\*

APY=100 (Interest/Principal)

\*

\*

## Examples \*

(3) If an institution offers a \$1,000 two-year certificate of deposit that distributes interest semi-annually by check or transfer, and there is annual compounding at a 6.00% interest rate, using the general formula above, the annual percentage yield is 6.09% for an account with semi-annual checks. and 6.00% for an account where interest is left in the account for compounding.  $APY=100[(1+(125.51/1,000))^{(365/730)}-1]$ APY=6.09%  $APY=100[(1+(123.60/1,000))^{(365/730)}-1]$ 

APY=6.00%

(4) If an institution offers a \$1,000 two-year certificate of deposit that compounds daily and distributes monthly interest checks at a 6.00% interest rate, using the general formula above, the annual percentage yield is 6.18%, for consumers who leave interest in the account and for those who receive monthly checks:

APY=100[(1+(127.49/1,000)) (365/730)-1] APY=6.18%

The revisions and additions under the first alternative would read as follows:

## Appendix A to Part 230—Annual **Percentage Yield Calculation**

The annual percentage yield measures the total amount of interest earned or imputed on an account based on the interest rate and the frequency of compounding or interest distributions.<sup>1</sup> The annual percentage yield is expressed as an annualized rate, based on a 365-day year.<sup>2</sup> Part I of this appendix discusses the annual percentage yield calculations for account disclosures and advertisements, while Part II discusses annual percentage yield earned calculations for periodic statements.

## Part I. Annual Percentage Yield for Account Disclosures and Advertising Purposes

A. General Rules

1. General. In general, the annual percentage yield for account disclosures under §§ 230.4 and 230.5 and for

advertising under §230.8 is an annualized rate that reflects the relationship between the amount of interest that would be earned by the consumer for the term of the account (taking into account the frequency of interest distributions or compounding) and the amount of principal used to calculate that interest. Special rules apply to accounts with tiered and stepped interest rates. The annual percentage yield shall be calculated by the formula shown in paragraph 2. of Part I.A. of this appendix. Institutions shall calculate the annual percentage vield based on the actual number of days in the term of the account. For accounts without a stated maturity date (such as a typical savings or transaction account), the calculation shall be based on an assumed term of 365 days. In determining the total interest figure to be used in the formula, institutions shall assume that no withdrawals or deposits of principal occur during the term. For time accounts that are offered in multiples of months, institutions may base the number of days on either the actual number of days during the applicable period, or the number of days that would occur for any actual sequence of that many calendar months. If institutions choose to use the latter rule, they must use the same number of days to calculate the dollar amount of interest earned on the account that is used in the annual percentage yield formulas. If interest is paid to the account or to the consumer from the account by check or transfer monthly, quarterly or semi-annually, institutions may base the number of days on either the actual number of days for those intervals, or the following assumed intervals: monthly, 30 days; quarterly, 91 days; and semi-annually, 182 days. If institutions choose to use the latter rule, they must use the same number of days to calculate the dollar amount of interest earned on the account that is used to determine when interest was paid to the account or to the consumer from the account. Institutions may base the dollar amount of a deposit on either the actual amount of the deposit or an assumed deposit of \$1,000.

2. Formula for all accounts. The following formula may be used for all accounts. It shall be used for all accounts where interest is paid prior to the maturity of the account. This formula reflects the specific frequency of interest payments to the consumer. Deposit=First payment/(1+APY/100)<sup>Day</sup>

of deposit to day of first payment/365 +Succeeding payment/(1+APY/100)Day

of deposit to succeeding payment/365

+Final Payment/(1+APY/100)Day of deposit to day of final payment/365

a. "APY" is the annual percentage yield paid on the deposit.

b. "Deposit" is the initial deposit.c. "First payment" is the amount of

the first interest payment made during the term of the account. d. "Succeeding payment" is the

amount of each succeeding interest payment, excluding the first and final payments, made during the term of the account.

e. "Final payment" is the amount of the final payment including principal made at the end of the account.

f. "Day of deposit to day of first payment" is the number of days between the day of the initial deposit and the first payment.

g. "Day of deposit to succeeding payment" is the number of days between the day of the initial deposit and each succeeding payment.

h. "Day of deposit to day of final payment" is the actual number of days in the term of the account.

## Examples

(1) For a \$1,000 two-year CD (with a 6.00% interest rate and a .01644% daily periodic rate, and no compounding but semi-annual interest payments), an institution makes two midyear interest payments of \$29.92 on day 182 of each year (days 182 and 547) and two interest payments of \$30.08 at each year's end (days 365 and 730). Using the formula in paragraph 2. of Part I.A. of this appendix, the annual percentage yield is 6.09%:

1,000=29.92/(1+APY/100)182/365+30.08/ (1+APY/100)<sup>365/365</sup>+29.92/(1+APY/ 100)<sup>547/365</sup>+1030.08/(1+APY/ 100)730/365

Daily yield=.01619%

APY=6.09%

(2) For a \$1,000 one-year CD (with a 6.00% interest rate and a .01644% daily periodic rate, compounded semiannually), an institution which allows the consumer to elect quarterly interest payments assumes three quarterly interest payments of \$14.96 at 91-day intervals (days 91, 182 and 273), and a final payment of \$1015.12 on day 365. Using the formula in paragraph 2. of Part I.A. of this appendix, the annual percentage yield for the quarterly payment option is 6.14%:

 $1,000=14.96/(1+APY/100)^{91/365}+14.96/$ (1+APY/100)182/365+14.96/(1+APY/ 100)<sup>273/365</sup>+1015.12/(1+APY/ 100)365/365

Daily yield=.01632% APY=6.14%

3. Formula for certain accounts. The formula under this paragraph may be

<sup>&</sup>lt;sup>1</sup>The annual percentage yield reflects only interest and does not include the value of any bonus (or other consideration worth \$10 or less) that may be provided to the consumer to open, maintain, increase or renew an account. Interest or other earnings are not to be included in the annual percentage yield if such amounts are determined by circumstances that may or may not occur in the future.

<sup>&</sup>lt;sup>2</sup> Institutions may calculate the annual percentage yield based on a 365-day or a 366-day year in a leap vear.