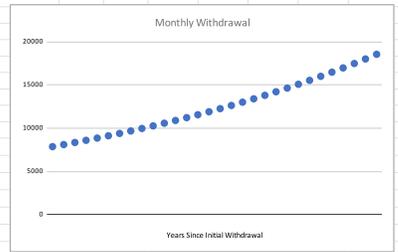


An Investment Withdrawal Monte Carlo Model in Excel

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\$	3,000,000	Initial Investment	Year	Bal	Gain/Loss	Withdrawal (Annual)	Withdrawal Change %	Withdrawal (Monthly)	Return	Stock	Bond	MM	%Stock	%Bond	%MM	Investment Mix	Avg	StdDev	Rate	nYears	Expense Multiplier	
3.15%		Initial Withdrawal Rate	1	\$2,905,500		(\$94,500)		\$7,875	19.2%	28.6%	5.4%	4.8%	60.0%	40.0%	0.0%	Stocks	11.5%	19.5%	4.5%	25	22.2	
55		Withdrawal Period (years)	2	\$3,367,214	\$559,049	(\$97,335)	3.0%	\$8,111	11.1%	7.9%	16.1%	3.5%	60.0%	40.0%	0.0%	10 yr T-Bonds	5.2%	7.7%	4.0%	30	25.0	
Fixed		Withdrawal Plan1	3	\$3,640,548	\$373,590	(\$100,255)	3.0%	\$8,355	9.3%	11.7%	6.1%	9.3%	60.0%	40.0%	0.0%	3 m T-Bills	3.4%	3.0%	3.7%	35	27.0	
3.0%		Annual Withdrawal Increase	4	\$3,876,983	\$339,698	(\$103,263)	3.0%	\$8,605	19.6%	27.6%	7.8%	3.6%	60.0%	40.0%	0.0%				3.5%	40	28.6	
3.0%		Avg Annual Increase	5	\$4,529,115	\$758,492	(\$106,361)	3.0%	\$8,863	10.1%	6.3%	15.9%	3.5%	60.0%	40.0%	0.0%	Labels				3.4%	45	29.4
0		# Annual Pay Cuts (last draw)	6	\$4,876,001	\$456,438	(\$109,551)	3.0%	\$9,129	11.6%	19.0%	0.7%	3.5%	60.0%	40.0%	0.0%	Adaptive				3.3%	50	30.3
NO		Run Out of Money Early?	7	\$5,327,471	\$564,308	(\$112,838)	3.0%	\$9,403	-10.8%	-17.4%	-0.6%	0.2%	60.0%	40.0%	0.0%	Fixed				3.15%	55	31.7
90.8%		Likelihood of Success	8	\$4,636,413	(\$574,835)	(\$116,223)	3.0%	\$9,685	15.5%	18.4%	11.5%	3.2%	60.0%	40.0%	0.0%	Avg ER ->	0.10%					
0.9%		+ StdDev	9	\$5,237,597	\$720,894	(\$119,710)	3.0%	\$9,976	4.1%	1.9%	7.7%	8.7%	60.0%	40.0%	0.0%							
		Click "Run x1,000" to run another 1,000 random draws; Hit F9 for a single draw	10	\$5,330,456	\$216,160	(\$123,301)	3.0%	\$10,275	6.1%	5.5%	7.2%	1.7%	60.0%	40.0%	0.0%							
			11	\$5,526,108	\$322,653	(\$127,000)	3.0%	\$10,583	42.9%	69.3%	3.6%	6.8%	60.0%	40.0%	0.0%							
			12	\$7,767,665	\$2,372,367	(\$130,810)	3.0%	\$10,901	8.1%	15.0%	-2.0%	8.9%	60.0%	40.0%	0.0%							
			13	\$8,258,800	\$625,869	(\$134,734)	3.0%	\$11,228	13.6%	18.0%	7.1%	1.5%	60.0%	40.0%	0.0%							
			14	\$9,239,225	\$1,119,202	(\$138,776)	3.0%	\$11,565	1.6%	-0.5%	4.9%	2.3%	60.0%	40.0%	0.0%							
			15	\$9,242,924	\$146,639	(\$142,940)	3.0%	\$11,912	12.4%	13.4%	11.0%	5.2%	60.0%	40.0%	0.0%							
			16	\$10,237,308	\$1,141,612	(\$147,228)	3.0%	\$12,269	0.0%	2.4%	-3.2%	3.4%	60.0%	40.0%	0.0%							
			17	\$10,087,090	\$1,426	(\$151,645)	3.0%	\$12,637	5.6%	12.6%	-4.6%	2.9%	60.0%	40.0%	0.0%							
			18	\$10,494,386	\$563,490	(\$156,194)	3.0%	\$13,016	30.2%	43.6%	10.3%	2.8%	60.0%	40.0%	0.0%							
			19	\$13,900,872	\$3,167,366	(\$160,880)	3.0%	\$13,407	5.8%	6.7%	4.7%	5.8%	60.0%	40.0%	0.0%							
			20	\$14,120,410	\$785,244	(\$165,706)	3.0%	\$13,809	1.9%	-0.2%	5.3%	1.0%	60.0%	40.0%	0.0%							
			21	\$14,216,801	\$267,069	(\$170,678)	3.0%	\$14,223	4.6%	3.6%	6.4%	0.2%	60.0%	40.0%	0.0%							
			22	\$14,694,315	\$653,312	(\$175,798)	3.0%	\$14,650	10.4%	18.8%	-2.0%	3.6%	60.0%	40.0%	0.0%							
			23	\$16,041,459	\$1,528,216	(\$181,072)	3.0%	\$15,089	21.3%	26.6%	13.6%	3.5%	60.0%	40.0%	0.0%							
			24	\$19,277,383	\$3,422,428	(\$186,504)	3.0%	\$15,542	15.0%	25.1%	0.0%	1.6%	60.0%	40.0%	0.0%							
			25	\$21,973,203	\$2,887,919	(\$192,099)	3.0%	\$16,008	19.2%	32.7%	-0.8%	6.1%	60.0%	40.0%	0.0%							
			26	\$25,988,259	\$4,212,918	(\$197,862)	3.0%	\$16,489	7.5%	11.5%	1.9%	18.5%	60.0%	40.0%	0.0%							
			27	\$27,743,715	\$1,959,254	(\$203,798)	3.0%	\$16,983	-4.8%	-9.8%	3.0%	2.0%	60.0%	40.0%	0.0%							
			28	\$26,206,243	(\$1,327,560)	(\$209,912)	3.0%	\$17,493	7.3%	10.6%	2.7%	3.5%	60.0%	40.0%	0.0%							
			29	\$27,910,163	\$1,920,129	(\$216,209)	3.0%	\$18,017	-1.3%	-9.7%	11.5%	0.5%	60.0%	40.0%	0.0%							
			30	\$27,319,469	(\$367,999)	(\$222,695)	3.0%	\$18,558	34.6%	58.9%	-1.7%	9.2%	60.0%	40.0%	0.0%							
			31	\$36,540,490	\$9,450,397	(\$229,376)	3.0%	\$19,115	36.0%	49.9%	15.5%	5.8%	60.0%	40.0%	0.0%							
			32	\$49,473,491	\$13,169,258	(\$236,258)	3.0%	\$19,688	25.2%	33.9%	12.4%	0.9%	60.0%	40.0%	0.0%							
			33	\$61,711,565	\$12,481,419	(\$243,345)	3.0%	\$20,279	28.1%	44.8%	3.4%	0.1%	60.0%	40.0%	0.0%							
			34	\$78,822,181	\$17,361,262	(\$250,646)	3.0%	\$20,887	12.8%	3.2%	27.4%	5.2%	60.0%	40.0%	0.0%							
			35	\$88,650,168	\$10,086,152	(\$258,165)	3.0%	\$21,514	5.1%	4.0%	7.0%	2.1%	60.0%	40.0%	0.0%							
			36	\$92,897,503	\$4,513,246	(\$265,910)	3.0%	\$22,159	-1.2%	-1.2%	-1.0%	10.2%	60.0%	40.0%	0.0%							
			37	\$91,517,705	(\$1,105,911)	(\$273,887)	3.0%	\$22,824	14.3%	19.5%	6.7%	11.3%	60.0%	40.0%	0.0%							
			38	\$104,304,806	\$13,069,205	(\$282,104)	3.0%	\$23,509	25.9%	35.4%	11.9%	5.9%	60.0%	40.0%	0.0%							
			39	\$131,023,671	\$27,009,432	(\$290,567)	3.0%	\$24,214	6.1%	7.2%	4.8%	6.7%	60.0%	40.0%	0.0%							
			40	\$138,752,856	\$8,028,469	(\$299,284)	3.0%	\$24,940	-1.7%	-3.3%	1.0%	2.2%	60.0%	40.0%	0.0%							
			41	\$136,129,486	(\$2,315,107)	(\$308,263)	3.0%	\$25,689	15.9%	21.8%	7.3%	4.3%	60.0%	40.0%	0.0%							
			42	\$157,498,243	\$21,686,268	(\$317,510)	3.0%	\$26,459	14.2%	21.5%	3.5%	2.1%	60.0%	40.0%	0.0%							
			43	\$179,501,740	\$22,330,533	(\$327,036)	3.0%	\$27,253	25.5%	42.8%	-0.2%	6.2%	60.0%	40.0%	0.0%							
			44	\$224,867,433	\$45,702,540	(\$336,847)	3.0%	\$28,071	10.0%	8.9%	11.9%	4.3%	60.0%	40.0%	0.0%							
			45	\$247,080,992	\$22,560,511	(\$346,952)	3.0%	\$28,913	-3.9%	-4.8%	-2.2%	10.6%	60.0%	40.0%	0.0%							
			46	\$237,158,476	(\$9,565,155)	(\$357,361)	3.0%	\$29,780	31.4%	47.2%	8.0%	1.4%	60.0%	40.0%	0.0%							
			47	\$311,240,984	\$74,450,590	(\$368,082)	3.0%	\$30,673	4.5%	7.4%	0.3%	2.6%	60.0%	40.0%	0.0%							
			48	\$324,803,420	\$13,941,560	(\$379,124)	3.0%	\$31,594	-5.4%	-10.2%	2.2%	5.3%	60.0%	40.0%	0.0%							
			49	\$306,924,468	(\$17,488,454)	(\$390,498)	3.0%	\$32,541	2.1%	2.2%	2.3%	2.8%	60.0%	40.0%	0.0%							
			50	\$313,027,496	\$6,505,241	(\$402,213)	3.0%	\$33,518	29.4%	46.2%	4.4%	4.6%	60.0%	40.0%	0.0%							
			51	\$404,509,552	\$91,896,335	(\$414,279)	3.0%	\$34,523	16.3%	27.0%	0.6%	8.0%	60.0%	40.0%	0.0%							
			52	\$470,152,202	\$66,069,358	(\$426,707)	3.0%	\$35,559	18.8%	19.0%	18.8%	1.1%	60.0%	40.0%	0.0%							
			53	\$557,966,621	\$88,253,928	(\$439,509)	3.0%	\$36,626	1.8%	3.4%	-0.2%	6.5%	60.0%	40.0%	0.0%							
			54	\$567,834,975	\$10,321,048	(\$452,694)	3.0%	\$37,724	-13.8%	-31.0%	12.3%	1.3%	60.0%	40.0%	0.0%							
			55	\$489,082,210	(\$78,286,490)	(\$466,275)	3.0%	\$38,856	33.7%	51.9%	6.7%	1.4%	60.0%	40.0%	0.0%							



Date	Change
7-Mar-2024	Added an info-only table in cells X3:Z9 showing a safe withdrawal rate and associated expense multiplier for varying withdrawl durations. This helps those planning for something other than standard 4% and 30 years from the Trinity Study, rather than resort to trial and error to find a successful withdrawal rate for a duration other than 30 years.
7-Mar-2024	Changed the insturction box for "Run 1,000 trials" from yellow to blue to avoid confusion as it's not an input field, just a note.
2-Jun-2024	Extended from 50y to 55y (many asking about retiring at 40!)