



CALCULATING TIAA TRADITIONAL ANNUITY EARNINGS

TIAA (Teachers Insurance and Annuity Association)
730 Third Avenue, New York, NY 10017, issues annuities.
© 2005 Teachers Insurance and Annuity Association – College
Retirement Equities Fund (TIAA-CREF), New York, NY 10017



FINANCIAL SERVICES
FOR THE GREATER GOOD™

A10754 (11/05)



FINANCIAL SERVICES
FOR THE GREATER GOOD™

For those investing in annuities who seek a high degree of safety, TIAA Traditional falls into the guaranteed asset class. Because the earnings — consisting of the minimum interest rate plus “additional amounts” — may vary from year-to-year, calculating your earnings can be a bit confusing.

This brochure is designed to show you how to calculate your earnings from TIAA Traditional. It takes you through the process in a step-by-step instruction that should make the calculation easier to understand.

WHAT IS A TIAA TRADITIONAL ANNUITY?

TIAA-CREF offers fixed and variable annuity accounts in different asset classes. The TIAA Traditional Annuity is one of 10 annuity accounts currently available to TIAA-CREF participants. Representing the guaranteed asset class, the TIAA Traditional Annuity offers maximum safety. During the accumulation phase, TIAA Traditional guarantees your principal and a minimum interest rate, and also offers the opportunity for additional growth through additional amounts — which have been declared every year since 1948 for Retirement Annuities. These additional amounts, when declared, remain in effect for the “declaration year,” which currently begins on March 1.

For its stability, sound investments, claims-paying ability, and overall financial strength, TIAA currently holds the highest possible ratings from all four of the nation’s leading ratings agencies: A.M. Best Co.(6/05), Fitch (8/05), Moody’s Investors Service (4/05), and Standard & Poor’s (6/05). (These ratings of TIAA as an insurance company do not apply to the TIAA Real Estate Account or the CREF variable annuity accounts.)

WHAT DOES TIAA INVEST IN?

The TIAA general account, whose returns support the TIAA Traditional Annuity, invests in publicly traded bonds, direct loans to business and industry, mortgages, and real estate. Although you do not invest directly in TIAA’s portfolio, your accumulation and contractual earnings are guaranteed by TIAA’s financial strength and claims-paying ability.

WHAT ARE TIAA TRADITIONAL'S INTEREST RATES?

Your TIAA Traditional accumulation is credited with interest that consists of the contractually guaranteed rate (3% for most contracts), plus additional amounts above the guaranteed level. The additional amounts are established on a year-by-year basis and are not guaranteed for future years. When declared, they remain in effect for the “declaration year,” which currently runs from March 1 through the end of the following February.

TIAA's Vintage System

As noted above, the total interest rates credited to your TIAA Traditional accumulation consist of a contractually guaranteed interest rate plus additional amounts. *It's important to note, however, that all of your accumulation is not necessarily credited with one rate.* Instead, TIAA uses a vintage system, which means different rates are established for funds applied at different times. This approach recognizes that, since the level of prevailing interest rates varies over time, the TIAA general account's investments supporting contributions, applied at different times, may have significantly different results.

Please see TIAA Traditional's current rates.

You'll find TIAA Traditional's rates on your quarterly statements, or go to www.tiaa-cref.org. Click on “view standard performance” and then “retirement investments.”

HOW LONG DO EXISTING TIAA TRADITIONAL INTEREST RATES APPLY?

TIAA's rates for existing vintages are established for a year at a time — March 1 through the end of the following February.

HOW OFTEN CAN “NEW MONEY” RATES BE INTRODUCED?

TIAA's Board of Trustees may establish a new crediting rate for newly remitted contributions and transfers whenever there is a material change in the yields that TIAA is obtaining on new investments. This new rate would continue to be credited until the end of the following February, when the crediting rate level would be reconsidered by the Board of Trustees. The Board can determine to increase, decrease, or continue the same crediting rate level for the following declaration year.

HOW IS THE INTEREST I EARN ON MY TIAA TRADITIONAL ACCUMULATION CALCULATED?

The rates TIAA credits for the various vintages are quoted as *effective annual rates*, with interest compounded daily. This means that your accumulation — or the portion of your accumulation in a particular vintage — is credited with the stated rate, assuming interest is earned for one full year.

Here's an example of how to calculate the earnings for a period of less than a year.

The basic formula is:

$$(1 + i)^{n/365} - 1^*$$

i = effective annual interest rate

n = number of days in the period

** If this calculation is done during a leap year, the formula is $(1 + i)^{n/366} - 1$.*

Let's assume that you have an accumulation of \$105,000 as of the end of the day on March 31 and it's all in the same vintage, which is being credited with interest at a rate of 6.50%. You want to calculate the earnings on your accumulation for a three-month period from April 1 through June 30.

Step 1:

Determine the number of days interest will be earned = 91 days

Step 2:

$$(1 + .065)^{91/365} - 1 = (1.065)^{(.249315068)} - 1$$

Step 3:

$$(1.065)^{(.249315068)} - 1 = 1.015824468 - 1$$

Step 4:

$$1.015824468 - 1 = .015824468$$

The interest rate factor = .015824468

Once you've determined the interest rate factor, you:

Calculate the amount earned

Accumulation at beginning of period x interest factor = amount earned during the period

$$\$105,000 \times .015824468 = \$1,661.57$$

Determine your new accumulation

Accumulation at beginning of period + amount earned = new accumulation

$$\$105,000 + 1,661.57 = \$106,661.57$$

You can use this calculation method for your entire accumulation, if all of your money is in one vintage. Chances are, however, your accumulation is spread over two or more vintages. This significantly changes the way the calculation is done because TIAA additional amounts are “rolled forward.”

WHAT DOES “ROLL FORWARD” MEAN?

This means that interest — above the guaranteed amount (usually 3%) — credited to an accumulation in a certain vintage is “rolled forward” and treated like a new contribution. Thus, the additional amounts credited are applied to the newest or “current” vintage, rather than the vintage containing the accumulation on which the additional amounts were earned.

To show you what that means in terms of calculating your earnings, here's an example...

Remember the basic formula:

$$(1 + i)^{n/365} - 1$$

i = effective annual interest rate

n = number of days in the period

Let's assume that you want to calculate *one day's earnings* and you have an accumulation of \$105,000 spread out in three vintages: \$75,000 is in a vintage whose rate is 6% — we'll call that Vintage One. Another \$25,000 is in a vintage whose rate is 6.25% — we'll call that Vintage Two. You also have \$5,000 in the current vintage, whose rate is 6.50% — called Current Vintage.

In effect, you calculate guaranteed earnings (3%) separately for each vintage and roll forward the additional amounts to the current vintage. We have three vintages in this example — Vintage One is 6%; Vintage Two is 6.25%; Current Vintage is 6.50% — but you may have more or fewer vintages, depending on how long you've been contributing to the TIAA Traditional Annuity.

Vintage One — \$75,000.00

Step 1:

Calculate the **total** interest:

$$\$75,000.00[(1.06)^{1/365} - 1] = \$11.97$$

Step 2:

Calculate the guaranteed amount:

$$\$75,000.00[(1.03)^{1/365} - 1] = \$6.07$$

Step 3:

Calculate the additional amounts earned:

$$\$11.97 - \$6.07 = \$5.90$$

Step 4:

Total Vintage One accumulation:

Beginning of day	\$75,000.00
Guaranteed interest	+ \$6.07

End of day accumulation

Vintage One **\$75,006.07**

You repeat this process for each vintage.

So the next step in our example is...

Vintage Two — \$25,000.00

Step 1:

Calculate the **total** interest:

$$\$25,000.00[(1.0625)^{1/365} - 1] = \$4.15$$

Step 2:

Calculate the guaranteed amount:

$$\$25,000.00[(1.03)^{1/365} - 1] = \$2.02$$

Step 3:

Calculate the additional amounts earned:

$$\$4.15 - \$2.02 = \$2.13$$

Step 4:

Total Vintage Two accumulation:

Beginning of day	\$25,000.00
Guaranteed interest	+ \$2.02

End of day accumulation

Vintage Two **\$25,002.02**

Current Vintage — \$5,000.00

Step 1:

Calculate the **total** interest:

$$\$5,000.00[(1.0650)^{1/365} - 1] = \$.86$$

Step 2:

Calculate the guaranteed amount:

$$\$5,000.00[(1.03)^{1/365} - 1] = \$.40$$

Step 3:

Calculate the additional amounts earned:

$$.86 - \$.40 = \$.46$$

Step 4:

Additional amounts rolled forward
from other vintages:

$$\$5.90 + \$2.13 = \$8.03$$

Step 5:

Total Current Vintage accumulation:

Beginning of day	\$5,000.00
Guaranteed interest	+ \$.40
Additional amounts from Current Vintage	+ \$.46
Additional amounts rolled forward	+ \$8.03

End of day accumulation

Current Vintage **\$5,008.89**

You then take the end of the day accumulation calculated for each vintage and add them together to arrive at your new total accumulation. This total represents the sum of the beginning of the day accumulations in each vintage, plus guaranteed interest, plus additional amounts.

End of the Day Value:

Vintage One	\$75,006.07
Vintage Two	+ \$25,002.02
Current Vintage	+ \$5,008.89
New Total Accumulation	\$105,016.98

The final step in determining *one day's earnings* is to subtract the total accumulation at the beginning of the day from the total accumulation at the end of the day.

Total accumulation at the end of the day:

\$105,016.98

Total accumulation at the beginning of the day:

\$105,000.00

Total earned in one day:

$\$105,016.98 - \$105,000.00 = \$16.98$

NOTE: Keep in mind that this process calculates earnings for one day only. So to get accurate results for a 30-day period, for example, you must do the calculation each day. You would have to repeat the process daily using the "end of the day" value for day 1 as the "beginning of the day" value for day 2, etc.

WHERE CAN I FIND TIAA'S CURRENT INTEREST RATES?

Rates currently being credited on each vintage are included on the performance insert in your quarterly statements. And you can also get information on our website at **www.tiaa-cref.org**. Just click on "view standard performance" and then "retirement investments" for information on TIAA's rates.

HOW CAN I FIND OUT THE RATES MY ACCUMULATION IS EARNING?

To find out the vintages or different rates your current accumulation is earning, just call our Telephone Counseling Center at **800 842-2776**. Consultants are available weekdays from 8 a.m. to 10 p.m., and Saturdays from 9 a.m. to 6 p.m. (ET).