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# Have Confidence That You Can Retire Without Changing Your Lifestyle: Here's How

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## Summary


- A method is presented to confidently determine your "magic number" for retirement.
- The magic number permits you to maintain your current lifestyle.
- To keep pace with inflation, annual increases in retirement income are pre-programmed.
- The method will put most readers in the right ballpark, even though the future cannot be predicted.
- Readers can individually determine their personal magic number using a spreadsheet that is available for download at no charge.


## Introduction

How much do I need to accumulate to retire? How will my lifestyle change after retirement? Will my retirement income increase each year to keep pace with inflation?

This article presents a method of determining your *magic number*. The plan is designed to maintain your current lifestyle, and your retirement income is programmed to increase annually. A spreadsheet is available for download, at no charge, to enable readers to run their own personalized calculation. Even though the future is unknowable, the method presented should put most readers' magic number in the right ballpark.

## The Input Parameters

Any calculation of retirement needs can only be as accurate as the input parameters upon which the calculation is performed. This section summarizes the nature of the input parameters. All rate data should be entered as a percentage and based on a best-estimated compound annual growth rate, *CAGR, over the entire period of retirement*. Note that the input values used in the following example are for illustration purposes only; they are not intended to represent those of the author or of any other person.

**TABLE I. Examples of Input and Output in the Retirement Needs Calculation**

| | |
|---|---|
| **Age at Retirement** | **64** |
| **Age at Death (Final Payout)** | **89** |
| **Initial Annual Needs, After Tax** | **$49,250** |
| **Effective Tax Rate, Estimated** | **15.00%** |
| **Annual Payout Increase Target** | **3.00%** |
| **Additional Initial Savings** | **$100,000** |
| **Additional Annual Savings Target** | **$9,950** |
| **Investment CAGR, Estimated** | **7.00%** |
| | |
| **Age for Starting Social Security** | **66** |
| **Initial Annual Social Security Benefit** | **$26,900** |
| **Annual SS Increase, Estimated** | **2.00%** |
| | |
| **Age for Starting Pension** | **150** |
| **Initial Annual Pension Benefit** | **$0** |
| **Annual Pension Increase, Estimated** | **0.00%** |
| | |
| **Multiplier** | **0.827837** |
| **Calculated Final Balance** | **$4** |
| | |
| **Investment Minimum** | **$827,837** |

| | |
|---|---|
| **Extra Initial Savings** | **$100,000** |
| **Total Needed to Retire** | **$927,900** |

*(1) Age at Retirement*. Your age at retirement is when you plan to start taking distributions from your investment retirement account(s). I have used an age of 64 in this example.

(2) *Age at Death (Final Payout)*. Because my calculation is designed to completely deplete your investment retirement funds the year you reach this age, *it is wise to overestimate the value*. For example, if my current life expectancy were 79 years, I would personally add one additional decade and would enter a value of 89 years to provide greater assurance that I will not outlive my investment retirement funds. I have used an age of 89 in this example. If you were to live beyond this age, your social security, annuities, and/or pension income would not be affected, but you will no longer supplement these sources with funding from your retirement investment account(s).

*(3) Initial Annual Needs, After Tax*. How much do you need to maintain your current lifestyle, effective the first year of your retirement? One way of estimating this value is to average your *actual expenditures* over the past three years, and then increase the total by 6.09% to adjust for two years of inflation at 3%. I have used an after-tax income of $49,250 in this example. Individuals who are certain that their annual inflation-adjusted expenses will increase upon retirement, compared to the most recent three years, should include the additional expected increase in this value.

(4) *Effective Tax Rate, Estimated*. Take your total annual tax assessment (state plus federal) and divide by your adjusted gross income to obtain the effective tax rate used in this calculation. This input is used to calculate your total investment withdrawal in the first year. I have used an effective tax rate of 15% in this example.

(5) *Annual Payout Increase Target*. This is the percentage by which you want your retirement income to increase every year during retirement. If the rate is equal to the CAGR of inflation evaluated over all your retirement years, your annual payouts will track with inflation. I used a rate of 3% in this example. Lowering this rate will lower the magic number required for retirement, but will also decrease your annual "raise" every year of your retirement. If your target exceeds the rate of inflation, your magic number will be higher, and your inflation-adjusted income will actually increase over your years of retirement.

(6) *Additional Initial Savings*. How much do you want to *initially* have in additional savings and/or brokerage accounts that are separate from and will not affect your "safe" retirement accounts? Funds in these accounts provide flexibility during periods of higher-than-normal expenses (e.g., medical), one-time expenses (e.g., a European vacation or buying a new car), and can also be used for speculative investing that will not put your retirement nest egg at risk. I have used a value of $100,000 in this example.

*(7) Additional Annual Savings Target*. Incorporating a regular savings plan during retirement adds to your initial savings balance and provides additional security and flexibility, as discussed in the preceding paragraph. I have used a value of $9950 in this example.

(8) *Investment CAGR, Estimated*. Over the entire retirement period, what is the expected CAGR of your retirement investments? This is one of the most important inputs in the calculation. For a target portfolio, an estimate can be based on analysis of historical returns over extended periods. Because past performance neither implies nor guarantees future performance, it is wise to underestimate the expected CAGR. For example, if the multi-year historical CAGR of my target portfolio is 9%, I would be conservative and lower the estimated CAGR to 7%, the value that I used in this example. Using the smaller value is safer, but it also increases your magic number for retirement.

*(9) Age for Starting Social Security*. Your initial payout from Social Security depends on your lifetime contributions and your age when you start collecting benefits. Note that entering an age that is less than your age at retirement (above) will generate an error message in the calculation spreadsheet. I have used an age of 66 in this example.

*(10) Initial Annual Social Security Benefit*. Your initial retirement benefit can be calculated or estimated from annual reports mailed out by the Social Security Administration. Benefits are based on historical contributions and age at retirement. I have used a value of $26,900 in this example.

*(11) Annual SS Increase, Estimated*. The value is your best estimate of social security CAGR, annualized over the entire period of retirement. I have used a rate of 2% in this example. To be more conservative, you can use a lower value, which will increase your magic number target.

(12) *Age for Starting Pension*. This value is the age when you will collect the first payout from your pension or annuity plan, if applicable. Entering an age that is less than your age at retirement will generate an error message in the calculation. I have entered a high

number, 150, that is larger than my expected age at death, because the "person" considered in my illustrative calculation does not have a pension or an annuity.

*(13) Initial Annual Pension Benefit*. If you have a pension and/or annuity, contact your plan administrators for an estimate of initial benefits. Because this calculation does not include a pension, I have used a value of $0.

*(14) Annual Pension Increase, Estimated*. This is your best estimate of pension/annuity annual payout increases, expressed as CAGR and annualized over the period of retirement. Because this calculation does not include a pension, I have used a value of 0%.

**The Calculated Estimate of How Much You Need to Retire**

I don't know about you, but I don't trust magic number calculations unless I fully understand details of how the calculation is being done. This section of the article is intended to provide complete transparency by explaining how each step of the calculation is performed. Because the calculation is carried out in an Excel spreadsheet, the descriptions and explanations below move from column to column. Readers with math phobia, and/or who are willing to put their blind faith in me, may choose to skip this section. Those who truly want to understand, and potentially critique, my calculation protocol should peruse this section thoughtfully and critically.

Table IIA provides an overview of annual retirement financial needs. Column 1 lists your age, beginning on your age of retirement (input 1) and ending on your estimated age at death (input 2). All rows below your estimated age at death will be blank in the spreadsheet (not shown).

Column 2 lists your gross, *pre-tax* annual income needs. The year you retire, the amount is calculated by dividing the sum of your initial after-tax annual needs (input 3) plus planned savings (input 7) by (1 minus your effective tax rate (input 4)). In subsequent years, it is the previous year's value multiplied by (1 plus your annual payout increase (input 5)).

Column 3 estimates your annual social security benefit. The first non-zero entry occurs the year you specify for starting payouts (input 9), and equals the value you entered for your initial social security benefit (input 10). Every subsequent entry takes the previous year's entry and multiples by (1 plus the annual social security increase (input 11)).

Column 4 estimates your annual pension/annuity benefit, if any. It is calculated in the

same manner as the social security benefit in column 3, using input 12-14 values.

Column 5 calculates the amount to withdraw from your investment retirement accounts each year. It is found by subtracting the sum of columns 3 and 4 from column 2.

**Table IIA. Annual Social Security Benefits, Pension Benefits, and Investment Payouts**

| Age on Birthday | Gross Payout, Including Social Security, Pre-Tax | Social Security Benefit | Pension Benefit | Required Payout from Retirement Accounts |
|---|---|---|---|---|
| 64 | $69,647 | $0 | $0 | $69,647 |
| 65 | $71,736 | $0 | $0 | $71,736 |
| 66 | $73,889 | $26,900 | $0 | $46,989 |
| 67 | $76,105 | $27,438 | $0 | $48,667 |
| 68 | $78,388 | $27,987 | $0 | $50,402 |
| 69 | $80,740 | $28,546 | $0 | $52,194 |
| 70 | $83,162 | $29,117 | $0 | $54,045 |
| 71 | $85,657 | $29,700 | $0 | $55,957 |
| 72 | $88,227 | $30,294 | $0 | $57,933 |
| 73 | $90,874 | $30,900 | $0 | $59,974 |
| 74 | $93,600 | $31,518 | $0 | $62,082 |
| 75 | $96,408 | $32,148 | $0 | $64,260 |
| 76 | $99,300 | $32,791 | $0 | $66,509 |

| | | | | |
|---|---|---|---|---|
| **77** | **$102,279** | **$33,447** | **$0** | **$68,832** |
| **78** | **$105,347** | **$34,116** | **$0** | **$71,232** |
| **79** | **$108,508** | **$34,798** | **$0** | **$73,710** |
| **80** | **$111,763** | **$35,494** | **$0** | **$76,269** |
| **81** | **$115,116** | **$36,204** | **$0** | **$78,912** |
| **82** | **$118,569** | **$36,928** | **$0** | **$81,642** |
| **83** | **$122,127** | **$37,666** | **$0** | **$84,460** |
| **84** | **$125,790** | **$38,420** | **$0** | **$87,371** |
| **85** | **$129,564** | **$39,188** | **$0** | **$90,376** |
| **86** | **$133,451** | **$39,972** | **$0** | **$93,479** |
| **87** | **$137,454** | **$40,771** | **$0** | **$96,683** |
| **88** | **$141,578** | **$41,587** | **$0** | **$99,991** |
| **89** | **$145,825** | **$42,419** | **$0** | **$103,407** |

Table IIB analyzes projected annual portfolio activity and balances over the retirement period. Note that the rows in Table IIB correspond directly with those in Table IIA.

Column 1 lists the number of full calendar years since retirement. In the first year of retirement, the value is zero.

Column 2 lists the projected initial portfolio balance each year. For the first year of retirement, it is based on the optimal *multiplier* that you will enter in the spreadsheet (discussed below in the next section). Each subsequent year, it is equal to the ending portfolio value of the previous year (column 4).

Column 3 calculates the portfolio income for the year. It is found by first subtracting the annual payout (Table IIA, column 5) from the initial portfolio value (column 2), and then multiplying the result by (1 plus the investment CAGR (input 8)). This calculation assumes one annual lump sum withdrawal at the beginning of each year. Income expectations will improve slightly by taking periodic (e.g., monthly) distributions throughout the year.

Column 4 gives the projected ending portfolio balance. It is found by adding the initial balance (column 2) plus portfolio income (column 3), and then subtracting the annual payout (Table IIA, column 5).

Column 5 lists the annual withdrawal as a *percentage* of the initial balance. Divide the annual payout (Table IIA, column 5) by the initial portfolio balance (column 2) to get this value.

**Table IIB. Financial Analysis of Retirement Investment Balance Changes**

| Years Since Retirement | Initial Portfolio Balance | Portfolio Income | Ending Portfolio Balance | Annual withdrawal % of Initial Balance |
|---|---|---|---|---|
| **0** | **$827,837** | **$53,073** | **$811,263** | **8.4131%** |
| **1** | **$811,263** | **$51,767** | **$791,294** | **8.8426%** |
| **2** | **$791,294** | **$52,101** | **$796,406** | **5.9382%** |
| **3** | **$796,406** | **$52,342** | **$800,081** | **6.1109%** |
| **4** | **$800,081** | **$52,478** | **$802,157** | **6.2996%** |
| **5** | **$802,157** | **$52,497** | **$802,461** | **6.5066%** |
| **6** | **$802,461** | **$52,389** | **$800,805** | **6.7349%** |
| **7** | **$800,805** | **$52,139** | **$796,987** | **6.9876%** |
| **8** | **$796,987** | **$51,734** | **$790,788** | **7.2690%** |

| | | | | |
|---|---|---|---|---|
| **9** | **$790,788** | **$51,157** | **$781,971** | **7.5841%** |
| **10** | **$781,971** | **$50,392** | **$770,281** | **7.9392%** |
| **11** | **$770,281** | **$49,421** | **$755,443** | **8.3424%** |
| **12** | **$755,443** | **$48,225** | **$737,159** | **8.8040%** |
| **13** | **$737,159** | **$46,783** | **$715,109** | **9.3375%** |
| **14** | **$715,109** | **$45,071** | **$688,949** | **9.9610%** |
| **15** | **$688,949** | **$43,067** | **$658,306** | **10.6989%** |
| **16** | **$658,306** | **$40,743** | **$622,779** | **11.5857%** |
| **17** | **$622,779** | **$38,071** | **$581,938** | **12.6710%** |
| **18** | **$581,938** | **$35,021** | **$535,317** | **14.0292%** |
| **19** | **$535,317** | **$31,560** | **$482,417** | **15.7776%** |
| **20** | **$482,417** | **$27,653** | **$422,700** | **18.1110%** |
| **21** | **$422,700** | **$23,263** | **$355,587** | **21.3806%** |
| **22** | **$355,587** | **$18,348** | **$280,455** | **26.2886%** |
| **23** | **$280,455** | **$12,864** | **$196,636** | **34.4736%** |
| **24** | **$196,636** | **$6,765** | **$103,410** | **50.8508%** |
| **25** | **$103,410** | **$0** | **$4** | **99.9967%** |

### Finalizing the Calculation: User Input is Required!

The calculation is not immediately finalized once you have entered the fourteen

parameters described above. To complete the calculation, the user must enter the *optimum* value in the *multiplier* input cell (Table I). The multiplier you enter will be multiplied by $1 million to determine the initial investment balance required to fund your retirement.

Determining the multiplier must be done by trial and error. When entering values, you will need to monitor the *calculated final balance*, just below your *multiplier* entry in the spreadsheet. When the balance is negative, your multiplier is too low. When the multiplier is positive, your multiplier is too high.

To determine the ideal multiplier, a bracketing strategy is recommended. Start by focusing on the ones and tenths digits. Then, enter values to one decimal only. For example, you could enter 1.0, then 0.9, then 0.8. In this example calculation, 0.800000 is too low (balance is negative and the cell is shaded red in the spreadsheet) and 0.900000 is too high (balance is positive and the cell is shaded green in the spreadsheet). (Note that the red and green shading does not appear in the article posted on Seeking Alpha.) Therefore, the optimal value must be between 0.800000 and 0.900000.

Now, drill down on the next decimal. Start from 0.80 (too low) and increase entries by 0.01. You could enter 0.80, then 0.81, then 0.82, then 0.83. In our example calculation, 0.820000 is too low and 0.830000 is too high. Therefore, the optimal value must be between 0.820000 and 0.830000.

Continue adding an additional digit, one at a time, bracketing as described above until all six decimals have been determined. Note that your final multiplier may yield a calculated final balance that is slightly larger than zero, but only by a few dollars. The goal is to identify the optimal multiplier that yields the smallest nonnegative calculated final balance.

Based on your input parameters, the spreadsheet output contains three items (Table I). (1) The *investment minimum* is what you need in investment retirement accounts (excluding savings, social security, and pensions) to maintain your current lifestyle. (2) Your *extra initial savings* comes from input 6. (3) *The total needed to retire* is the sum of your investment minimum plus your initial savings. This is your magic number for graduating from work to retirement. Note that the spreadsheet value is rounded up to the nearest $100.

**I have posted the calculation spreadsheet on my personal web page so that you can perform a personalized calculation using your own input parameters**. Be sure to read and follow the instructions posted on the site to download the spreadsheet. Once

downloaded, all the information you need to use the spreadsheet is described above in this article.

**Implementing Your Plan**

This article focuses on *how much* you need to retire, *not* on how to reach your magic number. Readers are advised to seek input from financial advisors and to do their own research on pre-retirement investment strategies to determine the best approach to reaching their personal retirement targets.

*How much should you withdraw from your investment retirement accounts each year of retirement*? One primary guideline is *that your annual withdrawal should never exceed the amount calculated in column 5 of Table IIA*. Following this rule "religiously" is important, even in years with amazing returns. It provides protection against the fallouts of down-market years, which will be inevitable over any lengthy retirement time frame. (1) The normal retiree can withdraw the full amount shown in column 5 of Table IIA. (2) A more conservative retiree could opt to withdraw the *lower* of the above amounts and the withdrawal percentage (column 5 Table IIB), based on their *actual* beginning-of-year retirement investment balance. Although the more conservative approach can result in lower-than-expected withdrawals some years, it has the advantage of guaranteeing a reasonably steady investment income up through your estimated year of death.

*How you should invest your investment retirement money after retirement* is beyond the scope of this article. I will discuss my own personal approach below, but with the caveat that a different approach may be appropriate to many readers.

One of your entries in the calculation is the expected CAGR of your retirement investments (input 8). Because past performance neither implies nor guarantees future returns, it is important to construct a diversified investment portfolio that *exceeds*, based on historical performance, your input value by 2% or more. Given the eventuality that future returns will not live up to historical returns, this provides a cushion. In the calculation described above, my input CAGR was 7.0%. Therefore, my goal is to structure a portfolio that, based on long-term past performance, might be expected to have a CAGR of 9% or better.

There are many ways of structuring a portfolio after retirement. My personal preference is to adopt a passive, low-fee strategy. To this end, I personally chose a diversified basket of ten no-commission ETFs. My basket includes an assortment of equity (80%) and bond (20%) ETFs. The equity portion includes all cap sizes, and includes both value and growth

strategies. The bond portion includes US government, corporate, municipal, and emerging market debt. My personal basket is targeted at increasing principal, assumes moderate to above-average risk, and has a historical CAGR of 9% or better. I emphasize that this strategy is my own. It is provided for the sake of example, but should *not* be construed as a general recommendation that would be appropriate for all readers.

My personal monthly withdrawal from retirement investment accounts takes all portfolio income (interest and dividends) off the top. If the income total is less than my programmed withdrawal amount, the difference is made up by selling the *minimum* number of shares of my *best-performing* ETF. Selling shares of my best-performing ETF is a passive way of rebalancing the portfolio, at least partially, from month to month.

**Increasing Your Retirement Income Beyond Initial Plans and Expectations**

The magic number generated in my calculation should be considered as a *minimum* entry level for *starting* your retirement, assuming, of course, that your input values are accurate. This does not imply that, once you are retired, your retirement income is inflexible and fixed for the duration of retirement.

The key to increasing your retirement income above and beyond the programmed values (Table IIA, column 5) rests in how much you save and what you do with those savings. As input, you entered an initial savings amount (input 6) plus an annual contribution to savings (input 7), $100,000 and $9,950 respectively in my sample calculation. The big question is, *what you will do with those savings*?

Savings can be used for emergency expenses, to go on a European vacation, or to buy a new car. Another choice is to put those savings to work in a separate brokerage account. The separate account, which must always be kept isolated from your "safe" retirement investments, can be used for additional investment. Because such investments are completely independent of your retirement needs, they can be can used for higher-risk investments that would never be appropriate for your "safe" money.

I personally follow the latter strategy. My "savings" go directly into a separate brokerage account, where I engage in more speculative, higher-risk trading. The ETPs I trade are liquid, so that I can easily withdraw funds within days if/when an emergency requires me to do so. Because these trades are done in a separate account, a devastating trade will not affect my retirement income, only my "savings" balance. When my "mad money" account reaches a pre-determined balance, I can transfer a fraction of the balance to my "safe" retirement investment accounts. Such transfers increase the principal balance in my

retirement investment accounts, which allows for a permanent increase in annual withdrawals and/or for an extension of the estimated date of death. Extending your final payout date provides additional assurance that investment income will not run out during your lifetime.

The strategy described in this preceding two paragraphs is my own, and should not be construed as a general recommendation that will be suitable for all readers. The important point is that increasing your retirement income above initial expectations requires putting your savings to work. Investors should determine how to best invest their savings, based on personal situations and needs. Without savings that can be put to work, the prospects of increasing your retirement above initial expectations are negligible.

**Comments**

*Kinds of accounts*. Four kinds of accounts are referred to in this article. It is important to understand the differences, so they are compared here. (1) *Social security*. The benefit and annual increase is completely out of the recipient's control after retirement. (2) *Pension and annuity accounts*. These accounts typically are fixed once distributions start. The benefit may or may not increase annually, based on the provider's cost-of-living analysis. (3) *"Safe" retirement investment accounts*. These include IRA, 401(k), and 403(b) accounts. They may also include traditional brokerage accounts whose sole purpose is to fund retirement income. The common denominator is that these accounts, within some limitations, allow the investor broad discretion to select their own portfolio and to trade individual stocks and ETFs. (4) *"Savings" accounts*. These can include, but are not limited to, traditional savings and brokerage accounts. The common denominator is that these accounts are funded by money that is *not* required to meet retirement income goals, and the account holder has complete control over how the funds are allocated/invested.

*GIGO, or Garbage In = Garbage Out*. The calculation of your magic number for retirement will only be as good as the values you input into the calculation. "Difficult to see the future is," Yoda might warn us. And of course, the Jedi master would be correct. Neither future increases in social security nor the overall CAGR of your investment portfolio can be precisely predicted. That said, devoting the time necessary to identify the optimal input parameter values will provide your best chance of determining the magic number that will meet your personal retirement needs. It should be noted (and obvious) that the inability of humans to predict the future is common to *all* investment strategies and methods for determining magic numbers.

*Time Frame*. In some retirement strategies, the investment time frame essentially drops to zero once retirement begins. Practically speaking, this is because preservation of capital is the primary goal and conservative investments are the norm. In my personal strategy, as illustrated by the calculation example, the investment time frame is the total number of years remaining until the anticipated year of death. For a new retiree, the investment time frame can be 30 years or longer. The extended, multi-year time frame allows for more aggressive investing strategies that target capital appreciation and, secondarily, investment interest and dividends.

*Two Disparate Strategies: Total drawdown vs. income only, with preservation of capital*. Some retirement plans focus on withdrawal of income only and emphasize preservation of capital. My approach is different. It draws down both investment income *and* capital over time, and results in a zero balance following withdrawals during the expected year of death. Some of the differences between the two approaches are compared in Table III. These should be self-explanatory.

**Table III. Comparison Between Two Disparate Approaches to Retirement Funding.**

| | **Strategy 1: Total Drawdown** | **Strategy 2: Income Only, with Preservation of Capital** |
|---|---|---|
| Running Portfolio Principal Balance | Varies from year to year (Table IIB, columns 2 and 4) | Remains essentially constant, at a value close to your initial magic number. |
| Expected Age at Death | Your retirement investment balance drops to zero and payouts end after this year. | Will not affect your income stream, except possibly when an annual increase in income is promised. |
| Portfolio Balance at Death<br><br>(Funds Left to Your Heirs) | Zero, if the actual year is on or later than the expected age of death. Positive, but typically smaller than your initial magic number, if death occurs earlier. | Approximately equal to your initial magic number. |
| Investment Strategy | Growth, capital appreciation, moderate risk | Conservative, preservation of capital, low risk |

| | | |
|---|---|---|
| Magic Number to Retire | As calculated in this article. | Larger, sometimes significantly, compared to the magic number in this article (assuming equal income streams). |
| Annual Increase in Withdrawals to track inflation | Included. The annual rate of increase is determined by your input into the calculation. With correct input, income can track inflation. | In typical cases, none, in which case inflation-adjusted income will decrease over time. If an annual increase in figured into the calculation, its inclusion would normally require a higher magic number and/or a riskier investment strategy. |
| Longevity Risk<br><br>*If you were to outlive your expected age at death …* | No additional payouts will be available from retirement investments after your estimated age at death. You will continue to receive Social Security, pension, and/or annuity benefits. | Normally, none of your retirement benefits or payouts will change. |
| Investment Timeframe | *All* of the years remaining until your expected age at death. For a new retiree, the time frame can be 30 years or longer. | Typically, zero years. In most cases, investments focus on income, and capital preservation is a primary goal. |

*CAGR and Investment Time Frame*. Because my investment time frame is from the current day up until my estimated age at death, it can typically be 30 or more years when retirement begins. Coupling that with a conservative best guess of future retirement investment CAGR over the entire 30+ year time frame provides some long-term insurance against portfolio damage that will result in the inevitable years when the markets are dropping. In a strategy where capital preservation is a primary emphasis, a one-year decrease of 40% in retirement investment capital would be devastating. In my approach, to the extent that the anticipated multi-year CAGR proves to be reasonably accurate, a one-year drawdown will, with high probability, be compensated by one or more years of better-than-expected returns over the entire retirement time frame. This expectation allows the retiree to make stable annual withdrawals that are not influenced by short-term, year-to-year fluctuations in the markets.

*Not everyone will agree*. The concepts and calculations in this article are one among

many possible tools for retirement needs planning. Even if I were a professional, licensed financial advisor, there would still be some who disagree with the concepts presented in this article. I respect alternative viewpoints that can be rationally supported, and welcome such comments. When there is a fundamental difference in viewpoint, I trust that we can agree to disagree.

**Disclaimers.** I am not a financial advisor, but I have strong numerical and analytical skills and an expertise in coding complex Excel formulas. The ideas presented in this article are my own. Calculation results can only be as good as the input parameters that are used in the calculation: bad input will yield bad results. Individuals should carefully consider their personal situations and needs before making any retirement decisions. Additional research and consultation with a financial advisor are also recommended.

**Supporting Documents**

1. Retirement_Calculator.xlsx

**Disclosure:** I/we have no positions in any stocks mentioned, and no plans to initiate any positions within the next 72 hours.

I wrote this article myself, and it expresses my own opinions. I am not receiving compensation for it (other than from Seeking Alpha). I have no business relationship with any company whose stock is mentioned in this article.



## Comments (12)

**Nearly done**
Your most accurate statement was the results are only as good as the inputs. I use 95 as age of death to be on the safe side. For those who download, this tool is great for doing "what if". Run with various combinations should provide decent estimate of your magic number.

23 Feb 2017, 08:54 AM

**Hungry for Knowledge**
that's a lot of math, and assumptions.
I'll stick with living on the income/dividends/rental income.
Thanks for presenting your method.

23 Feb 2017, 09:24 AM

**Texean**
After receiving your tool and using my own situation as inputs, but keeping the remainder of the inputs at your defaults, the results match with the estimates presented to me by a couple of well respected financial advisors and advising companies, as well as with my own personal calculations that I used to determine if I could retire. I would say you have an excellent tool here for playing "what if" game and setting realistic expectations within the investment community. Thanks for taking the time to prepare this and share with everyone. I would like to add that as a current retiree, it was easy to change the "multiplier" cell to match what I retired with and get the tool to predict the expected ending value I would have after 31 years of retirement.

23 Feb 2017, 12:28 PM

**NV_GARY**
And the RMD input? Or did I just miss it.

23 Feb 2017, 01:44 PM

**David Easter, Contributor**
Author's reply » NV_Gary,

Good question, and one that I did not directly address in the article.

If you compare the required minimum distributions, RMD, calculated from Table III in the relevant IRS publication (http://bit.ly/2lKGOZI), you will find that the programmed withdrawal percent in my strategy is always larger than the RMD. Note that Table III is for unmarried owners, married owners whose spouse is not more than 10 years younger, and married owners when the spouse is not sole beneficiary.

In cases where the owner is married and the spouse (sole beneficiary) is younger by more than 10 years, the RMD calculated from Table II will be smaller than what is calculated from Table III.

For beneficiaries, after death of the owner, the IRA can be rolled over into an IRA account in their own name as account owner. If my understanding is correct, the distribution rules discussed above apply to the beneficiary, after the rollover has been completed, and they have become the official account owner.

To summarize, the withdrawal percent in my strategy will always be larger than the RMD. As as result, RMD becomes a non-factor in the calculation, provided that you withdraw the method's withdrawal percentage each year.

Hope this clarifies things,
David

23 Feb 2017, 03:33 PM

**NV_GARY**

David-
Thanks.
Changes in the inheritance of IRAs is coming: The proposed law forces beneficiaries to withdraw and pay taxes on IRA balances in excess of $450,000 (beneficiaries other than a spouse) The 'stretch' IRA is likely dead since the Senate has voted to kill it- except for the 450k & spouse.
Video of it on YouTube:
http://bit.ly/2mq6Uy3

Ck James Lange's writings on it at his website.
http://bit.ly/2mq16ES

He's also the authority on ROTHs -- (along with Ed Slott)
G

23 Feb 2017, 04:26 PM

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**Doctor Dividend, Contributor**
Gary:

Here's my article on just this topic:

http://seekingalpha.co...

And yes, Jim Lange is the man!

DD

23 Feb 2017, 09:36 PM

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**Nearly done**
RMDs can be ignored as they just represent a shift in where your assets are.

26 Feb 2017, 08:18 AM

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**Centerfield12**
Good article. I'm planning to retire at 55 (very soon) and have done my own "burn down" charts using different realistic yields (3%, 4% and 5%) as well as varying inflation rate scenarios. I have also assumed the effect of taking a pension earlier (and also accelerating the burning down of that faster so that when I enter SS at the earliest date one will take over for the other). It's an interesting analysis to "stress" the models using, say, a 3% annual inflation rate rather than 2%. For taxes, I've assumed a flat 20% because I really don't know where it will land and I figured to stress the model further a 20% rate was more extreme (error to the conservative side). Hopefully I can make it to 80 before I'm broke. LOL

23 Feb 2017, 02:52 PM

**ret49**

If this is implemented as a spreadsheet, you can use the Solver capability to compute the "number" instead of trial and error. To make it even easier, link a button to a snippet of spreadsheet scripting to run the solver automatically.

By making it easier to use, you can take advantage of your calculators most valuable feature, which is running various what-if scenarios. It is quite educational to see the effect of changing different parameters. I built something similar for myself a few years ago and found it very useful. Good of you to make the effort of writing it up.

23 Feb 2017, 05:03 PM

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**tjfont**

Great article. Thanks for sharing your insights and calculations.

26 Feb 2017, 08:55 AM

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**v1Trader**

Hi David, I'm late to playing with this spreadsheet, but found it very useful. In particular, I liked fixing the multiplier to force my starting retirement nest egg at the value I'd like to have in X years when I'm Y years old, and then playing with the long term investment CAGR I'd have to reach in order to become a solvent centenarian. Nice work, on this and also your volatility spreadsheets, which I've found very useful and educational.

03 Mar 2018, 10:53 PM