
5 Must-Knows about In-Retirement Spending



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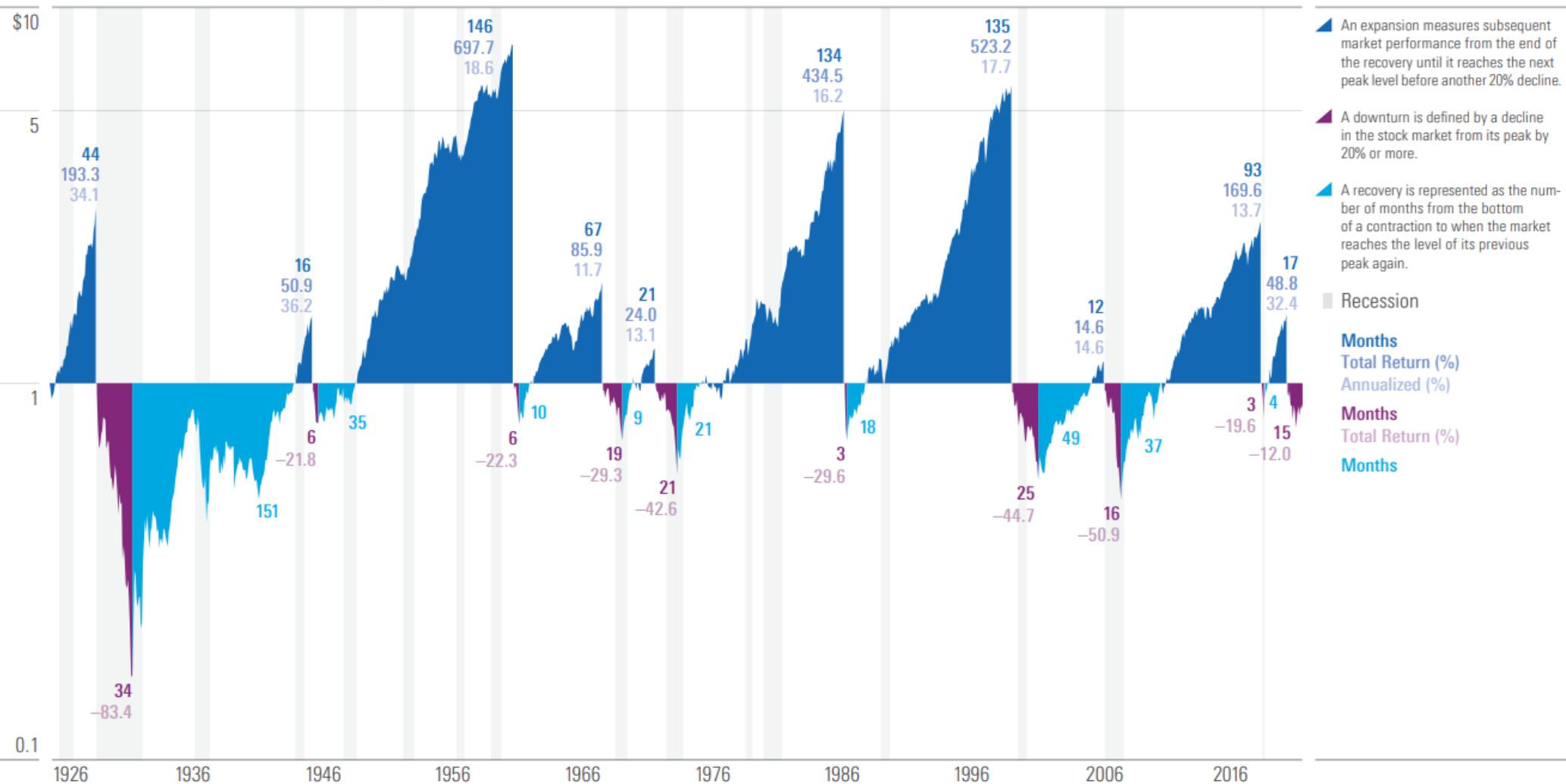
September 2023

Presentation Roadmap

- Why the “safe withdrawal rate” problem is such a hard one
- 5 key lessons from the research on withdrawal rates
 - Beginning market conditions matter a lot
 - Asset allocation is important
 - Inflation is a force to be reckoned with
 - Retirees’ own spending is apt to be variable over the life cycle
 - Variable withdrawal approaches can enlarge starting and lifetime withdrawal rates

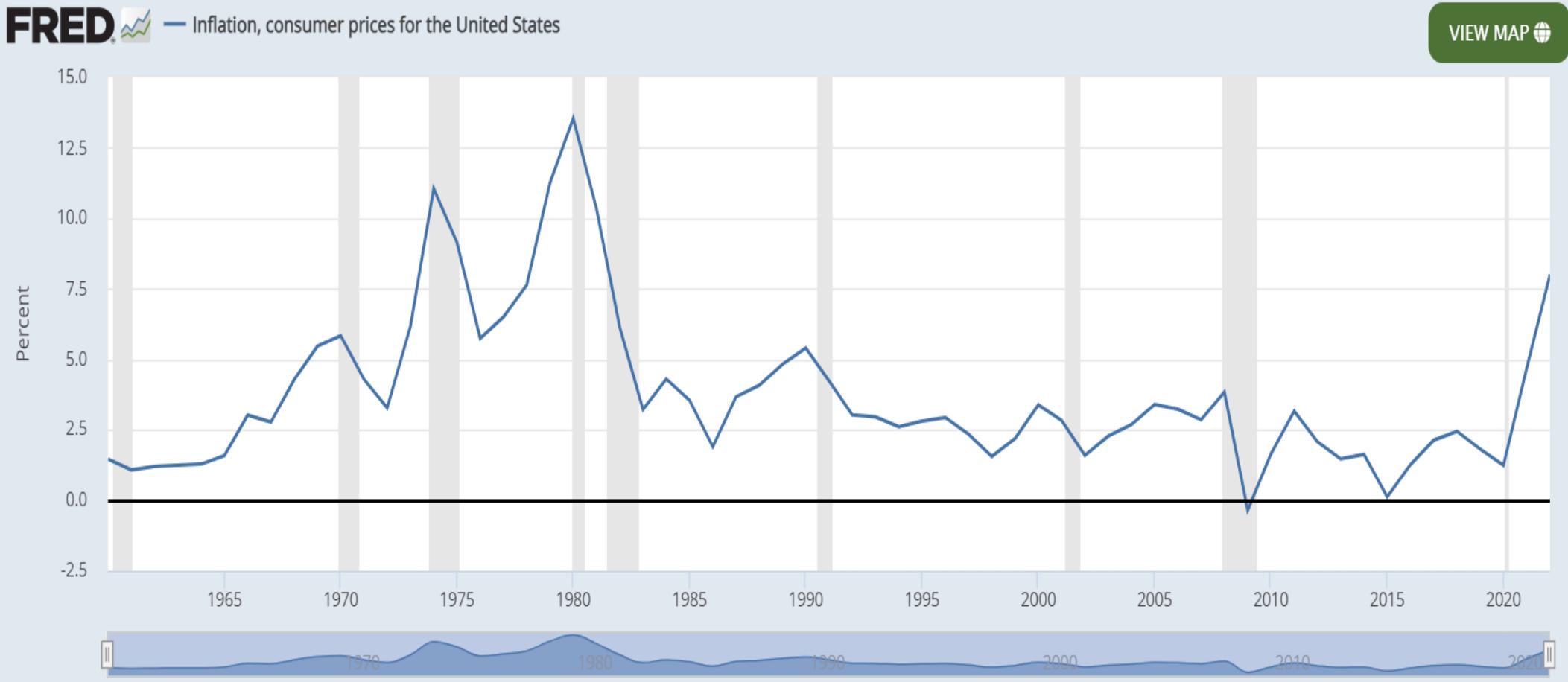
Market conditions are tough to predict

U.S. Market Downturns, Recoveries, and Expansions



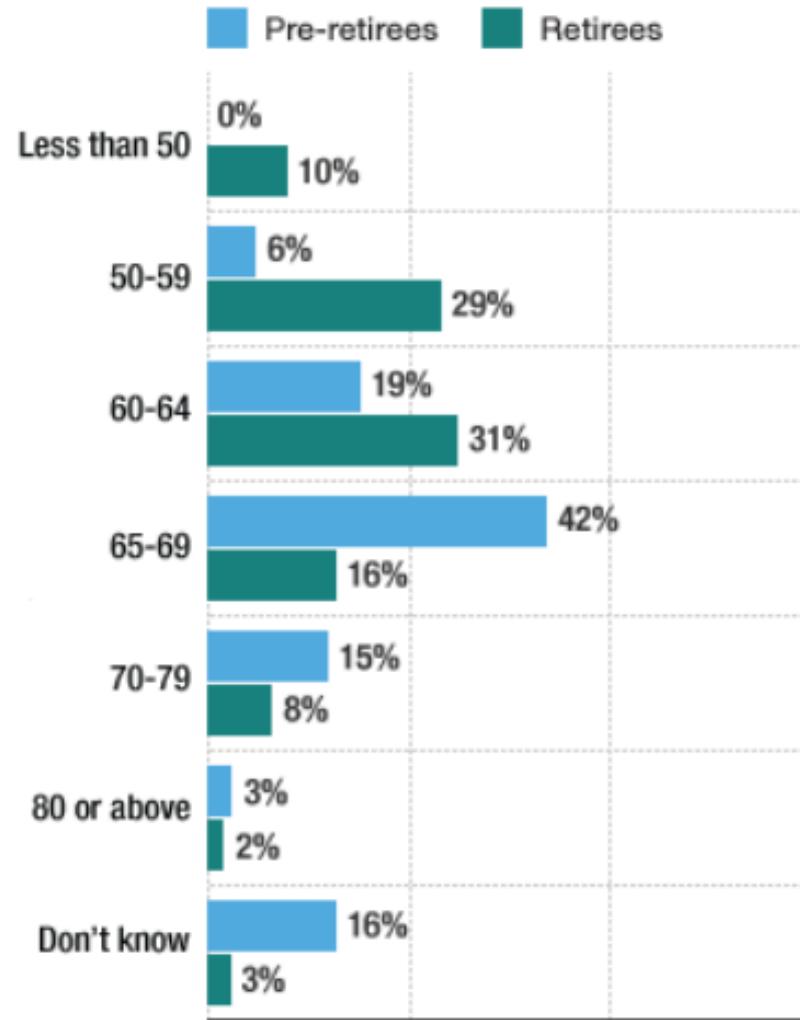
Source: Morningstar Markets
Observer, June 2023.

Inflation is also difficult to foresee



Source: World Bank via FRED,
stlouisfed.org.

Even setting a retirement date is hard!



Survey: NPR, The Robert Wood Johnson Foundation, Harvard School of Public Health

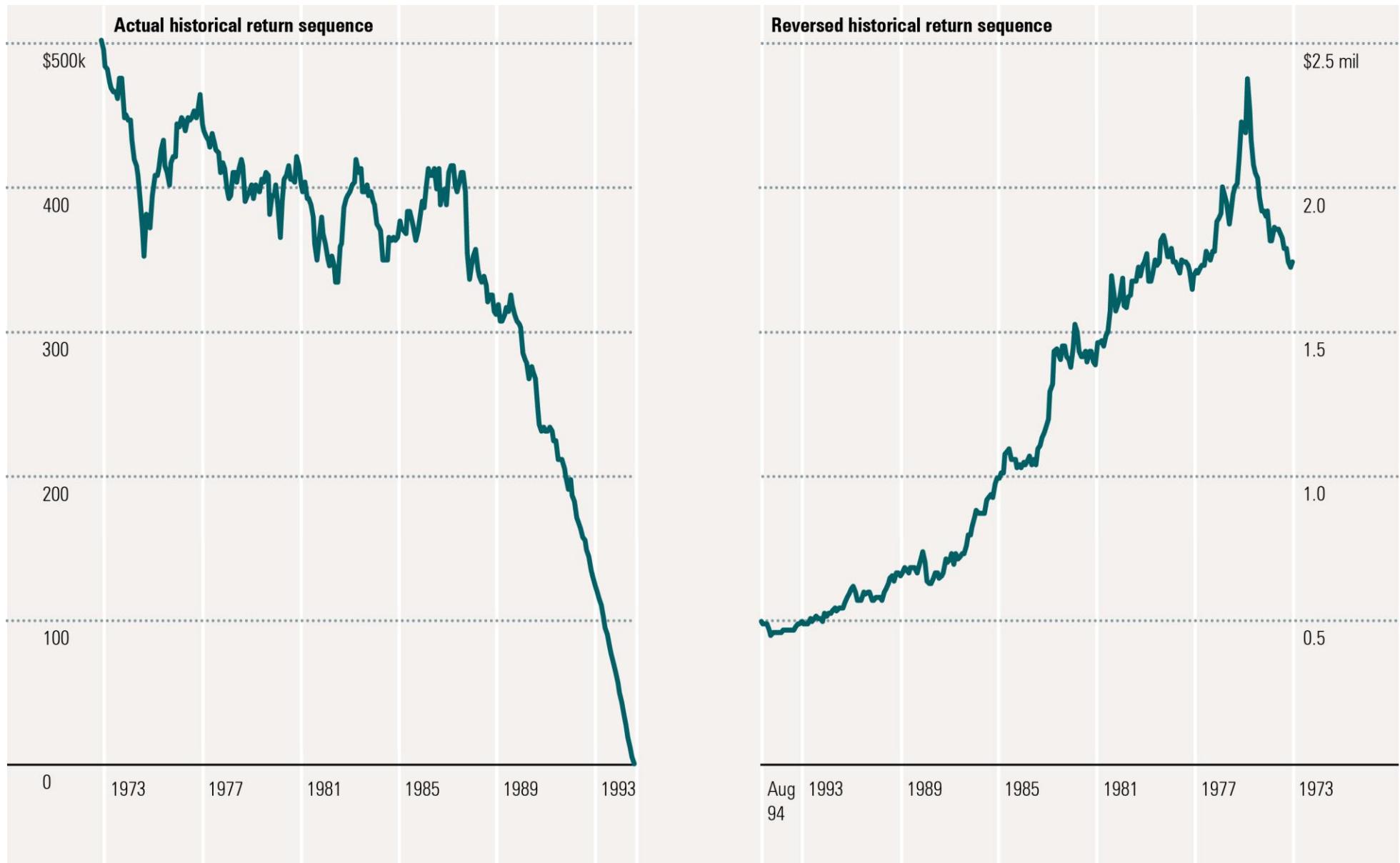
The wild cards are stacking up

- Stock and bond market returns
- Inflation
- The retirement date
- Retiree's own spending patterns (e.g., long-term care costs)
- LIFE EXPECTANCY

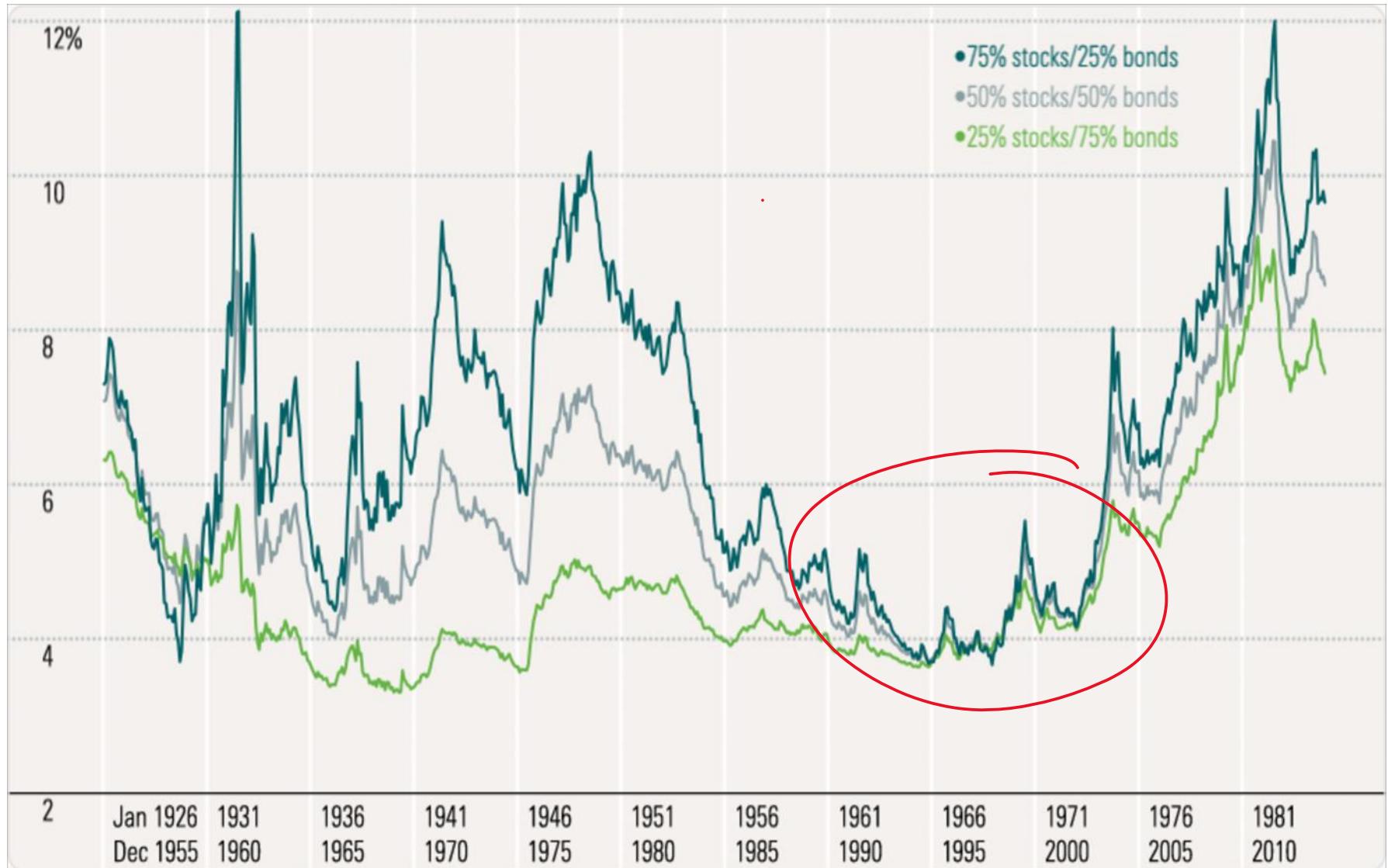
What do we know?



Lesson 1: Beginning conditions matter a lot



The “right” withdrawal rate? It depends



Gauging withdrawal conditions: A dashboard

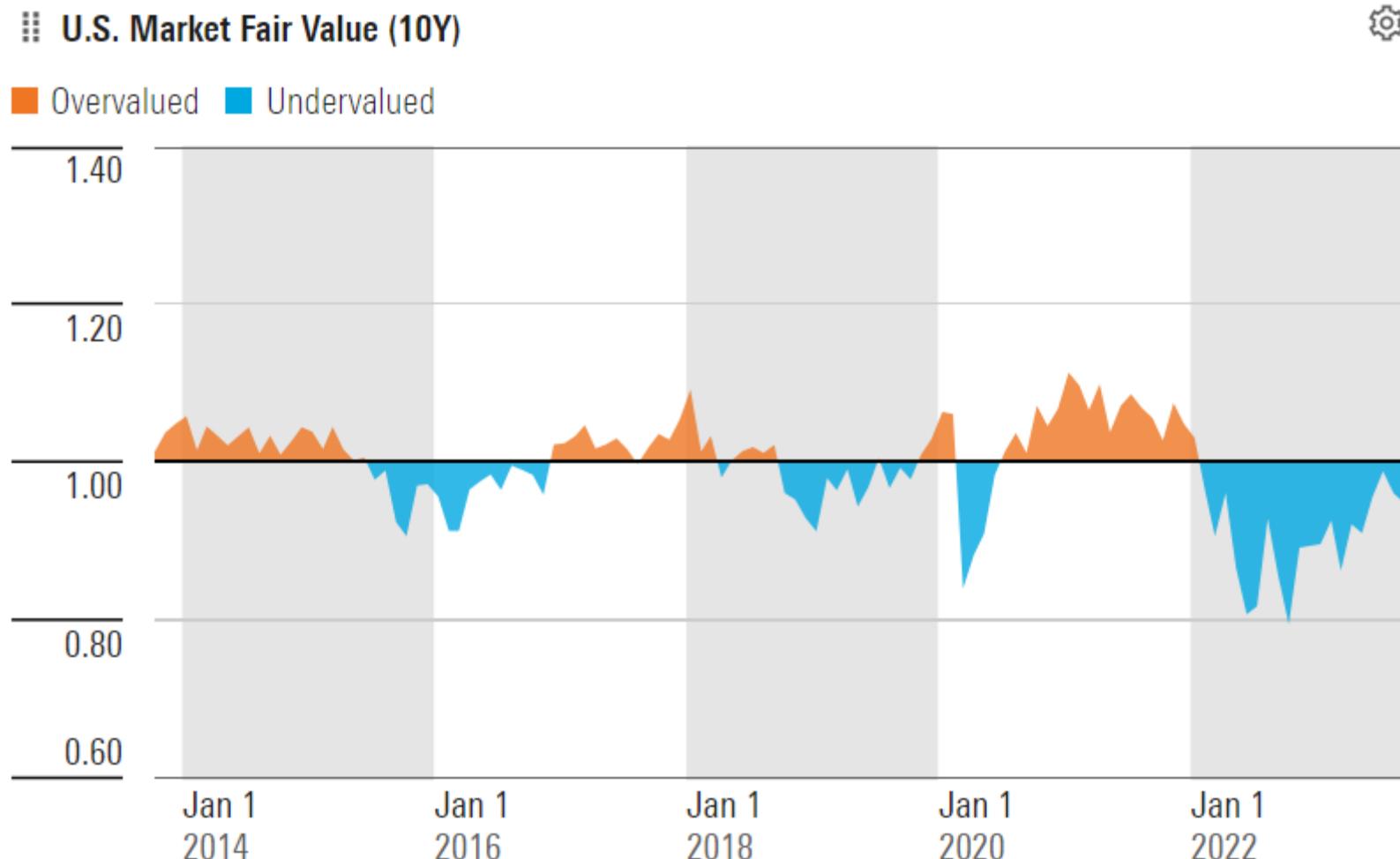
Ideal conditions for starting withdrawals

- Low equity valuations (sell into appreciating market environment)
- Decent cash and bond yields (creates safe cash flows)
- Low inflation (helps preserve purchasing power on portfolio cash flows)

Poor conditions for starting withdrawals

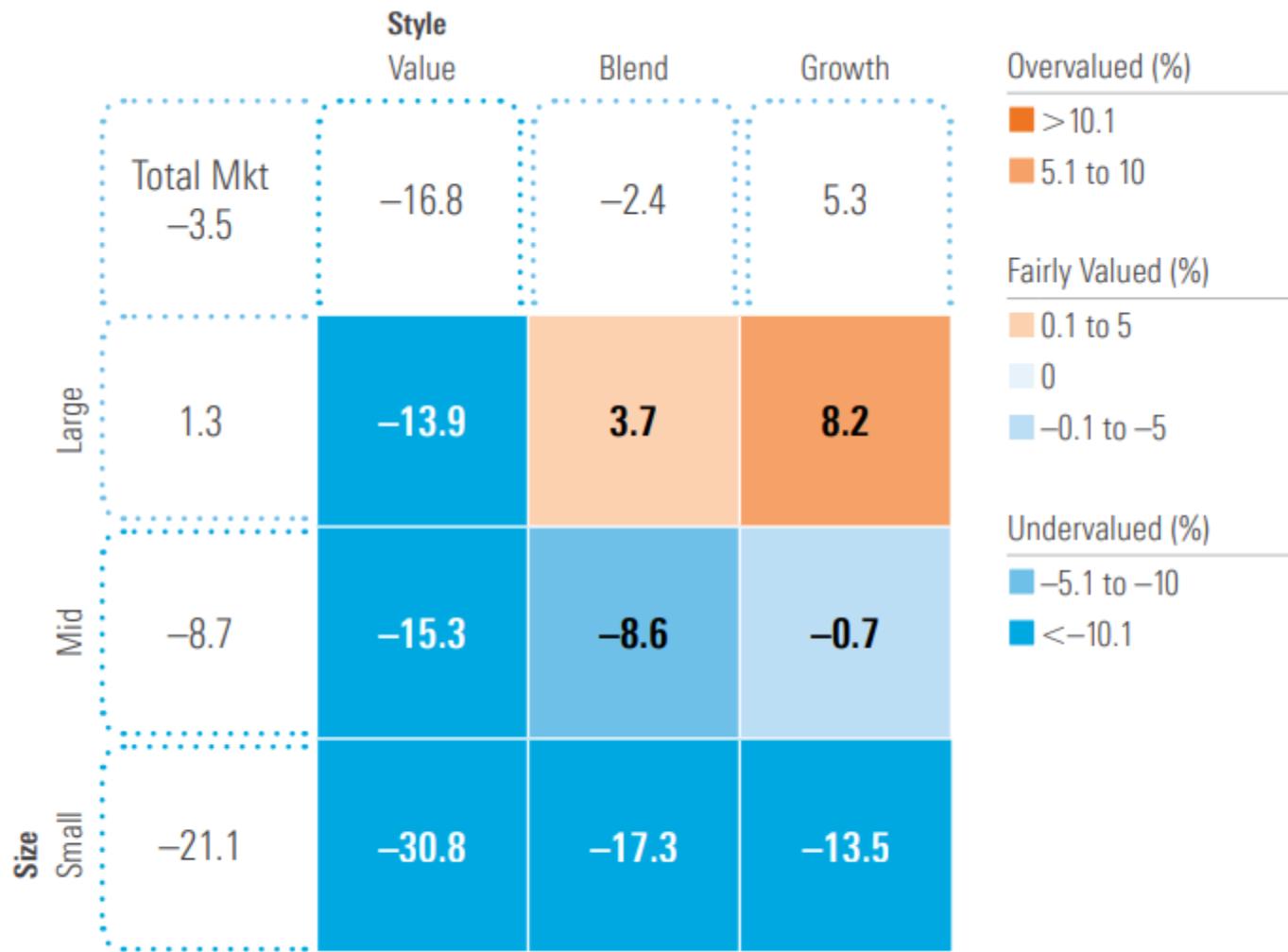
- High equity valuations (sell into declining market environment)
- Low cash and bond yields (meager safe cash flows)
- High inflation (reduces purchasing power of portfolio cash flows)

Equity valuations: Improving



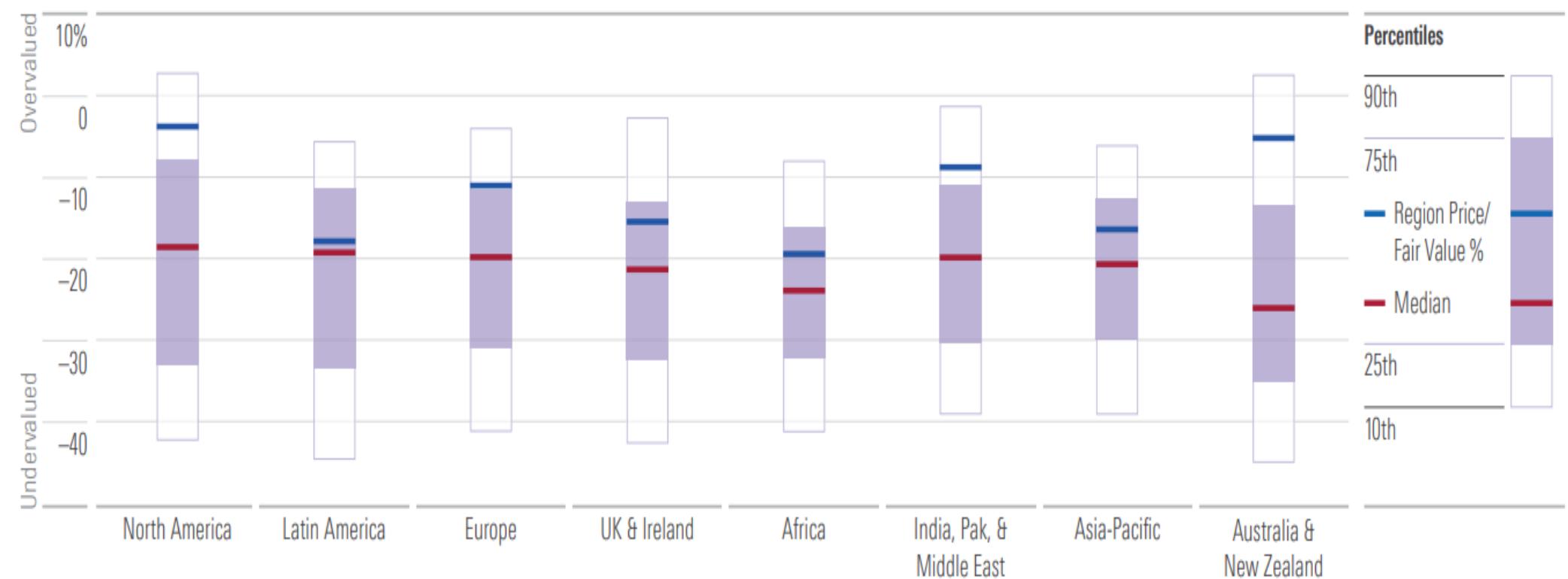
Source: Morningstar Investor,
September 2023.

Value, smaller stocks are attractive



Source: Morningstar Markets
Observer, June 2023.

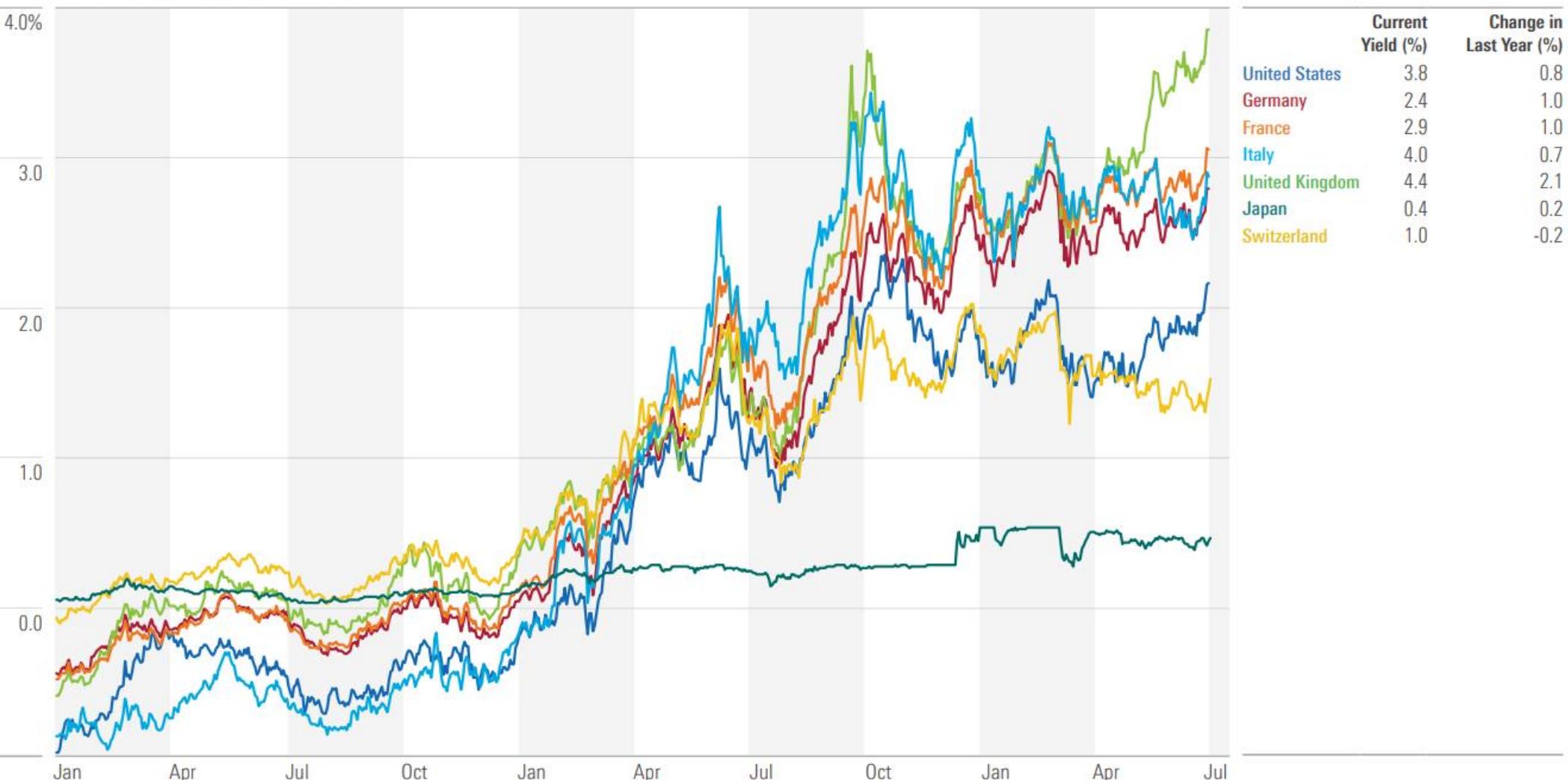
Non-U.S. stocks generally cheaper than U.S.



Source: Morningstar Markets
Observer, June 2023.

Bond yields are also looking MUCH better

Global Sovereign Benchmarks 10 Year Yield

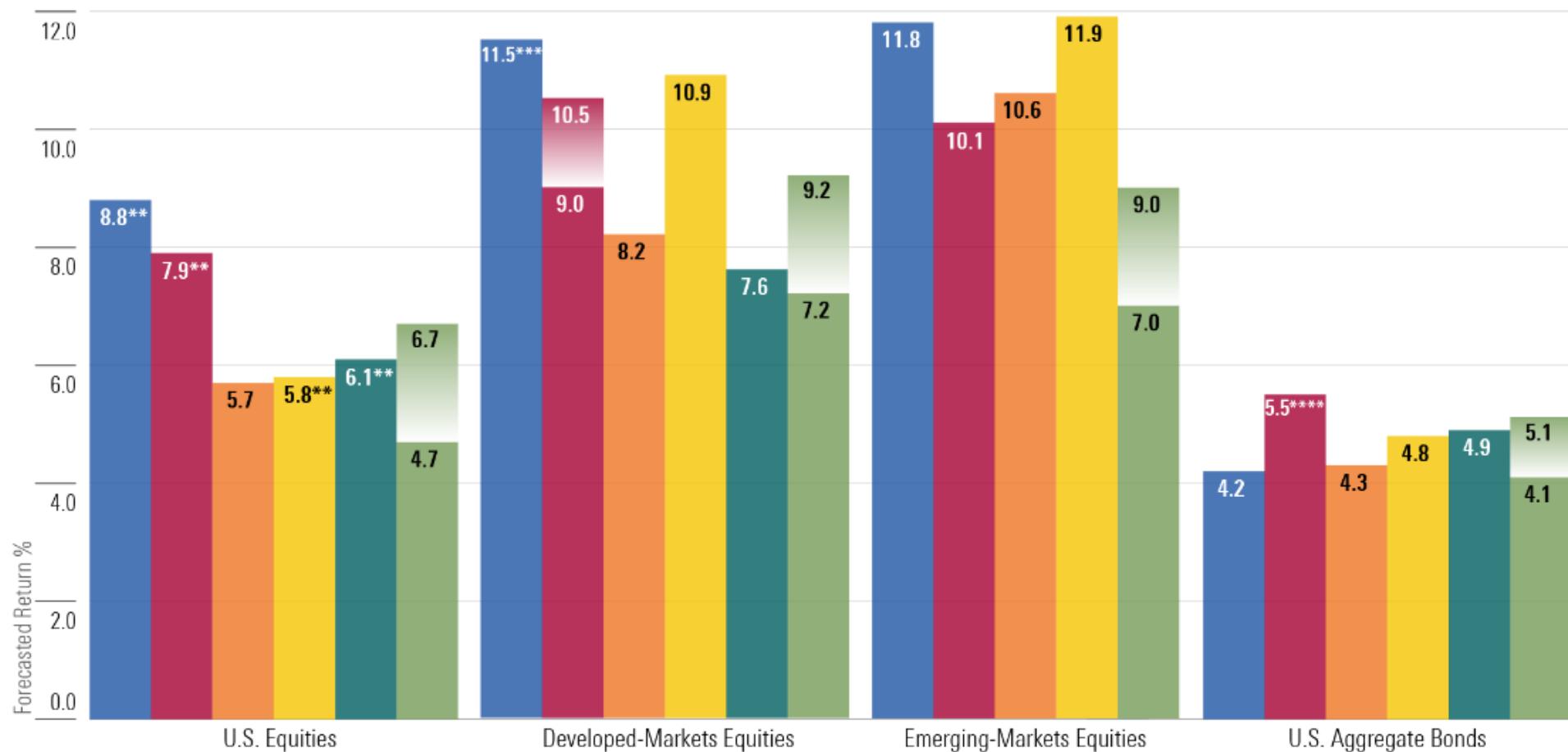


Source: Morningstar Markets
Observer, June 2023.

Outlook for stocks, bonds has improved

■ BlackRock ■ J.P. Morgan* ■ Morningstar Investment Management ■ Research Affiliates ■ Schwab ■ Vanguard

14%



Source: Morningstar.com, Jan.
20, 2023.

Better expected stock/bond returns lift starting safe withdrawal rates

- 3.3%: 2020 starting safe withdrawal amount
- 3.8%: 2022 starting safe withdrawal amount

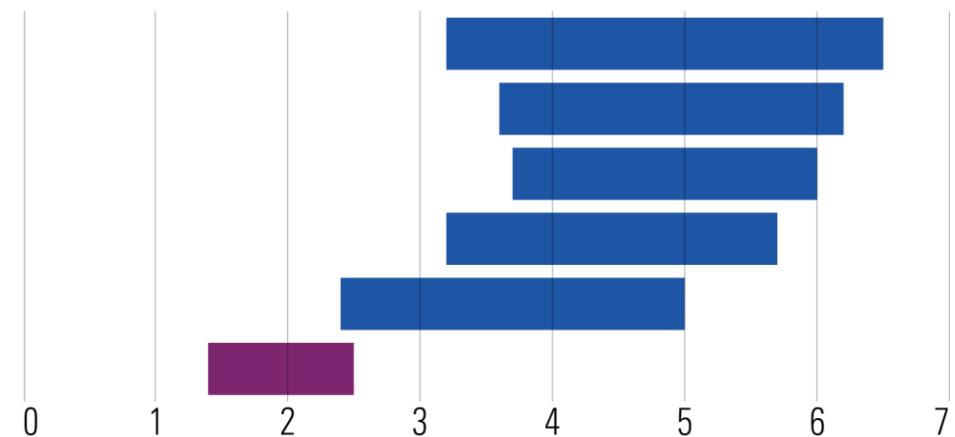
- Assumptions:
- Fixed real withdrawals
 - 3.8% of portfolio in year 1:
 - \$38,000 on \$1 mil. portfolio in year 1
 - \$39,140 in year 2 (assuming 3% inflation rate)
- Balanced stock/bond portfolio
- 90% success rate

Lesson 2: Asset allocation matters—a lot.

Highest and Lowest Starting Safe Withdrawal Rates, by Asset Allocation

(Rolling 30-Year Time Horizons, Starting From 1930 Through 1990, 90% Success Rate)

Asset Allocation	Lowest	Highest
100% Stocks	3.2	6.5
75% Stocks, 25% Bonds	3.6	6.2
50% Stocks, 50% Bonds	3.7	6.0
25% Stocks, 75% Bonds	3.2	5.7
100% Bonds	2.4	5.0
Mattress	1.4	2.5



Source: Morningstar Direct. Data as of 12/31/2019.

Higher yields point toward value of balance

Assumptions: Fixed real withdrawal system, 90% success rate.

Equity Weighting %	10 Years	15 Years	20 Years	25 Years	30 Years	35 Years	40 Years
100	8.5	5.9	4.7	3.9	3.5	3.3	3.1
90	8.7	6.1	4.9	4.0	3.6	3.3	3.1
80	8.9	6.2	4.9	4.1	3.7	3.3	3.1
70	9.1	6.3	5.1	4.2	3.7	3.4	3.2
60	9.3	6.5	5.2	4.3	3.8	3.4	3.2
50	9.5	6.6	5.2	4.3	3.8	3.4	3.2
40	9.6	6.7	5.3	4.4	3.8	3.4	3.2
30	9.7	6.7	5.3	4.3	3.8	3.4	3.1
20	9.7	6.7	5.2	4.3	3.7	3.3	3.0
10	9.7	6.6	5.1	4.1	3.5	3.1	2.8
0	9.4	6.4	4.8	3.9	3.3	2.9	2.6

Source: Morningstar Direct,
Sept. 30, 2022.

Source: Morningstar Direct. Data as of 9/30/2022.

Stock returns are higher, but more variable

Projected Asset Class and Portfolio Returns

Broad Asset Class	Asset Class	Expected 30-Year Return % <i>(Arithmetic)</i>	Expected 30-Year Standard Deviation % <i>(Annual)</i>
Equity	Large Growth U.S. Stocks	9.65	19.06
	Large Value U.S. Stocks	8.96	15.81
	Small Growth U.S. Stocks	10.58	24.71
	Small Value U.S. Stocks	12.40	20.60
	Foreign Stocks	10.00	18.32
Bond	U.S. Investment-Grade Bond	4.51	5.39
	Foreign Bond	5.12	9.03
Cash	U.S. Treasury Bill	2.69	1.74
Inflation		2.84	

Source: Morningstar Direct,
Sept. 30, 2022.

Bucket approach provides balance



Bucket 1

For: Years 1 and 2
Holds: Cash
Goal: Fund Near-Term Living Expenses

Bucket 2

For: Years 3-10
Holds: Bonds, Balanced Funds
Goal: Income production, stability, inflation protection

Bucket 3

For: Years 11 and beyond
Holds: Stock
Goal: Growth

Sample in-retirement bucket portfolio

Retirees Spending \$60,000/Year from Portfolio

Bucket 1: Liquidity Portfolio for Years 1 and 2: \$120,000

\$120,000 in CDs, money market accounts/funds, other cash

Bucket 2: Intermediate Portfolio for Years 3-10: \$480,000

\$100,000 in Vanguard Short-Term Bond ETF BSV

\$150,000 in Vanguard Short-Term Inflation-Protected Securities VTIP

\$230,000 in Vanguard Total Bond Market BND

Bucket 3: Growth Portfolio for Years 11 and Beyond: \$900,000

\$350,000 in Vanguard Dividend Appreciation VIG

\$225,000 in Vanguard Total Stock Market Index VTI

\$250,000 in Vanguard FTSE All-World ex-US VEU

\$75,000 in Vanguard High-Yield Corporate VWEHX

But buckets 1 & 2 carry a substantial opportunity cost

- Other “buffer” assets could reduce need to maintain ongoing stake in low-returning assets (Wade Pfau)
 - Standby reverse mortgage
 - Life insurance cash value
 - Annuities
- Alternatively, “bucketed” retiree could simply not fully replenish buckets 1 and 2 once depleted
- Retirees with tighter plans might shrink buckets 1 and 2 as a % of total portfolio (5 years v. 10?)

Lesson 3: Inflation is a force to be reckoned with

“If there’s a 10% inflation rate in the first year of retirement and then it gets back to normal afterward, every future year of spending has been impacted by that first-year inflation rate.”—Wade Pfau

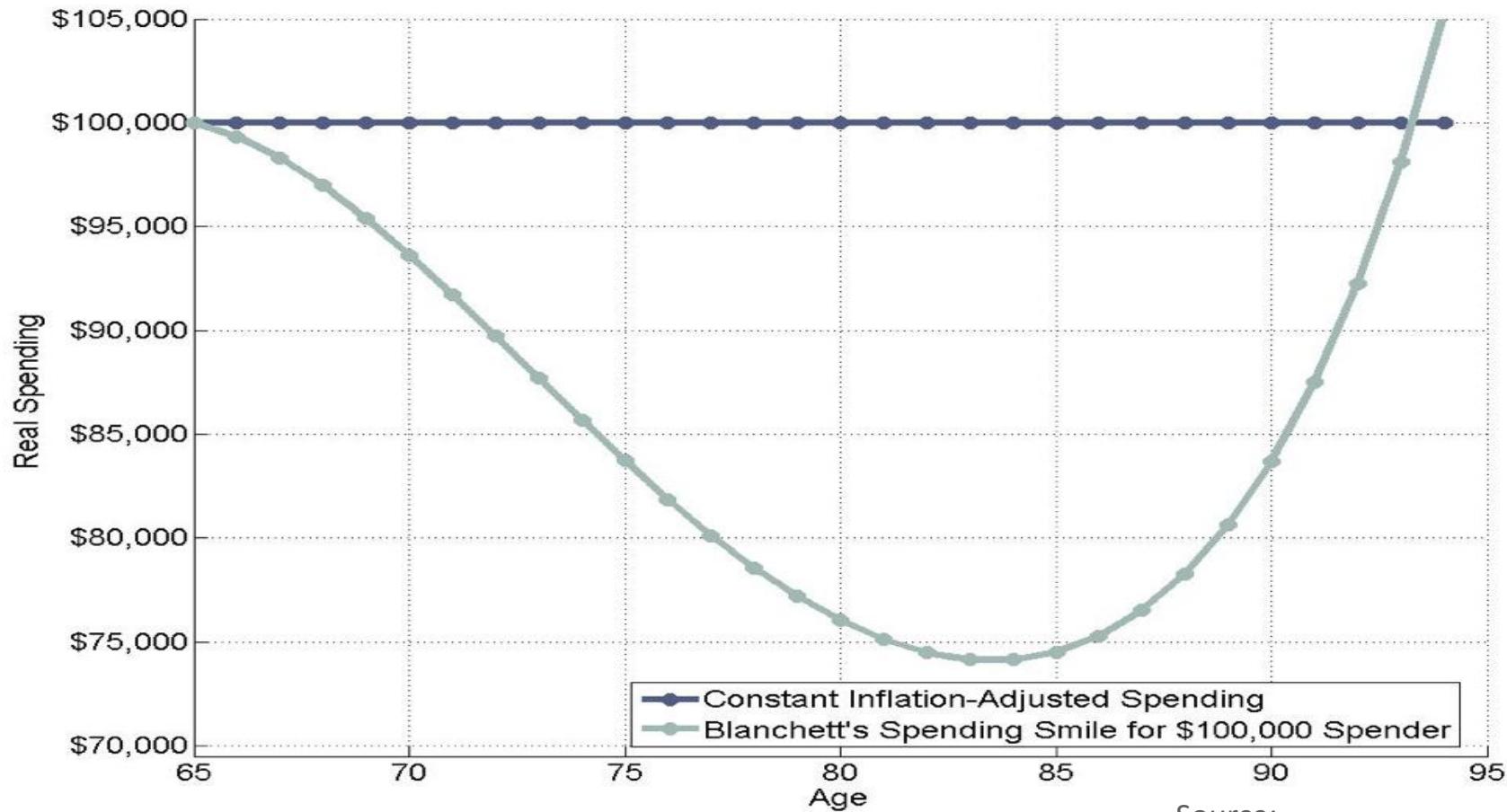
Why inflation can be a big deal in retirement

- Inflation is a factor for all of us, but it's especially negative for retirees because:
 - If high inflation occurs early in retirement, it builds upon itself
 - The categories that older adults tend to spend more on may be inflating more quickly than the general inflation rate
 - The portion of their portfolios that they're withdrawing is not automatically inflation-adjusted (in contrast with our paychecks and Social Security)
 - Inflation is the natural enemy of anything with a fixed payout:
 - Nominal (non-inflation-adjusted) bonds
 - Fixed annuities
 - More conservative portfolios have lower return potential, so inflation takes a bigger bite in percentage terms

Inflation *protection* a harder problem

- At the portfolio level:
 - Treasury Inflation-Protected Securities, I-Bonds
 - Stocks: Best long-run shot at beating inflation
- At the plan level:
 - Delaying Social Security: Enhanced return is also inflation-adjusted
 - Factoring inflation into portfolio-spending plan

Lesson 4: Retirees' own spending is apt to be variable over the life cycle



Source:
Retirementresearcher.com.

Pattern calls into question withdrawal rate conventions

- Much of the research assumes fixed real expenditures
 - 4% of a \$1 mil. portfolio in year 1: \$40,000
 - Year 2 withdrawal (assuming 3% inflation): \$41,200
- David Blanchett found that actual retiree spending tended to decline in the middle to later years of retirement, before trending up later in life

Takeaways for spending rates

- Retirees' starting withdrawal rates could be higher to factor in lower spending later on (even if they encounter higher spending later in life)
- Retirees' expenditures, on average, increase by 1 percentage point *less* than the inflation rate
- Factor in personal situation, especially status of long-term care coverage

Is 4% actually 4.3%?

Portfolio Weighting %	Method	
	Fixed Real	Inflation Haircut
100	3.5	3.9
90	3.6	4.0
80	3.7	4.1
70	3.7	4.2
60	3.8	4.3
50	3.8	4.3
40	3.8	4.3
30	3.8	4.3
20	3.7	4.2
10	3.5	4.0
0	3.3	3.7

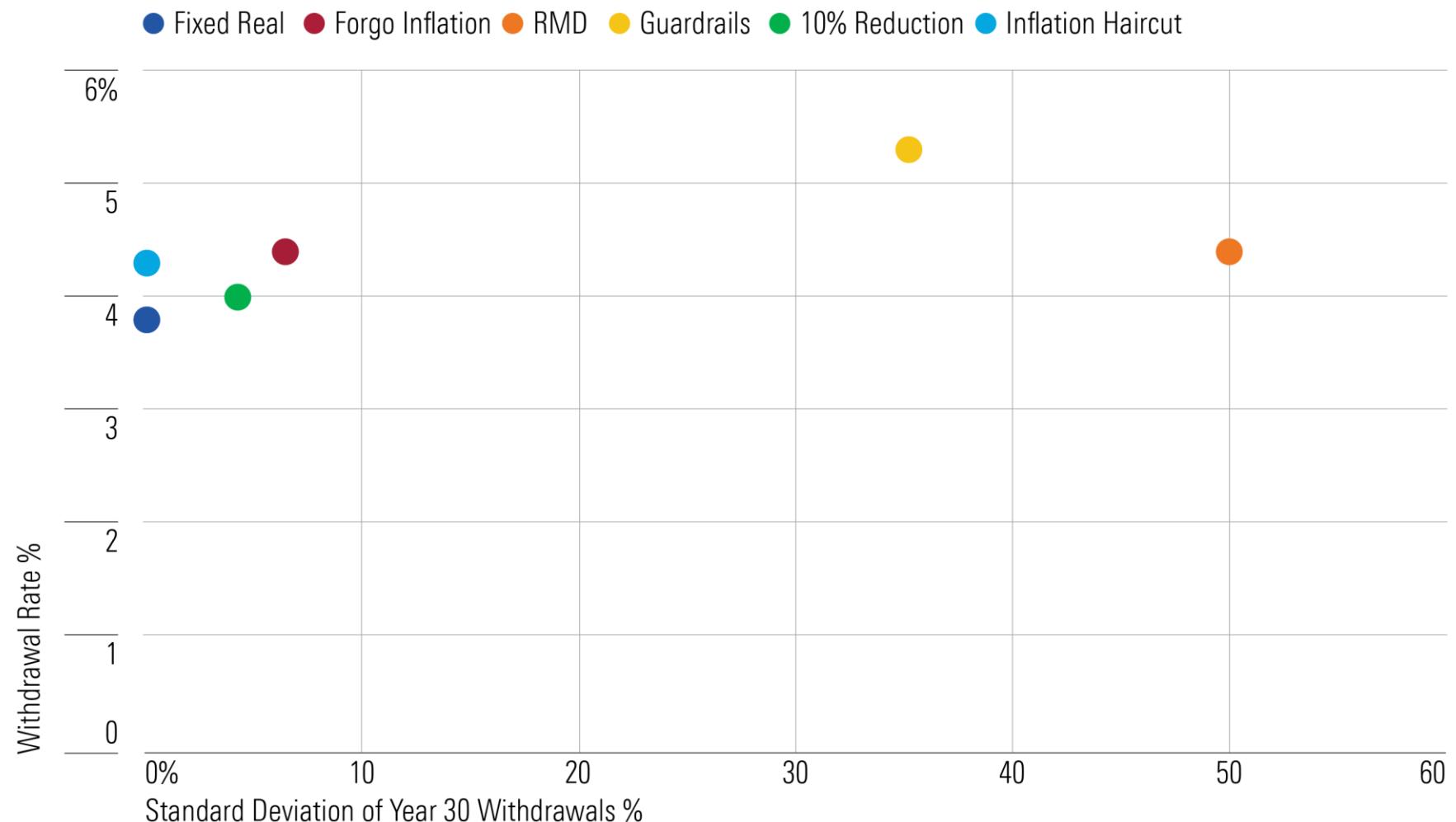
Source: Morningstar Direct. Data as of 9/30/2022.

Lesson 5: Variable withdrawal rates can help

- In contrast with fixed real spending systems, variable systems change up withdrawals based on how portfolio behaves
- Simple variable system: Fixed % each year...trade-off is huge cash-flow volatility
- Refinements:
 - RMD-type method
 - “Guardrails” (Jonathan Guyton and William Klinger)
 - Forgoing inflation adjustment following losing portfolio year

Variable methods entail trade-offs

Comparing Withdrawal Methods: Starting Safe Withdrawal Rate vs. Variability of Annual Withdrawal for a 50% Stock Portfolio



Source: Morningstar Direct. Data as of 9/30/2022.

Lifetime withdrawals are higher

Lifetime Withdrawal Rate % by Withdrawal Method and Asset Allocation

Portfolio Weighting %	Method					
	Fixed Real	10% Reduction	Forgo Inflation	Guardrails	RMD	Inflation Haircut
Equity Portfolio						
100	3.5	3.6	3.7	6.3	8.1	3.4
90	3.6	3.6	3.7	5.9	7.3	3.5
80	3.7	3.7	3.8	5.6	6.8	3.6
70	3.7	3.8	3.9	5.3	6.3	3.7
60	3.8	3.8	3.9	5.0	5.9	3.7
50	3.8	3.9	4.0	4.8	5.4	3.7
40	3.8	3.9	4.0	4.5	5.1	3.7
30	3.8	3.8	3.9	4.3	4.7	3.7
20	3.7	3.7	3.8	4.1	4.4	3.7
10	3.5	3.6	3.7	3.9	4.1	3.5
0	3.3	3.3	3.5	3.7	3.9	3.2

Source: Morningstar Direct. Data as of 9/30/2022.

But paydays are more volatile

Year 30 Cash Flow Standard Deviation by Withdrawal Method and Asset Allocation

Portfolio Weighting %	Method					
	Fixed Real	10% Reduction	Forgo Inflation	Guardrails	RMD	Inflation Haircut
Equity Portfolio						
100	0.0	8.0	7.0	88.2	99.7	0.0
90	0.0	8.0	7.0	79.2	88.1	0.0
80	0.0	7.9	7.0	68.6	77.6	0.0
70	0.0	7.6	6.9	57.3	67.8	0.0
60	0.0	7.3	6.7	45.8	58.5	0.0
50	0.0	6.9	6.4	35.2	50.0	0.0
40	0.0	6.4	6.3	26.6	42.3	0.0
30	0.0	5.9	5.9	20.7	35.6	0.0
20	0.0	5.5	5.7	17.5	30.5	0.0
10	0.0	5.5	5.7	16.3	27.4	0.0
0	0.0	6.2	6.1	17.6	27.3	0.0

Source: Morningstar Direct. Data as of 9/30/2022.

And ending balances are lower

Median Ending Value Year 30 (\$ Mil) by Withdrawal Method and Asset Allocation

Portfolio Weighting %	Method	Fixed Real	10% Reduction	Forgo Inflation	Guardrails	RMD	Inflation Haircut
Equity Portfolio							
100		5.0	4.8	4.6	2.1	0.4	4.9
90		4.0	4.0	3.7	1.7	0.3	4.0
80		3.4	3.4	3.1	1.4	0.3	3.5
70		3.0	2.8	2.6	1.2	0.3	2.8
60		2.3	2.3	2.0	1.0	0.3	2.3
50		1.9	1.8	1.6	0.8	0.2	1.9
40		1.5	1.4	1.2	0.7	0.2	1.5
30		1.1	1.2	1.0	0.6	0.2	1.1
20		0.9	0.9	0.7	0.5	0.2	0.9
10		0.8	0.7	0.6	0.4	0.1	0.7
0		0.4	0.7	0.5	0.4	0.1	0.6

Source: Morningstar Direct. Data as of 9/30/2022.

Questions/comments

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