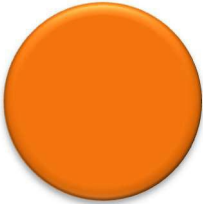



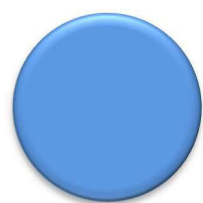


Asset Allocation Risk & Return Spectrum – January 2024

Craig L. Israelsen, Ph.D.
 25-Year Period from 1999-2023
www.7TwelvePortfolio.com

Risk Level	Various Asset Allocation Models with Annual Rebalancing (Using underlying <u>indexes</u> shown on page 3)		25-Year Annualized Return (%) of Lump Sum Investment	25-Year Growth of \$10,000 Lump Sum Investment*	Retirement Account Ending Balance** (see next page)
Very Conservative	100% Cash 90-day T Bill		1.77%	\$15,513	\$0 Ran out in year 20
Conservative	100% Bonds Agg Bond Index		3.85%	\$25,718	\$31,262
Moderately Aggressive	60% US Stock 40% Bonds 60% S&P 500 40% Agg Bond Index		6.52%	\$48,553	\$73,032
Moderately Aggressive	Index-based 7Twelve® Portfolio 8.33% allocation to 12 asset classes		6.99%	\$54,202	\$416,797
Very Aggressive	100% Large Cap US Stock S&P 500		7.56%	\$61,843	\$0 Ran out in year 22

* Ending account balance on December 31, 2023 assuming a lump sum investment of \$10,000 on January 1, 1999 (25-year period)






** Ending account balance on 12/31/2023 in a retirement portfolio with a starting balance of \$250,000 on January 1, 1999, 5% initial withdraw rate, 3% cost of living increase in the annual cash withdrawal. A total of 25 annual withdrawals totaling \$455,741

25-Year Retirement Portfolio Survival Test: 1999-2023

\$250,000 starting balance on January 1, 1999

5% initial withdrawal and 3% annual COLA (annual cost of living adjustment)

Total 25-year withdrawal of \$455,741

Retirement Portfolio Asset Allocation Model (Using underlying indexes shown on next page)		1-Asset Portfolio Very Conservative	2-Asset Portfolio* Conservative	2-Asset Portfolio* Moderately Aggressive	12-Asset Portfolio* Moderately Aggressive	1-Asset Portfolio Very Aggressive
		100% Cash	100% Bonds	60% US Stock 40% Bonds	7Twelve Portfolio (8.33% each index)	100% Large US Stock (S&P 500)
Calendar Year	Annual Cash Withdrawal (3% annual increase)					
Year-End Account Balances Shaded area in yellow indicates portfolio value is "underwater" (less than starting balance of \$250,000)						
1999	\$12,500	\$249,096	\$235,446	\$268,241	\$279,603	\$290,104
2000	12,875	250,709	249,944	253,187	281,882	250,817
2001	13,261	245,929	257,787	230,421	262,729	207,744
2002	13,659	236,210	270,564	195,659	247,593	148,172
2003	14,069	224,529	267,600	218,477	300,615	176,606
2004	14,491	213,116	264,720	222,043	340,105	181,334
2005	14,926	204,894	256,223	215,818	367,644	175,315
2006	15,373	199,205	251,953	224,638	408,378	187,631
2007	15,835	192,038	253,671	222,468	442,852	182,105
2008	16,310	178,344	250,655	161,437	313,665	98,420
2009	16,799	161,813	248,722	174,101	377,301	107,668
2010	17,303	144,731	247,690	177,089	414,377	106,583
2011	17,822	126,985	249,292	167,066	393,369	91,012
2012	18,357	108,737	241,442	167,568	417,382	87,220
2013	18,907	89,893	217,649	179,867	442,146	96,562
2014	19,475	70,448	211,158	179,458	429,280	90,306
2015	20,059	50,426	192,261	161,284	383,216	71,496
2016	20,661	29,926	176,690	153,905	406,651	59,387
2017	21,280	8,924	161,668	154,965	434,135	51,071
2018	21,919	0	139,767	128,976	379,504	26,913
2019	22,576	0	129,374	135,263	419,825	12,811
2020	23,254	0	115,832	131,003	418,690	0
2021	23,951	0	90,094	128,806	465,276	0
2022	24,670	0	53,703	83,437	404,742	0
2023	25,410	0	31,262	73,032	416,797	0
Account Value After 25 Years of Withdrawals		\$0	\$31,262	\$73,032	\$416,797	\$0

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* The multi-asset portfolios were rebalanced at the start of each year

Raw data source: Steele Mutual Fund Software, calculations by author

25 Calendar Year Returns	100% Cash	100% Bonds	60% S&P 500 40% Bonds	7Twelve Portfolio	100% S&P 500
1999	4.64%	-0.82%	12.30%	16.84%	21.04%
2000	5.82%	11.63%	-0.81%	5.42%	-9.10%
2001	3.38%	8.44%	-3.75%	-2.09%	-11.89%
2002	1.60%	10.25%	-9.16%	-0.56%	-22.10%
2003	1.01%	4.10%	18.85%	27.10%	28.68%
2004	1.37%	4.34%	8.26%	17.96%	10.88%
2005	3.15%	2.43%	3.92%	12.49%	4.91%
2006	4.73%	4.33%	11.21%	15.26%	15.79%
2007	4.35%	6.97%	6.08%	12.32%	5.49%
2008	1.36%	5.24%	-20.10%	-25.49%	-37.00%
2009	0.15%	5.93%	18.25%	25.64%	26.46%
2010	0.14%	6.54%	11.65%	14.41%	15.06%
2011	0.05%	7.84%	4.40%	-0.77%	2.11%
2012	0.09%	4.21%	11.29%	10.77%	16.00%
2013	0.06%	-2.02%	18.62%	10.46%	32.39%
2014	0.03%	5.97%	10.60%	1.49%	13.69%
2015	0.05%	0.55%	1.05%	-6.06%	1.38%
2016	0.32%	2.65%	8.23%	11.51%	11.96%
2017	0.93%	3.54%	14.52%	11.99%	21.83%
2018	1.94%	0.01%	-2.63%	-7.54%	-4.38%
2019	2.06%	8.72%	22.38%	16.57%	31.49%
2020	0.36%	7.51%	14.04%	5.27%	18.40%
2021	0.04%	-1.54%	16.61%	16.85%	28.71%
2022	2.01%	-13.01%	-16.07%	-7.71%	-18.11%
2023	5.07%	5.53%	17.98%	9.26%	26.29%

Large negative returns in the initial years of a withdrawal scenario (such as retirement) can be catastrophic for a portfolio—as noted by the collapse of the 100% S&P 500 retirement portfolio in year 22. Inadequate returns (such as 100% cash) can also kill a retirement portfolio.

Indexes used in performance calculations (including 12-asset 7Twelve Portfolio)

Large US Stock	S&P 500 Index TR
Mid Cap US Stock	S&P Midcap 400 Index TR
Small Cap US Stock	S&P SmallCap 600 Index TR
Non-US Developed Stock	MSCI EAFE Index NR
Non-US Emerging Stock	MSCI EM Index GR
Real Estate	S&P Global REIT Index TR
Natural Resources	S&P North American Natural Resources Index TR
Commodities	DBIQ Optimum Yield Diversified Commodity Index TR
US Bonds	Bloomberg US Aggregate Bond Index TR
Inflation Protected Bonds	Bloomberg US Treasury US TIPS Index TR
Non-US Bonds	Bloomberg Global Treasury Index TR
Cash	US Treasury Bill 90 Day TR

Raw data source: Steele Mutual Fund Software, calculations by author

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