

The Complete Guide to Substantially Equal Periodic Payments (SEPP)

The SEPP Series Deep Dive

A series of Substantially Equal Periodic Payments (SEPP) is a simple concept in theory. But it can become incredibly complicated in the execution. In most cases, you'll want to work out a SEPP by coordinating efforts between your accountant and your retirement plan trustee.

This guide has been prepared to give you a deeper level of understanding of the SEPP process. The intent is that you will be better informed to provide input to those professionals that will create the right distribution plan for your needs and preferences.

Because of the complexity of the SEPP, or better put, the different options, this guy has been divided into several parts. It's hoped that will make for easier reading, and cleaner presentation. You may want to read through any or all four parts, and discuss them with your accountant.

This SEPP Series for ChooseFI is broken down into four separate parts:

1. The SEPP Series Deep Dive Part A: The Fork in the Road
2. The SEPP Series Deep Dive Part B: An Interesting Choice
3. The SEPP Series Deep Dive Part C: Finishing What We Started
4. The SEPP Series Deep Dive Part D: Choosing Your Payout Method

None of the four parts are easy reading. Charts, graphs and other illustrations have been added generously to provide visual representations to better explain the text.

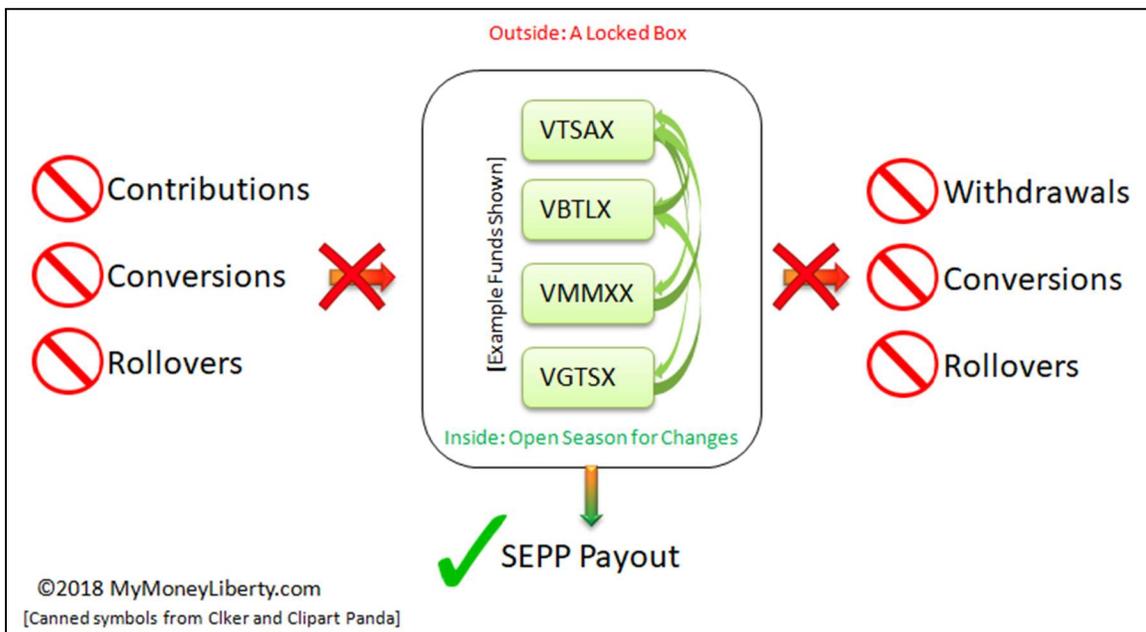
It is suggested you go through each Part and page slowly, writing down questions as you do. You can later discuss them with your team of financial experts. You may even find many of your questions are answered as you move through the guide.

The SEPP Series Deep Dive Part A: The Fork in the Road

Now it's time to dig a little deeper. For those who appreciate busting through another rock layer and seeing the finer details, the SEPP Series Deep Dives will provide a greater insight into SEPP.

As a means of terminology, I'll be referring to any individual Substantially Equal Periodic Payment as a "SEPP payout" or simply "payout," to distinguish it from any other non-SEPP distribution or "withdrawal" of money from a qualified account.

Regardless of the calculation method chosen, the IRS rules compel you to take Substantially Equal Periodic Payments for a 5 year minimum inclusive period starting from the date of your first payout, or until the day you turn age 59½, whichever is longer. To avoid the dreaded penalties and interest, during this period the account from which you establish a SEPP sequence must have no contributions, no conversions, no rollovers, no withdrawals – that means no activity with the outside world – aside from the exact calculated regular SEPP payout. (Note, however, that you do have normal flexibility in managing fund allocation within the account). A graphical representation of this arrangement is as follows.



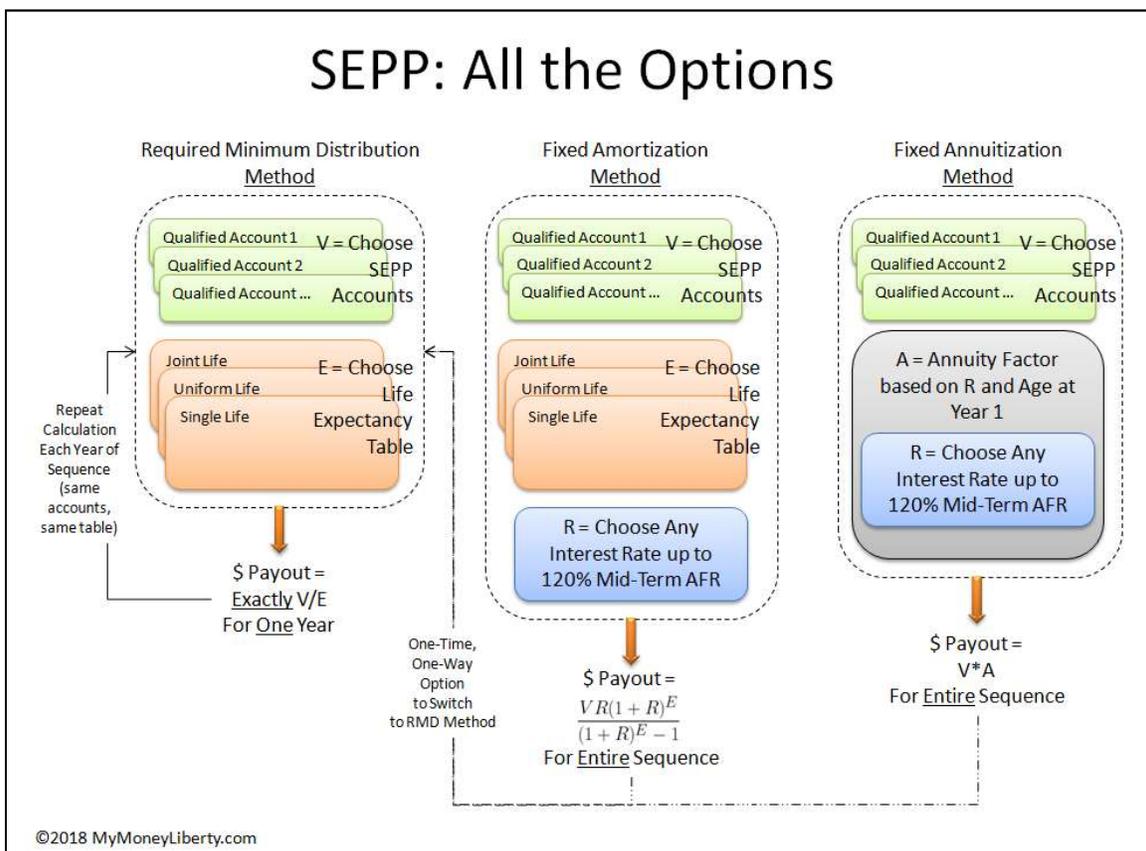
Three Different Ones

At their heart, the IRS rules offer three methods of determining SEPP payouts.

“...then shalt thou count to three, no more, no less. Three shall be the number thou shalt count, and the number of the counting shall be three.”

– Monty Python and the Holy Grail

Recall the SEPP overview chart we previewed in Part 2.



The three methods correspond to the three columns in the chart above. All of them treat the SEPP payout calculation as if you were going to follow the same method *for your (or your beneficiary's) lifetime*, even though you'll surely stop adhering to the rigor once the rules allow.

For each method, we'll examine the *concept* of the method (really just thought experiments loosely connected to reality); the *calculation* involved (the actual

nuts and bolts of figuring your payout amount); and the *catches*, or considerations particular to each method.

Required Minimum Distribution (RMD)

- The *concept*: If you were to receive a payout each year based on life expectancy, and there were no loss or growth in the account value aside from your SEPP payouts, your funds would be drained at the end of life expectancy.
- The *calculation*: Essentially identical to qualified retirement plan RMDs once you reach 70½. Determined each year by dividing your account balance by your expected remaining life in years, based on the life expectancy table you choose.
- The *catches*:
 - This is the worst name ever! The term “Required Minimum Distribution” is misleading. While the calculation mimics “age 70½” RMD calculations, the result of the calculation in the SEPP world is not a minimum amount, but the exact amount of the allowed SEPP payout during that year. No more, no less. Exact. This method would be better called the Variable Payout Method, as it is the only SEPP method for which the payout amount ever changes.
 - Also keep in mind that once you choose this method you’re locked into it for the duration of the sequence.

Fixed Amortization

- The *concept*: Think of this one just like a mortgage, but you’re the bank. You loan out your account balance at a certain interest rate, for a term that equals your life expectancy at the start of the loan, and get paid back according to the corresponding amortization schedule.
- The *calculation*: The payment per the conceptual loan described above is the SEPP payout. Since the concept is akin to a (fixed) mortgage, the payout is also fixed. More details of the calculation will be reviewed in Part 4.
- The *catches*:
 - The calculation is more complex than the RMD method, which can be off-putting to some. But it is still just one equation, and you only have to do the calculation one time, ever.
 - When we say fixed, we mean fixed. The payout amount will stay the same (in nominal dollars) for the entire sequence. However, as a consolation you can subsequently choose to switch to the RMD method,

but then you must stick with RMD for the remaining duration (a switch does not reset the clock on total sequence duration).

Fixed Annuitization

- The *concept*: Someone gives you \$1 (in nominal dollars) per year starting when you begin your SEPP sequence. Assuming a certain interest rate and factoring in IRS-defined age-based mortality factors, what are all of those dollars worth, in starting-year dollars, if you live and receive a dollar annually until age 115?
- The *calculation*: The starting-year dollar value of all those nominal one-dollar bills is the annuity factor, which when divided into your initial account value determines your SEPP payout. As with the previous method, this is a one-time calculation and a fixed amount.
- The *catches*:
 - Again, fixed means fixed, but you do have the flexibility for a one-time, one-way switch to the RMD method (a switch does not reset the clock on total sequence duration).
 - Oh, plus one more thing. The calculation for the annuity factor is gruesome. It is not one math equation, but a summation of a series of math equations for a changing mortality factor every year out to age 115. Certainly the most difficult calculation to perform and, for most, to comprehend as well.

All three of the methods take a different approach to SEPP payout calculation, and they all offer a means of dialing in the calculation to suit our individual cash flow needs. We'll dig into those details next time; for now, we'll switch gears and cover another fact of life that is woven into all three SEPP methods – we're all going to die.

Your Money and Your Life

The IRS cares how long you are going to live... actuarially speaking. It would be content with your living a long life so you can pay taxes on all those tax-deferred contributions you made to your qualified retirement plans. In keeping with this philosophy, the IRS creates life expectancy tables to help determine how your distributions will be carried out.

The RMD method of calculating SEPP contributions is entirely dependent on only two factors.

1. How much money is in your plan
2. How long you're expected to live

Nothing more, nothing less. The equation is simple (P = SEPP payout, V = account value, E = life expectancy):

$$P = \frac{V}{E}$$

To the IRS, this equation is as fundamental as that of mass–energy equivalence.

$$E = mc^2$$

Just as the speed of light (“ c ” in Einstein’s little gem above) has been measured and defined by science with higher degrees of accuracy over the ages, so too has the science of determining life expectancy come to a point of exhausting precision.

The IRS rules indicate that any of their three published life expectancy tables can be chosen for SEPP payout calculations (whereas, by contrast, their usage for “age 70½” RMD calculations is more restricted). All of the lifetime tables available for SEPP are non-gender-specific, meaning you use the same tables regardless of your gender, or your beneficiary’s gender if applicable. Importantly, once you choose a table, you need to stick with it for the SEPP duration.

Uniform Lifetime Table

- This is the table that the typical qualified account owner would use for “age 70½” RMD calculations. Since IRS [Publication 590-B](#) (defining IRA distributions) only starts this table at age 70, SEPP fans must have been scratching their heads until the publication of [Bulletin No. 2002-42](#), which starts the Uniform Lifetime (UL) table much earlier.

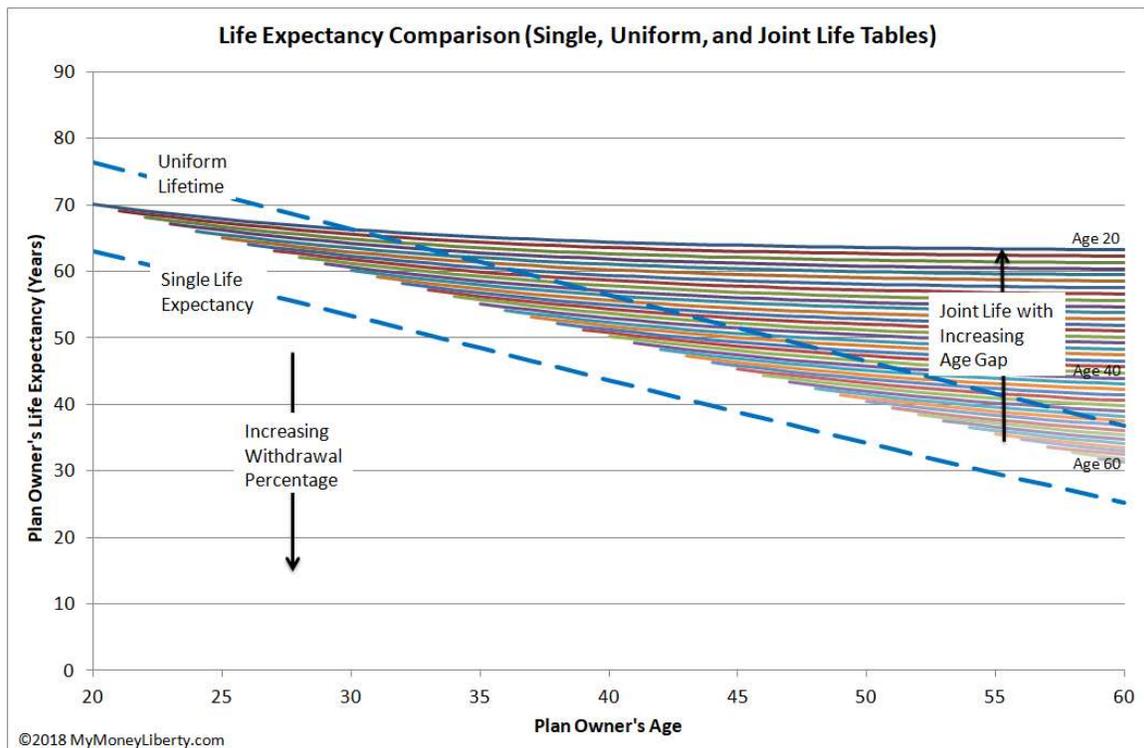
Single Life Expectancy Table

- In “age 70½” RMD parlance, the Single Life (SL) method would normally be used by certain beneficiaries for calculations after the death of the participant. However, SEPP rules open this method to anyone. And that’s good for the SEPP user, as it provides for the option to choose the highest payout rates for your sequence, all other factors being equal.

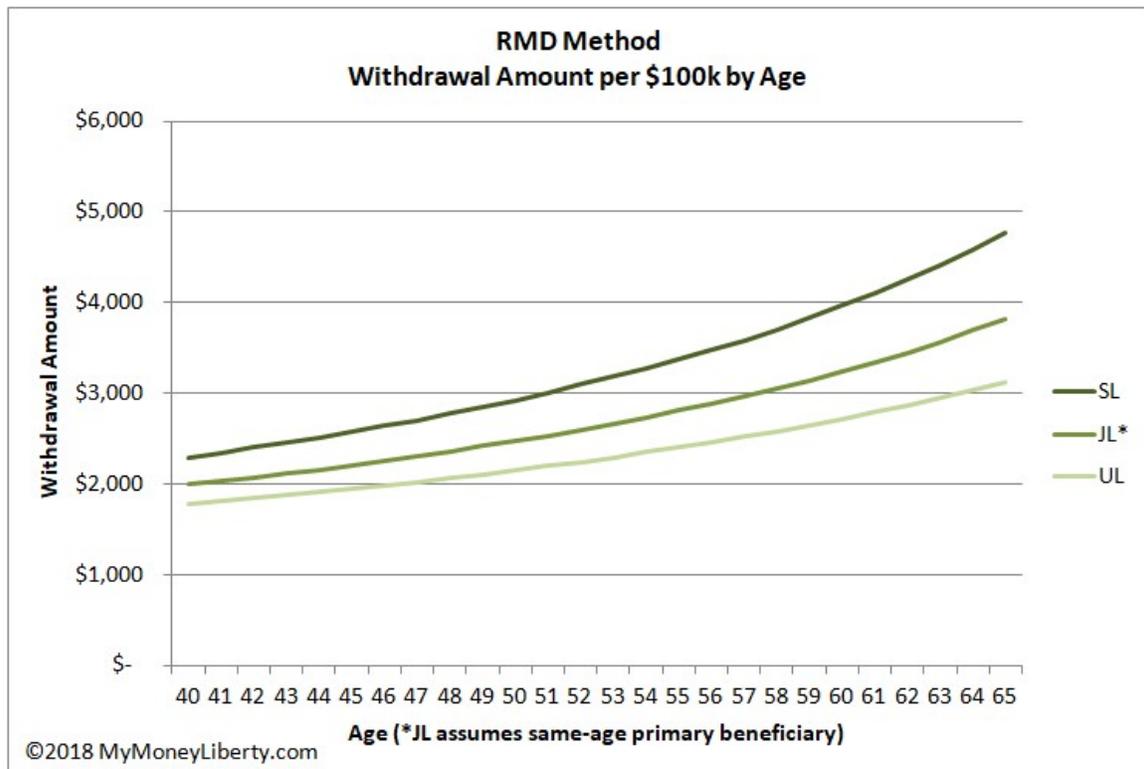
Joint and Last Survivor Table

- The utility of the Joint and Last Survivor (JL) table in “age 70½” RMD terms is that if there’s more than a 10-year gap in age between you and your spouse, RMDs are lower than the Uniform Table.
- The JL table is available for SEPP distribution determination if you want to include your primary beneficiary in the calculation. The greater the age difference between owner and beneficiary, the lower the payout will get (starting at about the mid-point between the UL and SL tables and getting lower from there).
- This is all a way of saying that using the JL table is complicated, and defining multiple beneficiaries or a change in beneficiaries makes using this table even messier.

A comparison graph of life expectancy using the three different tables is shown below.



Remember that lower life expectancy translates into higher distributions, all other things being equal, as a fundamental rule. The translation from life expectancy to payout is shown for the RMD method in the graph below (normalized as per \$100k).



The following can be said based on the above graph when fixing all other factors, respectively.

- Higher age means higher payout percentage
- SL table always gives the highest payout percentage
- During your 50s, what we might consider the Sweet Spot of SEPP (hereby unofficially trademarked), the payout percentages are right smack in the range of 3-4%.

This last point becomes very important in the context of Safe Withdrawal Rates, which we'll hit on in a later part of the series.

Summary

Let's recap the three SEPP calculation methods.

- RMD – the only variable payout method, the payout is purely based on account value and life expectancy year to year.
- Fixed Amortization – one-time calculation of a fixed payout based on account value, life expectancy, and an interest rate (hold tight for Part 4!).
- Fixed Annuitization – one-time calculation of a fixed payout based on account value, a special mortality factor table (as a proxy for life expectancy), and an interest rate.

All of these methods depend on actuarial life expectancy figures from one of three tables. While each was designed for specific circumstances under “age 70½” RMD rules, for SEPP it's open season.

- Single Life Expectancy Table (SL) – sets the high bar for payouts
- Uniform Lifetime Table (UL) – typically sets the low bar for payouts
- Joint and Last Survivor Table (JL) – payouts typically sit between SL and UL, but sit below UL for beneficiary age differences greater than ten years

Some of the analysis in the remaining parts of the series will include UL and JL data. However, the SL table will provide an anchor point for SEPP payout calculations. It provides the highest payout structure of all the tables, and we'll show how you can lock in on SL while using other strategies to dial in your payout starting point.

Hopefully this part of the series provided you with some more clarity on the core SEPP options, beyond the usual humdrum cut and paste of many other overview sites out there. We're still building the knowledge base, and we'll soon begin to tailor the options to suit our FI instincts.

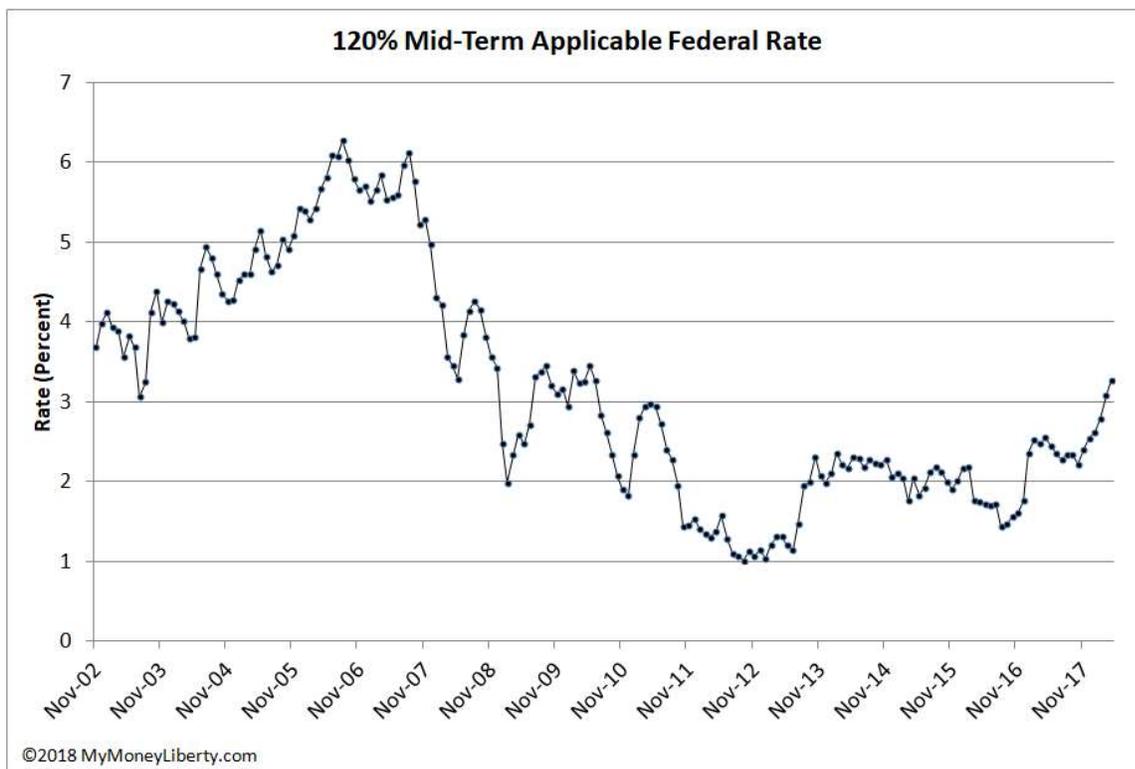
In addition to this ChooseFI guest post series, look for additional SEPP-related content plus other practical and philosophical tidbits on the [My Money Liberty](#) blog.

In Deep Dive Part B, we'll present more details on the Fixed Methods before we tackle the final job of simplifying SEPP in Deep Dive Part C.

The SEPP Series Deep Dive Part B: An Interesting Choice

SEPP Series Deep Dive Part A focused on an overview of the three SEPP calculation methods, plus a look at life expectancy. We saw that in the variable-payout RMD Method, account value and life expectancy are the only factors affecting how much money to extract from your plan on an annual basis. In this part we'll look at the fixed-payout SEPP methods (Fixed Amortization and Fixed Annuitization). They each factor an interest rate into the calculation.

For a number of reasons, the IRS regularly publishes various interest rate guidelines. The interest rate of concern in SEPP-land is "120 percent of the federal mid-term rate." This rate is associated with treasury bills that pay in about the 4- to 9-year period. The use of this rate seems to make some sense given that most SEPP sequences will last somewhere in that range of durations. The rate is updated monthly by the IRS. Both Fixed Amortization and Fixed Annuitization depend on choosing an interest rate for the one-time SEPP payout calculation. Below is a graph of the 120% mid-term rate (also called Applicable Federal Rate or AFR) since November 2002.



Rate history per Imagisoft

Over the time period shown there has been a wide fluctuation in the rate – as low as about 1% and highs above 6%. The rate was pinned in April 2018 at 3.27% and stands to rise in the current financial climate. This fluctuation has a dramatic impact on the maximum possible payout with the pair of fixed SEPP methods. However, with any positive interest rate (and let’s hope they always stay positive!) both of the fixed SEPP methods will result in a higher payout amount than the initial RMD Method payout using the same life expectancy.

It’s important to keep in mind that the rules state this is the maximum interest rate that can be chosen. In other words, you can also choose any lower rate; this gives you flexibility in defining the payout amount. It is the main “lever” (along with the amount of money in your SEPP account) to use in dialing in a SEPP payout.

The IRS rules state that a rate can be chosen based on “either of the two months immediately preceding the month in which the distribution begins.” Rate changes being largely unpredictable and well out of any individual’s control, this means you are beholden to the reality of the sequence timing. If you’re in a low-rate cycle you’ll have a more limited “top end” to your fixed payout amount.

Fixed Amortization, or Some Algebra Required

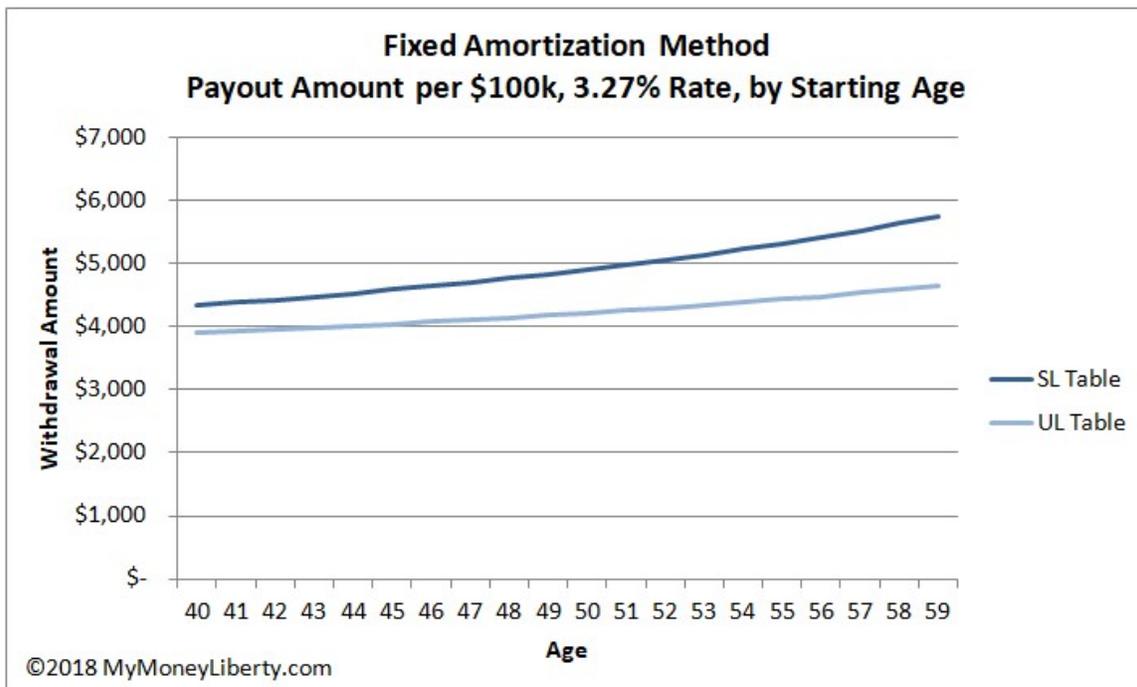
Google’s dictionary defines amortize as meaning to “gradually write off the initial cost of (an asset).” In this case the asset is your SEPP account, and the write-off is your regular payout. The word can be traced to its Latin origin as *ad mort* (to death); in theory, you’re setting up the SEPP to continue until your actuarially-predicted death, although you’ll surely end the sequence as soon as the rules allow.

This paragraph will make you clench your fist either in glee of exercising your left brain or in mock exhibition of punching in your computer screen (depending on your outlook on the field of mathematics). Don’t despair if you’re in the latter camp. The Fixed Amortization SEPP payout is calculated using the following equation.

$$\frac{VR(1 + R)^E}{(1 + R)^E - 1}$$

Here, R is the chosen interest rate, E is the life expectancy, and V is the account value. This is a one-time calculation. Once you have the number, it stays the same through the entire SEPP sequence (unless you choose the allowable one-time migration to the RMD Method). That’s the beauty of Fixed Amortization – just solve one math equation. There are online calculators that can provide a sanity check for your math (we’ll share some links in Part 5), but part of the motivation for the SEPP Series is to provide you with the background so you’re not blindly following a tool without some understanding of where the answers come from.

The graph below shows the SEPP payout using this method for various starting ages (normalized as per \$100k account value). The April 2018 maximum rate is used as an example, and results using both SL and UL life expectancy tables introduced in Part 3 are shown.

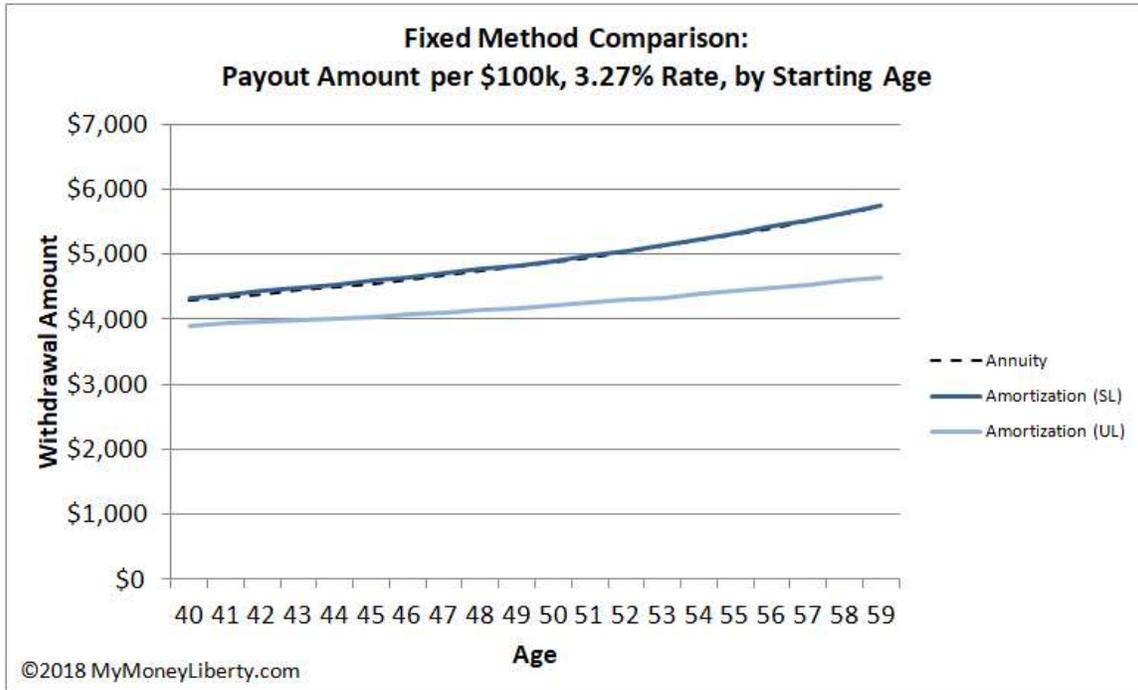


Using the SL table, this particular interest rate puts a 50-something SEPP candidate in the range of a 5-6% withdrawal rate from the SEPP account. Whether this is too high to support Safe Withdrawal Rate (SWR) depends on the total portfolio. If it is too high for SWR comfort, keep in mind the interest rate can be dialed down to any lower rate to compensate. For comparison, we saw in Part 3 that the RMD method in this same age range gives withdrawal rates in the 3-4% range.

Fixed Annuitization, or I Must Have Slept Through that Accounting Lecture

Once again we turn to Google for a definition of annuity, which tells us this word describes “a form of ... investment entitling the investor to a series of annual sums,” which makes perfect sense since that’s what we’re trying to do with SEPP. Our Latin forebears give us this nice word through their own word *annus* which also leads to our English word annual. Still makes sense.

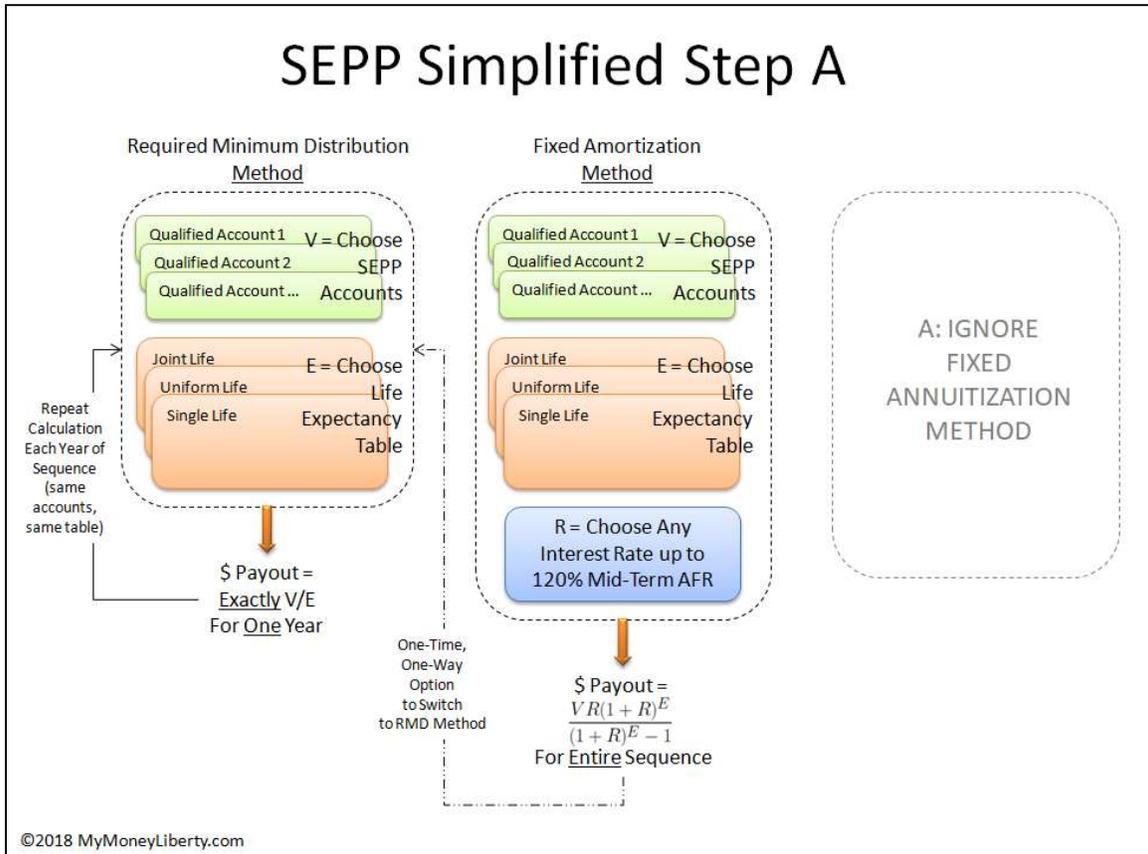
What doesn’t make a whole lot of sense is the existence of this method. SEPP provides a variety of options, and therefore flexibility in your FIRE planning. But not all SEPP options are created equal, and introducing the Annuity Factor is where we enter another dimension in difficulty, way beyond anything we’ve already covered. Full credit goes to the [Early Retirement Home Page website](#) and their reference calculator of the annuity method. We won’t lay out the details of the calculation here. The comparison below of the payout results using Amortization and Annuitization methods readily demonstrates why it isn’t worth our time.



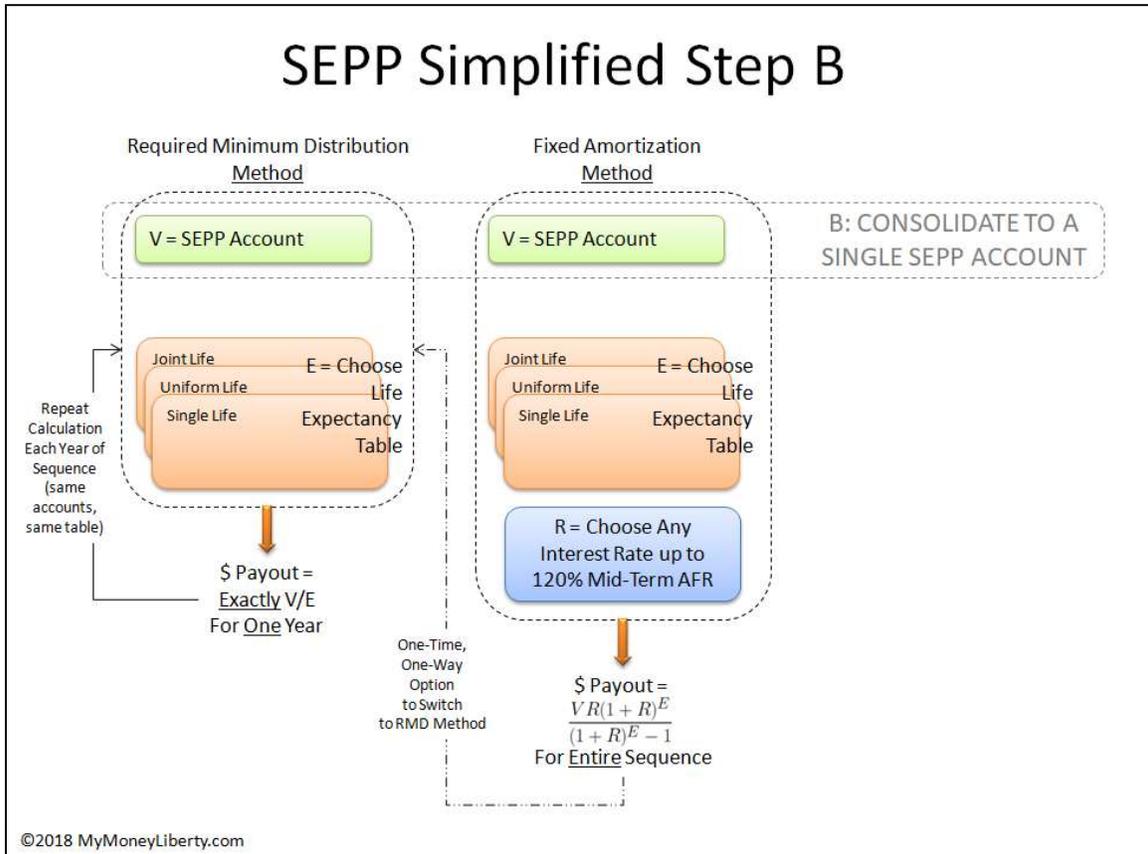
Look how closely the Annuity line tracks the Amortization results using the SL table. They're not identical, but there is no practical difference. The existence of this SEPP method is baffling. It's a more complicated way of getting to essentially the same answer as the Amortization Method using the SL table.

Cleaning Up the Picture

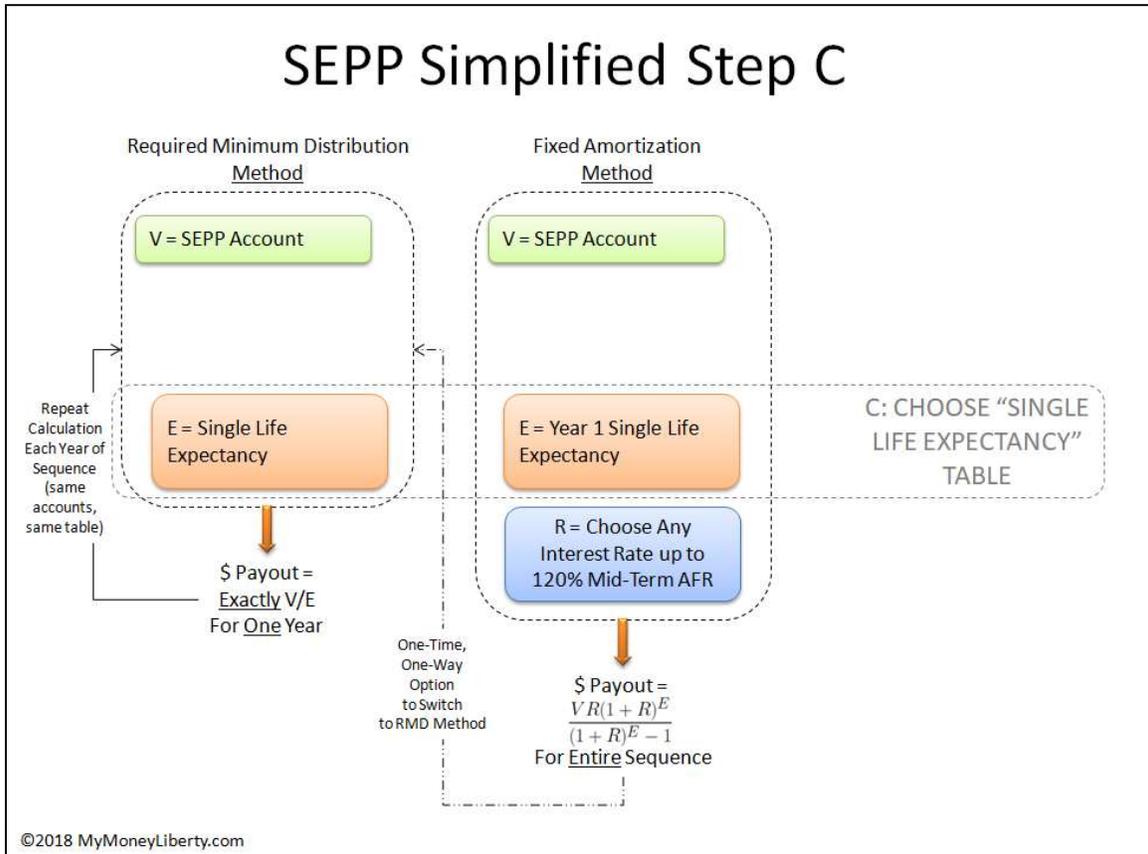
With the above in mind, let's start taking the great leap into simplifying SEPP! The elimination of the Fixed Annuity Method goes a long way toward tidying up the SEPP overview chart.



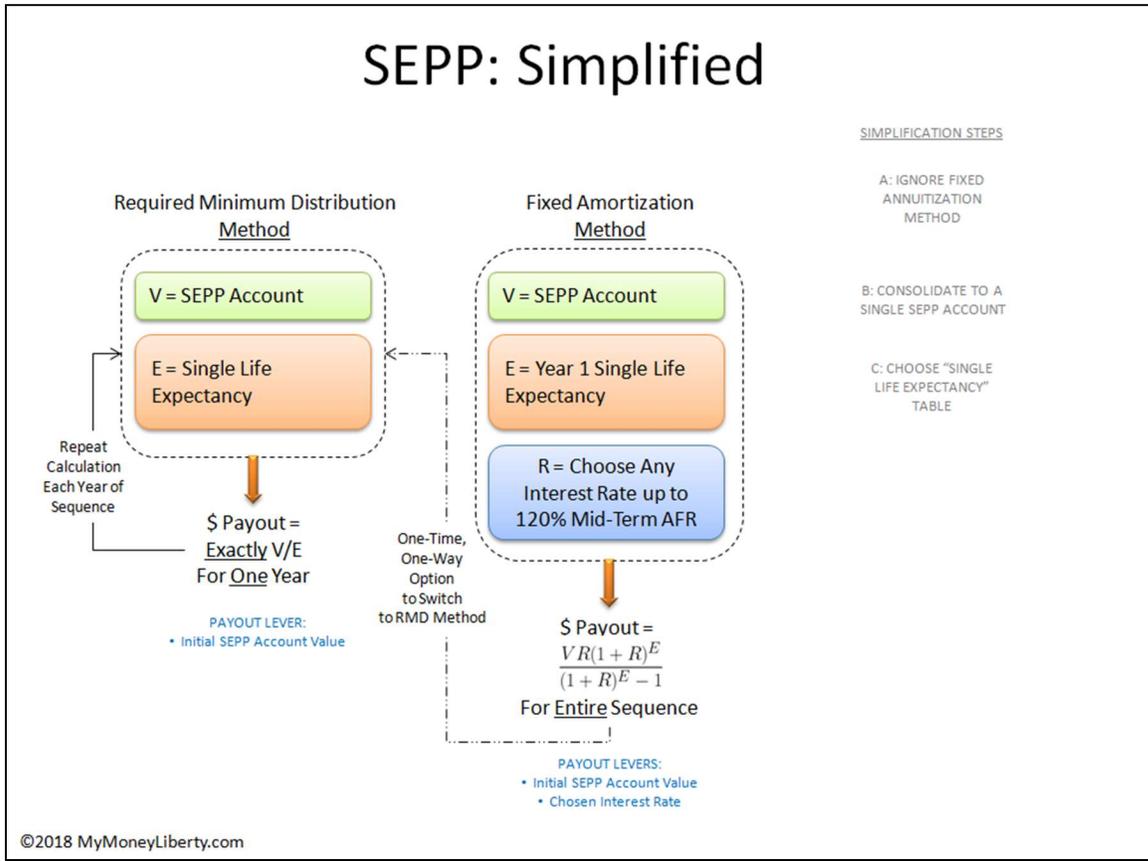
Now that we've got this ball rolling, why stop there? We've already hit on some other simplification strategies that you might have picked up on. For example, we've been talking about payouts coming from a SEPP account. One account. Singular. While the rules allow for setting up a SEPP from any multiple accounts you wish, that implies running multiple calculations and taking the exact payouts from each associated account as needed. Much simpler is the concept of consolidating or breaking up accounts as needed to create one single Traditional IRA account for the purpose of your SEPP.



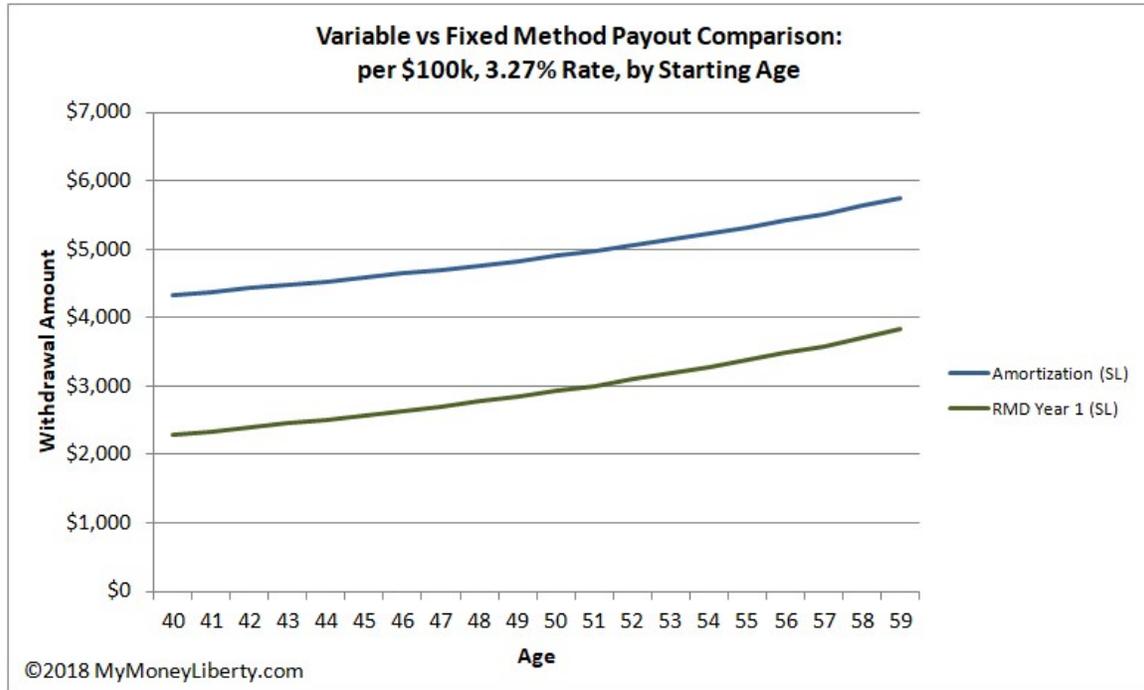
We can also make one final broad simplification by focusing on the SL table for SEPP payout calculations. As already discussed, this table sets the high bar for payouts, which can then be tailored to our specific needs by adjusting interest rate and/or starting account value.



Cleaning this up a little and summarizing the simplification steps, we have the following.



We've trimmed away quite a lot with those few steps. But there are still choices to be made and calculations to be run. Let's bring together the learning of the RMD Method together with Fixed Amortization. The chart below compares the two methods within the parameters we've been using.



Keep a couple notes in mind for this comparison:

- Payouts are per \$100k initial account value, so each \$1,000 on the y-axis represents 1% in payout rate.
- The x-axis represents the starting-year age
- The Variable Method (RMD) curve shows first year payout – based on account value fluctuations, this payout would change every year. In contrast, the Fixed Method (Amortization) amounts will be the same for every year of the sequence, regardless of account value fluctuations.
- The Variable Method (RMD) payout is not affected by an interest rate selection. By comparison, the Fixed Method (Amortization) payouts are shown at the ceiling level available as of April 2018, dictated by the published rate. For a lower chosen interest rate, the payout is reduced. As the chosen interest rate approaches 0%, the Fixed Method payout amount approaches the Variable Method.

Conclusions

We've finally reached a level of understanding that allows us to start the SEPP simplification process. We took three big steps in that direction today.

- Elimination of Fixed Annuitization from consideration

- Consolidation to one Traditional IRA account for SEPP
- Use of the SL table for life expectancy

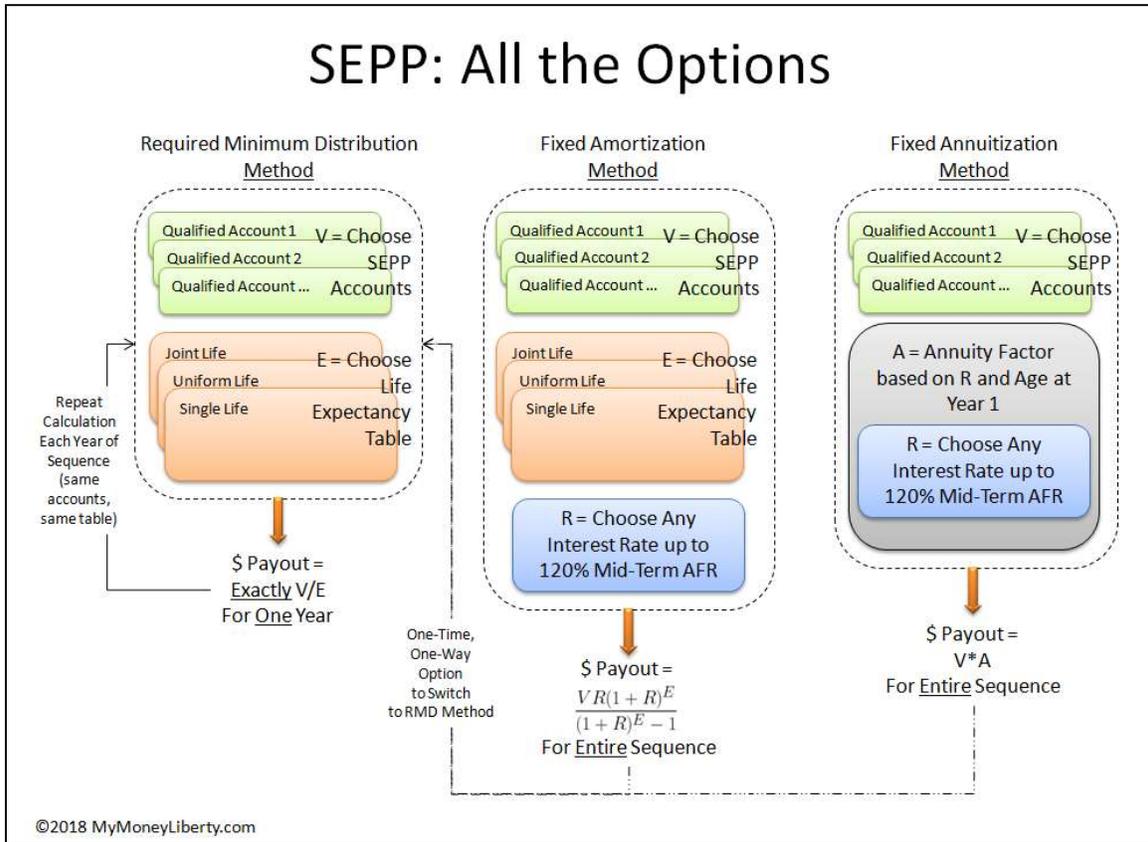
But there's more to come. In Deep Dive Part C, the final SEPP Series installment, we'll compare and contrast the remaining choices, present a clearly defined path for SEPP execution, and discuss mitigations for sequence of return risk.

The SEPP Series Deep Dive Part C: Finishing What We Started

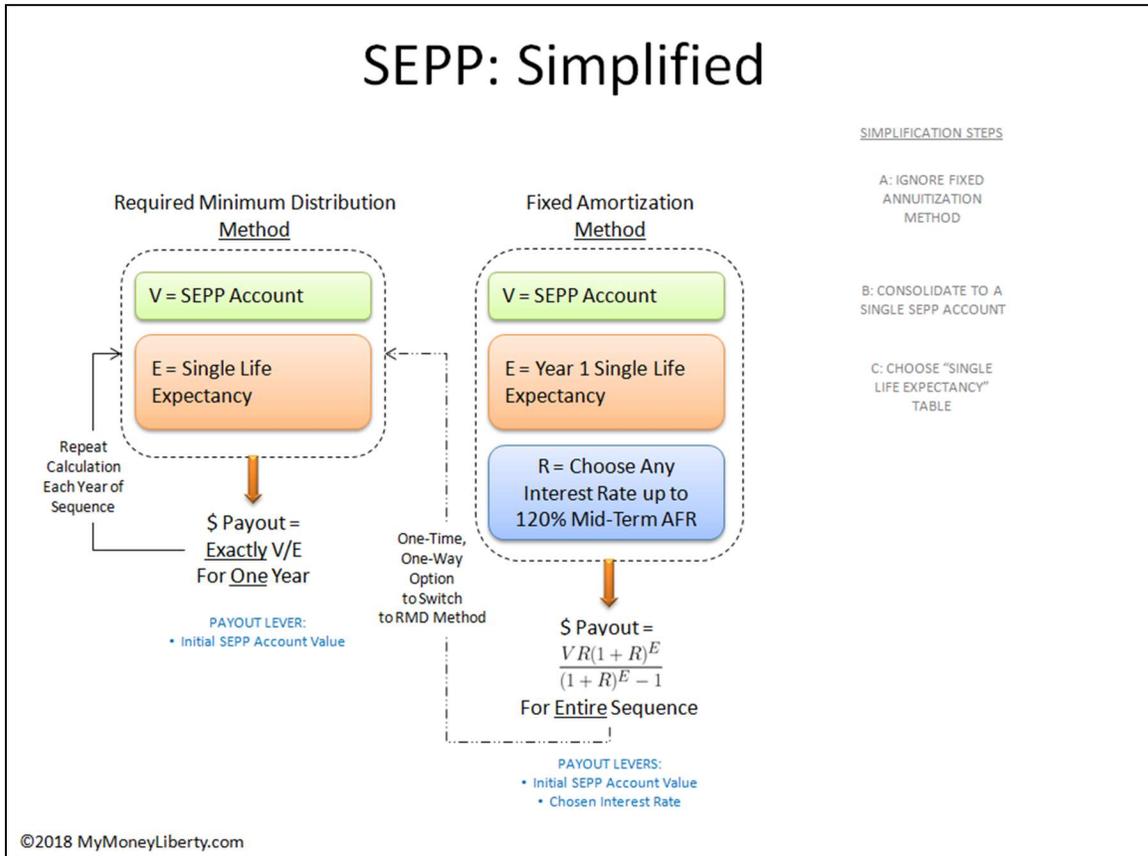
In Deep Dive Part B we reviewed the Fixed Methods of calculating a SEPP payout. We then took some steps toward simplifying the SEPP picture. In this final chapter of the SEPP Series, we'll put the finishing touches on a SEPP playbook for FIRE planners.

Review

A couple of times in the series we've taken a look at the "superset" of SEPP options, as follows.



We've now additionally taken three major steps toward SEPP simplification. By eliminating the Fixed Annuitization Method, choosing the Single Life Expectancy table, and limiting ourselves to using one single Traditional IRA account, the picture becomes much cleaner.



In a nutshell, these simplifications are justified by the following logic:

- Eliminate Fixed Annuitization Method: overly-complex calculation with no practical difference in payout compared to the simpler Fixed Amortization Method
- Choose Single Life Expectancy table: provides greatest payout of all the tables, but still allows for staying in Safe Withdrawal Rate territory
- Use only a single Traditional IRA account: keeping all your SEPP eggs in one basket makes for easier calculations and segregation of SEPP funds

Other Considerations

While the picture has become much simpler, there are a few more considerations when developing and executing your SEPP plans.

Interest Rate

Choosing an interest rate is not needed for RMD, but it is for Fixed Amortization. In some sense there is limited flexibility – you can only benchmark the 120% mid-term rate from one of the two months prior to starting your sequence. However, you may choose a lower rate than the published number. The IRS only limits you on the high side. If you're setting your payout during a low-rate cycle you might feel a little pinched, but it doesn't take a very high rate ceiling to start pushing payout levels well above Safe Withdrawal Rate guidelines.

Payout Frequency

While there is some discussion about taking SEPP payouts at frequencies other than annually (e.g. monthly), the IRS publications focus on discussions of annual payout. In addition, it is just plain simpler to manage this sequence only once a year. There's less to remember and less to forget.

Reasonable Periods

It's possible to determine SEPP payouts at essentially any point in time to. However, it is in many ways simplest to start with, and to continue to use as necessary, the end of day Dec 31 of the prior year as the account value. Using this approach also sets you up for taking yearly payouts in January (and if using the Fixed Amortization calculation, basing it on either the latest November or December interest rate).

Duration

If you take your first SEPP payout before you turn 54½ (not a typo – fifty four and a half), then you will essentially be “free” of your SEPP as soon as you turn 59½. That's because you will have been in your SEPP for at least a 5-year duration at that time.

Beginning a SEPP sequence after the age of 54½ implies you will have to stay in the SEPP beyond the date you turn 59½, since a SEPP must continue for at least 5 years (not 5 payouts). The key word here is duration.

SEPP Payout vs. Overall Withdrawal Rate

In this series we discuss using SEPP as a method of pulling only a baseline of early retirement funding. Trying to use SEPP to pull exactly what you need for annual funding just won't work – it doesn't carry a sufficient measure of flexibility.

However, using some clever account management, it can serve as a great baseline.

As an example, let's say as a 52 year old we want to structure a SEPP that gets a Year 1 payout close to [Big ERN's rock-bottom, worst-case-other-than-asteroid-hitting-Earth Safe Withdrawal Rate](#) of 3.25% of our total portfolio. In this example we'll also assume that 70% of the total portfolio is contained within the IRA account from which we'll pull the SEPP. That means we desire 4.64% ($3.25\% \div 70\%$) of the SEPP IRA value as the Year 1 payout. Using the Fixed Amortization method (32.3 year life expectancy from the Single Life table; assume the April 2018 treasury rate of 3.27% for the chosen interest rate) the maximum payout percentage would be 5.06%, which is greater than the desired 4.64%, so we can choose a lower interest rate such that the payout will equal our target payout.

However the exact math works for you, it makes sense to start off your SEPP series by figuring your initial SEPP payout to be, say, 3.25% or less of your total portfolio. This sets you up for keeping your SEPP below an ultra-safe withdrawal rate; you will need to make up any difference to your total withdrawal rate through your other non-SEPP accounts.

Boiling It Down

With all the previous considerations in mind, we can formulate a scenario that represents the simplified SEPP approach. We'll call the year before you start your SEPP "Year Zero." You will need to do some prep work in that year to be ready to start the sequence early in Year 1.

1. Start with the Fixed Amortization method.
2. Use Single Life Expectancy (SL) table.
3. Prep your SEPP account:
 - a. Monitor the applicable interest rates to get a general idea where the rates stand as you approach your SEPP start.
 - b. Before the end of Year Zero, segregate a stand-alone, SEPP- specific traditional IRA with an amount that would result in the desired payout.

- c. You can turn both the “interest rate” and “IRA account value” knobs to dial in the payout. To help the dialing-in process, you might choose to temporarily allocate the account funds in a relatively stable investment position to avoid potential wild swings.
4. Choose a rate no higher than the 120% mid-term rates available from November or December of Year Zero, targeting a payout that does not exceed your planning total portfolio withdrawal rate.
5. Calculate and take an annual distribution in January of Year 1, based on the Dec 31 Year Zero value, using the Fixed Amortization formula. If you stick with this method, the annual payout amount will stay the same for the entire sequence. No adjustments based on account value, no changes due to inflation or cost of living. Fixed means fixed.
6. Once the sequence begins (and thereafter at least annually), rebalance at your chosen stock/bond/cash mix as part of your overall portfolio maintenance (although you can’t move money in and out of this IRA aside from the SEPP payouts, there are no limitations on fund reallocation within the IRA).
7. Remember, you’re not committed to this method for your entire sequence.
 - a. If your portfolio is growing you’ll probably feel at ease keeping this method in force. In these cases the real value of the payout will decrease with inflation, so you’ll adjust your non-SEPP withdrawals as needed to reach your annual needs.
 - b. If your overall portfolio’s sequence of returns is cutting too far into your principal, you can make a one-time decision to switch to the RMD method. If you switch, you’ll now have to recalculate payouts every remaining year using the simpler RMD calculation method. Remember that for SEPPs the result of the RMD calculation is the exact payout amount.
8. After the greater of 5 years duration or once you turn 59½, you’re free from the boundaries of SEPP.

The Dark Side of SEPP

The section title might be a little too ominous, but we’d be remiss if we didn’t talk about the downside of SEPP if not executed properly – penalties and interest.

Penalties come in the form of owing that nasty 10% extra tax that is normally due on a pre-59½ IRA withdrawal. Remember, that's why we're talking about SEPP in the first place!

Paying the extra 10% would be bad enough, but depending on when a mistake is made, it becomes all the more costly because the IRS will charge interest on all the unpaid extra tax going back to the beginning of the SEPP! If you fumble the ball at the end of a 5+ year period, the interest payouts become hefty.

As an example, suppose an 8-year SEPP of exactly \$40,000 per year, and assume the IRS interest rate is 5% (this rate changes regularly and is the federal short-term rate plus 3%, i.e. it is high). If the SEPP is goofed up on the last payout – maybe \$40,000.01 is withdrawn – then all of the SEPP payouts will be taxed the extra 10% ($8 \times \$40,000 = \$32,000$... plus one cent), plus the compounding interest on all the back tax due would add more than another \$8,000! That one cent mistake translates into taxes + interest essentially equaling another full year of SEPP payouts... going to Uncle Sam in taxes and penalties.

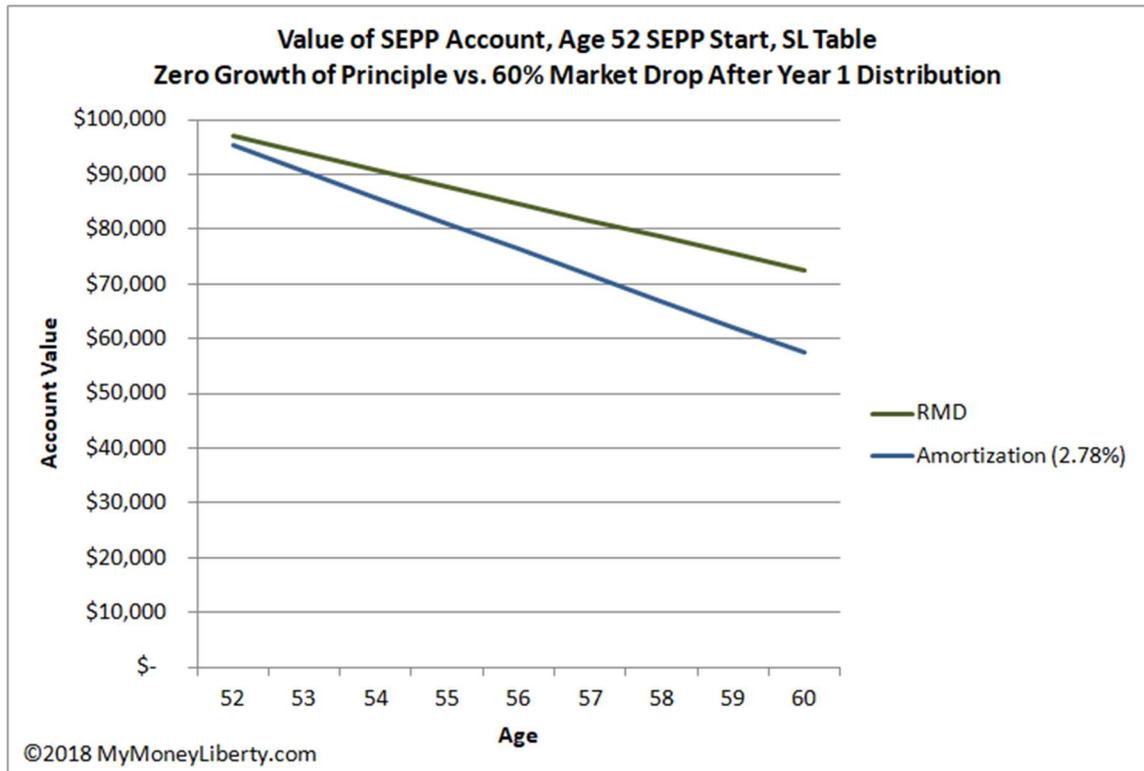
The easy answer is “don't mess up” and while easy to say, it's also easy to do when you have someone (a real tax professional) in your corner double checking your process.

The Sky is Falling

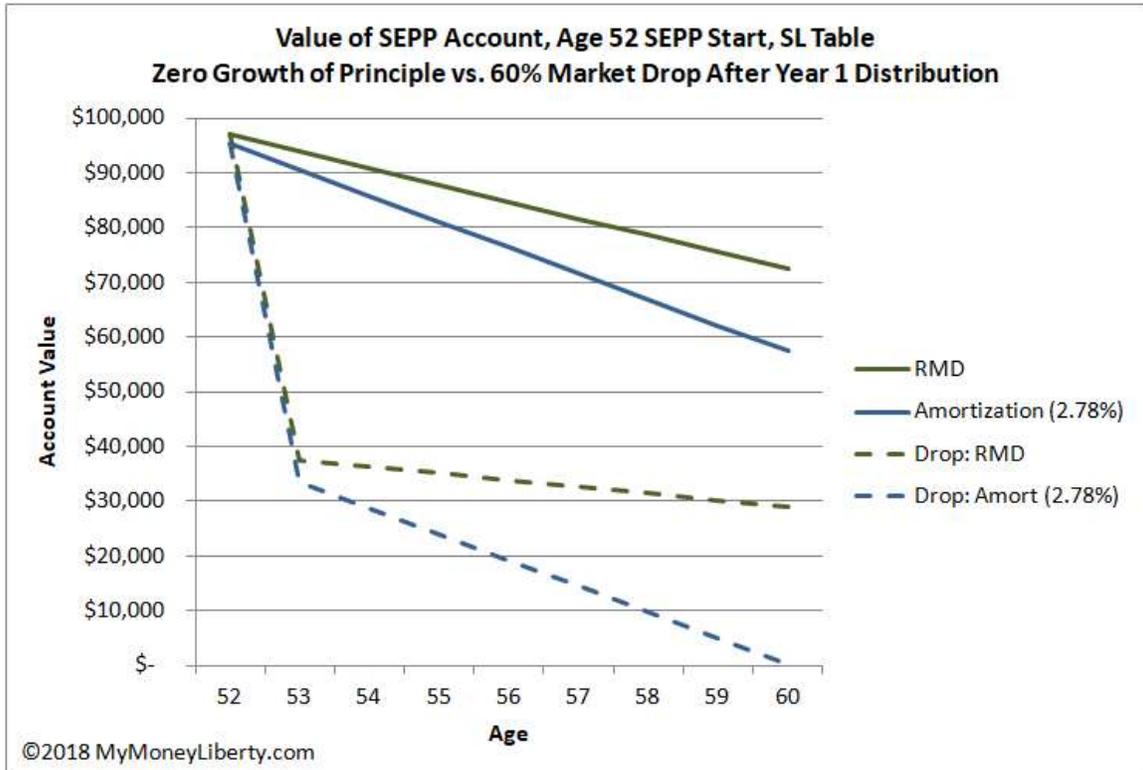
Now time for another fair question: what happens if the bottom drops out of the market once I've started a fixed sequence? The RMD method has a nice built-in function that it cannot fully deplete an account balance (unless the balance goes to zero, in which case we have bigger fish to fry). But the fixed methods present a problem in cases of a gut punch to market performance – it is possible to drain the SEPP account in extreme down-market conditions.

Let's present this by way of the following comparison. Assume two 52 year olds start SEPP sequences at the same time, one choosing RMD and the other Fixed Amortization with a 2.78% interest rate. For the sake of utter simplicity, let's also assume that the account realizes zero change in value other than the SEPP

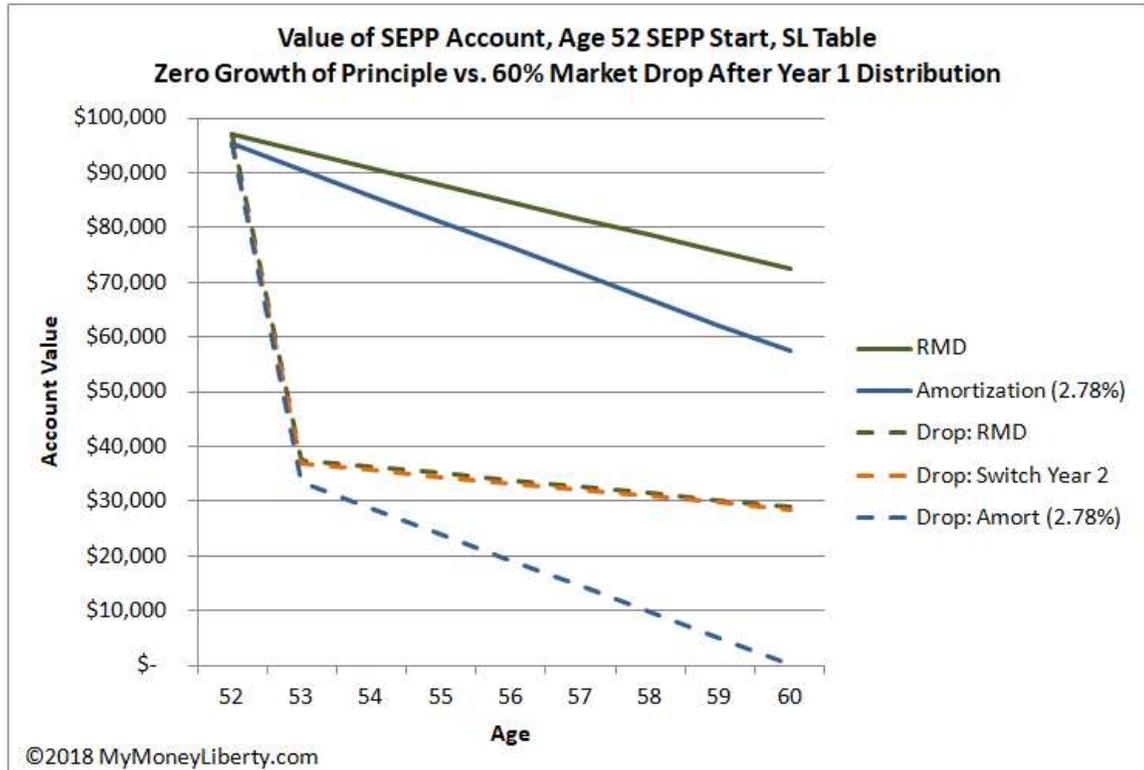
payouts (no interest, no dividends, no capital gains, no nothin'). We start with \$100k in each account and pull the appropriate funds each year.



Super duper. We ain't running out of money. Until the unthinkable happens – a 60% market drop in the first year, after the first annual payout is made. Pit in stomach. And let's just say that after the big drop we go back to no further changes in the account balance. In this case, the RMD player is automatically protected from account depletion, as the payout is adjusted annually as a percentage of the account value. The account cannot be depleted in the RMD method (although payout amounts will plummet in proportion to the account balance). However, the Fixed Amortization player is faced with a situation where staying the course will utterly wipe out the account by the end of the sequence.



Here's where the superpower of the one-time change comes in. The sky has fallen, but we can jump ship to the RMD method and ensure at least that we cannot deplete the account in the case of continued weak markets.



This example serves to illustrate the value of the one-time change allowance from a fixed method to the RMD Method.

Conclusions from The SEPP Deep Dives

- SEPP is available for essentially anyone with a qualified retirement plan.
- Use SEPP as just one component of your FIRE withdrawal strategy. In conjunction with tools like the Roth Conversion Ladder and pulling from taxable sources, SEPP can help redirect “overloaded” tax-deferred accounts, reducing the tax impact of RMDs starting at age 70½.
- There is a retroactive 10% penalty (with interest) looming in the background, so keep your mind in the game and seek professional confirmation.
- In the end we hone it down to just ONE technique, all from the superficial chaos of 3 distribution methods, 3 life expectancy tables, multiple payout frequencies, a selectable but upper-bounded interest rate, and math ranging from simple division to hard core accounting.

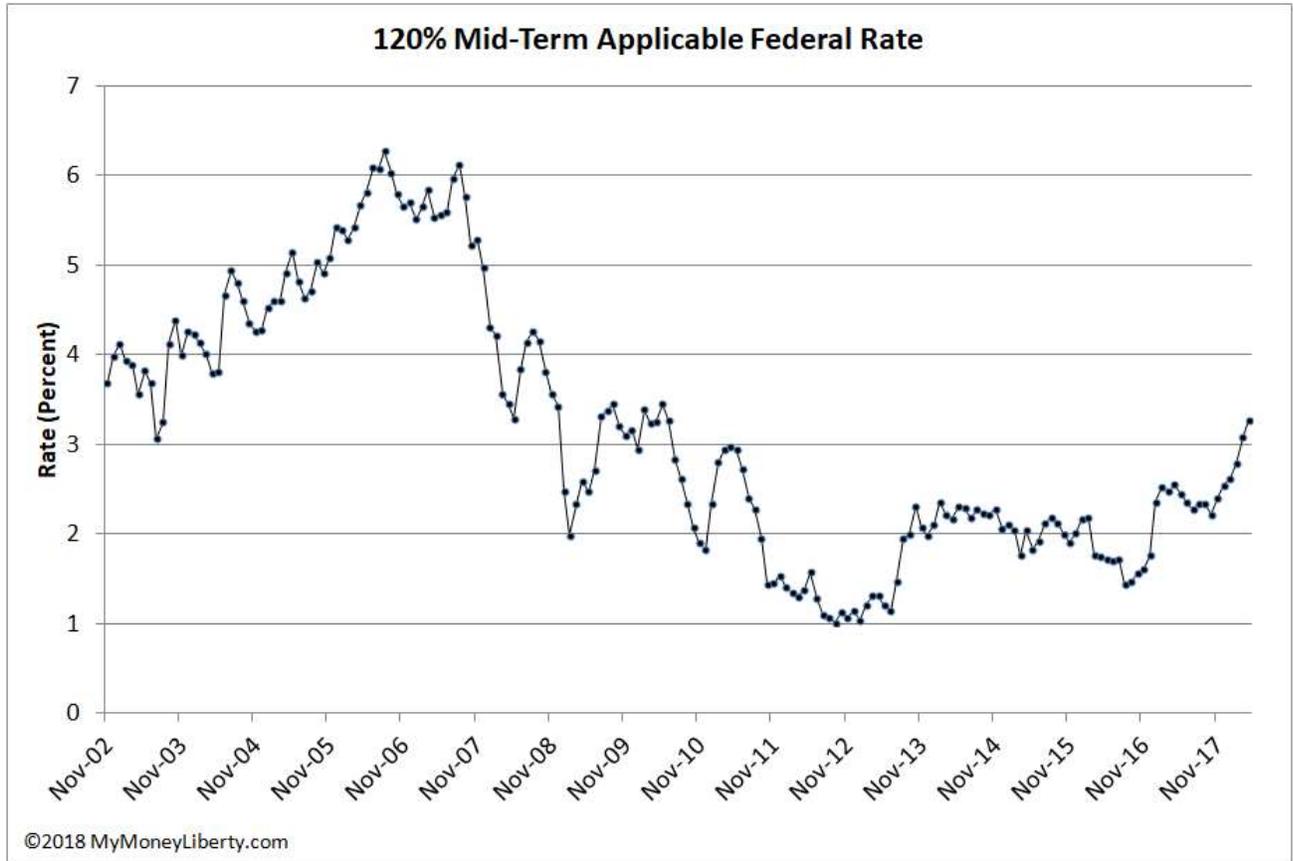
- If your payout in a given year ends up being more than you really need, remember that you don't have to spend it all. It can become additional cash reserve if needed, or be reinvested in your taxable portfolio. At least that money has spent some amount of time with tax-deferred growth; you're no worse off than if that money had spent all its time in taxable accounts – in fact, you're better off!

Stay tuned as we'll present more SEPP tools on [My Money Liberty](#), such as a Safe Withdrawal Rate payout calculator. We hope you've enjoyed reading this series as much as we've enjoyed compiling it. Success in all your FIRE goals!

The SEPP Series Deep Dive Part D: Choosing Your Payout Method

SEPP Series Part 3 focused on an overview of the three SEPP calculation methods, plus a look at life expectancy. We saw that in the variable-payout RMD Method, account value and life expectancy are the only factors affecting how much money to extract from your plan on an annual basis. In this part we'll look at the fixed-payout SEPP methods (Fixed Amortization and Fixed Annuitization). They each factor an interest rate into the calculation.

For a number of reasons, the IRS regularly publishes various interest rate guidelines. The interest rate of concern in SEPP-land is "120 percent of the federal mid-term rate." This rate is associated with treasury bills that pay in about the 4- to 9-year period. The use of this rate seems to make some sense given that most SEPP sequences will last somewhere in that range of durations. The rate is updated monthly by the IRS. Both Fixed Amortization and Fixed Annuitization depend on choosing an interest rate for the one-time SEPP payout calculation. Below is a graph of the 120% mid-term rate (also called Applicable Federal Rate or AFR) since November 2002.



[Rate history per Imagisoft](#)

Over the time period shown there has been a wide fluctuation in the rate--as low as about 1% and highs above 6%. The rate was pinned in April 2018 at 3.27% and stands to rise in the current financial climate. This fluctuation has a dramatic impact on the maximum possible payout with the pair of fixed SEPP methods. However, with any positive interest rate (and let's hope they always stay positive!) both of the fixed SEPP methods will result in a higher payout amount than the initial RMD Method payout using the same life expectancy.

It's important to keep in mind that the rules state this is the maximum interest rate that can be chosen. In other words, you can also choose any lower rate; this gives you flexibility in defining the payout amount. It is the main "lever" (along with the amount of money in your SEPP account) to use in dialing in a SEPP payout.

The IRS rules state that a rate can be chosen based on "either of the two months immediately preceding the month in which the distribution begins." Rate changes

being largely unpredictable and well out of any individual's control, this means you are beholden to the reality of the sequence timing. If you're in a low-rate cycle you'll have a more limited "top end" to your fixed payout amount.

Fixed Amortization, or Some Algebra Required

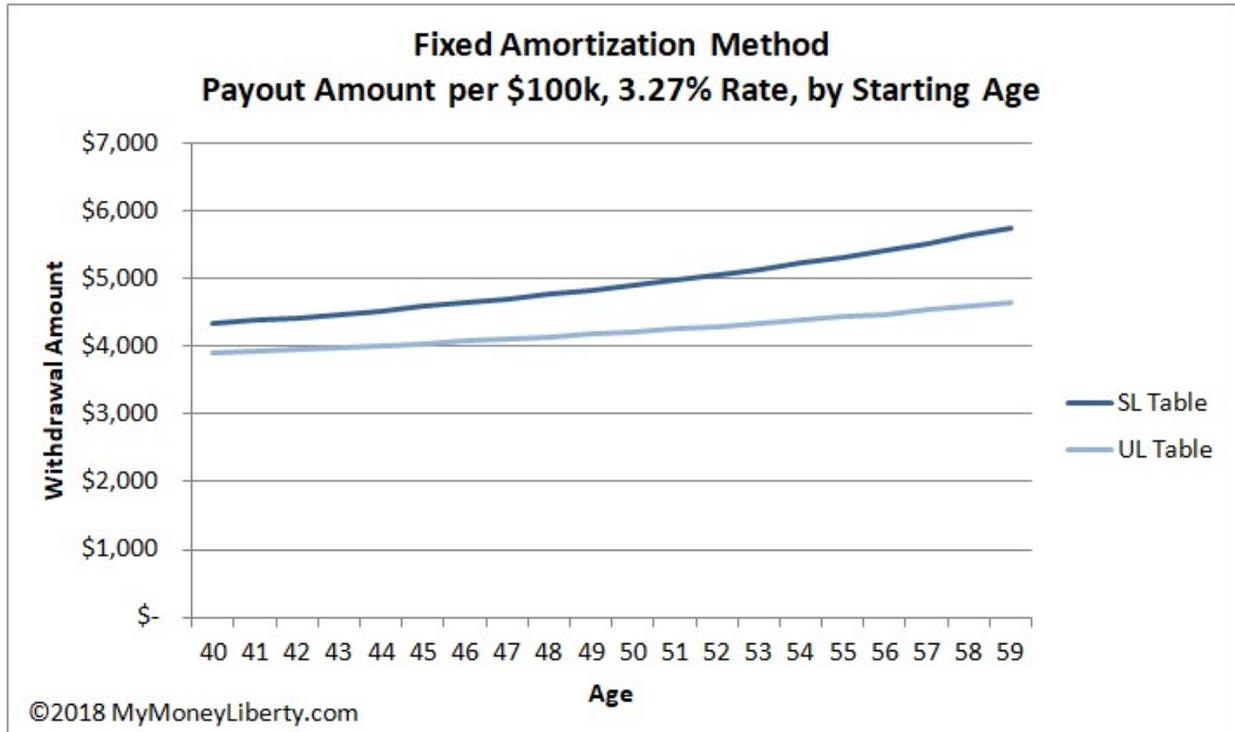
Google's dictionary defines amortize as meaning to "gradually write off the initial cost of (an asset)." In this case the asset is your SEPP account, and the write-off is your regular payout. The word can be traced to its Latin origin as *ad mort* (to death); in theory, you're setting up the SEPP to continue until your actuarially-predicted death, although you'll surely end the sequence as soon as the rules allow.

This paragraph will make you clench your fist either in glee of exercising your left brain or in mock exhibition of punching in your computer screen (depending on your outlook on the field of mathematics). Don't despair if you're in the latter camp. The Fixed Amortization SEPP payout is calculated using the following equation.

$$\frac{VR(1 + R)^E}{(1 + R)^E - 1}$$

Here, R is the chosen interest rate, E is the life expectancy, and V is the account value. This is a one-time calculation. Once you have the number, it stays the same through the entire SEPP sequence (unless you choose the allowable one-time migration to the RMD Method). That's the beauty of Fixed Amortization--just solve one math equation. There are online calculators that can provide a sanity check for your math (we'll share some links in Part 5), but part of the motivation for the SEPP Series is to provide you with the background so you're not blindly following a tool without some understanding of where the answers come from.

The graph below shows the SEPP payout using this method for various starting ages (normalized as per \$100k account value). The April 2018 maximum rate is used as an example, and results using both SL and UL life expectancy tables introduced in Part 3 are shown.



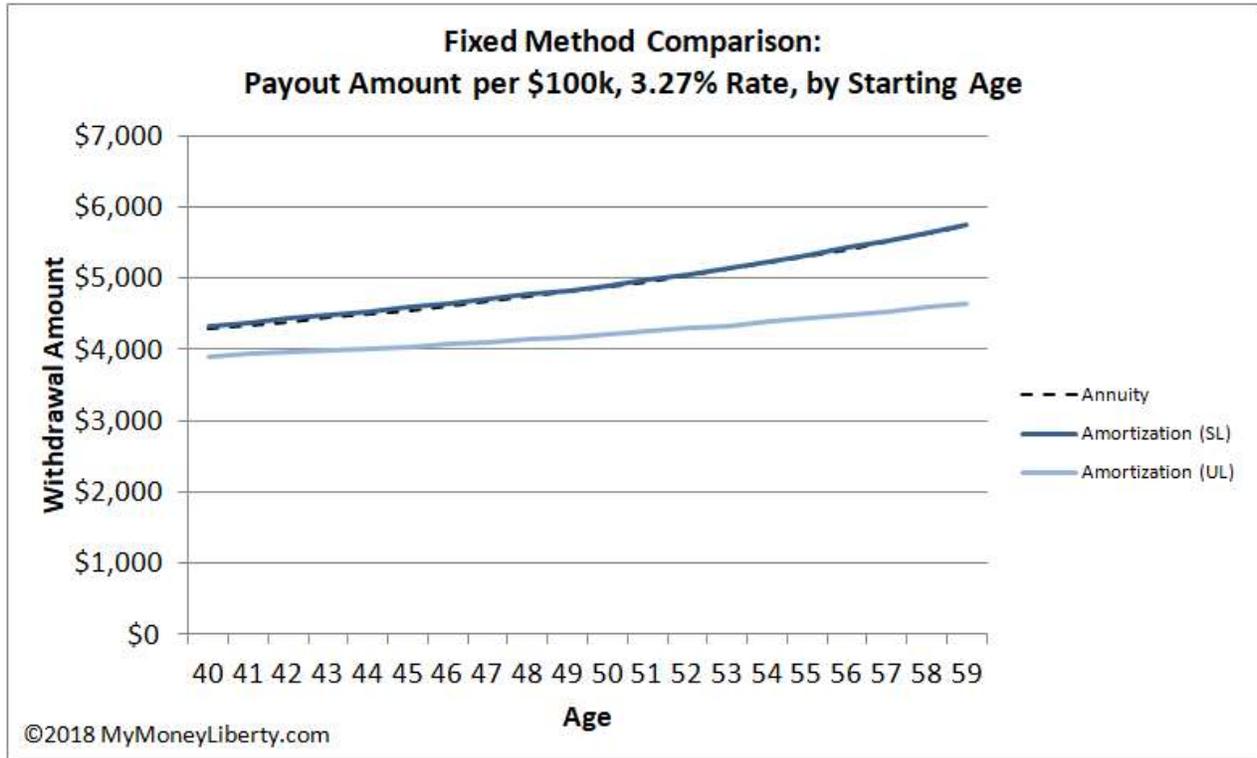
Using the SL table, this particular interest rate puts a 50-something SEPP candidate in the range of a 5-6% withdrawal rate from the SEPP account. Whether this is too high to support Safe Withdrawal Rate (SWR) depends on the total portfolio. If it is too high for SWR comfort, keep in mind the interest rate can be dialed down to any lower rate to compensate. For comparison, we saw in Part 3 that the RMD method in this same age range gives withdrawal rates in the 3-4% range.

Fixed Annuitization, or I Must Have Slept Through that Accounting Lecture

Once again we turn to Google for a definition of annuity, which tells us this word describes “a form of ... investment entitling the investor to a series of annual sums,” which makes perfect sense since that’s what we’re trying to do with SEPP. Our Latin forebears give us this nice word through their own word *annus* which also leads to our English word annual. Still makes sense.

What doesn’t make a whole lot of sense is the existence of this method. SEPP provides a variety of options, and therefore flexibility in your FIRE planning. But not all SEPP options are created equal, and introducing the Annuity Factor is where we enter another dimension in difficulty, way beyond anything we’ve already covered. Full credit goes to the [Early Retirement Home Page website](#) and

their reference calculator of the annuity method. We won't lay out the details of the calculation here. The comparison below of the payout results using Amortization and Annuitization methods readily demonstrates why it isn't worth our time.

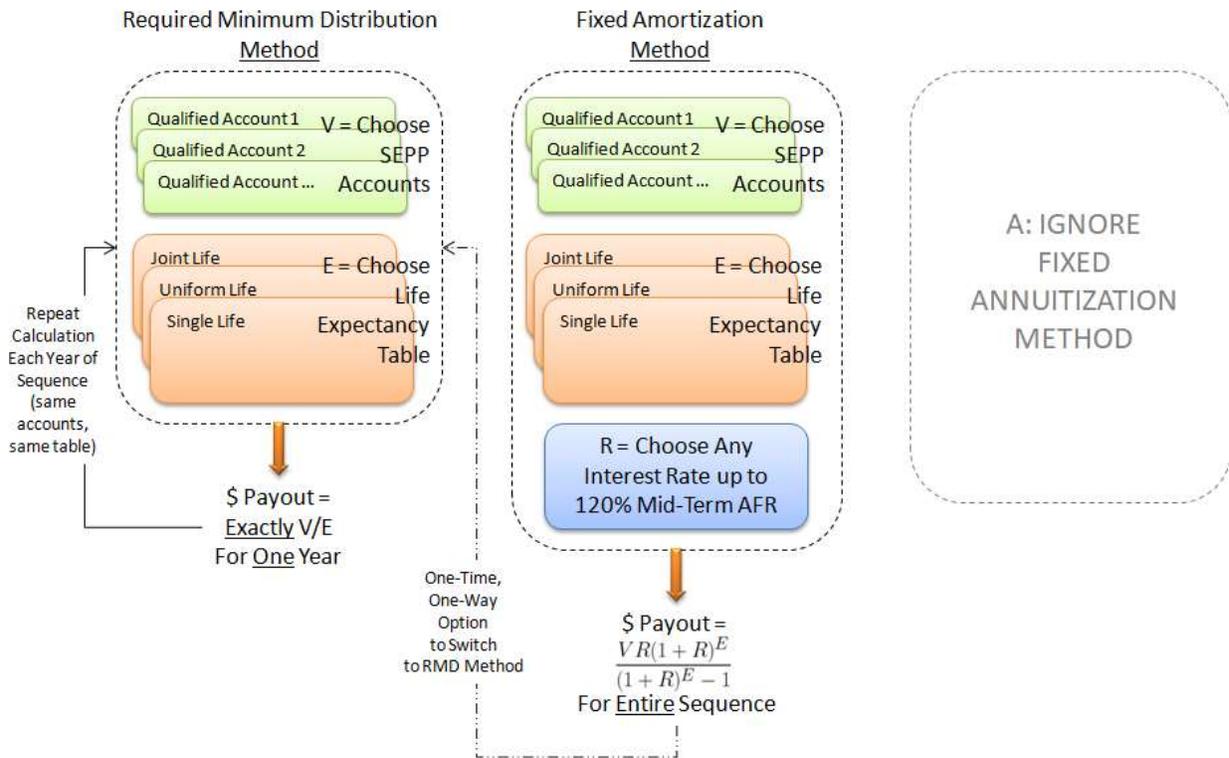


Look how closely the Annuitization line tracks the Amortization results using the SL table. They're not identical, but there is no practical difference. The existence of this SEPP method is baffling. It's a more complicated way of getting to essentially the same answer as the Amortization Method using the SL table.

Cleaning Up the Picture

With the above in mind, let's start taking the great leap into simplifying SEPP! The elimination of the Fixed Annuitization Method goes a long way toward tidying up the SEPP overview chart.

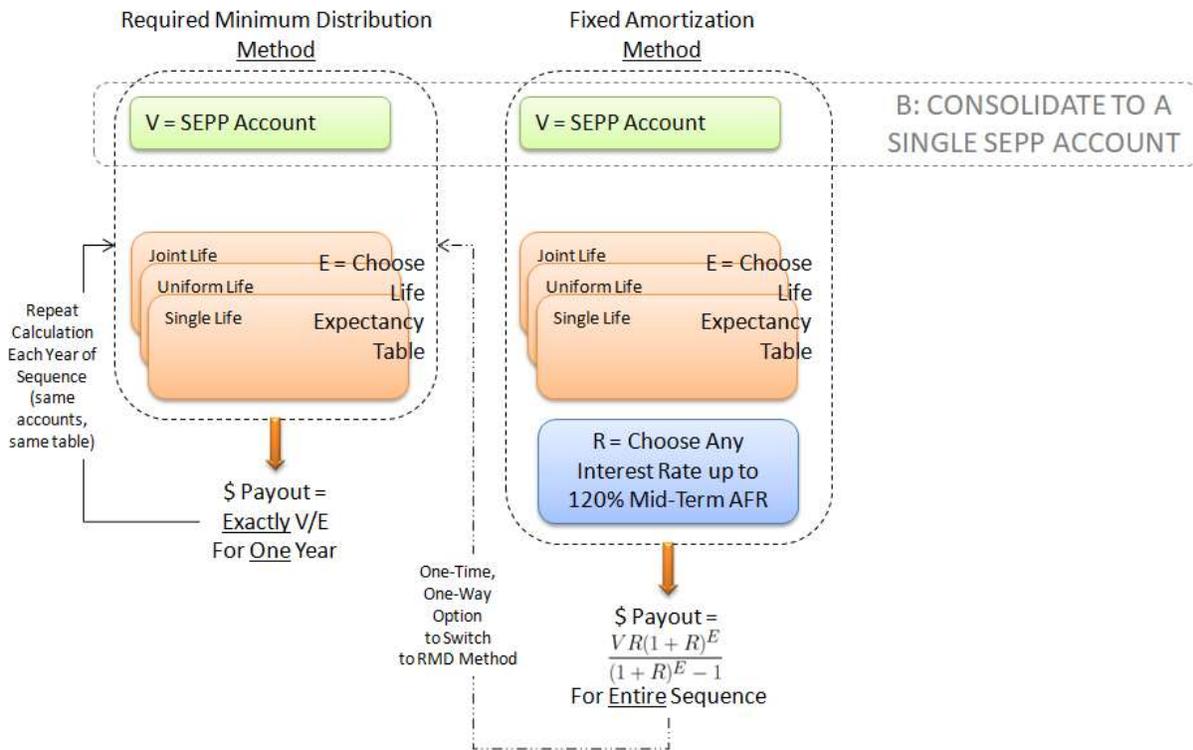
SEPP Simplified Step A



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Now that we've got this ball rolling, why stop there? We've already hit on some other simplification strategies that you might have picked up on. For example, we've been talking about payouts coming from a SEPP account. One account. Singular. While the rules allow for setting up a SEPP from any multiple accounts you wish, that implies running multiple calculations and taking the exact payouts from each associated account as needed. Much simpler is the concept of consolidating or breaking up accounts as needed to create one single Traditional IRA account for the purpose of your SEPP.

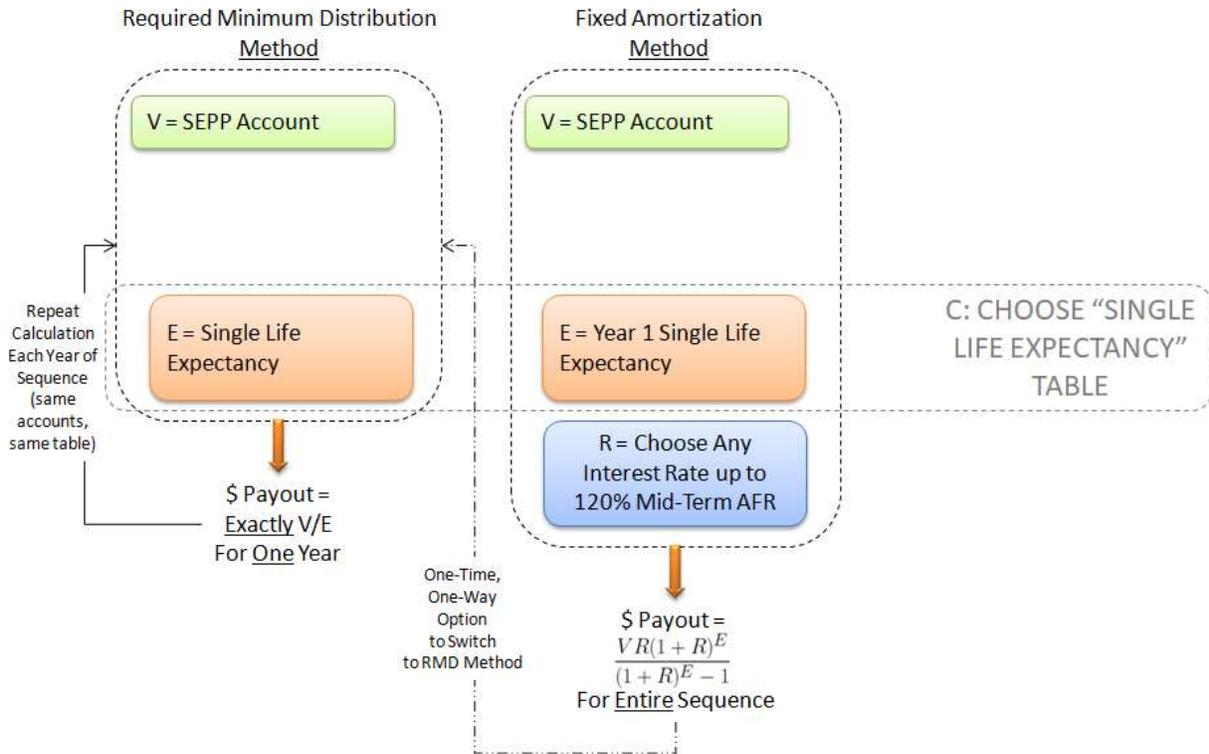
SEPP Simplified Step B



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We can also make one final broad simplification by focusing on the SL table for SEPP payout calculations. As already discussed, this table sets the high bar for payouts, which can then be tailored to our specific needs by adjusting interest rate and/or starting account value.

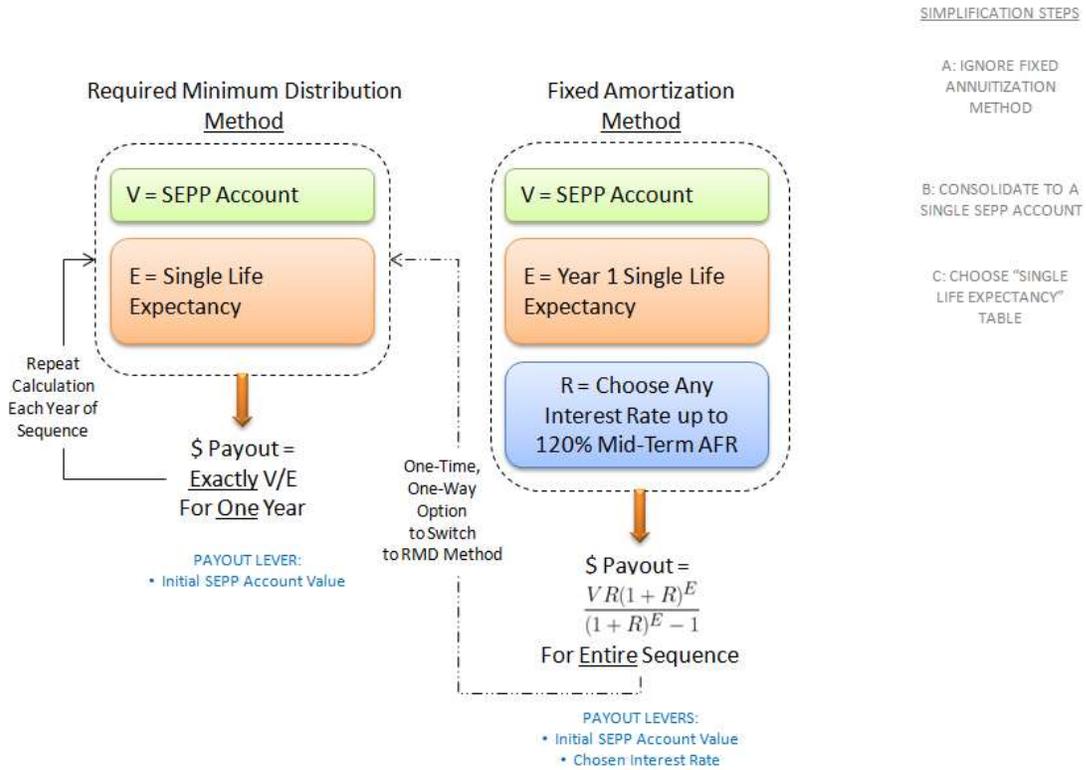
SEPP Simplified Step C



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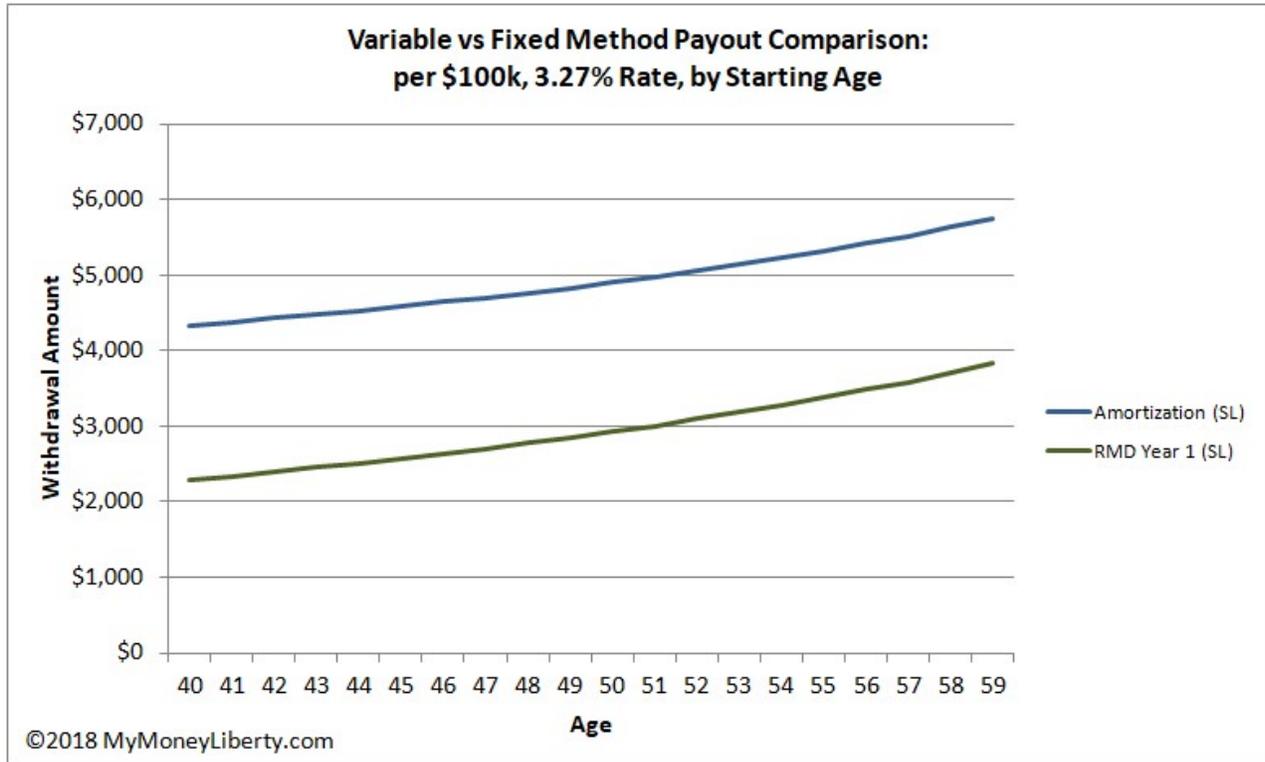
Cleaning this up a little and summarizing the simplification steps, we have the following.

SEPP: Simplified



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We've trimmed away quite a lot with those few steps. But there are still choices to be made and calculations to be run. Let's bring together the learning of the RMD Method together with Fixed Amortization. The chart below compares the two methods within the parameters we've been using.



Keep a couple notes in mind for this comparison:

- Payouts are per \$100k initial account value, so each \$1,000 on the y-axis represents 1% in payout rate.
- The x-axis represents the starting-year age
- The Variable Method (RMD) curve shows first year payout--based on account value fluctuations, this payout would change every year. In contrast, the Fixed Method (Amortization) amounts will be the same for every year of the sequence, regardless of account value fluctuations.
- The Variable Method (RMD) payout is not affected by an interest rate selection. By comparison, the Fixed Method (Amortization) payouts are shown at the ceiling level available as of April 2018, dictated by the published rate. For a lower chosen interest rate, the payout is reduced. As the chosen interest rate approaches 0%, the Fixed Method payout amount approaches the Variable Method.

Conclusions

We've finally reached a level of understanding that allows us to start the SEPP simplification process. We took three big steps in that direction today.

- Elimination of Fixed Annuitization from consideration
- Consolidation to one Traditional IRA account for SEPP
- Use of the SL table for life expectancy

If you have further questions about SEPP you can email My Money Liberty at <http://mymoneyliberty.com/contact-us/>.