PD P 0036 E
Department of the Treasury Bureau of the Public Debt
(November 2003)

QUESTIONS AND ANSWERS ABOUT
SERIES EE SAVINGS BONDS ISSUED NOVEMBER 1982 THROUGH APRIL 1995

## Question: What interest rate does my bond earn?

Answer: As your bond is now five years old or older, it earns interest based on market-based investment yields or guaranteed minimum investment yields. (When your bond was less than five years old, it earned interest at a guaranteed rate. For bonds with issue dates prior to March 1993, the guaranteed rates were gradually increased during the initial five year period. Series EE savings bonds with issue dates from March 1993 through April 1995 earned interest at a guaranteed 4\% per year during the first 5 years.)

Question: What do you mean "or"? How do I know which one applies to my 5-year old or older bond?
Answer: Actually, they both apply. Treasury is calculating the value of your bond two ways, using the market-based investment yield and guaranteed minimum investment yield, and giving you the better overall return.

Question: What is a market-based investment yield? How is it applied to my 5 year old or older bond?
Answer: Each May 1 and November 1, Treasury determines an average of 5-year Treasury security yields from the preceding six months. Each time your bond is due to increase in value, Treasury recalculates anew from the issue date the bond's market-based redemption value. The average of the Treasury security yields for each six-month earning period are added together and divided by the number of semiannual periods since the bond was issued. The result is multiplied by $85 \%$ and rounded. This one rate is applied for each semiannual period since the bond was issued.

Question: Can you give me an example?
Answer: If you bought a bond in June 1985, by December 1994, the bond was $91 / 2$ years old. During the 9 $1 / 2$ years, there were 19 six-month interest earning periods. For each earning period, there is an applicable 5-year Treasury security yield. To determine the market-based December 1994 value of your bond, the 19 average 5-year Treasury security yields were added together and divided by 19. The result was multiplied by $85 \%$ and then rounded to the nearest $1 / 4$ of one percent (.25\%). The result was the market-based investment yield. The market-based worth of your bond on December 1994 was calculated by applying this yield or rate to the entire $91 / 2$ years.*

A year later, to determine the market-based investment yield for your bond for December 1995, the applicable average 5-year Treasury security yields for the interest periods December 1994 through May 1995 and June 1995 through November 1995 were added to those for the other 19 six-month interest earning periods and divided by 21 to obtain the average. This 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 December 1995 was calculated by applying this yield to the entire $101 / 2$ years.

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## Question: Why is the rounding to $.25 \%$ in some cases and $.01 \%$ in others?

Answer: When bonds are issued, an original maturity period is established. (Your 1985 bond had an original maturity period of 10 years.) After original maturity, bonds may be held for additional extensions of maturity. During maturity periods that began before May 1989, rounding of the market-based investment yield is to the nearest $1 / 4$ 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.

Question: What are the original maturity periods for my bonds?
Answer: For bonds dated November 1982 through October 1986, it was 10 years.
For bonds dated November 1986 through February 1993, it is 12 years.
For bonds dated March 1993 through April 1995, it is 18 years.
Question: Where does the guaranteed minimum investment yield come in?
How does it apply to my bond?
Answer: When Treasury first offered a guaranteed minimum return in November 1982, the rate for the original maturity period was set at $7.5 \%$ per year, compounded semiannually. Effective with bonds issued November 1986, the rate was reduced to $6 \%$ per year, compounded semiannually. You had to hold a bond no less than 5 years to receive the guaranteed minimums. For bonds issued March 1993 through April 1995, the rate is $4 \%$ from issue date. With each offering, Treasury established a table of redemption values for the original maturity period based on the guaranteed minimum return promised.

Question: Can you give me an example?
Answer: Let's use your June 1985 bond again. When you bought this bond, Treasury promised you that if you held the bond at least five years then you would receive a return of no less than $7.5 \%$ per year, compounded semiannually, during the original maturity period of the bond. In December 1994, the bond had not reached original maturity and had been held at least 5 years; therefore, the redemption value established in the offering table reflected a yield of the promised $7.5 \%$ per year, compounded semiannually, from the issue date to December 1994.

Question: What happens after my bond reaches original maturity?
Answer: For original maturity, Treasury has established a table of redemption values which reflects the guaranteed minimum rate promised. After the bond reaches original maturity, it enters an extension. The guaranteed minimum during the extension will be the rate in effect at the time the extension starts, right now 4\% per year, compounded semiannually. During the first extension, each time a bond is due to increase in value, Treasury re-calculates the bond's guaranteed minimum redemption value starting with what the bond is guaranteed to be worth at original maturity, and applies the guaranteed minimum rate for the current extension to each interest period since original maturity.

## Question: Can you give me an example?

Answer: On June 1, 1995, your June 1985 bond reached original maturity. At that time, the value of your bond from the offering table reflected the guaranteed rate of $7.5 \%$. By December 1995, your bond had one interest earning period in extended maturity. When your bond entered the extended maturity period, the guaranteed minimum in effect for extensions was $4 \%$. To determine the December 1995 guaranteed minimum value of your bond, the interest rate of $4 \%$ per year, compounded semiannually, is applied to the June 1995 value for one semiannual period.

Question: You said the "first extension". Is there more than one extension?
Answer: The first extension is 10 years. The bond then enters a second extension, earning interest until it is 30 years old. During the second extension, Treasury re-calculates the bond's guaranteed minimum redemption value starting with what the bond is guaranteed to be worth at the end of the first maturity and applies the rate in effect when the second maturity was entered for each interest period since.

Question: If I go to the bank and cash my bond, 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 worth more, correct?

Answer: Yes, that's correct.

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

Answer: Yes, 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 bond's date of issue 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 a June 1986 bond as an example, the market-based investment yield was $6.11 \%$ per year, compounded semiannually, from June 1, 1986, to June 1, 1997. Over that same period, the overall guaranteed minimum investment yield for the bond was greater, $7.18 \%$ per year, compounded semiannually, including two six-month periods (June 1, 1996 to June 1, 1997) at 4\% per year, compounded semiannually, as well as earnings at the higher rate of $7.5 \%$ per year, compounded semiannually, during the preceding 10 years ( 20 six-month periods from June 1 , 1986 to June 1, 1996).

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 was issued, and comparing that with the overall market-based return over the same period.


[^0]:    *All redemption values calculations are performed on a hypothetical base denomination of $\$ 25$. 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 8 times the value of the base denomination.

