Retire Plan

Retire Plan Report

Mid forties, one income, catching up · September 25, 2026

Working until 65, in 2045, with a plan that runs to age 95.

Sample plan. These are the numbers of one of our sample households, not yours.

PREPARED	September 25, 2026
DOLLARS	Summary numbers and charts are in **2026 dollars**: what the money would buy in 2026. The year-by-year tables are in **future dollars**: the amounts you would see on a statement in that year, if prices rise 2.5% a year.
MADE WITH	Retire Plan, from market history since 1871. Every number is worked out from your inputs.

SECTION 1

Your plan on one page

Retire at 65 with $985K, spend $74K a year, and history gives a 90% success rate.

HISTORICAL TESTING

90%

success rate: the share of cases since 1871 that never ran out of money.

A case is your plan started in one year of real history: once as if you began in 1871, once in 1872, and so on to 1977. Each case lives through the booms, crashes and inflation that really came next.

FUTURE SIMULATION

87%

success rate across 1,000 random futures: the share that never ran out.

A random future strings together years drawn at random from history, a few years at a time, so it can put good and bad years in orders that never happened. It is a second opinion on the first number.

Your savings when you retire at 65

$985K

In 2026 dollars, if markets return what you assumed. That is about $1.57M in 2045 dollars. In history the median case had $1.13M.

What you can spend

$74K a year

After tax, in 2026 dollars, about $6K a month. It rises with prices every year.

Balance at the end of the plan

$1.23M

The median case's savings at the end of the plan, age 95, in 2026 dollars. Half the cases ended with more.

The hardest case

Ran out at 83

The plan started in 1956 ran out of money at age 83.

WHAT THE REPORT EXPLORED

- Spending $73K a year would bring the success rate to 95%.
- Retiring at 66 would bring the success rate to 95%.
- Barista FIRE and Coast FIRE: your plan is below a 95% success rate as it is, so start with the spending and the retirement age.

Each is worked out in section 6, "What if things change".

SECTION 2

Your plan and your assumptions

19 more years of work, then 30 years in retirement, to age 95.

> WHAT TO LOOK AT
>
> Everything the report was built from. If any of it is wrong, change it in the planner and build the report again.

One word about returns. A return **after inflation** is what your money grows by once rising prices are taken out. A 5.0% return after inflation, with 2.5% inflation, is about 7.6% a year on your statement. Only the expected path uses these returns. The historical analysis uses the real market returns of each year since 1871, and the future simulation draws from them.

Figure 1. **Your paycheck, in this year's dollars**

	Share of gross pay	Per paycheck 26 a year	Per month 12 a year	Per year
Gross pay		**$3,654**	**$7,917**	**$95,000**
Traditional 401K		($292)	($633)	($7,600)
Federal tax		($400)	($867)	($10,398)
Social Security and Medicare		($280)	($606)	($7,268)
State tax		($133)	($289)	($3,464)
Take home		**$2,549**	**$5,523**	**$66,271**
Roth IRA		($269)	($583)	($7,000)
Spending budget		**$2,280**	**$4,939**	**$59,271**
Housing		($1,015)	($2,200)	($26,400)
Everything else		$1,264	$2,739	$32,871
Employer match, on top		*$146*	*$317*	*$3,800*

Savings rate

● 19.4% of gross pay ● 24.9% of pay after taxes

> **Each bar is a share of your gross pay.** The three columns are the same money per paycheck, per month and per year, in 2026 dollars.

You

Your age at the end of 2026	46
Tax return	Single
State	Michigan

Timeline

Stop full-time work at	65, in 2045
Plan runs to age	95
Years in retirement	30

Pay and saving

Salary	$95,000 a year
Yearly raise	2.5%, including inflation
Into your 401K, pre-tax	8.0% of pay, $7,600 a year
Into your Roth 401K	0.0% of pay, $0 a year
Employer match	4.0% of pay, $3,800 a year
Into your IRA each year	$0 pre-tax, $7,000 Roth, in 2026 dollars
Into your taxable account each year	$0 in 2026 dollars

Savings today, 2026

401K, pre-tax	$120,000
Roth 401K	$0
IRA, pre-tax	$0
Roth IRA	$35,000
Taxable account	$10,000

Spending in retirement

Spending, after tax	$74,000 a year in 2026 dollars
Social Security and pension lower what you draw	Yes
Taxable account	Spent first
Share drawn from the IRA, the rest from the 401K	30%

Social Security and pension

Social Security	$3,250 a month in 2026 dollars, from age 67, our estimate from your pay
Pension	None

Markets and prices

Inflation	2.5% a year, for the expected path and the future-dollar tables
Return while working	5.0% a year after inflation
Return in retirement	5.0% a year after inflation
Stocks while working	75%, the rest in bonds
Stocks in retirement	50%, the rest in bonds
Dividend and bond yields	1.3% and 4.6% a year before inflation, for the expected path; history uses each year's own
History	Every case since 1871, with each year's real inflation
Random futures	1,000 runs, years drawn from history 5 at a time

Taxes

Federal income tax	2026 federal brackets and standard deduction, carried forward with inflation
State income tax	Michigan's 2026 state tax rules, with its own rules for pensions, withdrawals, Social Security and gains by age and income
IRS rules applied	IRS contribution limits, the 10% penalty on early withdrawals, the Rule of 55, required minimum distributions, Social Security and Medicare tax on pay, the yearly tax on dividends and interest in the taxable account

SECTION 3

Your plan in pictures

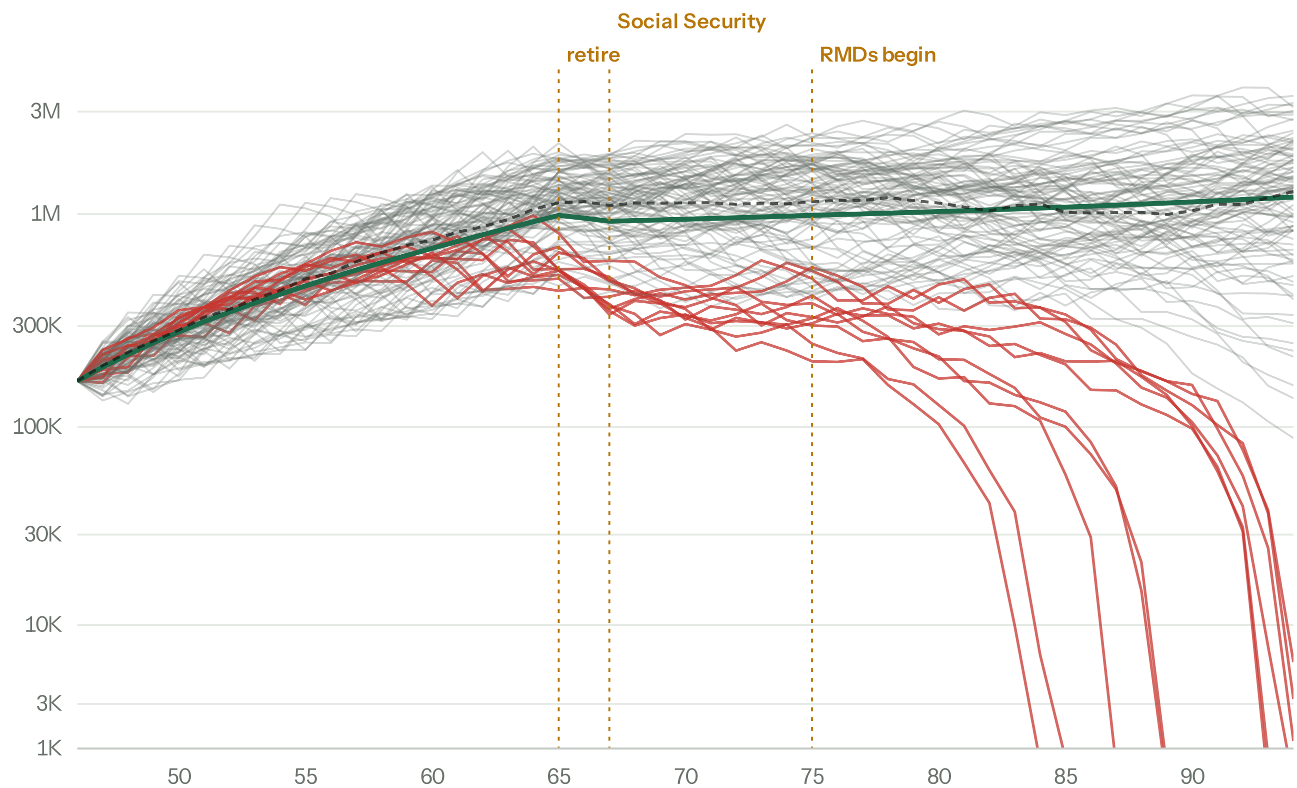
Even the 10th percentile case retires with $557K, in 2026 dollars.

WHAT TO LOOK AT

Every chart is in 2026 dollars. The first three use a log scale: each step up the side multiplies the money, so a fall from $1M to $500K looks as tall as one from $200K to $100K. Their side starts near the lowest balance drawn, not at $0.

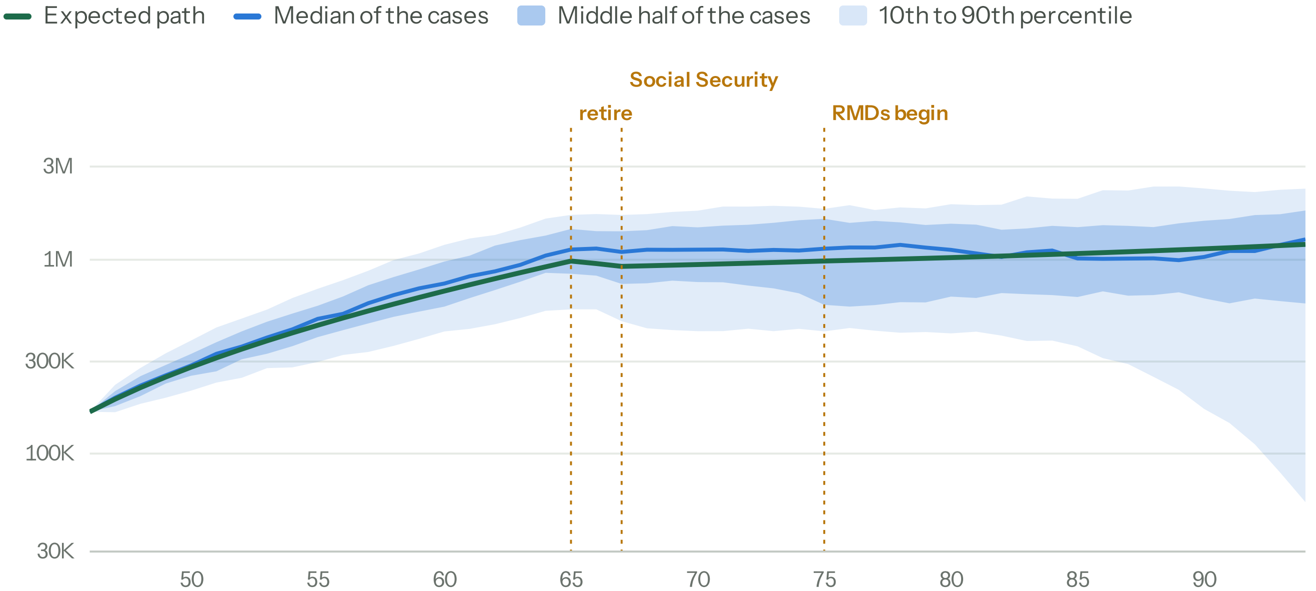
Figure 2. **Every case since 1871, one line each**

Expected path — Median case — A case that survived — A case that ran out



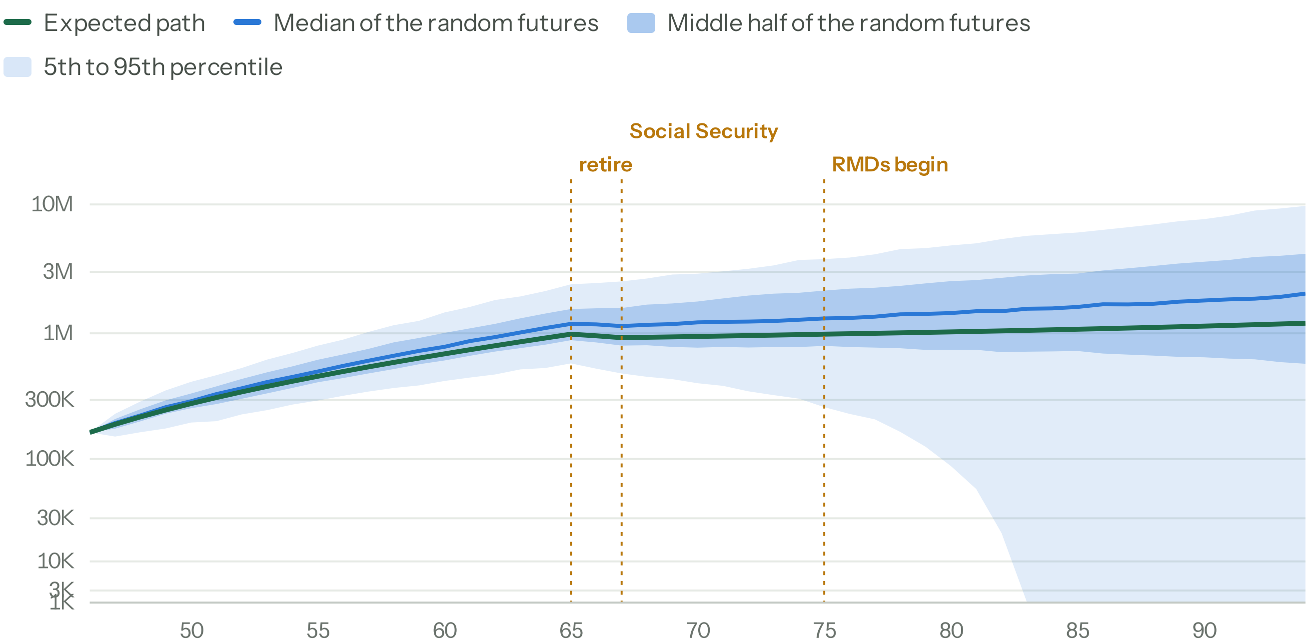
A 90% success rate: the red lines ran out of money. Each grey line is your plan started in one year of history. The red ones ran out. The green line is the expected path and the dashed line is the median case.

Figure 3. Your savings in the historical market analysis ("back testing")



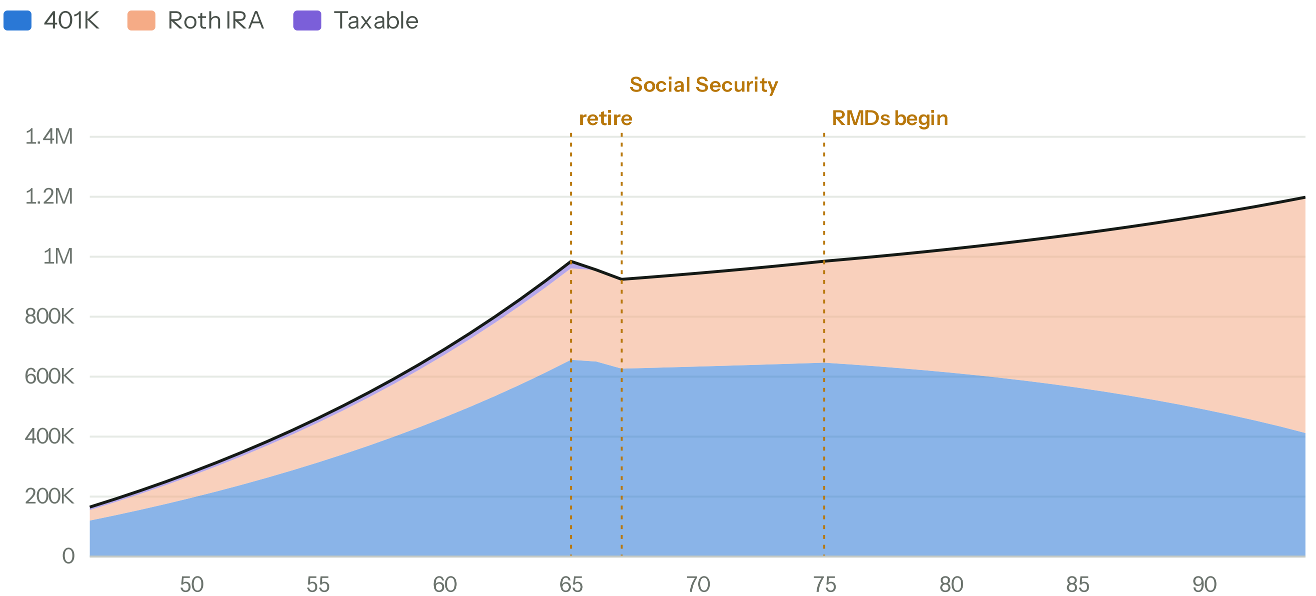
The median case retires with $1.13M. The dark band holds the middle half of the 107 cases and the light band the 10th to 90th percentile. Where the light band nears the bottom, the worst tenth of cases were running low.

Figure 4. Your savings in 1,000 random futures



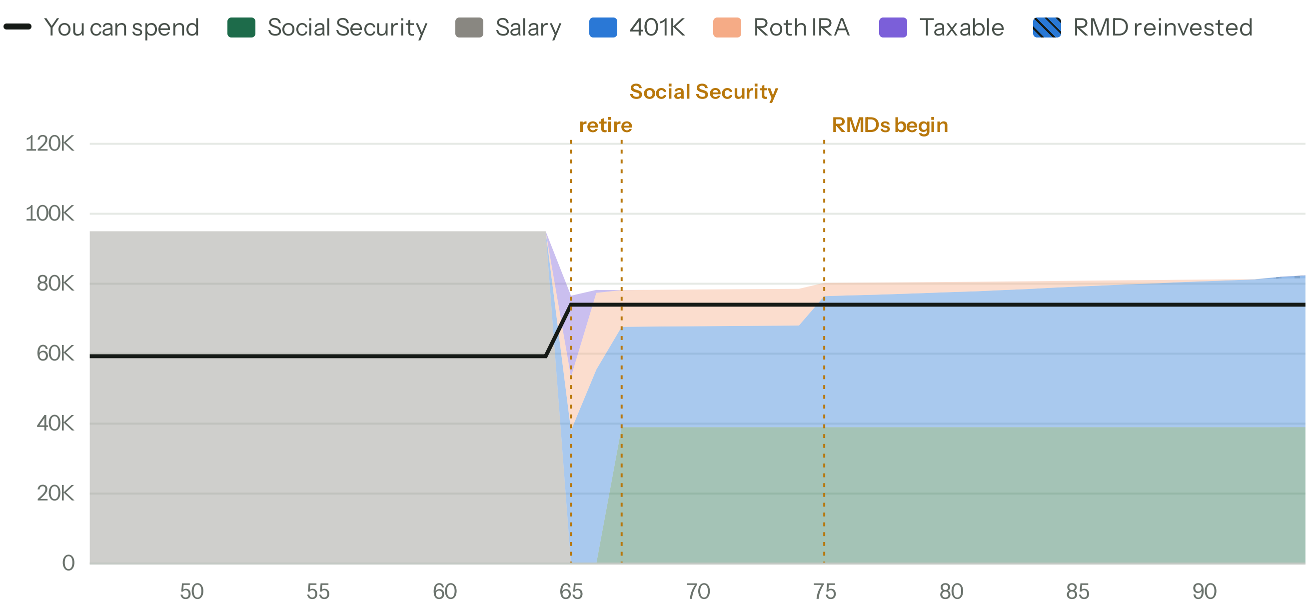
A 87% success rate across 1,000 random futures. Random futures mix good and bad years in new orders, so the bands spread wider than history did.

Figure 5. Where the money sits



At 65, 67% of your savings is pre-tax. Pre-tax money is taxed as it comes out; Roth money is not. Each layer is one account on the expected path.

Figure 6. Where your spending money comes from



From 67, Social Security pays 50% of the money coming in. The line on top is what you can spend after tax and after saving. The layers under it are where the money came from each year on the expected path.

SECTION 4

Year by year, in future dollars

You put away $441K over 19 years of work, then take out $3.02M in retirement, in future dollars.

WHAT TO LOOK AT

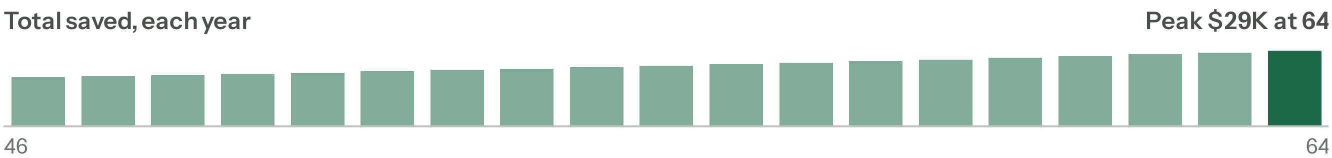
These tables are in future dollars: the amounts you would actually see in each year, if prices rise 2.5% a year. They follow the expected path, the one where markets return what you assumed.

WHAT THIS MEANS FOR YOU

Use them as targets. Each year, compare what you saved, took out and hold with the row for that year.

How much to save each year

What goes into each account while you work. The pre-tax 401K column includes your employer's match. IRS limits are already applied.



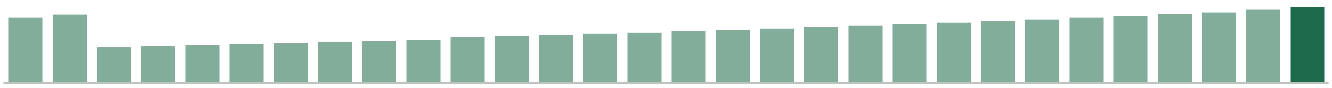
AGE	YEAR	SALARY	401K, PRE-TAX	ROTH IRA	TOTAL SAVED
46	2026	$95,000	$11,400	$7,000	$18,400
47	2027	$97,375	$11,685	$7,175	$18,860
48	2028	$99,809	$11,977	$7,354	$19,331
49	2029	$102,305	$12,277	$7,538	$19,815
50	2030	$104,862	$12,583	$7,727	$20,310
51	2031	$107,484	$12,898	$7,920	$20,818
52	2032	$110,171	$13,221	$8,118	$21,338
53	2033	$112,925	$13,551	$8,321	$21,872
54	2034	$115,748	$13,890	$8,529	$22,419
55	2035	$118,642	$14,237	$8,742	$22,979
56	2036	$121,608	$14,593	$8,961	$23,554
57	2037	$124,648	$14,958	$9,185	$24,142
58	2038	$127,764	$15,332	$9,414	$24,746
59	2039	$130,959	$15,715	$9,650	$25,365
60	2040	$134,233	$16,108	$9,891	$25,999
61	2041	$137,588	$16,511	$10,138	$26,649
All years			**$272,984**	**$167,622**	**$440,607**

AGE	YEAR	SALARY	401K, PRE-TAX	ROTH IRA	TOTAL SAVED
62	2042	$141,028	$16,923	$10,392	$27,315
63	2043	$144,554	$17,346	$10,651	$27,998
64	2044	$148,168	$17,780	$10,918	$28,698
All years			**$272,984**	**$167,622**	**$440,607**

How much to take out of each account

What to withdraw from each account in retirement, before tax. Taxes come out of these amounts. From age 75 the IRS makes you take a minimum from pre-tax accounts each year. That column shows how much of the withdrawal was the required minimum (and any 72(t) payment).

Total withdrawn, each year **Peak $142K at 94**



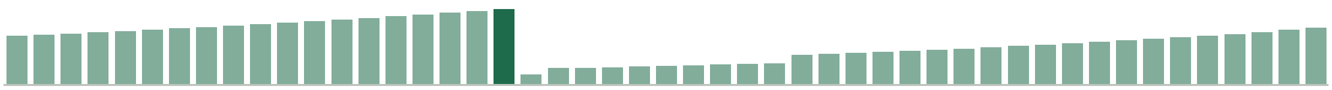
AGE	YEAR	401K, PRE-TAX	ROTH IRA	TAXABLE	TOTAL WITHDRAWN	REQUIRED BY THE IRS
65	2045	$60,784	$24,542	$37,071	$122,397	$0
66	2046	$90,847	$35,964	$1,376	$128,188	$0
67	2047	$48,141	$17,620	$51	$65,812	$0
68	2048	$49,482	$18,076	$2	$67,560	$0
69	2049	$50,815	$18,528	$0	$69,343	$0
70	2050	$52,179	$18,992	$0	$71,171	$0
71	2051	$53,578	$19,466	$0	$73,044	$0
72	2052	$55,011	$19,953	$0	$74,964	$0
73	2053	$56,481	$20,452	$0	$76,933	$0
74	2054	$57,987	$20,963	$0	$78,950	$0
75	2055	$76,630	$7,785	$0	$84,415	$53,795
76	2056	$78,995	$7,629	$0	$86,624	$56,736
77	2057	$81,377	$7,502	$0	$88,879	$59,611
78	2058	$83,933	$7,283	$0	$91,216	$62,937
79	2059	$86,596	$7,024	$0	$93,620	$66,492
80	2060	$89,374	$6,722	$0	$96,096	$70,296
81	2061	$92,159	$6,460	$0	$98,619	$73,988
82	2062	$95,265	$5,996	$0	$101,261	$78,327
83	2063	$98,402	$5,557	$0	$103,959	$82,517
84	2064	$101,844	$4,930	$0	$106,774	$87,480
85	2065	$105,262	$4,373	$0	$109,635	$92,244
86	2066	$108,740	$3,822	$0	$112,562	$97,306
87	2067	$112,346	$3,225	$0	$115,571	$102,697
88	2068	$115,871	$2,747	$0	$118,618	$107,654
89	2069	$119,779	$2,027	$0	$121,806	$113,714
90	2070	$123,568	$1,458	$0	$125,026	$119,205
91	2071	$127,483	$851	$0	$128,334	$124,938
92	2072	$131,526	$204	$0	$131,730	$130,914
93	2073	$137,130	$0	$0	$137,130	$137,130
All years		**$2,683,492**	**$300,151**	**$38,500**	**$3,022,144**	

AGE	YEAR	401K, PRE-TAX	ROTH IRA	TAXABLE	TOTAL WITHDRAWN	REQUIRED BY THE IRS
94	2074	$141,908	$0	$0	$141,908	$141,908
All years		**$2,683,492**	**$300,151**	**$38,500**	**$3,022,144**	

What you pay in taxes, estimated

Federal income tax (including tax on investment gains), state income tax, any early-withdrawal penalty, and the Social Security and Medicare tax taken from pay. The tax on the brokerage account's dividends and interest is paid out of that account each year, not out of your spending, so it is not in the total. These are estimates from the federal brackets and the state table, not a tax return.

Total tax, each year **Peak $33K at 64**



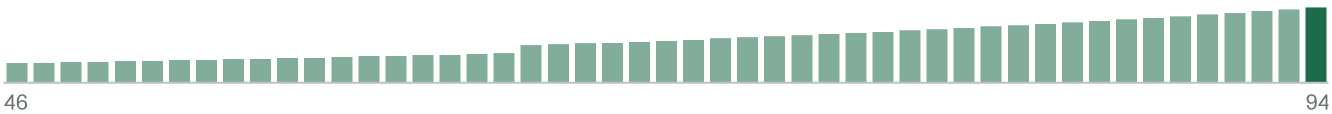
AGE	YEAR	FEDERAL	STATE	PAYROLL	TAX INSIDE THE BROKERAGE ACCOUNT	TOTAL
46	2026	$10,398	$3,464	$7,268	$49	$21,129
47	2027	$10,658	$3,550	$7,449	$52	$21,657
48	2028	$10,924	$3,639	$7,635	$56	$22,199
49	2029	$11,198	$3,730	$7,826	$60	$22,754
50	2030	$11,477	$3,823	$8,022	$64	$23,323
51	2031	$11,764	$3,919	$8,223	$69	$23,906
52	2032	$12,058	$4,017	$8,428	$73	$24,503
53	2033	$12,360	$4,117	$8,639	$79	$25,116
54	2034	$12,669	$4,220	$8,855	$84	$25,744
55	2035	$12,986	$4,326	$9,076	$90	$26,388
56	2036	$13,310	$4,434	$9,303	$97	$27,047
57	2037	$13,643	$4,545	$9,536	$104	$27,723
58	2038	$13,984	$4,658	$9,774	$111	$28,416
59	2039	$14,334	$4,775	$10,018	$119	$29,127
60	2040	$14,692	$4,894	$10,269	$128	$29,855
61	2041	$15,059	$5,017	$10,526	$137	$30,601
62	2042	$15,436	$5,142	$10,789	$146	$31,366
63	2043	$15,822	$5,271	$11,058	$157	$32,151
64	2044	$16,217	$5,402	$11,335	$168	$32,954
65	2045	$3,519	$578	$0	$0	$4,097
66	2046	$6,930	$0	$0	$0	$6,930
67	2047	$7,027	$0	$0	$0	$7,027
68	2048	$7,305	$0	$0	$0	$7,305
69	2049	$7,582	$0	$0	$0	$7,582
70	2050	$7,865	$0	$0	$0	$7,865
71	2051	$8,156	$0	$0	$0	$8,156
72	2052	$8,454	$0	$0	$0	$8,454
73	2053	$8,760	$0	$0	$0	$8,760
All years		**$683,551**	**$83,521**	**$174,028**	**$1,841**	**$941,100**

AGE	YEAR	FEDERAL	STATE	PAYROLL	TAX INSIDE THE BROKERAGE ACCOUNT	TOTAL
74	2054	$9,073	$0	$0	$0	$9,073
75	2055	$12,790	$0	$0	$0	$12,790
76	2056	$13,209	$0	$0	$0	$13,209
77	2057	$13,629	$0	$0	$0	$13,629
78	2058	$14,084	$0	$0	$0	$14,084
79	2059	$14,561	$0	$0	$0	$14,561
80	2060	$15,059	$0	$0	$0	$15,059
81	2061	$15,557	$0	$0	$0	$15,557
82	2062	$16,123	$0	$0	$0	$16,123
83	2063	$16,692	$0	$0	$0	$16,692
84	2064	$17,325	$0	$0	$0	$17,325
85	2065	$17,950	$0	$0	$0	$17,950
86	2066	$18,585	$0	$0	$0	$18,585
87	2067	$19,245	$0	$0	$0	$19,245
88	2068	$19,884	$0	$0	$0	$19,884
89	2069	$20,603	$0	$0	$0	$20,603
90	2070	$21,293	$0	$0	$0	$21,293
91	2071	$22,007	$0	$0	$0	$22,007
92	2072	$22,745	$0	$0	$0	$22,745
93	2073	$23,823	$0	$0	$0	$23,823
94	2074	$24,728	$0	$0	$0	$24,728
All years		**$683,551**	**$83,521**	**$174,028**	**$1,841**	**$941,100**

What you can spend

Everything that comes in, less taxes, less what you save. The last column is the same spending in 2026 dollars, so you can see it holds its buying power.

You can spend, each year **Peak $242K at 94**



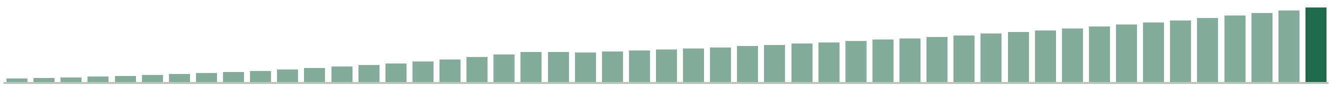
AGE	YEAR	MONEY IN	TAXES	SAVED	YOU CAN SPEND	IN 2026 DOLLARS
46	2026	$95,000	$21,129	$14,600	$59,271	$59,271
47	2027	$97,375	$21,657	$14,965	$60,753	$59,271
48	2028	$99,809	$22,199	$15,339	$62,271	$59,271
49	2029	$102,305	$22,754	$15,723	$63,828	$59,271
50	2030	$104,862	$23,323	$16,116	$65,424	$59,271
51	2031	$107,484	$23,906	$16,519	$67,059	$59,271
52	2032	$110,171	$24,503	$16,932	$68,736	$59,271
53	2033	$112,925	$25,116	$17,355	$70,454	$59,271
54	2034	$115,748	$25,744	$17,789	$72,216	$59,271
55	2035	$118,642	$26,388	$18,233	$74,021	$59,271
56	2036	$121,608	$27,047	$18,689	$75,872	$59,271
57	2037	$124,648	$27,723	$19,156	$77,768	$59,271
58	2038	$127,764	$28,416	$19,635	$79,713	$59,271
59	2039	$130,959	$29,127	$20,126	$81,705	$59,271
60	2040	$134,233	$29,855	$20,629	$83,748	$59,271
61	2041	$137,588	$30,601	$21,145	$85,842	$59,271
62	2042	$141,028	$31,366	$21,674	$87,988	$59,271
63	2043	$144,554	$32,151	$22,216	$90,187	$59,271
64	2044	$148,168	$32,954	$22,771	$92,442	$59,271
65	2045	$122,397	$4,097	$0	$118,300	$74,000
66	2046	$128,188	$6,930	$0	$121,258	$74,000
67	2047	$131,316	$7,027	$0	$124,289	$74,000
68	2048	$134,701	$7,305	$0	$127,396	$74,000
69	2049	$138,163	$7,582	$0	$130,581	$74,000
70	2050	$141,711	$7,865	$0	$133,846	$74,000
71	2051	$145,348	$8,156	$0	$137,192	$74,000
72	2052	$149,076	$8,454	$0	$140,622	$74,000
73	2053	$152,897	$8,760	$0	$144,137	$74,000
74	2054	$156,813	$9,073	$0	$147,741	$74,000
75	2055	$164,224	$12,790	$0	$151,434	$74,000
76	2056	$168,429	$13,209	$0	$155,220	$74,000

AGE	YEAR	MONEY IN	TAXES	SAVED	YOU CAN SPEND	IN 2026 DOLLARS
77	2057	$172,729	$13,629	$0	$159,101	$74,000
78	2058	$177,162	$14,084	$0	$163,078	$74,000
79	2059	$181,716	$14,561	$0	$167,155	$74,000
80	2060	$186,393	$15,059	$0	$171,334	$74,000
81	2061	$191,174	$15,557	$0	$175,617	$74,000
82	2062	$196,130	$16,123	$0	$180,008	$74,000
83	2063	$201,200	$16,692	$0	$184,508	$74,000
84	2064	$206,446	$17,325	$0	$189,120	$74,000
85	2065	$211,798	$17,950	$0	$193,849	$74,000
86	2066	$217,280	$18,585	$0	$198,695	$74,000
87	2067	$222,907	$19,245	$0	$203,662	$74,000
88	2068	$228,637	$19,884	$0	$208,754	$74,000
89	2069	$234,576	$20,603	$0	$213,972	$74,000
90	2070	$240,615	$21,293	$0	$219,322	$74,000
91	2071	$246,812	$22,007	$0	$224,805	$74,000
92	2072	$253,170	$22,745	$0	$230,425	$74,000
93	2073	$261,606	$23,823	$1,597	$236,186	$74,000
94	2074	$269,496	$24,728	$2,678	$242,090	$74,000

What each account holds

Balances on 1 January of each year. The last column is the total in 2026 dollars.

Total held, each year **Peak $3.92M at 94**



AGE	YEAR	401K, PRE-TAX	ROTH IRA	TAXABLE	TOTAL	IN 2026 DOLLARS
46	2026	$120,000	$35,000	$10,000	$165,000	$165,000
47	2027	$140,996	$44,943	$10,714	$196,653	$191,856
48	2028	$163,889	$55,825	$11,479	$231,193	$220,053
49	2029	$188,831	$67,724	$12,298	$268,854	$249,658
50	2030	$215,987	$80,721	$13,176	$309,884	$280,740
51	2031	$245,531	$94,905	$14,117	$354,554	$313,374
52	2032	$277,656	$110,371	$15,125	$403,152	$347,637
53	2033	$312,565	$127,223	$16,205	$455,992	$383,611
54	2034	$350,479	$145,570	$17,362	$513,411	$421,380
55	2035	$391,637	$165,532	$18,601	$575,770	$461,035
56	2036	$436,293	$187,238	$19,929	$643,460	$502,670
57	2037	$484,724	$210,826	$21,352	$716,902	$546,383
58	2038	$537,227	$236,445	$22,877	$796,549	$592,279
59	2039	$594,123	$264,257	$24,510	$882,889	$640,466
60	2040	$655,754	$294,434	$26,260	$976,447	$691,058
61	2041	$722,494	$327,162	$28,134	$1,077,790	$744,177
62	2042	$794,740	$362,643	$30,143	$1,187,526	$799,947
63	2043	$872,925	$401,092	$32,295	$1,306,312	$858,502
64	2044	$957,510	$442,744	$34,601	$1,434,855	$919,980
65	2045	$1,048,996	$487,848	$37,071	$1,573,915	$984,528
66	2046	$1,065,821	$499,544	$1,376	$1,566,740	$956,136
67	2047	$1,052,688	$500,262	$51	$1,553,001	$924,636
68	2048	$1,082,931	$520,098	$2	$1,603,031	$931,144
69	2049	$1,114,087	$540,972	$0	$1,655,059	$937,917
70	2050	$1,146,233	$562,968	$0	$1,709,201	$944,975
71	2051	$1,179,413	$586,159	$0	$1,765,572	$952,333
72	2052	$1,213,669	$610,626	$0	$1,824,295	$960,007
73	2053	$1,249,048	$636,453	$0	$1,885,500	$968,015
74	2054	$1,285,597	$663,730	$0	$1,949,327	$976,375
75	2055	$1,323,369	$692,556	$0	$2,015,925	$985,104
76	2056	$1,344,647	$737,274	$0	$2,081,921	$992,541
77	2057	$1,365,091	$785,564	$0	$2,150,655	$1,000,302

AGE	YEAR	401K, PRE-TAX	ROTH IRA	TAXABLE	TOTAL	IN 2026 DOLLARS
78	2058	$1,384,618	$837,668	$0	$2,222,286	$1,008,408
79	2059	$1,402,978	$893,973	$0	$2,296,951	$1,016,867
80	2060	$1,419,971	$954,839	$0	$2,374,810	$1,025,693
81	2061	$1,435,373	$1,020,661	$0	$2,456,034	$1,034,902
82	2062	$1,449,056	$1,091,773	$0	$2,540,829	$1,044,519
83	2063	$1,460,554	$1,168,790	$0	$2,629,344	$1,054,543
84	2064	$1,469,668	$1,252,137	$0	$2,721,805	$1,065,001
85	2065	$1,475,902	$1,342,489	$0	$2,818,391	$1,075,897
86	2066	$1,479,059	$1,440,310	$0	$2,919,369	$1,087,262
87	2067	$1,478,842	$1,546,162	$0	$3,025,005	$1,099,126
88	2068	$1,474,863	$1,660,705	$0	$3,135,568	$1,111,511
89	2069	$1,466,916	$1,784,480	$0	$3,251,396	$1,124,459
90	2070	$1,454,303	$1,918,440	$0	$3,372,743	$1,137,976
91	2071	$1,436,791	$2,063,205	$0	$3,499,997	$1,152,109
92	2072	$1,413,876	$2,219,641	$0	$3,633,517	$1,166,888
93	2073	$1,385,012	$2,388,676	$0	$3,773,688	$1,182,345
94	2074	$1,348,124	$2,570,813	$1,660	$3,920,596	$1,198,413

SECTION 5

What this report leaves out

12 things this plan does not count. Read them before you rely on the numbers.

WHAT THIS MEANS FOR YOU

Budget for health care, housing and big one-off costs inside your spending. If you pay fund or advice fees, lower the returns you assume by the same amount.

Health care	No health insurance, doctor bills or drug costs, and no cover before Medicare at 65. No health savings account (HSA). Budget for these inside your spending.
Medicare premiums	Medicare Part B and D premiums, and the higher premiums (IRMAA) charged on higher incomes, are not taken out.
Long-term care	No nursing home, assisted living or care at home.
Your home	Housing is part of your spending. A mortgage that ends is not modeled, so spending stays the same after it is paid off. No home equity or downsizing.
Some taxes	No alternative minimum tax (AMT), no city or county income tax, standard deduction only (no itemizing), and some state rules are simplified. Every dividend in the taxable account is taxed as a qualified dividend, and its bond interest is taxed by your state too.
Moves you can make	No Roth conversions, no annuities, and no 457(b), 403(b) catch-up, 529 or inherited-account rules. An inherited IRA is treated as your own. 72(t) equal payments are counted only if you turned them on, and never stopped early.
One household, the whole way	A couple is modeled as both living to the end of the plan, filing jointly. No survivor years, no widow’s tax brackets, and each account is one household account.
Whole-year steps	Ages, raises, retirement and claiming Social Security happen a whole year at a time. Money moves in and out at least monthly within each year.
Social Security as given	The benefit is paid in full as shown. No cut to the program is assumed, and a gap in pay does not lower it.
Flat spending	Spending holds steady after inflation. No big one-off costs such as a car, a wedding or help for family, and no change in spending with age.
Fees	Fund fees and advice fees are not taken off returns. If you pay 1% a year, your returns are 1% lower than shown.
The past as a guide	History here is United States stocks and Treasury bonds since 1871. The future can be worse than any case in it.

SECTION 6

What if things change

Spending $73K a year would bring the success rate to 95%.

Your key numbers, explored

Each one moves part of your plan until the success rate sits at 95%. They are ways to see how much room the plan has, not things you must change.

SPENDING

Today your success rate is 90%. Spending **$73K** a year after tax would bring the success rate to 95%. That is $1K less than now.

RETIREMENT AGE

Today your success rate is 90%. Retiring at **66**, 1 year later, would bring the success rate to 95%. The plan still ends at 95.

BARISTA FIRE

Your plan is below a 95% success rate as it is, so there is no room yet to go part-time early. The spending and retirement age above show what would bring it there.

COAST FIRE

Your plan is below a 95% success rate as it is, so there is no room yet to go part-time early. The spending and retirement age above show what would bring it there.

They are searched on history alone, not the random futures. Each one changes only that part of the plan.

WHAT TO LOOK AT

Of the changes tested, “Retire 5 years earlier” moves your success rate most: from 90% to 26%.

Each what-if changes one thing and runs your plan through the same history again. Each is judged by the one number that matters most for it. Money is in 2026 dollars.

WHAT IF	WHAT WE LOOK AT	YOUR PLAN	WITH THE CHANGE
Retire 5 years earlier You stop work at 60 instead of 65. The plan still ends at 95.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**26%** −64 pts Success rate, random futures 39% **−48 pts** Savings at retirement $691K **−$293K** Balance at the end of the plan $0 **−$1.23M**

WHAT IF	WHAT WE LOOK AT	YOUR PLAN	WITH THE CHANGE
Retire 5 years later You stop work at 70 instead of 65. The plan still ends at 95.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**100%** **+10 pts** Success rate, random futures 99% **+12 pts** Savings at retirement $1.36M **+$374K** Balance at the end of the plan $2.46M **+$1.23M**
Spend 10% more You spend $81,400 a year after tax instead of $74,000, in 2026 dollars.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**77%** **−13 pts** Success rate, random futures 77% **−10 pts** Savings at retirement $985K **same** Balance at the end of the plan $695K **−$537K**
Spend 10% less You spend $66,600 a year after tax instead of $74,000, in 2026 dollars.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**100%** **+10 pts** Success rate, random futures 94% **+7 pts** Savings at retirement $985K **same** Balance at the end of the plan $1.75M **+$515K**
The lost decade at retirement The markets and prices of 2000–2009 happen again starting the year you retire, at 65, in every case.	Balance at the end of the plan, the median case	**$1.23M** Success rate, history 90% Savings at retirement $985K	**$562K** **−$670K** Success rate, history 71% **−19 pts** Savings at retirement $985K **same**
Stagflation at retirement The markets and prices of 1973–1982 happen again starting the year you retire, at 65, in every case.	Balance at the end of the plan, the median case	**$1.23M** Success rate, history 90% Savings at retirement $985K	**$0** **−$1.23M** Success rate, history 40% **−50 pts** Savings at retirement $985K **same**
The 2008 crash at retirement The markets and prices of 2008–2009 happen again starting the year you retire, at 65, in every case.	Balance at the end of the plan, the median case	**$1.23M** Success rate, history 90% Savings at retirement $985K	**$821K** **−$411K** Success rate, history 83% **−7 pts** Savings at retirement $985K **same**
A year with no pay You earn nothing for a year from age 47, and nothing goes into your accounts that year. Nothing comes out of them either: the plan assumes you get by on other money.	Savings at retirement, the median case	**$1.13M** Success rate, history 90% Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**$1.08M** **−$47K** Success rate, history 88% **−2 pts** Success rate, random futures 85% **−2 pts** Savings at retirement $942K **−$43K** Balance at the end of the plan $1.04M **−$193K**

WHAT IF	WHAT WE LOOK AT	YOUR PLAN	WITH THE CHANGE
Claim Social Security at 62 You start Social Security at 62 instead of 67. The benefit is our estimate for that age.	Balance at the end of the plan, the median case	**$1.23M** Success rate, history 90% Success rate, random futures 87% Savings at retirement $985K	**$1.07M** **−$160K** Success rate, history 88% **−2 pts** Success rate, random futures 85% **−2 pts** Savings at retirement $985K **same**
Claim Social Security at 70 You start Social Security at 70 instead of 67. The benefit is our estimate for that age.	Balance at the end of the plan, the median case	**$1.23M** Success rate, history 90% Success rate, random futures 87% Savings at retirement $985K	**$1.40M** **+$169K** Success rate, history 89% **−1 pt** Success rate, random futures 88% **+1 pt** Savings at retirement $985K **same**
Plan to 5 years later The plan runs to 100 instead of 95, so the money has to last 5 more years.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**86%** **−3 pts** Success rate, random futures 83% **−4 pts** Savings at retirement $985K **same** Balance at the end of the plan $1.23M **−$957**
Plan to 5 years earlier The plan runs to 90 instead of 95, so the money has to last 5 fewer years.	Success rate	**90%** Success rate, random futures 87% Savings at retirement $985K Balance at the end of the plan $1.23M	**96%** **+6 pts** Success rate, random futures 91% **+4 pts** Savings at retirement $985K **same** Balance at the end of the plan $1.06M **−$173K**

Under each number, in small type: the other results of the same runs. Savings at retirement follow the expected path; the balance at the end of the plan is the median case. A replayed market is one stretch of real history, so it runs on history alone. Money is in 2026 dollars.

How each one is judged

Retiring earlier or later, spending more or less, a longer or shorter plan	The share of cases that never ran out. These change how long the money has to last or how fast it goes.
A bad market	The balance at the end of the plan in the median case. Your spending stays the same, so the damage shows in what is left.
A year with no pay	Your savings on the day you retire, in the median case. The gap happens while you work, so that is where it shows first.
When to claim Social Security	The balance at the end of the plan in the median case. Claiming early pays less for longer; claiming late pays more for fewer years. The ending balance shows which comes out ahead for you.
The smaller numbers	Every row also shows the other results of the same runs: the success rate in history and in the random futures, your savings at retirement on the expected path, the balance at the end of the plan in the median case. A plus or minus beside a number is the change from your plan, in green when it is better and in red when it is worse.

SECTION 7

Your own what-if

What if: The lost decade replayed from 65, your retirement. The success rate goes from 90% to 71%.

You built this what-if in the What-if tab. The report runs it beside your plan through the same 107 cases of history and 1,000 random futures, under the same rules. Each case is paired with itself, the same year of history under both plans, so a difference between them is the change, not the market. Money is in 2026 dollars.

The what-if replays 2000–2009 at ages 65 to 74, with the stock and bond returns and the inflation of those years, in every case and every Monte Carlo run.

WHAT CHANGES

	YOUR PLAN	WHAT-IF
Replay past markets	Each case's own history	**The lost decade replayed from 65, your retirement**

Side by side

	YOUR PLAN	WHAT-IF	DIFFERENCE
Success rate cases since 1871 that never ran out	90%	71%	−19 pts
Years paid in full share of retired years, every case	98.2%	88.7%	−9.5 pts
Short years averaged under the target, per year	$32K	$34K	+$2K
Retire at age 2045 vs 2045	65	65	same
Plan ends at age	95	95	same
Balance at retirement expected path	$985K	$985K	same
Median ending balance history	$1.23M	$562K	−$670K
Spent in retirement expected path, total	$2.22M	$2.22M	same
Lifetime income tax expected path	$442K	$403K	−$39K
Lifetime payroll tax Social Security and Medicare	$138K	$138K	same
Monte Carlo success rate 1,000 runs that never ran out	87%	73%	−14 pts
Monte Carlo median ending	$2.10M	$802K	−$1.29M

Green and red mark the direction that is better for the number, not a verdict on the plan. Money is in 2026 dollars.

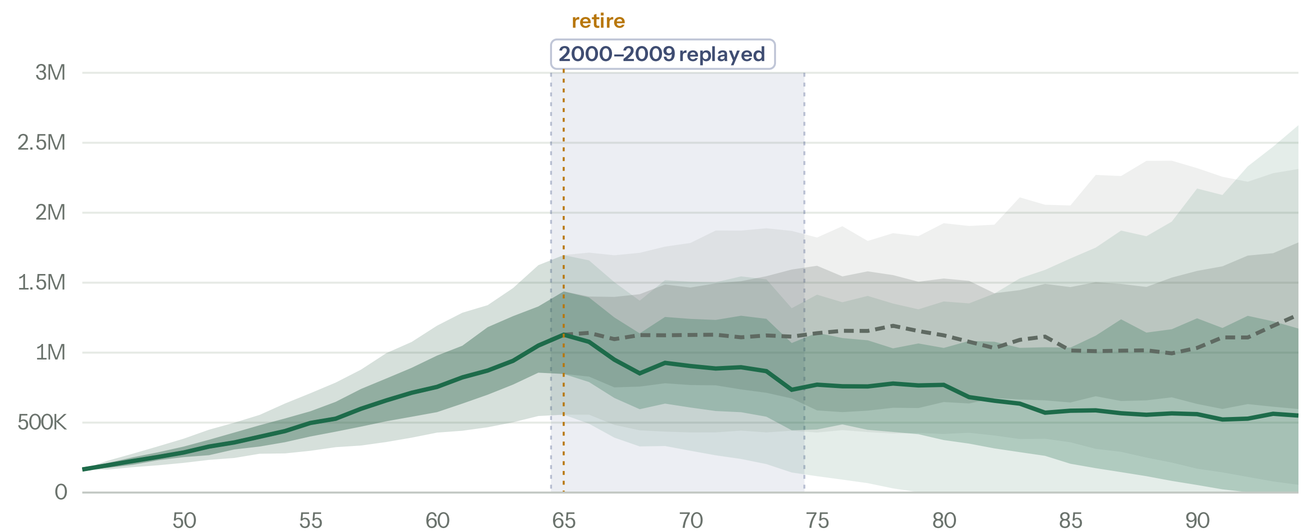
Figure 7. **Same history, both plans**

70% both never ran out	**1%** only the what-if never ran out	**20%** only your plan never ran out	**9%** both ran out

> **In 1% of cases only the what-if never ran out; in 20% only your plan never ran out.** Each case is your plan started in one year of history, run under both plans. The four numbers are shares of those cases.

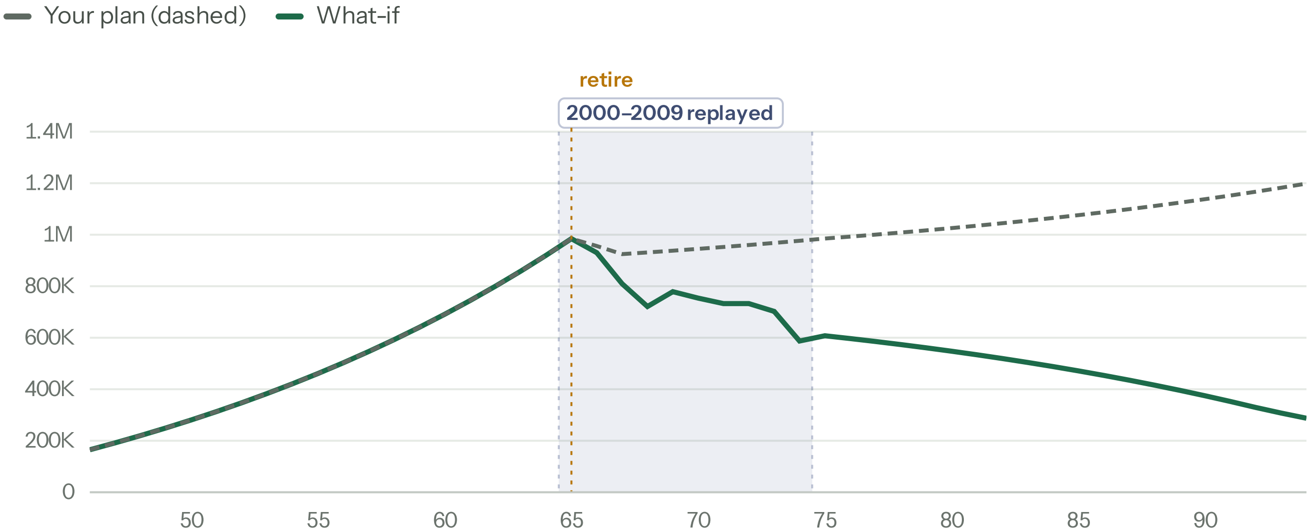
Figure 8. **Balance over time, both plans**

Your plan, median (dashed) · Your plan, middle half · What-if, median · What-if, middle half · 10th to 90th percentile, faint



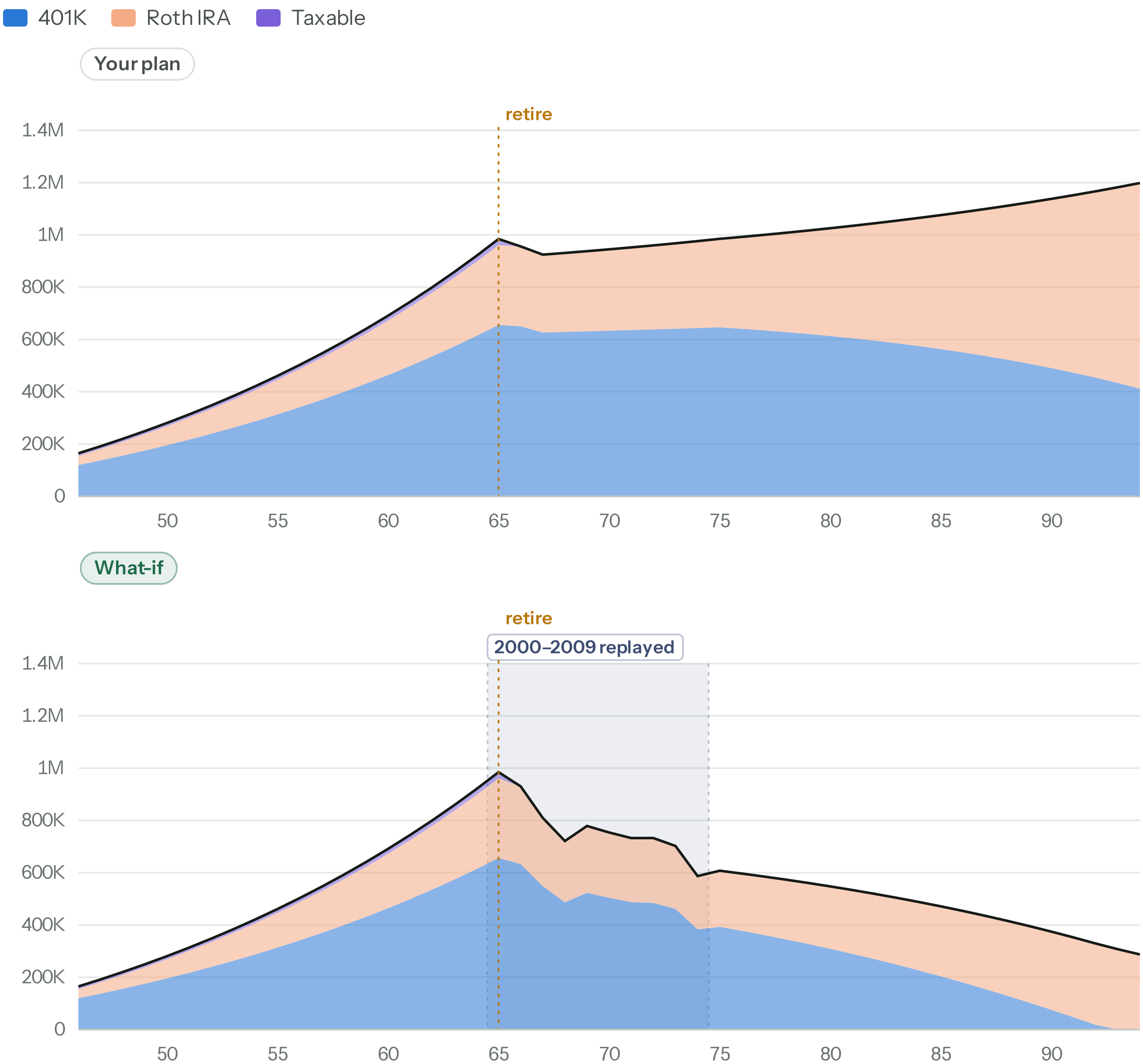
> **Under the what-if, the median case ends the plan with $562K, against $1.23M on your plan.** The solid line and the green bands are the what-if: its median case, the middle half of cases and, faint, the 10th to 90th percentile. The dashed line and the grey bands are your plan. The scale is linear, so the height of the gap is its size in dollars.

Figure 9. Total balance, both plans



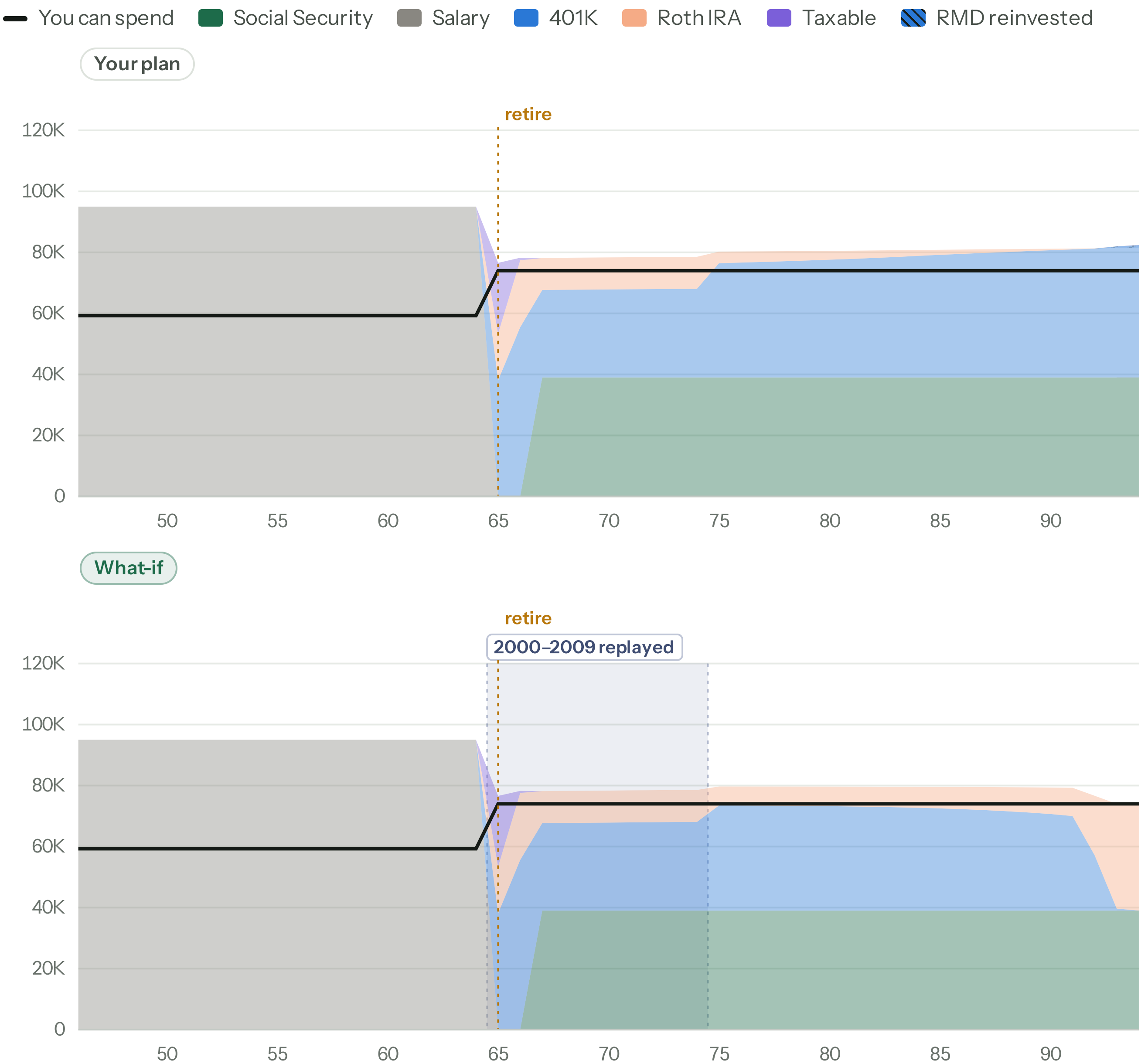
On the expected path the what-if retires with $985K, against $985K on your plan. The expected path, in 2026 dollars: markets return what you assumed every year, with no market history. The solid line is the what-if, the dashed line your plan.

Figure 10. **Where the money sits, both plans**



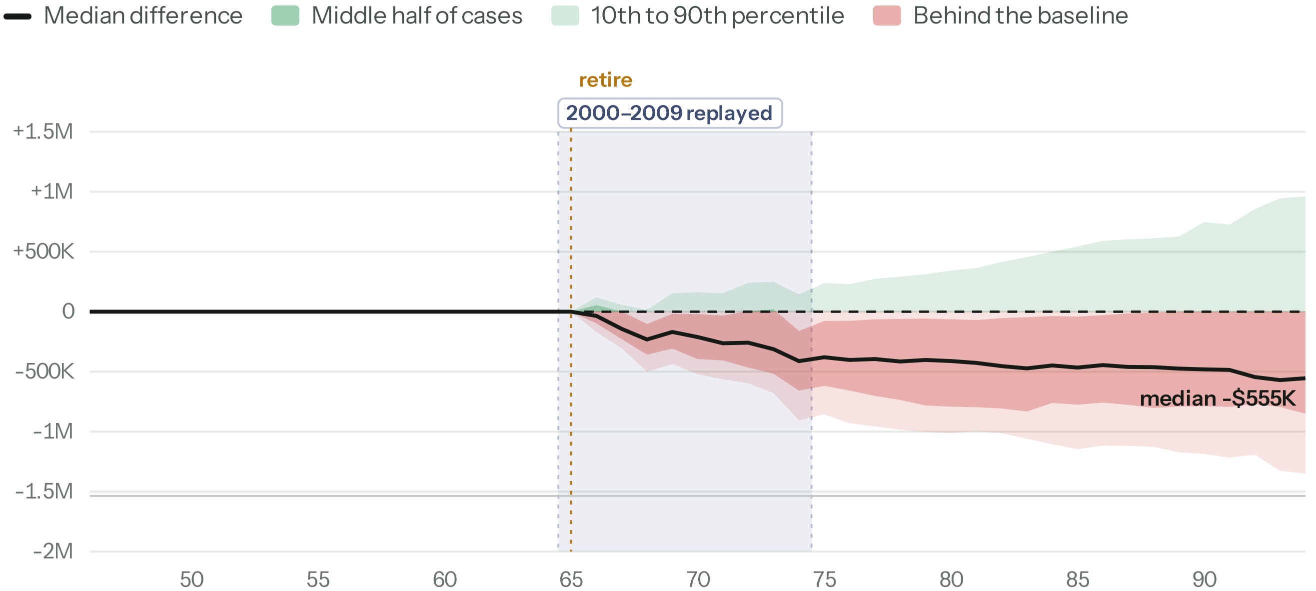
On the expected path the what-if ends with $266K, against $1.22M on your plan. One scale for both, in 2026 dollars. Each layer is one account on the expected path, where markets return what you assumed every year.

Figure 11. What pays for each year, both plans



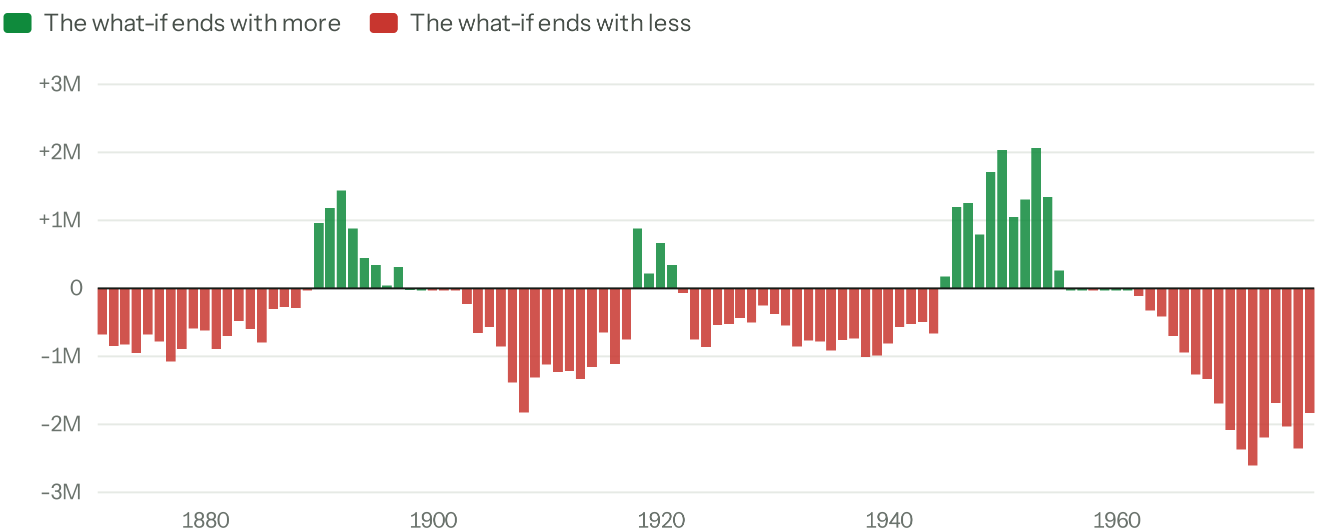
Income tax over the whole plan: $403K under the what-if, against $442K on your plan. One scale for both, in 2026 dollars, on the expected path. The solid line is what you can spend after tax and after saving. Both plans spend the same each year.

Figure 12. The difference, year by year



At 94, the what-if is ahead in 22% of cases. The median difference is −$555K. The what-if minus your plan in each case, then the spread across all of them. Above the line the what-if is ahead; below it, behind.

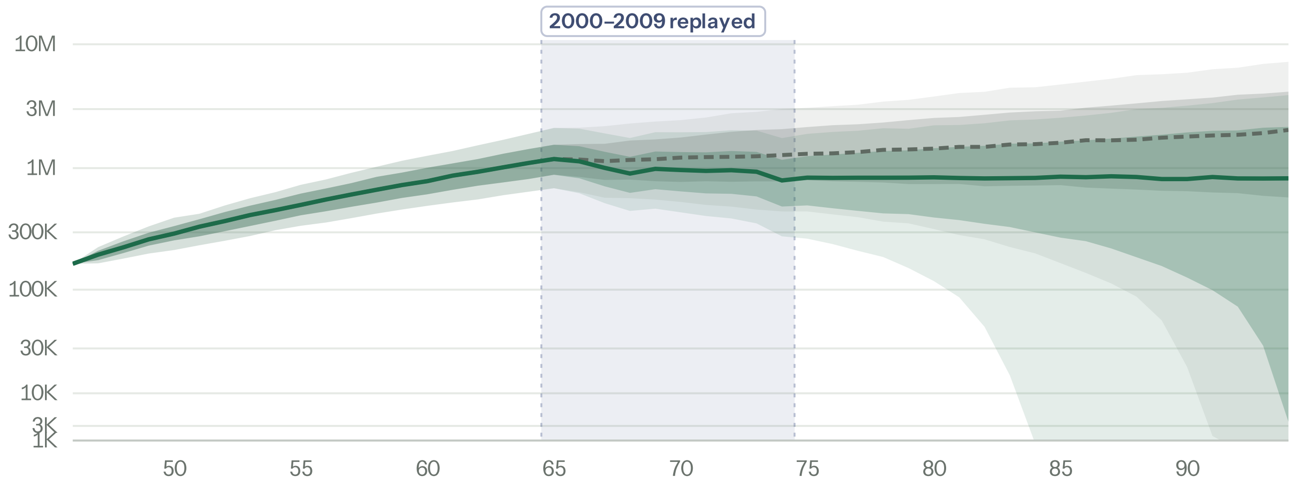
Figure 13. How each case ends



The what-if ends the plan with more in 22% of cases and with less in 71%. The median difference is −$565K. One bar per case, placed by the year the case started: the balance at the end of the plan under the what-if, minus the balance under your plan.

Figure 14. **Monte Carlo, both plans**

Your plan, median (dashed) · Your plan, middle half · What-if, median · What-if, middle half · 10th to 90th percentile, faint



Across 1,000 random futures the success rate goes from 87% to 73%. Random futures are drawn for each plan on its own, so they do not pair the way the cases of history do. The median and the middle half of runs for each plan, on a log scale that starts near the lowest balance drawn.

WHAT THIS MEANS FOR YOU

This what-if puts events on your plan; it does not change your inputs, so there is nothing to make your plan. The rest of this report is about your plan as saved.

SECTION 8

Words used in this report

Every term the report uses, 25 in all, each one explained.

Case
Your plan started in one year of real market history. The case that started in 1966 lives through the markets and prices of 1966 onward.

Never ran out
A case where the money lasted to the end of the plan, paying your full spending every year.

Years paid in full
For a plan that draws a percentage: the share of retired years, across every case, that paid at least your target.

Random futures (Monte Carlo)
Made-up futures built by drawing years at random from history. A way to test orders of good and bad years that never happened.

Median
Half the cases did better than the median case and half did worse. The median is not an average of them.

Percentile
The 10th percentile is the case that did better than one in ten; the 90th did better than nine in ten.

Expected path
One smooth future where markets return exactly what you assumed every year. Useful for tables, but real markets are never this smooth.

Today's dollars
Money measured by what it buys in the report's dollar year. Also called real dollars.

Future dollars
The number you will actually see on a statement in that year. Also called nominal dollars. Higher than today's dollars because prices rise.

Inflation
The yearly rise in prices. At 2.5% a year, prices roughly double in 28 years.

Return after inflation
How much your money grows once rising prices are taken out. Also called a real return.

401K
A retirement account through your job. Money goes in from your pay, often with a match from your employer.

IRA
An individual retirement account you open yourself.

Pre-tax (traditional)
Money that went in before income tax. You pay the tax when you take it out.

Roth
Money that went in after tax. It comes out tax-free once the rules are met.

Taxable account
An ordinary investment account. You pay tax on the gains when you sell.

Employer match
What your employer adds to your 401K when you put money in.

Early withdrawal penalty
An extra 10% tax on money taken from a 401K or IRA before age 59 and a half.

Social Security
The federal retirement benefit. Claiming at 62 pays less each month; waiting to 70 pays more.

Capital gains
The growth on an investment you sell for more than you paid. Taxed at 0%, 15% or 20% depending on your income.

Stocks and bonds
Stocks grow more over time and fall harder in bad years. Bonds grow less and fall less. The split is how much of your savings sits in each.

Required minimum distribution (RMD)
The least the IRS makes you take out of pre-tax accounts each year from age 73 or 75. Money you do not spend goes back into the taxable account.

Rule of 55
Leave your job in or after the year you turn 55 and you can take money from that job's 401K without the 10% penalty.

Payroll tax
Social Security and Medicare tax taken from pay while you work.

Withdrawal rate
The share of your savings you take out in a year.

SECTION 9

How the numbers are checked

Nothing on these pages is typed in by hand.

Retire Plan works out every number from your inputs and from published data.

- Market history is Robert Shiller's monthly series, 1871 to 2025: United States stocks with dividends, 10-year Treasury bonds and inflation. Each year's dividend yield and 10-year Treasury yield also set that year's tax on the taxable account's dividends and interest. The script that builds it is published with the planner.
- Tax brackets, contribution limits and required minimum distributions follow the 2026 IRS figures, carried forward with inflation.
- The engine is tested against the planner it replaced, line by line, and against the well-known studies of the 4% rule: at 4%, 30 years and 75% stocks since 1926, about 98.6% of cases last.
- Sample households are worked out by hand and checked against it.

Every check and the sums done by hand are at retire-plan.app/accuracy/.