

**QUESTIONS AND ANSWERS ABOUT
SERIES E/EE SAVINGS BONDS & SAVINGS NOTES ISSUED BEFORE NOVEMBER 1982**

Question: *What interest rate is used to calculate what my bond or note is worth?*

Answer: If your bond is still earning interest, the interest is currently based on **market-based investment yields** or **guaranteed minimum investment yields**.

Question: *What do you mean, "If your bond is still earning interest"?*

Answer: Savings bonds and savings notes stop earning interest when they reach final maturity. All Series E bonds, all savings notes, and some Series EE bonds have reached final maturity. Series EE bonds reach final maturity when they are 30 years old.

Question: *What do you mean "market-based investment yields or guaranteed minimum investment yields"? How do I know which one applies to my bond or note?*

Answer: Actually, they both apply. Treasury is calculating the value of your bond or note two ways, using the market-based investment yield and guaranteed minimum investment yield, and giving you the better overall return.

Question: *When did Treasury start using the market-based investment yield and guaranteed minimum investment yield?*

Answer: Treasury first offered market-based rates for savings bonds in November 1982. Bonds and notes outstanding at that time were to be included in the program if the owner continued to hold the bond or note for at least five years from the date it first increased in value on or after November 1, 1982. Series E bonds which were 40 years old before November 1987 were not eligible for the program.

Question: *What do you mean by "the date it first increased in value on or after November 1, 1982"?*

Answer: Bonds generally increase in value every six months. An eligible bond or note that increased in value each April and October, for example, entered the market-based rate program on April 1, 1983, and had to be held until April 1988.

Question: You said "generally increase in value every six months." Are there exceptions I need to know about?

Answer: Yes. When a bond or note was first issued, it was given an original maturity period. For some Series E bonds, the original maturity period was such that the last interest earning period in original maturity was less than six months. For example, the last interest earning period for a bond with a June 1972 issue date was four months because the original maturity of the bond was 5 years, 10 months. This bond increased in value on December 1, 1977 (5½ years after issue) and again on April 1, 1978 (5 years and 10 months after issue). NOTE: As stated above, all Series E bonds, all savings notes, and some Series EE bonds have reached final maturity and no longer earn interest.

Question: *Why is this important to know?*

Answer: After a bond or note reaches original maturity, it enters a 10-year extension and increases in value six months from the original maturity date, as well as every six months thereafter during the extension. Additional maturity periods follow. Each additional maturity period is 10 years long unless a period of less than 10 years is required for the bond or note to reach the age at which it stops earning interest. During extensions, the bond or note increases in value every six months from the date the maturity period was entered. A final interest earning period may be less than six months.

For example, the June 1972 bond increased in value each April 1 and October 1 during its extended maturity periods with the next-to-last increase on April 1, 2002, and the final increase on June 1, 2002. (The original maturity was 5 years 10 months, April 1978. The first extension was from April 1978 through March 1988 and the second extension was from April 1988 through March 1998. At this point the bond was 25 years and 10 months old. Since it stopped earning interest at 30 years, the final extension was 4 years and 2 months.)

Question:	<i>So a bond with an April issue date, for example, may not always increase in value in April and October?</i>
Answer:	That's right. Also, a bond or note entered the market-based rate program the first time it increased in value on or after November 1, 1982. Since the June 1972 bond, for example, was increasing in value each April and October at that point, it entered the market-based rate program April 1, 1983, not December 1, 1982.
Question:	<i>What are the original maturity periods for my bonds and notes?</i>
Answer:	The original maturity periods are shown in the Original Maturity Tables on page 5.
Question:	<i>So once I know the original maturity of my bond or note, I can determine when it entered the market-based rate program and when it increases in value. What is a market-based investment yield? How is it applied to my bond?</i>
Answer:	Each May 1 and November 1, Treasury determines an average of five-year Treasury security yields from the preceding six months. Each time your bond is due to increase in value, Treasury recalculates the market-based redemption value anew from the date it first increased in value on or after November 1, 1982. The average of the Treasury security yields for each six-month earning period since are added together and divided by the number of semiannual periods since that date. The result is multiplied by 85% and rounded. This one rate is applied for each semiannual period since the date of the first increase in value on or after November 1, 1982.
Question:	<i>Can you give me an example?</i>
Answer:	<p>Let's say you purchased a bond in June 1968. In 1982, this bond was in an extended maturity period with increases in value occurring each June 1 and December 1. (The bond had an original maturity of seven years.) Its first increase in value on or after November 1, 1982, was December 1, 1982. The value of the bond for December 1982 is the starting point for determining the value of the bond using a market-based investment yield.</p> <p>Now let's look at how the June 1994 market-based value was determined. In the 11½ years between December 1982 and June 1994, there were 23 semi-annual interest earning periods. For each earning period, there is an applicable five-year Treasury security yield. To begin determining the market-based yield for the June 1994 market-based value of your bond, the 23 average Treasury security yields were added together and divided by 23. The result was multiplied by 85% and then rounded to the nearest one-fourth of one percent (.25%). The result was the market-based investment yield. The market-based worth of your bond on June 1994 was calculated by applying this yield to the entire 11½ years.</p> <p>Two years later, to determine the market-based investment yield for your bond for June 1996, four additional applicable average five-year Treasury security yields were added to those for the other 23 six-month interest earning periods and divided by 27 to obtain the average. The result was multiplied by 85%, but this time the result was rounded to the nearest one-hundredth of one percent (.01%). The market-based worth of your bond for June 1996 was calculated by applying this yield to the entire 13½ years.</p>
Question:	<i>Why is the rounding to .25% in some cases and .01% in others?</i>
Answer:	During maturity periods that began before May 1989, rounding of the market-based investment yield is to the nearest one-fourth of one percent. If the current maturity period was entered on or after May 1, 1989, the rounding is to the nearest one-hundredth of one percent.

* All redemption values calculations are performed on a base denomination of \$25. This is a hypothetical denomination in the case of EE bonds. Redemption values for bonds of greater denominations are in direct proportion according to the ratio of denominations; i.e., a \$50 bond would be worth twice the value of the base denomination; a \$200 bond would be worth eight times the value of the base denomination.

Question: *Where does the **guaranteed minimum investment yield** come in? How does it apply to my bond?*

Answer: Unless the date a bond or note first increased in value on or after November 1, 1982, happened to coincide with the beginning of a new maturity period, guaranteed minimum returns for the remainder of the maturity period the bond or note was in were reflected in published tables of redemption values. These values were determined with rates announced and published prior to November 1982.

As a bond or note entered an extension, the guaranteed minimum in effect at that time became that bond's or that note's guaranteed minimum investment yield for that extension. When Treasury first offered a guaranteed minimum return in November 1982, the rate was set at 7.5% per year, compounded semiannually, for bonds or notes entering an extension. For bonds or notes entering an extension on or after November 1986, the rate was reduced to 6% per year, compounded semiannually. For bonds or notes entering an extension March 1993 or later, the rate is 4% per year, compounded semiannually.

Question: *Can you give me an example?*

Answer: Let's use the June 1968 bond again. By December 1987, when it had been held five years under the market-based rate program, it had entered its second 10-year extension of maturity. That second extension began on June 1985 when the guaranteed minimum rate in effect for extensions was 7.5%. The December 1987 guaranteed minimum value of this bond was determined by using the value of the bond on June 1, 1985, and applying a rate of 7.5% per year, compounded semiannually, to each of the five semiannual interest earning periods from June 1985 through November 1987.

Question: *Does the same thing apply to each additional extension?*

Answer: Generally, yes. Each extension is 10 years (except the final extension, which may be less than 10 years). During each extension, Treasury goes back to the guaranteed minimum value of the bond or note at the end of the previous maturity period and applies the rate in effect when the current maturity was entered for each interest period since.

Question: *Can you give me an example?*

Answer: A savings note issued January 1970 had an original maturity of 4 years and 6 months. On July 1, 1984, it entered its second 10-year extended maturity. At that time, the value of the note reflected the rates in effect prior to the introduction of the market-based rate program. The guaranteed minimum value of the note for July 1990 was calculated using the value of the note in July 1984 and applying the rate of 7.5% per year, compounded semiannually, to each of the 12 semiannual interest earning periods from July 1984 through June 1990.

The note entered its third and final extension of maturity (a 5 year and 6 month extension) on July 1994. The guaranteed minimum value of the note on July 1998 is calculated using the July 1994 guaranteed minimum value and applying the rate of 4% per year, compounded semiannually, for the eight semiannual interest earning periods from July 1994 through June 1998.

Question: *Is there an exception?*

Answer: Yes. Series E bonds and notes were granted a one-time bonus in January 1980. The bonus applied if a bond or note was held to the date it first increased in value on or after January 1, 1991, if the bond or note did not stop earning interest before that date.

Question: *How was this 11-year bonus applied?*

Answer: When each Series E bond or note increased in value for the first time on or after January 1, 1991, the guaranteed minimum value of the bond or note included the 11-year bonus. For the remainder of the maturity period the bond or note was in when it received the bonus, calculations of guaranteed minimum values were based on the guaranteed minimum value of the bond or note (including the bonus) on the first date it increased in 1991 rather than the date it entered the maturity period. If the bond or note entered another maturity period after that 1991 date, calculations once again were based on the value of the bond or note at the start of the latest extension.

Question: *Can you give me an example?*

Answer: Once again, let's use the June 1968 bond. Let's look at a June 1994 value for the bond based on a guaranteed minimum investment yield. The bond entered its second extension of maturity in June 1985. Normally, the June 1985 value would be the base for calculations of the guaranteed minimum value during the second extension; but, this bond was also entitled to the one-time bonus the first time it increased in value in 1991. The June 1991 guaranteed minimum value included the 11-year bonus. Therefore, the June 1994 guaranteed minimum value was calculated using the June 1991 guaranteed minimum value as a base and applying the rate of 7.5% per year, compounded semiannually, to each of the six semiannual interest earning periods from June 1991 to June 1994. Similarly, the guaranteed minimum value of the bond on June 1995, when it entered its third extended and final maturity, was calculated with the June 1991 guaranteed minimum value as a base and the rate of 7.5% per year, compounded semiannually, applied for the eight semiannual interest earning periods from June 1991 through May 1995.

The June 1996 guaranteed minimum value of the bond is calculated by using the June 1995 guaranteed minimum value as a base and applying the rate of 4% per year, compounded semiannually, to the two semiannual interest earning periods since.

Question: *If I go to the bank and cash my bond or note, I will receive a redemption value that is calculated with either the **market-based investment yield** or **guaranteed minimum investment yield**, whichever makes my bond or note worth more?*

Answer: From issue date until the bond or note first increased in value on or after November 1982, increases in its value were based on the rate of return promised when the bond or note was issued and on adjustments to that rate made when Treasury announced rate increases. If you held the bond or note at least five years after the date it first increased in value on or after November 1, 1982, the difference in the value of your bond or note from the date of that first increase on or after November 1, 1982, and the redemption value you receive is based on the **market-based investment yield** or the **guaranteed minimum investment yield**, whichever increases the value of your bond or note more *overall*.

Question: *With this method, I can't compare a market-based return with a guaranteed minimum investment yield for a six-month period?*

Answer: That's correct. The market-based investment yield and guaranteed minimum investment yield are two separate, alternative, competing streams of calculations. *Overall* market-based return from the date an eligible bond or note first increased in value at the start of the market-based investment yield program is compared with *overall* guaranteed return from that date. This approach does not involve comparing a market-based return with a guaranteed minimum investment yield for the current year or six-month period.

Question: *Can you give me an example?*

Answer: Taking our June 1968 E bond as an example, the market-based investment yield was 6.97% per year, compounded semiannually, from December 1, 1982, to June 1, 1997. Over that same period, the *overall* guaranteed minimum investment yield for the bond was greater, 7.56% per year, compounded semiannually, including four six-month periods (June 1, 1995, to June 1, 1997) at 4% per year, compounded semiannually, as well as earnings at higher rates averaging about 8.14% per year, compounded semiannually, during the preceding 12½ years (25 six-month periods from December 1, 1982, to June 1, 1995).

As bonds have entered an extension since March 1, 1993, many bond owners have observed that their bonds are increasing in value at 4% per year, compounded semiannually, and expressed concern because every market-based rate they have seen or heard of is higher. However, when comparing returns (market-based vs. guaranteed minimum), Treasury is not looking just at the 4% per year, compounded semiannually, alone. Treasury is looking at the *overall* guaranteed minimum return since each bond first increased in value on or after November 1, 1982, and comparing that with the *overall* market-based return over the same period.

ORIGINAL MATURITY TABLES

FOR SERIES E SAVINGS BONDS:

ISSUE DATES	ORIGINAL MATURITY
May 1941 through April 1952	10 years
May 1952 through January 1957	9 years and 8 months
February 1957 through May 1959	8 years and 11 months
June 1959 through November 1965	7 years 9 months
December 1965 through May 1969	7 years
June 1969 through November 1973	5 years and 10 months
December 1973 through June 1980	5 years

FOR SERIES EE BONDS:

ISSUE DATES	ORIGINAL MATURITY
January 1980 through October 1980	11 years
November 1980 through April 1981	9 years
May 1981 through October 1982	8 years

FOR ALL SAVINGS NOTES:

The original maturity was 4 years and 6 months.
