

Robert Muksian provides additional options for Plans B and C. These are variations of the strategies he listed in the article. He also provides a fourth plan using revolving five-year bond ladders.

Plan B: Purchase Two Bonds Maturing at Five-Year Intervals

As discussed in the article, this option involves having a fixed annual income from maturing bonds of \$40,000 per year beginning on May 15, 2012, and terminating on May 15, 2046. Bonds worth \$80,000 will be purchased to mature on May 15, 2016, 2021, 2026, 2031, and 2036. Forty thousand dollars will be used for income in each of those years, and \$40,000 will be used to purchase bonds maturing in 2042, 2043, 2044, 2045 and 2046, respectively.

The yield rates listed in Table 2 of the article indicate that this can be accomplished at a purchase cost of \$920,304, leaving residual cash of \$79,696. This residual may be used to supplement the bond income with annual withdrawals and may be increased to offset, somewhat, the effects of inflation. Alternatively, it can be left to accumulate as a legacy. The withdrawals would begin with \$3,045 in 2012, increased by 3% per year, and end with \$7,177 in 2041 if the rate of return is 4%.

Table 2 shows the results of this option, with a possible legacy amount of \$258,483 on May 15, 2042, if the residual cash is not depleted by annual withdrawals and is not subject to required minimum distributions. However, if placed in equities, market volatility could affect the actual annual cash amount or the legacy amount.

Here are four alternatives.

Alternative 1—Maximized Level Amounts

This option will maximize the annual income at \$43,400 each year at a total cost of \$998,863 and leave \$1,137 as residual cash. Bonds with face values of \$86,900 would be purchased to mature in 2016, 2021, 2026, 2031, and 2036. The face values are greater than those of the intervening years because 30-year Treasury bonds may be purchased in \$100 multiples, with a minimum of \$100. The theoretical maturity values are \$43,464 and \$86,928, respectively. This option could result in a possible legacy of \$3,689 on May 15, 2042.

Alternative 2—Amounts to Increase by 3% per Year

In order to provide the funds for the increased future amounts, the bonds for 2012 would be limited to \$29,900. The two bonds maturing in 2016, 2021, 2026, 2031, and 2036 will have face values of the \$29,900 that will have been indexed by 3% per year. The bonds of 2041 would be \$70,500. The total cost for this option would be \$999,116, leaving \$884 as residual cash. This option would leave a

possible legacy of \$2,868 on May 15, 2042. The downside of this option is the significantly lower first-year income, and the \$40,000 benchmark would not be reached until 2022.

Alternative 3—Amounts to Decrease 1% per Decade

Michael Stein cites in “The Prosperous Retirement Guide to the New Reality” that the effects of inflation in retirement could be segregated into three periods:

- 1) An active cost-affected retirement through age 75 in which inflation would have a relatively significant effect on discretionary expenses,
- 2) A transitional cost-affected retirement from age 75 to age 85 where discretionary expenses that are affected by inflation decline, and
- 3) A relatively passive retirement beyond age 85 where inflation has a much smaller effect on discretionary expenses.

Toward this end, the investor may purchase bonds to be increased by nominal rates (the interest rate paid by the bond, which is not adjusted by inflation) of 3% per year from 2012, 2% per year from 2022, and 1% per year from 2032. With this option the initial bonds would be \$32,100. The bonds for 2022 would be \$42,700, the bonds for 2032 would be \$51,600, and two of each would be purchased at the fifth-year intervals. The total cost for this option would be \$999,138 with residual cash of \$862. This option would result in possible legacy of \$2,796 on May 15, 2042. The downside of this option is the significantly lower first-year income, and the \$40,000 benchmark would not be reached until 2020.

Alternative 4—Amounts to Increase 1% per Decade

An investor may have investments outside a retirement plan and use those funds to mitigate the effects of inflation, rather than use tax-deferred funds. With this option, the investor may purchase bonds to be increased by nominal rates of 1% per year from 2012, 2% per year from 2022, and 3% per year from 2032 in order to provide greater income in the later years. The income stream would be \$36,100 to be increased by 1% per year until 2021; then \$40,200 in 2022 to be increased by 2% per year until 2031, and then \$49,500 in 2032 to be increased by 3% per year until 2041. Two of each of these bonds would be purchased at the fifth-year intervals. The cost of this option would be \$999,041 with residual cash of \$929. This option would result in a possible legacy of \$3,112 on May 15, 2042. With this option, the \$40,000 benchmark would be reached in 2022.

Plan C: Purchase Six Bonds Maturing at Year 30

As discussed in the article, rather than purchase two bonds to mature every five years, another alternative would be to purchase six bonds to mature in year 30, on May 15, 2041. One of the bonds would be the income for

the year, and the remaining five bonds would be used to purchase bonds maturing in years 2042 through 2046.

This option would provide \$40,000 in annual income for 30 years. On the maturity date of the 30th anniversary, \$200,000 from the additional maturing bonds would become available to purchase five bonds to mature in 2042 through 2046. The total cost of this option would be \$855,770 with residual cash of \$144,230. Assuming a 4% return on investment, this cash could supply additional annual income, beginning with \$5,511 and increased by 3% per year to a final amount of \$12,988 to mitigate the effects of inflation. If there are previously taxed investments that could deliver the same results, the cash could be left as a legacy amount of \$467,795 on May 15, 2042, subject to required minimum distributions. As with Plan B, if left in equities, market volatility could affect these values.

Here are four alternatives.

Alternative 1—Maximized Level Amounts

This option maximizes the annual income at \$46,700 at a total cost of \$999,111, leaving only \$889 residual cash. The five additional bonds in 2041 would have a face value of \$233,500 to purchase one additional bond for each of the years from 2042 through 2046. This option would result in a possible legacy of \$2,882 on May 15, 2042.

Alternative 2—Amounts to Increase by 3% per Year

For this option, the reduced income for the 2012 year would be \$30,600. The income for the 2041 year would be \$72,200. Five additional bonds worth \$361,000 would be purchased for maturity in 2041 to be used to purchase bonds for each year from 2042 through 2046. The total cost would be \$999,225 with residual cash of \$775. This option would result in a possible legacy of \$2,514 on May 15, 2042. The down side of this option is the severe reduction of the first-year benefit. The benchmark \$40,000 level would be reached in 2021.

Alternative 3—Amounts to Increase 1% per Decade

With this option, the investor would purchase bonds to be increased by nominal rates of 3% per year from 2012, 2% per year from 2022, and 1% per year from 2032. The reduced income for the 2012 year would be \$33,800. The income for the year 2041 would be \$59,400. Five additional bonds worth \$297,000 would be purchased for maturity in 2041 to be used to purchase bonds for each year from 2042 through 2046. The total cost would be \$999,896 with residual cash of \$1,004. This option would result in a possible legacy of \$3,255 on May 15, 2042. The downside of this option is the severe reduction of the first-year benefit. The benchmark \$40,000 level would be reached in 2018.

Alternative 4—Amounts to Decrease 1% per Decade

The investor may purchase bonds to be increased by nominal rates of 1% per year from 2012, 2% per year from

2022, and 3% per year from 2032. The reduced income for the 2012 year would be \$37,300. The income for the 2041 year would be \$66,800. Five additional bonds worth \$334,000 would be purchased for maturity in 2041 to be used to purchase bonds for each year from 2042 through 2046. The total cost would be \$998,947 with residual cash of \$1,053. This option would result in a possible legacy of \$3,417 on May 15, 2042. The downside of this option is minimal relative to annual income. The benchmark \$40,000 level would be reached in 2019.

Plan D: Revolving Five-Year Laddered Bonds

Rather than commit the entire fund of \$1 million for the 30-year period, extended to 35 years, an alternative would have been to purchase five years of bonds on March 19, 2012. Then on May 15, you would retain the first year's income and use the remainder to purchase bonds maturing in 2017. On May 15, 2013, you would retain the income for that year and use the remainder to purchase bonds maturing in 2018. Continuing this process, at the end of the first five years you will have a portfolio for the next five years. Except for the March 19 quotes, you would not know the cost of those subsequent bonds. Those bonds will have to be purchased at those future market yields.