- Vary at age/stage of life (and by category)
- Can substantially impact safe withdrawal rates
- Declining spending throughout retirement means that typical assumptions often overstate retirement savings need

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