

Test Drive Your Retirement Portfolio...

and Some Thoughts on Asset Allocation

AAII – Texas
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**Will my portfolio balance decline
during retirement?**

**Will I run out of money
in retirement?**

From 1926 to 2024 there have been 75 rolling 25-year periods. The first 25-year period was 1926-1950, the second from 1927-1951, and so on.

Let's assume that each of those 25-year periods represents a 25-year retirement "window" for 75 different retirees from the age of 73 to 98. Each retiree annually withdraws money.

We are now analyzing sequence-of-returns risk by analyzing outcomes over 75 rolling 25-year periods.

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How often was a 60% equity/40% fixed income retirement portfolio larger at age 98 than the starting balance at age 73? Portfolio cost = 125 bps.

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How often was a 60% equity/40% fixed income retirement portfolio larger at age 98 than the starting balance at age 73? Portfolio cost = 125 bps.

RMD annual withdrawal: 81.3% of the time.
4% annual withdrawal: 100% of the time.

How Often Was a Retirement Portfolio Larger Than the Starting Balance After 25 Years of Withdrawals?

Overall Asset Allocation	Sub Allocations	RMD From age 73-98	4% Annual Withdrawal	5% Annual Withdrawal
60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash	81.3%	100%	

Analysis of 75 rolling 25-year periods from 1926 to 2024

Large-cap US stock was represented by the S&P 500 Index.

Small-cap US stock was represented by the Ibbotson Small Companies Index from 1926-1978 and the Russell 2000 Index from 1979-2024.

U.S. bond returns were represented by SBBI US Intermediate Government Bonds from 1926-1975 and the Bloomberg Aggregate Bond Index from 1976-2024.

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Overall Asset Allocation	Sub Allocations	RMD From age 73-98	4% Annual Withdrawal	5% Annual Withdrawal
40% Equity 60% Fixed	25% Large Stock 15% Small Stock 45% Bonds 15% Cash	42.7%	98.7%	90.7%
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60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash	81.3%	100%	94.7%
80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash	92.0%	100%	100%

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80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash	92.0%

Point #1:
**If the RMD governs your withdrawals
AND
you want your portfolio to grow...**
**You will need to have a
large equity allocation.**

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How Often Was a Retirement Portfolio Larger Than the Starting Balance After 25 Years of Withdrawals?

Overall Asset Allocation	Sub Allocations	<u>Point #2</u> If you are using a 4% or 5% withdraw rate AND you want your portfolio to grow... The asset allocation is not as critical... meaning you can be more conservative without guilt!	4% Annual Withdrawal	5% Annual Withdrawal
40% Equity 60% Fixed	25% Large Stock 15% Small Stock 45% Bonds 15% Cash		98.7%	90.7%
60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash		100%	94.7%
80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash		100%	100%

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How Often Was a Retirement Portfolio Totally Depleted After 25 Years of Withdrawals?

Overall Asset Allocation	Sub Allocations	RMD From age 73-98	4% Annual Withdrawal	5% Annual Withdrawal
40% Equity 60% Fixed	25% Large Stock 15% Small Stock 45% Bonds 15% Cash	Never	Never	Never
60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash	Never	Never	Never
80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash	Never	Never	Never

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How Often Was a Retirement Portfolio Totally Depleted After 25 Years of Withdrawals?

Overall Asset Allocation	Sub	RMD	4% Annual	5% Annual Withdrawal
40% Equity 60% Fixed		<u>Point #3:</u>	Stop worrying about running out of money. If the portfolio is prudently built and rebalanced annually AND your withdrawals are reasonable...	Never
60% Equity 40% Fixed			You won't deplete the portfolio within 25 years. And likely not within 35 years.	Never
80% Equity 20% Fixed	10% Bonds 5% Cash			Never

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Assumed portfolio cost was 125 bps

The Impact of Controlling Portfolio Expenses

How Often Was a Retirement Portfolio Larger Than the Starting Balance After 25 Years of RMD Withdrawals? (from age 73-98)

Overall Asset Allocation	Sub Allocations	125 bps Portfolio Cost	100 bps Portfolio Cost	75 bps Portfolio Cost	50 bps Portfolio Cost
60% Equity 40% Fixed	40% Large Stock 20% Small Stock 30% Bonds 10% Cash	81.3%	82.7%	89.3%	90.7%

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40% Equity 60% Fixed	25% Large Stock 15% Small Stock 45% Bonds 15% Cash	42.7%	49.3%	54.7%	66.7%
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40% Equity 60% Fixed	25% Large Stock 15% Small S 45% Bond 15% Cash				66.7%
60% Equity 40% Fixed	40% Large S 20% Small S 30% Bond 10% Cash	<p>Point #4:</p> <p>Lowering the cost of your portfolio is more important when the asset allocation is more conservative.</p>			90.7%
80% Equity 20% Fixed	50% Large Stock 30% Small Stock 15% Bonds 5% Cash	92%	94.7%	94.7%	94.7%

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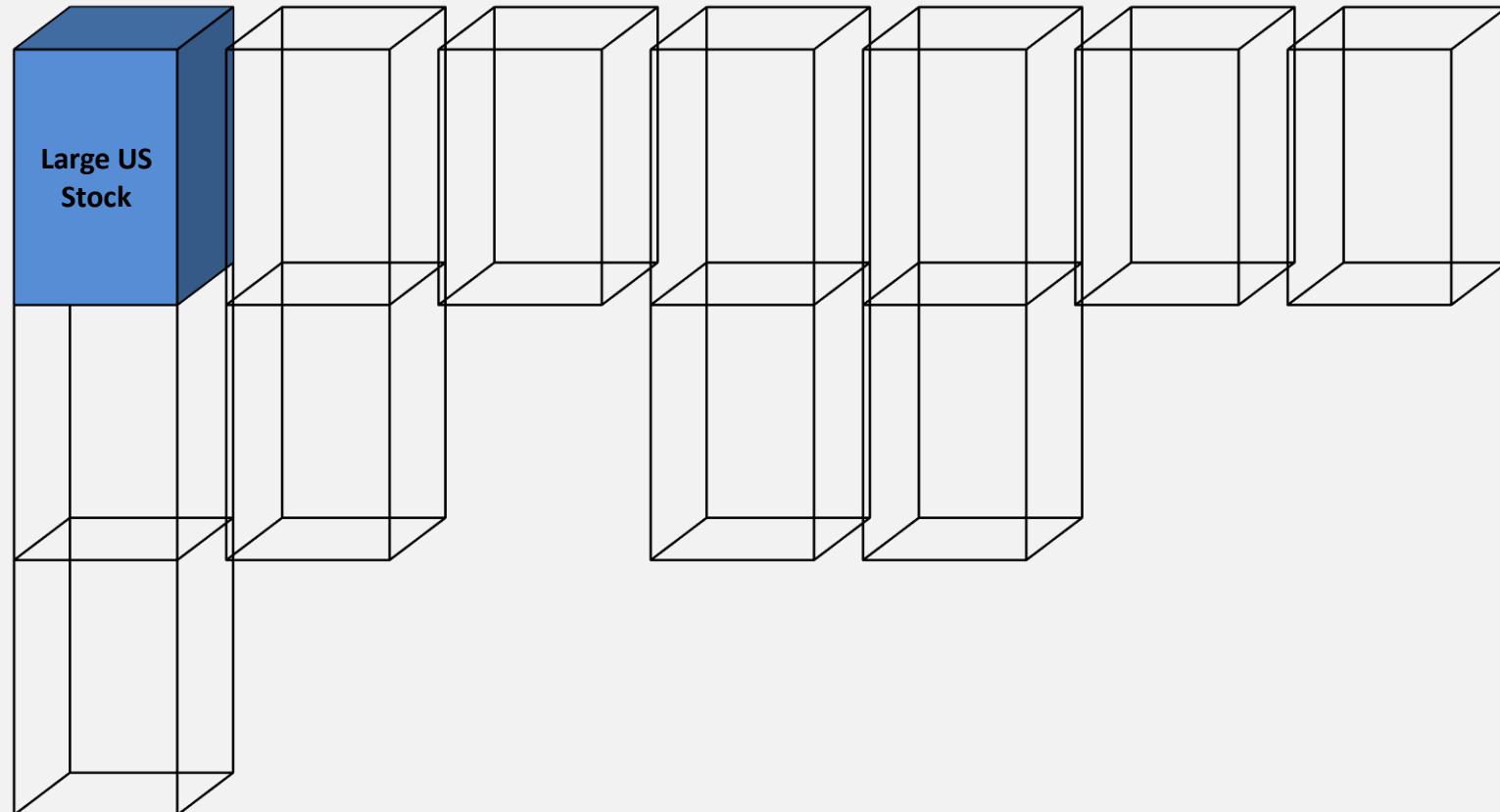
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Some Thoughts on Asset Allocation

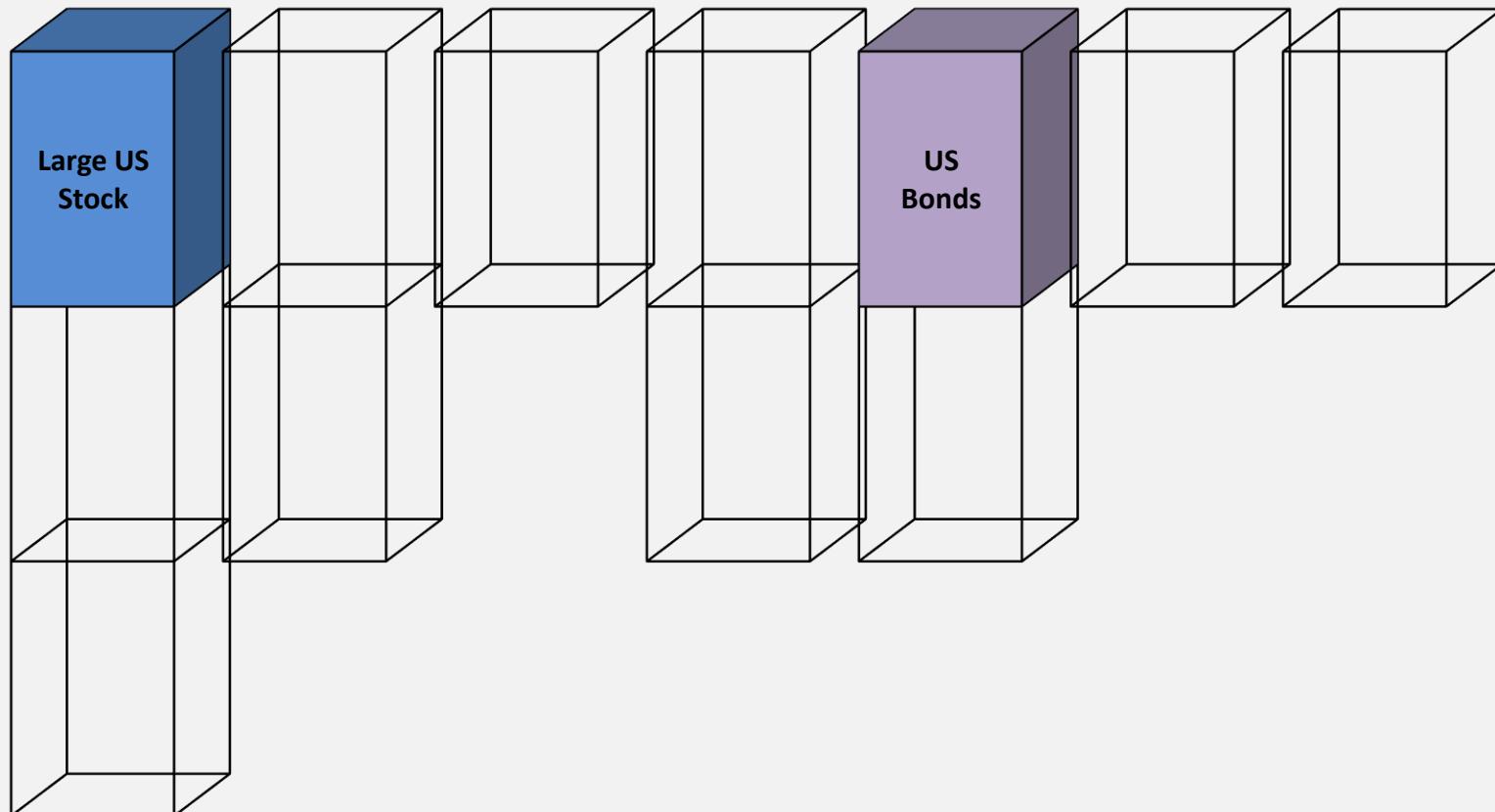
Minimal Diversification

The S&P 500 Index



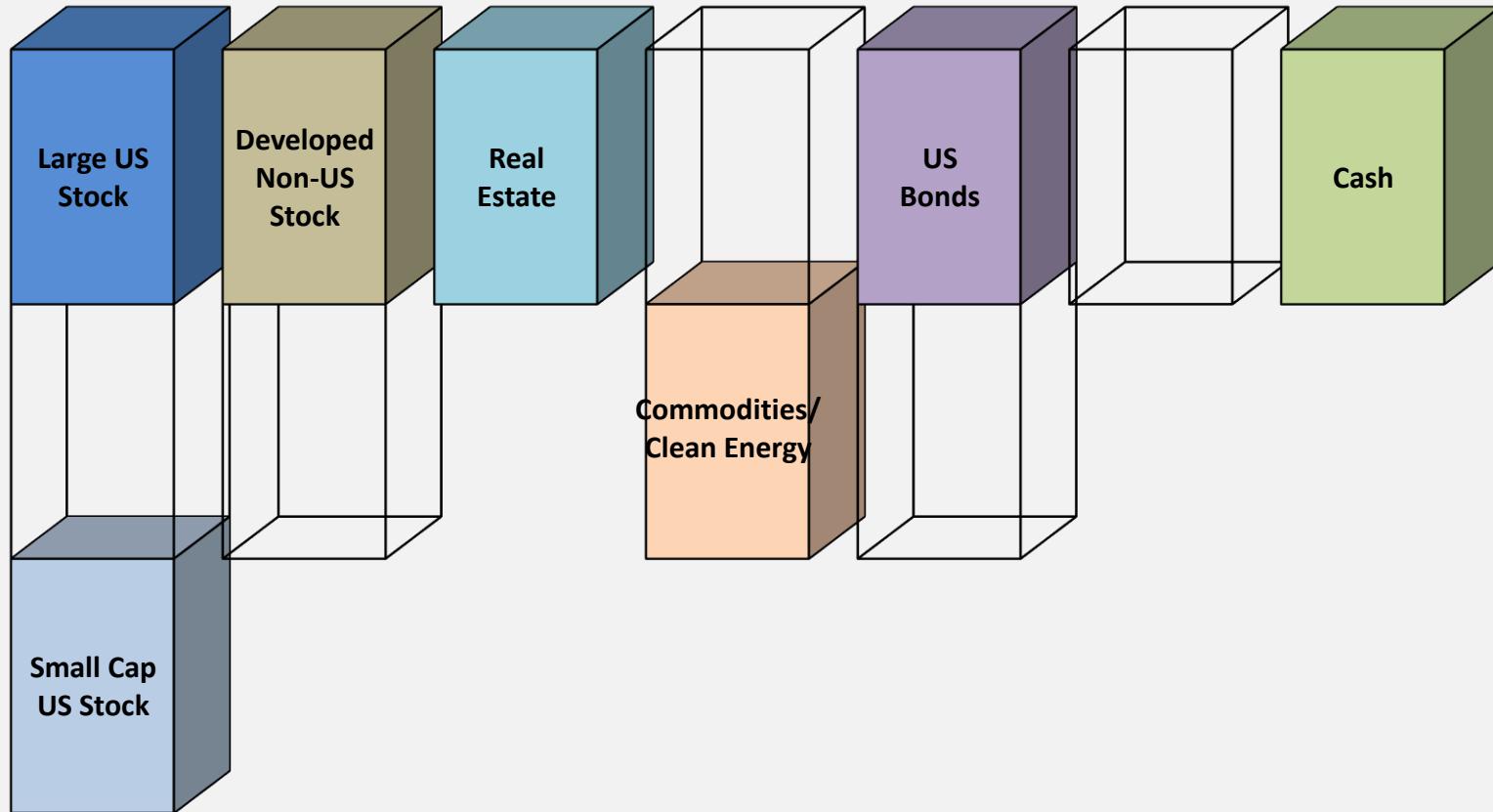
Two-Asset Diversification

60/40 Portfolio



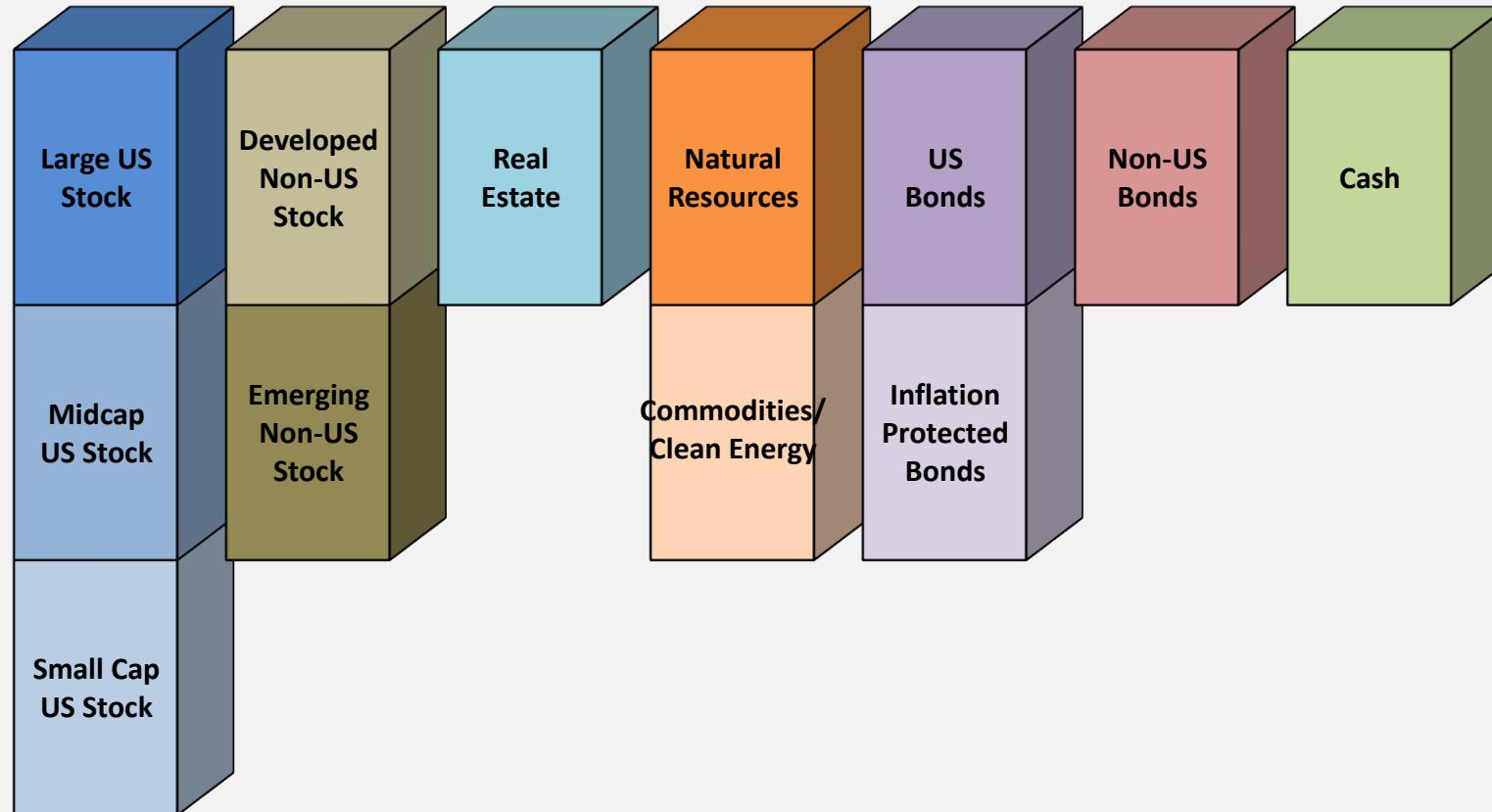
Good Diversification

7-Asset Portfolio



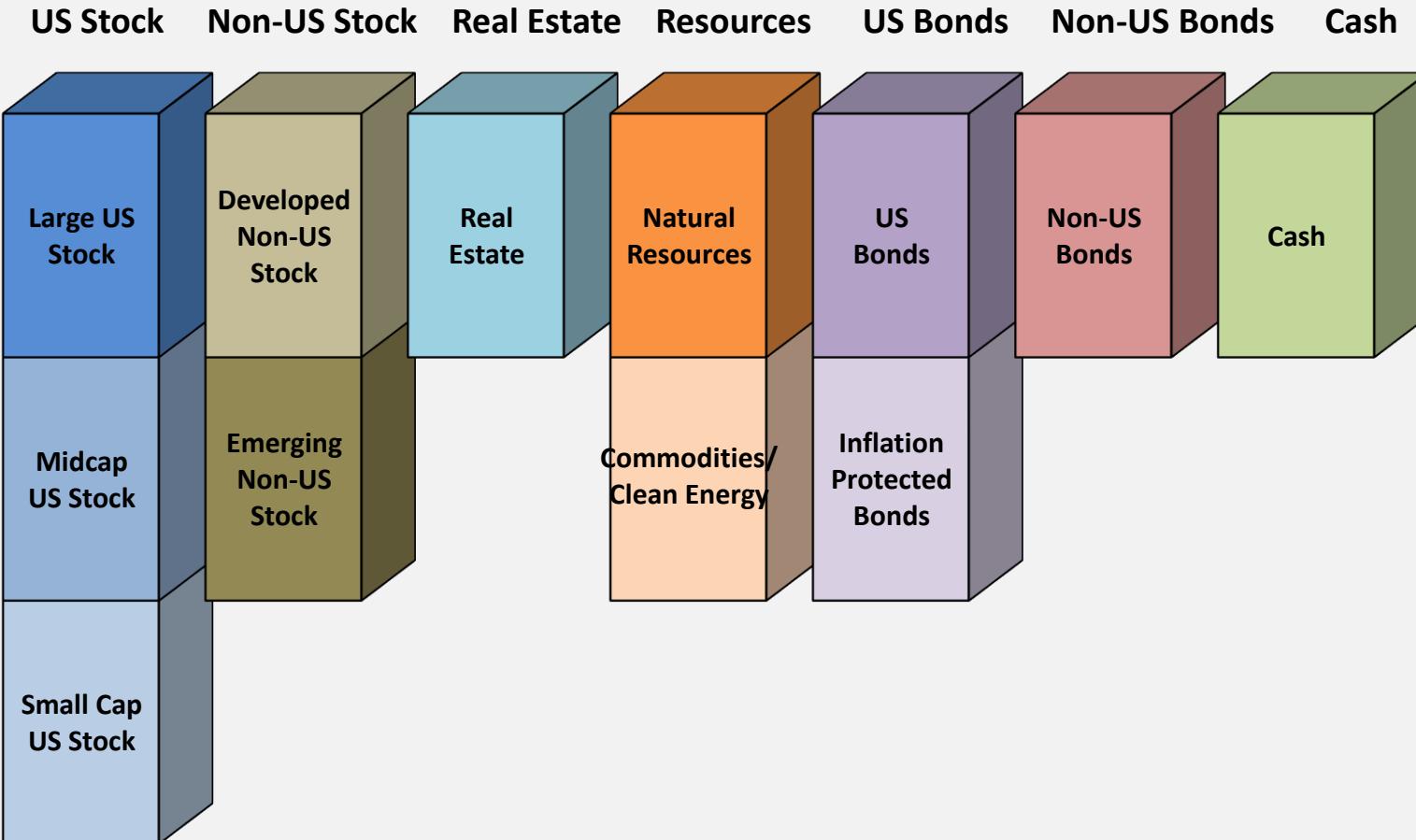
Superior Diversification

12-Asset Portfolio

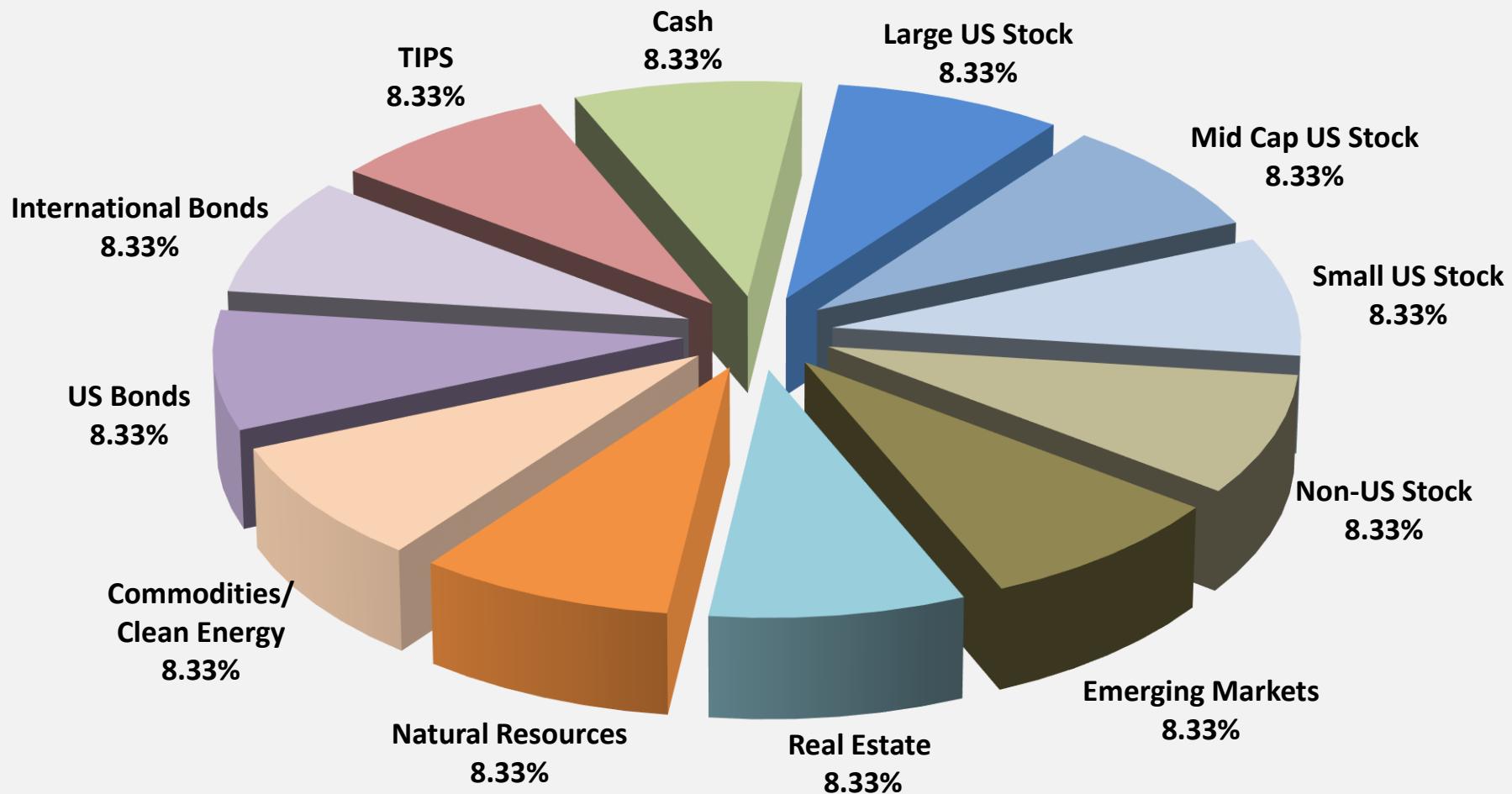


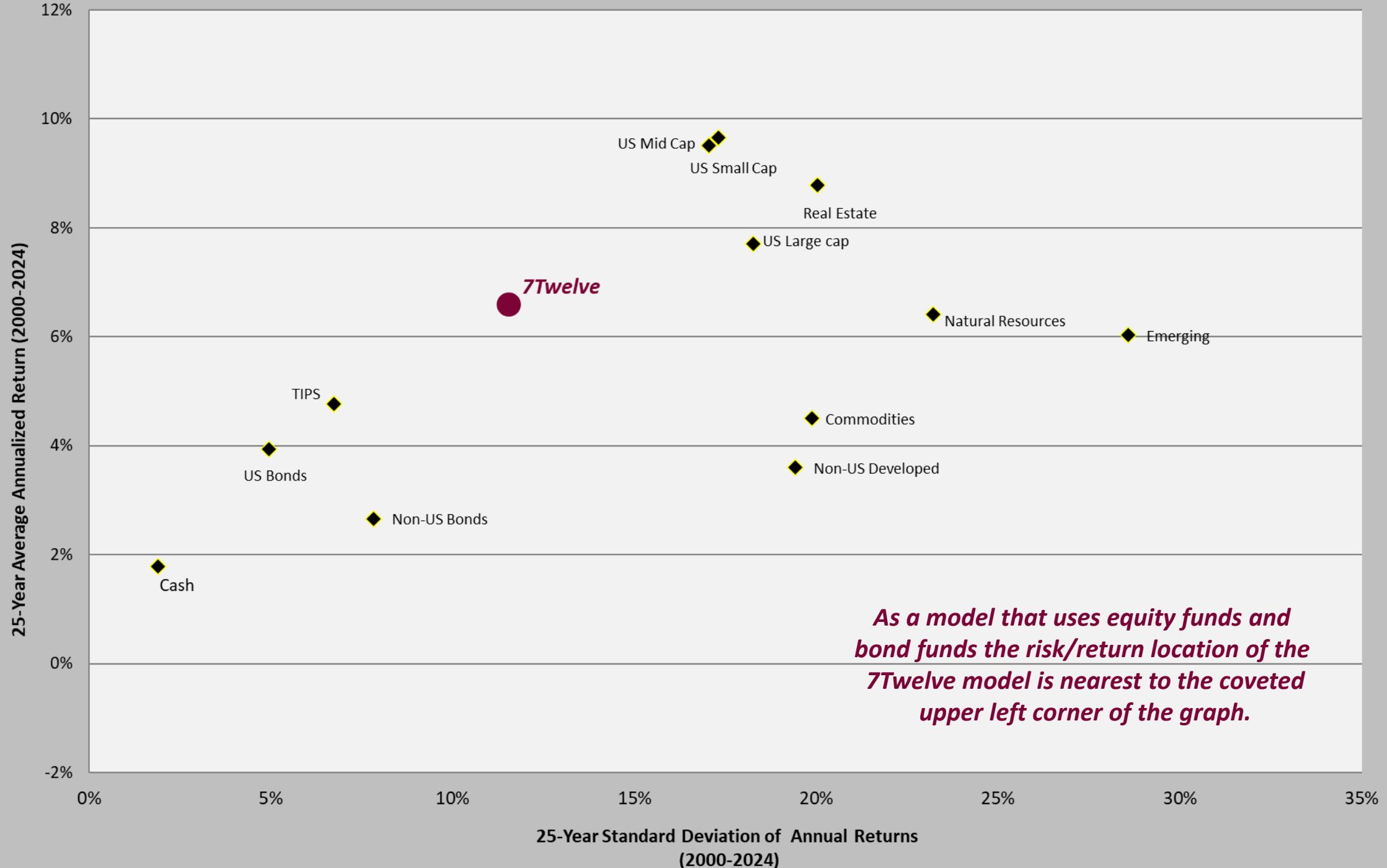
7Twelve®

7 Core Asset Classes *Twelve* Actual Holdings



Equally-weighted exposure to 12 asset classes





Accumulation Portfolio Assumption

25-Year Period from 2000-2024 with annual rebalancing

Risk Level	Asset Allocation Models (Using Indexes)	25-Year Annualized Return (%)	25-Year Standard Deviation (%)	25-Year Growth of \$10,000	
Very Conservative	100% Cash (90-day T-Bill)		1.78%	1.90%	\$15,562
Moderate	60% US Stock (S&P 500) 40% Bonds (Agg Bond)		6.64%	11.09%	\$49,943
Moderate	7Twelve® Portfolio (Index-based)		6.58%	11.56%	\$49,240
Aggressive	100% US Large Stock (S&P 500)		7.70%	18.26%	\$63,876
Crazy	Chasing Last Year's Best Performing Index in Index-based 7Twelve® Portfolio		2.95%	18.32%	\$20,679

Retirement Portfolio Assumption

\$250,00 Starting Balance

5% initial withdrawal rate

3% annual cost of living (COLA) increase in withdrawal

Analysis

Determine the Ending Balance After 25 Years of Annual Withdrawals

\$455,741 total amount withdrawn

January 1, 2000 – December 31, 2024

Retirement Portfolio Survival Analysis

25-Year Period from 2000-2024

Risk Level	Asset Allocation Models	Remaining Balance After 25 Years <small>Starting balance of \$250,000 Total Withdrawal of \$455,741</small>
Very Conservative	100% Cash	 \$0 Ran out in year 19
Conservative	50% Cash 50% Bonds	 \$0 Ran out in year 23
Moderate	60% S&P 500 40% Bonds	 \$4,413
Moderate	Index-based <i>7Twelve</i> [®] Portfolio	 \$298,446
Aggressive	100% S&P 500	 \$0 Ran out in year 17

A non-diversified retirement portfolio consisting of 100% large cap U.S. stock (S&P 500)

experienced significant negative returns near the start of the retirement period (from 2000-2002).

Portfolio losses in the early years of a retirement portfolio are deadly—as shown by the results.

This is precisely why we diversify during retirement.

25-Year Period	S&P 500 Index	7Twelve Portfolio
2000	-9.10	5.42
2001	-11.89	-2.09
2002	-22.10	-0.56
2003	28.68	27.10
2004	10.88	17.96
2005	4.91	12.49
2006	15.79	15.26
2007	5.49	12.32
2008	-37.00	-25.49
2009	26.46	25.64
2010	15.06	14.41
2011	2.11	-0.77
2012	16.00	10.77
2013	32.39	10.46
2014	13.69	1.49
2015	1.38	-6.06
2016	11.96	11.51
2017	21.83	11.99
2018	-4.38	-7.54
2019	31.49	16.57
2020	18.40	5.27
2021	28.71	16.85
2022	-18.11	-7.71
2023	26.29	9.26
2024	25.02	6.15

Disclosures

Performance in the past is not a guarantee of performance in the future.

Raw data source: Steele Mutual Fund Expert

Calculations: Craig Israelsen, Ph.D.

Indexes used for performance calculations on the previous slide.

US Large cap	S&P 500 Index (TR)
US Mid Cap	S&P Midcap 400 Index (TR)
US Small Cap	S&P Small Cap 600 Index (TR)
Non-US Developed	MSCI EAFE Index NR USD
Emerging	MSCI EM Index GR USD
Real Estate	S&P Global REIT Index TR USD
Natural Resources	S&P North American Natural Resources Index TR
Commodities	Deutsche Bank Liquid Commodity Optimum Yield Diversified Commodity Index Total Return
US Bonds	Bloomberg US Aggregate Bond Index TR USD
TIPS	Bloomberg U.S. Treasury US TIPS Index TR USD
Non-US Bonds	Bloomberg Global Treasury Index TR
Cash	US Treasury Bill 90 Day TR

Low-Cost **7Twelve®** Models

Total % Return

as of 12/31/2024 assuming annual rebalancing

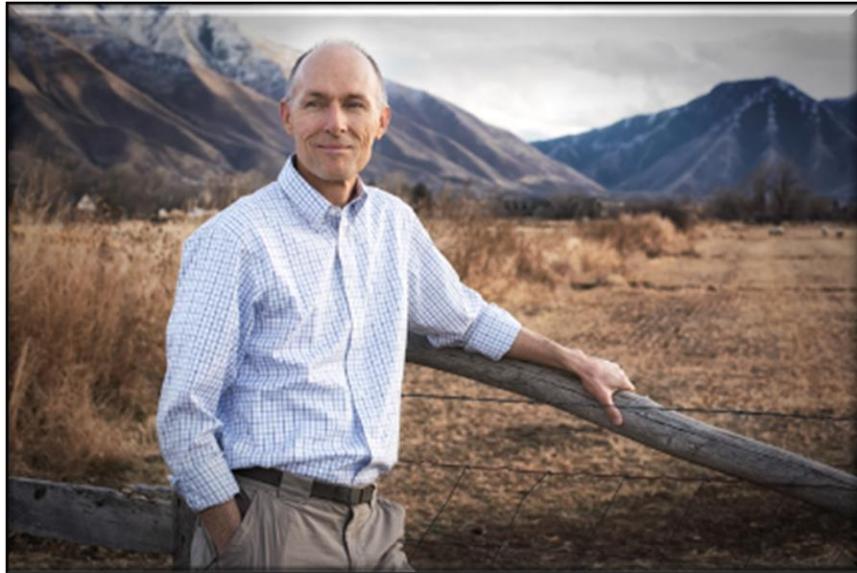
7Twelve® Model	<i>Active 7Twelve</i> 12 actively managed funds	<i>Passive 7Twelve</i> 12 ETFs from various families	<i>Vanguard Mutual Fund 7Twelve</i> 12 Vanguard mutual funds	<i>Vanguard ETF 7Twelve</i> 12 Vanguard ETFs	<i>Fidelity 7Twelve</i> 12 Fidelity mutual funds	<i>Schwab 7Twelve</i> 12 Schwab ETFs
Portfolio Aggregate Annual Expense Ratio (bps = basis points)	0.58%	0.27%	0.25%	0.13%	0.32%	0.17%
25-Year Average Annualized Return (2000-2024)	6.72%	5.98%	6.50%	6.39%	7.13%	6.15%

7Twelve® Models

Rebalancing Frequency

25-Year Annualized Return from January 1, 2000 to December 31, 2024

7Twelve model	No Rebalancing	Monthly Rebalancing	Quarterly Rebalancing	Semi-annual Rebalancing	Annual Rebalancing
Index-based	6.46%	6.43%	6.58%	6.53%	6.58%
Passive ETF	5.83%	5.85%	5.97%	5.93%	5.98%
Active	6.45%	6.34%	6.53%	6.61%	6.72%
Vanguard ETF	6.14%	6.30%	6.43%	6.30%	6.39%
Fidelity	6.66%	7.01%	7.13%	7.14%	7.13%
Schwab	6.33%	6.04%	6.15%	6.08%	6.15%



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Let's test drive your retirement portfolio!

Fire up the *Retirement Portfolio Analyzer* spreadsheet.