



FEDERAL RESERVE BANK
OF DALLAS

ROBERT D. McTEER, JR.
PRESIDENT
AND CHIEF EXECUTIVE OFFICER

December 13, 1993

DALLAS, TEXAS
75265-5906

Notice 93-129

TO: The Chief Executive Officer of each member bank and others concerned in the Eleventh Federal Reserve District

SUBJECT

Proposed Amendments to Regulation DD
(Truth in Savings)

DETAILS

The Federal Reserve Board has issued for public comment proposed amendments to Regulation DD (Truth in Savings). The proposed changes would provide greater precision in calculating the annual percentage yields (APY) for certain accounts.

Under the proposed revisions, the APY would reflect not only the effect of compounding but also the time value of money for consumers who receive interest payments during the term of the account. The amendments would not affect accounts that make a single interest payment at maturity (whether or not compounding occurs), nor would they affect most accounts with daily compounding.

The Board is also asking for comments on whether a narrower approach is preferable or if the regulation should remain unchanged, given the potential burden associated with implementing a different calculation method at this time.

The Board must receive comments by January 13, 1994. Comments should be addressed to William W. Wiles, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, D.C. 20551. All comments should refer to Docket No. R-0812.

ATTACHMENT

A copy of the Board's notice (Federal Reserve System Docket No. R-0812) is attached.

MORE INFORMATION

For more information, please contact Eugene Coy at (214) 922-6201.
For additional copies of this Bank's notice, please contact the Public Affairs
Department at (214) 922-5254.

Sincerely yours,

Robert D. McTeer, Jr.

FEDERAL RESERVE SYSTEM

12 CFR Part 230

[Regulation DD; Docket No. R-0812]

Truth in Savings; Proposed Regulatory Amendment

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Proposed rule.

SUMMARY: The Board is publishing for comment proposed amendments to Regulation DD (Truth in Savings) to provide a more precise calculation of annual percentage yields (APYs) for certain accounts under a uniform method that gives consumers an enhanced basis for comparing across a broad range of accounts. This action is taken in response to reported difficulties that some institutions have experienced with the current formula. Under the proposal, the APY would reflect not only the effect of compounding but also the time value of money for consumers who receive interest payments during the term of the account. The amendments would not affect accounts that make a single interest payment at maturity (whether or not compounding occurs), nor would they affect most accounts with daily compounding. The Board also solicits comment on whether taking a narrower approach -- or leaving the regulation unchanged -- is preferable, given the potential burden associated with implementing a different calculation method at this time.

DATES: Comments must be received on or before January 13, 1994.

ADDRESSES: Comments should refer to Docket No. R-0812, and may be mailed to William W. Wiles, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, DC 20551. Comments also may be delivered to Room B-2222 of the Eccles Building between 8:45 a.m. and 5:15 p.m. weekdays, or to the guard station in the Eccles Building courtyard on 20th Street, N.W. (between Constitution Avenue and C Street) at any time. Comments may be inspected in Room MP-500 of the Martin Building between 9:00 a.m. and 5:00 p.m. weekdays, except as provided in 12 CFR 261.8 of the Board's rules regarding the availability of information.

FOR FURTHER INFORMATION CONTACT: Jane Ahrens, Kyung Cho, Kurt Schumacher or Mary Jane Seebach, Staff Attorneys, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System, at (202) 452-3667 or 452-2412; for questions associated with the regulatory flexibility analysis, Gregory Elliehausen, Economist, Office of the Secretary, at (202) 452-2504; for the hearing impaired only, Dorothea Thompson, Telecommunications Device for the Deaf, at (202) 452-3544.

SUPPLEMENTARY INFORMATION: (1) Background. The Truth in Savings Act (act) (12 U.S.C. 4301 et seq.) requires depository institutions to provide disclosures to consumers about their deposit accounts, including an APY on interest-bearing accounts.¹ The law also contains rules about advertising deposit accounts, including accounts at depository institutions offered to consumers by deposit brokers. The Board is authorized in section 269(a)(3) of the act to make adjustments and exceptions that, in its judgment, are necessary or proper to carry out the purposes of the act or to facilitate compliance with the requirements of the act. The act is implemented by the Board's Regulation DD (12 CFR part 230), which became effective June 21, 1993. (See final rule published on September 21, 1992 (57 FR 43337), correction-notice published on October 5, 1992 (57 FR 46480); and amendments published on March 19, 1993 (58 FR 15077).)

Time value of money in the annual percentage yield

In implementing the Truth in Savings Act, the Board sought to fulfill the Congress's intent to provide consumers with a uniform tool that would enable them to make informed decisions regarding deposit accounts. In the rulemaking that resulted in the final rule of September 1992, the Board was guided by several general principles, such as establishing simple rules that minimize the possibility of errors and compliance costs and providing institutions with flexibility to promote a variety of product choices for consumers. This included designing a simple, easy-to-use formula for calculating the APY.

It has since come to the Board's attention that for some accounts the regulation's current formula for calculating the APY produces results that seem anomalous. The formula assumes that interest paid remains on deposit until maturity. Because the formula sometimes ignores the opportunity to reinvest interest received, it does not always reflect the time value of money. When consumers receive interest payments over several years prior to maturity, the formula produces results that seem especially anomalous, an APY that is lower than the contract interest rate.²

Yet for other accounts in which interest is paid before maturity, the current formula effectively reflects the time value of money in the resulting APY. This situation occurs when interest is compounded on an account that gives consumers the option to take interest payments at intervals when the interest would otherwise compound. In this circumstance, the

¹For convenience, the terms "APY" and APYE" (for annual percentage yield earned) are used throughout the supplementary information.

²For example, assume a consumer deposits \$1,000 in a two-year noncompounding CD with a 6.00% interest rate. If the institution pays out interest annually, the consumer receives \$60 each year. Because the formula reflects only the total amount of interest paid regardless of when it is paid out (\$120 at the end of two years, in this example), the APY for the two-year CD is 5.83% -- which is lower than the 6.00% interest rate.

APY disclosed is the same for consumers who receive interest payments as for those who choose to leave interest in the account for compounding.³

To reduce these apparent anomalies and account for the timing of interest payments, the Board is soliciting comment on proposed amendments to Regulation DD that provide a single alternative formula for calculating the APY. The Board believes the act's purposes -- providing a uniform method of computing the APY for effective comparison shopping -- are better fulfilled by a formula that captures both total interest paid and the timing of interest payments. Because the calculation would be more precise, the Board believes it may be preferable to the current computation method. The Board is concerned that amending the regulation at this time and in the manner proposed might have a significant impact on the compliance programs many institutions have already put in place to comply with Regulation DD. If the burden of compliance costs is shown to exceed the benefits consumers may derive from the proposed calculation, the Board will consider whether a narrower solution, or making no change to the regulation, may ultimately be more satisfactory.

(2) Proposed regulatory revisions.

Approach A: Proposal of additional formula

The Board is proposing for comment a new formula for the APY that reflects not only the effect of compounding, but also the value of receiving interest during the term of the account. Institutions offering accounts that pay interest only at maturity (regardless of whether or when compounding occurs) and accounts that compound daily (other than accounts involving stepped-rate calculations) would not be affected by this proposal.

The proposal bases the calculation of the APY on a commonly-used computation tool, a standard internal rate of return formula. This formula, labeled "Formula for all accounts," appears in Appendix A, section 1.A., below. Although the proposed formula may be used by institutions to calculate APYs for all accounts, at their option, use of the formula would be required for institutions offering accounts involving stepped-rate calculations that make interest payments prior to maturity. It also would be required for accounts that pay interest prior to maturity if interest is not compounded daily. If any change to the current rule is adopted, the Board contemplates providing institutions with a sufficient period -- such as nine months from the date the amendments become final -- to implement any necessary changes in operating systems before compliance with the amendments become mandatory.

³To illustrate, assume a consumer deposits \$1,000 in a one-year CD with a 6.00% interest rate that compounds quarterly. The consumer receives \$61.40 in interest at maturity, and the institution discloses a 6.14% APY. If the consumer receives interest checks each quarter, the current APY is still 6.14%, because the regulation requires the institution to assume that interest continues to compound in the account until maturity. In this case the consumer receives only \$60 in four \$15 quarterly payments.

The Board believes that the new formula would provide more helpful information to consumers for making investment decisions in the marketplace, given that depository institutions often offer consumers a choice regarding interest payments on deposit accounts. After considering many alternatives, the Board believes an internal rate of return formula is the best method for computing the APY in a way that fulfills the Congress's intent to provide consumers with a uniform tool to compare accounts.

The Board is aware that requiring the use of the new formula would affect existing format, account disclosure, and advertising requirements, among others. The Board is concerned that amending the regulation not long after its effective date could impose additional burdens on depository institutions, and asks for general comment on the potential cost. To help weigh the burden against the potential advantage to consumers, the Board also solicits comment on whether commenters believe the new calculation would improve or reduce the value of the APY in consumer comparisons of investment choices in the marketplace.⁴

The Board is also aware of differences in disclosed returns among various investment products. For example, a two-year Treasury note sold at par value that bears a coupon rate of 6.00% and makes semi-annual interest payments states a 6.00% yield. In contrast, a two-year CD with a noncompounding 6.00% interest rate and semi-annual interest payments would disclose a 5.83% APY under the current formula and a 6.09% APY under the proposal. Would these kinds of differences cause significant confusion for consumers?

Approach B: Noncompounding multi-year CDs

In considering whether to propose a new APY formula, the Board discussed taking a narrower approach that would address only the calculation of APYs for noncompounding CDs that have maturities longer than one year and that provide interest payments at least annually. The current formula produces a APY that is lower than the contract interest rate even if institutions make interest payments at least annually. Under the alternative approach considered by the Board, the APY for a multi-year CD that does not compound but pays interest at least annually would always be the same as the contract interest rate.⁵ This

⁴For example, under the current formula, a 5.83% APY is disclosed for a two-year CD with a noncompounding 6.00% interest rate and semi-annual interest checks. Under the proposal, a 6.09% APY would be disclosed (reflecting the value of the semi-annual interest checks).

⁵An example is a two-year CD that pays a 6.00% interest rate and does not compound interest but pays out interest checks at the end of each year. Under the current regulation, institutions would disclose a 5.83% APY, but under Approach B institutions would disclose a 6.00% APY whether checks are sent annually or more frequently.

approach corresponds to the way in which the return is calculated on Treasury securities and similar investments when they are purchased at par value.⁶

The Board recognizes that this narrower approach would produce less precise calculations than would the use of an internal rate of return formula because the resulting APY would not reflect differences in periodic interest distributions. For example, it would not differentiate between annual or monthly interest payments. Compared to the current rule, how would a narrower approach improve or reduce the value of the APY in comparing different accounts? If commenters believe a narrower approach is preferable, how would the compliance costs to implement the narrower rule compare to the costs to implement the formula proposed in Approach A?

Approach C: Leaving the regulation unchanged

In light of concerns about requiring changes soon after the regulation's effective date and questions about whether the costs of the proposed changes could outweigh the benefits to consumers, the Board solicits comments on whether the regulation should be left unchanged.

(3) Section-by-section analysis.

A section-by-section description of proposed amendments follows.

SECTION 230.2 -- Definitions

Paragraph (c) -- Annual percentage yield

The act and regulation define the APY as the total amount of interest that would be received based on the interest rate and the frequency of compounding for a 365-day year. The proposed amendment broadens the definition to treat the distribution of interest to the consumer as the equivalent of compounding. For example, if an institution pays a 6.00% interest rate on an account, the same APY would result whether an institution compounds monthly or sends out monthly interest payments.

Section 269 of the act authorizes the Board to make adjustments and exceptions that are necessary or proper to carry out the purposes of the act. The Board solicits comments on whether an exception should be made to the definition of APY, and whether the purpose of the regulation -- enabling consumers to make informed decisions about deposit accounts -- is better met if the APY captures the time value of interest received as an interest payment during the term of the account, as well as by compounding.

⁶Treasury notes and bonds provide semi-annual interest payments, and the investment yield reflects the interest coupon rate and whether the securities are sold at a discount or a premium.

Paragraph (i) -- Crediting

The act and regulation require institutions to disclose crediting policies for interest-bearing accounts. The Board proposes to define the term "crediting" to include the payment of interest to a consumer, either by payment to the account or by check or transfer to another account. The Board believes that using a single term to describe the various methods by which interest is paid to a consumer will simplify the regulation (particularly Appendix A, dealing with the APY formula). A uniform definition also would ease compliance when institutions disclose their interest crediting frequencies. (See paragraph 4(b)(2).) The Board believes that the term "compounding" -- when interest begins to earn interest in an account -- has a uniform meaning in the industry; thus, a regulatory definition is not proposed. The Board requests comment on the proposed definition of "crediting" and on whether the term "compounding" should be defined.

Section 230.4 -- Account Disclosures

Paragraph (b)(6) -- Features of time accounts

Paragraph (b)(6)(iii) -- Withdrawal of interest prior to maturity

The regulation contains a disclosure for institutions offering time accounts that compound interest and permit a consumer to withdraw accrued interest during the account term. Institutions must currently disclose that the APY assumes interest remains on deposit until maturity of the account and that interest withdrawals will reduce the earnings on the account. The proposal would delete the disclosure as unnecessary since, under the proposed amendments, the APY would reflect the receipt of interest at specific time intervals.

Section 230.5 -- Subsequent Disclosures

Paragraph (a) -- Change in terms

Paragraph (a)(2) -- No notice required

Paragraph (a)(2)(iv) -- Changes to the frequency of interest payments initiated by the consumer

The act and regulation require institutions to give 30-days' advance notice of any change in the account disclosures if the change might reduce the APY or adversely affect the consumer.

The proposal would create an exception for changes to the interest-payment intervals that are initiated by the consumer. For example, if a consumer receives monthly interest payments on an account and prior to maturity requests the institution to start making payments semi-annually, no advance notice would be required. However, if an institution that permits interest payments monthly eliminates that payment option during the term of an account, advance notice would be required for consumers who are receiving monthly payments.

Section 269 of the act authorizes the Board to make adjustments and exceptions that are necessary or proper to carry out the purposes of the act. The Board solicits comment on whether the proposed exception to the change-in-terms notice requirements should be made.

Appendix A to Part 230 - Annual Percentage Yield Calculation

Part I. Annual percentage yield for account disclosures and advertising purposes

A. General rules

Appendix A establishes the rules that institutions use to calculate the APY. Currently, Part I contains the calculations for account disclosures and advertisements. Two APY formulas are provided: A "general" formula that can be used for all types of accounts and a "simple" formula that can be used for accounts that have a maturity of one year or that have an unstated maturity. Assumptions and other general rules regarding the formulas are addressed in section I.A.

As discussed above, the Board proposes to add a formula that takes into account the time value of money based on when the consumer receives interest. The general rules applicable to all APY calculations for account disclosures and advertisements would appear in Part I.A. A new section I.A.1. would explain the proposed new formula and accompanying rules for calculations, and section I.A.2. would explain when institutions may use the existing formula.

The proposal would change some assumptions. For example, the current formula generally requires institutions to assume that all interest and principal remain on deposit and that no transactions (deposits or withdrawals) occur during the term of the account. Because the proposed new formula factors in the timing of interest payments, institutions would continue to assume that no deposits occur during the term of the account, but would consider when interest withdrawals are made.

The Board proposes to delete footnote 3 as unnecessary, given that the proposed formula specifically factors in when interest payments are made on an account.

The Board proposes to incorporate two assumptions to provide greater flexibility and ease compliance with the new formula. First, institutions could calculate the APY by assuming an initial deposit amount of \$1,000. Or, institutions could factor in the actual dollar amount of a deposit, although the Board notes that the effects of rounding interest paid on a very small deposit amount such as \$25 can produce a skewed APY.

Second, if interest is paid out monthly, quarterly, or semi-annually, institutions could base the number of days either on the actual number of days for those intervals or on an assumed number of days (30 days for monthly distributions, 91 days for quarterly distributions, and 182 days for semiannual distributions). Appendix A currently permits institutions to use a similar assumption for determining the number of days in the term of a "three-month" or

"six-month" time account, for example. (Of course, if the institution chooses to use 91 days as the number of days for each quarter, it must also use 91 days to compute interest for those quarters. And see § 230.7, which requires institutions to pay interest on the full principal balance in the account each day.) To illustrate, assume the institution sends interest payments at the end of each calendar month to consumers with six-month CDs. If the institution bases its APY calculation on an assumed term of 183 days, the institution could calculate the effect of monthly interest payments by using the actual days in each calendar month or assuming five 30-day intervals and one 33-day interval.) The Board solicits comment on the proposed assumptions.

1. Formula for all accounts

The new formula, which is a standard internal rate of return formula, could be used for all accounts. It would have to be used for accounts that: (1) involve stepped-rate calculations (regardless of the compounding frequency) that pay interest prior to the maturity of the account, and (2) pay interest prior to the maturity of the account if interest is not compounded daily. For example, institutions would use the formula to calculate the APY for a one-year time account that compounds semi-annually and for which the consumer receives interest payments during the year. Institutions also would use the formula for stepped-rate accounts, with daily compounding, where the consumer receives interest payments during the term of the account.

The proposed formula and the existing formula produce the same result for two commonly offered accounts (and, thus, institutions could use either formula to calculate the APY): (1) accounts where interest is paid only in a single payment at maturity (whether or not interest is compounded), and (2) accounts not requiring stepped-rate calculations that compound interest daily. For transaction accounts such as NOW accounts and money market deposit accounts (MMDAs), institutions could continue to use the existing formula unless they do not compound daily or unless they require stepped-rate calculations, in which case they would disclose an APY based on the new formula.

The APY is determined directly from the proposed formula. For an internal rate of return program that is standard for most calculators and software, calculations would consider the amount and days at which payments are made in relation to the amount and day of the deposit. Using standard programs, the calculation will result in a daily yield, which is annualized to produce the APY.⁷ To ease compliance and calculations with standard programs for internal rates of return, the proposed examples include figures such as the daily periodic rate and daily yield. The Board solicits comment on the proposed formula and proposed examples, and whether additional examples should be given.

⁷Annual percentage yield = $(\text{daily yield}/100 + 1)^{365} - 1$.

2. Formula for certain accounts

Proposed section I.A.2. contains the formulas currently in Appendix A. Institutions could continue to use them for accounts with a single interest payment made at maturity (whether or not compounding occurs prior to maturity). These formulas may also be used for accounts that compound daily and pay interest prior to maturity -- except for accounts involving stepped-rate calculations. When these formulas are used for accounts that compound daily, the time value of money is reflected by the assumption that interest remains in the account, even though consumers may choose to receive interest payments during the term of the account (as Example 2 illustrates).

Institutions offering stepped-rate accounts (or variable-rate accounts with an introductory premium or discount rate) that compound daily (or on another frequency) and pay interest prior to the maturity of the account would be required to use the proposed formula rather than the existing formula. Otherwise, the APY would reflect the assumption that interest earned at the initial rate remains in the account and earns interest at the rate paid in succeeding periods.

B. Stepped-Rate Accounts (Different Rates Apply in Succeeding Periods)

This paragraph provides two examples for calculating the APY for accounts that have two or more interest rates that take effect in succeeding periods and are known when the account is opened (stepped-rate accounts). Minor amendments to the text, without substantive change, are proposed. Also, an additional example is proposed to illustrate the use of the new formula.

C. Variable-Rate Accounts

Appendix A currently provides that the APY for a variable rate account with an introductory premium (or discount) must be calculated like a stepped-rate account, and provides an example using the current "simple" formula. The Board proposes to modify the example in Part I.C. to illustrate the use of the proposed new formula.

Part II. Annual percentage yield earned for periodic statements

Institutions that send periodic statements for interest-bearing accounts must disclose information, including the annual percentage yield earned (APYE). The APYE is tied to the interest earned and the account balance for the period reflected on the statement. Appendix A, Part II, sets forth two formulas for calculating the APYE: a general formula and a formula for accounts that compound interest and send periodic statements more frequently than the compounding period.

Under the proposal, a savings account that compounds quarterly but permits monthly interest payments would disclose an APY reflecting the value of receiving interest monthly rather than quarterly. For example, an institution offering an MMDA with a 6.00% interest rate

would disclose a 6.17% APY to consumers who chose to receive monthly interest payments. However, if periodic statements are sent quarterly, the APYE would be lower than the disclosed APY (in this example, 6.14%, assuming an initial deposit of \$1,000 and no activity in the account during the 91-day quarter).

The Board recognizes that the APYE may vary from the APY disclosed in advertisements and in account-opening disclosures, depending on the activity in an account during a statement cycle. This is the case regardless of whether periodic statements are sent at the same or a different frequency as interest distributions or compounding periods. The Board believes the proposed changes to the calculation of the APY do not require a corresponding amendment to the rules regarding the calculation of the APYE. However, the Board solicits comment on the potential differences between the APY that may be disclosed under the proposal and the APYE, and whether consumers are likely to be confused by those differences.

Appendix B – Model clauses and sample forms

1. **B-1 Model Clauses**. Clause (b)(i) provides model language that may be used to disclose the frequency of an institution's compounding and crediting practices. The proposal adds a new sentence providing model language to use when interest is credited by check payments or transfer to another account. In accord with the proposed deletion of paragraph 4(b)(6)(iii), the Board also proposes to delete clause (h)(iii), and to redesignate clause (h)(iv) as (h)(iii).
2. **B-7 Sample Form**. Given the proposed deletion of paragraph 4(b)(6)(iii) and model clause B-1(h)(iii), the proposal would delete the last two sentences in the first paragraph of the sample form.
3. **B-7a Sample Form**. The proposed new sample form illustrates a disclosure for a CD that offers consumers the options to compound interest or to receive interest on a more frequent basis. The form discloses which interest payment option was chosen, and an APY reflecting that choice.

(4) Proposed additional guidance

The proposed regulatory amendments associated with a new APY formula raise other interpretive issues. The Board solicits comments on the issues addressed below.

Section 230.3(a) -- Form

Board believes that institutions must indicate in some manner which options and yields apply to the terms chosen by the consumer. The regulation provides institutions with great flexibility in designing their disclosures, as long as the information is presented in a format that allows consumers to readily understand the terms of their own accounts (see § 230.3(a)), as illustrated in proposed B-7a Sample Form.

Section 230.3(e) – Oral response to inquiries

The regulation provides that institutions must state the APY when responding to oral inquiries about rates. For example, on a one-year CD that pays an interest rate of 6.00%, compounds semi-annually, and permits interest to be withdrawn quarterly or monthly, the consumer could receive an APY of 6.09% (semi-annual compounding), or 6.14% (quarterly interest payments) or 6.17% (monthly interest payments) under the proposed formula. In stating an APY that will vary depending on a consumer's choice of interest payments, any of several approaches could be taken. An institution could:

- State any currently available APY.
- State any currently available APY, along with any compounding or crediting period, such as, "An annual percentage yield of 6.17% assumes you receive monthly interest payments."
- State the lowest and highest APYs for a given maturity.
- State all APYs for the account.

The Board solicits comment on which approach best serves consumers who are comparison shopping.

Section 230.4(a) -- Delivery of account disclosures

Paragraph 4(a)(2)(ii) -- Requests

The Board solicits comment on the approaches suggested for giving oral responses to requests for information (discussed in regard to paragraph 3(e)), as they would apply to responding to a request for written account disclosures.

Section 230.4(b)(1)(i) -- Annual percentage yield and interest rate

The Board believes the regulation would require institutions offering a variety of options for compounding or interest payments to disclose the APY reflecting the specific interest payment or compounding option chosen by the consumer, because disclosures must reflect the terms of the legal obligation (see § 230.3(b)). Indicating in some manner which of several yields preprinted on a rate sheet applies to the consumer's account would be an acceptable way of complying. (See § 230.3(a), which provides flexibility in designing disclosures.)

Section 230.4(b)(2) -- Compounding and crediting

Paragraph (b)(2)(i) -- Frequency

The regulation requires institutions to disclose the frequency with which interest is compounded and credited. This standard would require institutions also to specify the

crediting frequency for interest payments sent directly to the consumer or to another account, whether by check or other means, as well as when interest is credited to the account.

The Board believes that just as the disclosure of the compounding frequency permits consumers to correlate a higher APY with more frequent compounding periods, the disclosure of an interest payment frequency schedule for an account could assist consumers in understanding why APYs may vary. So, if a multi-year time account does not compound interest but pays interest annually, the proposal would require the institution to state that interest is credited annually. The Board solicits comment on the proposed disclosure and on whether stating the frequency of crediting by interest payments or transfers to other accounts is likely to help consumers compare and understand differences in the disclosed APYs.

Section 230.5(b) – Notice before maturity for time accounts longer than one month that renew automatically

Annual percentage yield

The regulation requires institutions to provide disclosures, including the APY, prior to maturity of automatically renewing time accounts. If the new interest rate and APY are known at the time the notice is sent, the Board believes institutions must state the interest rate and APY that correspond to the specific compounding and interest payment options applicable to the account at the time the notice is sent.

If the APY and interest rate are not known, institutions must disclose when that information will be available and provide a telephone number for consumers. The Board believes that oral responses giving specific APYs would be important to consumers in comparing accounts. However, the Board recognizes the potential cost of compliance for institutions that may not have online access to computerized account information about what options apply to a particular account. The Board solicits comment on the approaches for disclosure under paragraphs 3(e) and 4(a)(2)(ii) as they would apply to a renewing rollover CD.

Compounding and crediting frequency

The regulation requires institutions to disclose the specific compounding and crediting frequency applicable to renewing CDs. (See § 230.3(b), which requires that disclosures reflect the legal obligation of the account agreement.) The Board solicits comment on the approaches for disclosure under paragraphs 3(e) and 4(a)(2)(ii) as they would apply to the compounding and crediting frequencies of a renewing rollover CD. The Board solicits comment on the potential compliance costs for tracking and disclosing the consumer's current choice for compounding and crediting frequencies, particularly for accounts that require account disclosures to be given, such as CDs with maturities longer than one year.

SECTION 230.8(b) – Permissible rates

The Board solicits comment on whether an advertisement for an account offering consumers a variety of interest payment options may state any available APY. For example, assume an institution advertises a one-year CD that pays a 6.00% interest rate, compounds semi-annually, and permits interest to be withdrawn quarterly or monthly. May the institution advertise only one APY such as 6.17% (monthly interest payments), or must the advertisement disclose all three rates: 6.09% (semi-annual compounding), 6.14% (quarterly interest payments), and 6.17% (monthly interest payments)?

The Board solicits comment on this issue, and alternatives such as the desirability of requiring the lowest APY also to be stated if a higher APY is quoted. How would institutions' advertising be affected by these alternative requirements for advertising? Would institutions reduce the frequency of advertising yields, for example? How would these alternatives affect the value of the information that consumers receive from advertising? The Board also solicits comment on whether an advertisement should be considered misleading if it does not also state the interest payment frequency used in obtaining the advertised yield.

(5) **Form of comment letters.** Comment letters should refer to Docket No. R-0812, and, when possible, should use a standard typeface with a type size of 10 or 12 characters per inch. This will enable the Board to convert the text into machine-readable form through electronic scanning, and will facilitate automated retrieval of comments for review. Comments may also be submitted on 3 1/2 inch or 5 1/4 inch computer diskettes in any IBM-compatible DOS-based format, if accompanied by an original document in paper form.

(6) **Regulatory flexibility analysis and Paperwork Reduction Act.** The Board's Office of the Secretary has prepared an economic impact statement on the proposed revisions to Regulation DD. The analysis expresses reservations about whether the proposed amendment would significantly improve the value of the APY disclosure to consumers and concern about the desirability of amending the regulation regarding the calculation of the APY at this time. A copy of the analysis may be obtained from Publications Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551, at (202) 452-3245.

The Board solicits information regarding the likely costs for complying with the proposed changes to the APY formula, or a narrower approach that involves changes to the disclosure of the APY for noncompounding multi-year CDs. In particular, the Board solicits comments on the following:

- What proportion of existing accounts would require the new formula for computing APYs? Would institutions adopt the new formula only when required, or would they use the new formula for all accounts whether required or not?
- What changes would institutions have to make to implement the new formula and what would it cost institutions to make these changes?
- What changes in the number of different account terms and types of accounts offered would result if the new formula were adopted? For example, would institutions offer

consumers fewer choices? Would institutions change from compounding to distributing the interest paid on accounts without compounding?

In accordance with section 3507 of the Paperwork Reduction Act of 1980 (44 U.S.C. 35; 5 CFR 1320.13), the proposed revisions will be reviewed by the Board under the authority delegated to the Board by the Office of Management and Budget, after consideration of comments received during the public comment period.

List of Subjects in 12 CFR Part 230

Advertising, Banks, banking, Consumer protection, Deposit accounts, Interest, Interest rates, Truth in savings.

Certain conventions have been used to highlight the proposed revisions to the regulation. New language is shown inside bold-faced arrows, while language that would be deleted is set off with bold-faced brackets.

For the reasons set forth in the preamble, the Board proposes to amend 12 CFR part 230 as follows:

PART 230 -- TRUTH IN SAVINGS (REGULATION DD)

1. The authority citation for part 230 would continue to read as follows:

Authority: 12 U.S.C. 4301.

2. Part 230.2 would be amended by revising paragraph (c), by redesignating paragraphs (i) through (v) as paragraphs (j) through (w) and by adding a new paragraph (i) to read as follows:

§ 230.2 Definitions.

* * * * *

(c) Annual percentage yield means a percentage rate reflecting the total amount of interest paid on an account, based on the interest rate and the frequency of ► interest payments and ◀ compounding, for a 365-day period and calculated according to the rules in Appendix A of this part.

* * * * *

► (i) Crediting means the payment of interest to the account or to the consumer from the account by check or transfer to another account. ◀

* * * * *

3. Section 230.4 would be amended by removing paragraph 4(b)(6)(iii) and redesignating paragraph 4(b)(6)(iv) as 4(b)(6)(iii).

4. Section 230.5 would be amended by adding a new paragraph (a)(2)(iv) to read as follows:

§ 230.5 Subsequent Disclosures.

- (a) * * * * *
- (2) * * * * *

▶(iv) Changes to the frequency of interest payments initiated by the consumer.

Changes initiated by the consumer to the frequency of interest payments. ◀

5. Part 230 would be amended by revising the introductory paragraphs to Appendix A, by revising paragraphs A and B, by revising the final paragraph in paragraph C, and by removing footnote 3 in Part I of Appendix A, and by adding Sections I.A.1. and I.A.2. to read as follows:

APPENDIX A to PART 230 -- ANNUAL PERCENTAGE YIELD CALCULATION

The annual percentage yield measures the total amount of interest paid on an account based on the interest rate, and the frequency of compounding[,] ▶and interest payments◀.¹ The annual percentage yield is expressed as an annualized rate, based on a 365-day year.² 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◀

In general, the annual percentage yield for account disclosures under §§ 230.4 and 230.5 of this part and for advertising under § 230.8 of this part 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 ▶(and the frequency of interest payments)◀ and the amount of principal used to calculate that interest. [Special rules apply to accounts with tiered and stepped interest rates. A. General Rules] The annual percentage yield shall be calculated by the formula▶s◀ shown below. Institutions shall calculate the annual percentage yield 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

¹ 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.

² Institutions may calculate the annual percentage yield based on a 365-day or a 366-day year in a leap year.

on an assumed term of 365 days. [In determining the total interest figure to be used in the formula,] Institutions shall assume that [all principal and interest remain on deposit for the entire term and that no other transactions (deposits or withdrawals)] ▶ no deposits ◀ occur during the term.³ For time accounts that are offered in multiples of months, institutions may base the number of days either on 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 formula ▶ s ◀ [(where "Interest" is divided by "Principal")]. ▶ If interest is credited 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 for the crediting interval. Institutions may base the dollar amount of a deposit on either the actual amount of the deposit or an assumed deposit of \$1000.

1. Formula for all accounts

The following formula may be used for all accounts. It shall be used for stepped-rate accounts (and variable-rate accounts with an introductory premium or discount) where interest is paid prior to the maturity of the account. The formula also shall be used for accounts where interest is paid prior to the maturity of the account if interest is not compounded daily. This formula reflects the specific frequency of interest payments to the consumer.

$$\begin{aligned} \text{Deposit} &= \text{First payment}/(1 + \text{APY}/100)^{\text{Day of deposit to day of first payment}/365} \\ &+ \text{Succeeding payment}/(1 + \text{APY}/100)^{\text{Day of deposit to succeeding payment}/365} \\ &+ \dots \\ &+ \text{Final Payment}/(1 + \text{APY}/100)^{\text{Day of deposit to day of final payment}/365} \end{aligned}$$

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

"Deposit" is the initial deposit.

"First payment" is the amount of the first interest payment made during the term of the account.

³[This assumption shall not be used if an institution requires, as a condition of the account, that consumers withdraw interest during the term. In such a case, the interest (and annual percentage yield calculation) shall reflect that requirement.]

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

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

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

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

"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 above, the annual percentage yield is 6.09%:

$$1,000 = \frac{29.92}{(1 + APY/100)^{182/365}} + \frac{30.08}{(1 + APY/100)^{365/365}} + \frac{29.92}{(1 + APY/100)^{547/365}} + \frac{1030.08}{(1 + APY/100)^{730/365}}$$

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 semi-annually), 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 above, the annual percentage yield for the quarterly payment option is 6.14%:

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

Daily yield = .01632%

APY = 6.14%

2. Formula for certain accounts

The formula under this section I.A.2. may be used for accounts that make a single interest payment at maturity. The formula may also be used for accounts that compound daily regardless of when interest is credited, with one exception. This formula may not be used for stepped-rate accounts and variable-rate accounts with an introductory premium or discount that compound daily and pay interest prior to maturity. When using the formula, institutions shall determine the total interest figure to be used in the formula by assuming that

all principal and interest remain on deposit for the entire term and that no other transactions (deposits or withdrawals) occur during the term. ◀ The annual percentage yield is calculated by use of the following [general] formula ("APY" is used for convenience in the formulas):

$$APY = 100 [(1 + (\text{Interest}/\text{Principal}))^{(365/\text{Days in term})} - 1]$$

"Principal" is the amount of funds assumed to have been deposited at the beginning of the account.

"Interest" is the total dollar amount of interest earned on the Principal for the term of the account.

"Days in term" is the actual number of days in the term of the account.

When the "days in term" is 365 (that is, where the stated maturity is 365 days or where the account does not have a stated maturity), the annual percentage yield can be calculated by use of the following simple formula:

$$APY = 100 (\text{Interest}/\text{Principal})$$

Examples:

(1) If an institution pays [\$61.68] ▶ \$61.83 ◀ in interest for a 365-day year on \$1,000 deposited into a NOW account ▶ (with a 6.00% interest rate and daily compounding) ◀, using the [general] formula above, the annual percentage yield is [6.17] ▶ 6.18 ◀ %:

$$APY = 100 [(1 + ([61.68] ▶ 61.83 ◀ / 1,000))^{(365/365)} - 1]$$

$$APY = [6.17] ▶ 6.18 ◀ \%$$

Or, using the simple formula above (since, as an account without a stated term, the term is deemed to be 365 days):

$$APY = 100 (61.1[7] ▶ 8 ◀ / 1,000)$$

$$APY = 6.1[7] ▶ 8 ◀ \%$$

(2) If an institution [pays \$30.37 in interest on] ▶ offers ◀ a \$1,000 six-month certificate of deposit (where the six-month period used by the institution contains 182 days ▶, quarterly interest payments are sent, and there is daily compounding at a 6.00% interest rate ◀), using the [general] formula above, the annual percentage yield is 6.18%:

$$APY = 100 [(1 + (30.37/1,000))^{(365/182)} - 1]$$

$$APY = 6.18\%$$

B. Stepped-Rate Accounts (Different rates apply in succeeding periods.)

* * * * *

Examples

(1) If an institution offers a \$1,000 6-month certificate of deposit on which it pays a 5.00% interest rate, compounded daily, for the first three months (which contain 91 days), and a 5.50% interest rate, compounded daily, for the next three months (which contain 92 days), the total interest paid in a single payment at maturity for six months is \$26.68 and using the [general] formula in section I.A.2. above, the annual percentage yield is 5.39%:
 $APY = 100 [(1 + (26.68/1,000))^{(365/183)} - 1]$
 $APY = 5.39\%$

(2) If an institution offers a \$1,000 two-year certificate of deposit on which it pays a 6.00% interest rate, compounded daily, for the first year, and a 6.50% interest rate, compounded daily, for the next year, the total interest paid in a single payment at maturity is \$133.13 and using the [general] formula in section I.A.2. above, the annual percentage yield is 6.45%:
 $APY = 100 [(1 + 133.13/1,000)^{(365/730)} - 1]$
 $APY = 6.45\%$

▶(3) For a \$1,000 two-year certificate of deposit (with an interest rate of 6.00% and a daily periodic rate of .01644% the first year, and an interest rate of 6.50% and a daily periodic rate of .01781% the second year, no compounding but semi-annual interest payments), an institution makes two payments during the first year, a midyear interest payment of \$29.92 on day 182 and a yearend interest payment of \$30.08 on day 365, and two payments during the second year, a midyear interest payment of \$32.41 on day 547 and a final payment of \$1032.59 on day 730. Using the formula in section I.A.1. above, the annual percentage yield is 6.34%:

$$1,000 = \frac{29.92}{(1 + APY/100)^{182/365}} + \frac{30.08}{(1 + APY/100)^{365/365}} + \frac{32.41}{(1 + APY/100)^{547/365}} + \frac{1032.59}{(1 + APY/100)^{730/365}}$$

Daily yield = .01684%
 $APY = 6.34\%$

C. Variable-Rate Accounts

* * * * *

For example, [if] ▶assume◀ an institution offers an account on which it pays ▶quarterly interest payments at◀ a 7.00% interest rate ▶and a .01934% daily periodic rate◀, compounded daily, for the first three months (which, for example, contain 91 days), while the variable interest rate that would have been in effect when the account was opened was 5.00% [, the total interest for] ▶with a daily periodic rate of .01378%. For◀ a 365-day year [for]▶on◀ a \$1,000 deposit [is \$56.52] ▶an institution would make one quarterly interest payment on day 91 of \$17.60◀ [(based on 91 days at 7.00%)▶, two interest payments of \$12.54 on days 182 and 273,◀ [followed by 274 days at 5%]]▶ and a final payment of \$1012.68 on day 365◀. Using the [simple] formula ▶in section I.A.1.◀ the annual percentage yield is [5.65]▶5.66◀%:

[APY = 100 (56.52/1,000)
 APY = 5.65%]
 ▶ 1,000 = 17.60/(1 + APY/100)^{91/365} + 12.54/(1 + APY/100)^{182/365}
 + 12.54/(1 + APY/100)^{273/365} + 1012.68/(1 + APY/100)^{365/365}
 Daily yield = .01508%
 APY = 5.66% ◀
 * * * * *

6. In Part 230, Appendix B, section B-1 is amended by removing Model Clause B-1(h)(iii) and redesignating Model Clause B-1(h)(iv) as Model Clause B-1(h)(iii), and by adding a sentence to the end of Model Clause B-1(b)(i) to read as follows:

APPENDIX B -- MODEL CLAUSES AND SAMPLE FORMS

B-1 -- MODEL CLAUSES FOR ACCOUNT DISCLOSURES

(a) * * * * *

(b) **Compounding and crediting**

(i) *Frequency*

* * *

▶ or

Interest for your account will be paid [by check/to another account] [(time period)]. ◀

* * * * *

7. In Part 230, Appendix B is amended by removing the last two sentences from the first paragraph of Sample Form B-7 and by adding a new Sample Form B-7a to read as follows:

APPENDIX B -- MODEL CLAUSES AND SAMPLE FORMS

* * * * *

B-7 -- SAMPLE FORM (CERTIFICATE OF DEPOSIT)

XYZ SAVINGS BANK

1 YEAR CERTIFICATE OF DEPOSIT

Rate information

The interest rate for your account is 5.20 % with an annual percentage yield of 5.34 %. You will be paid this rate until the maturity date of the certificate. Your certificate will mature on September 30, 1993. [The annual percentage yield assumes interest remains on deposit until maturity. A withdrawal will reduce earnings.]

► B-7a -- SAMPLE FORM (CERTIFICATE OF DEPOSIT)
XYZ SAVINGS BANK
1 YEAR CERTIFICATE OF DEPOSIT

Rate information

The interest rate for your account is 5.00 % with an annual percentage yield of 5.12 %.
You will be paid this rate until the maturity date of the certificate. Your certificate will
mature on September 30, 1994.

Interest for your account will be:

Compounded and credited to your account ___ two times a year.
___ four times a year.

Paid to you monthly by check ___ to another
___ four times a year account.

Interest begins to accrue on the business day you deposit any noncash item (for example,
checks).

Minimum balance requirements

You must deposit \$1,000 to open this account.

You must maintain a minimum balance of \$1,000 in your account every day to obtain the
annual percentage yield listed above.

Balance computation method

We use the daily balance method to calculate the interest on your account. This method
applies a daily periodic rate to the principal in the account each day.

Transaction limitations

After the account is opened, you may not make deposits into or withdrawals from the
account until the maturity date.

Early withdrawal penalty

If you withdraw any principal before the maturity date, a penalty equal to three months
interest will be charged to your account.

Renewal policy

This account will be automatically renewed at maturity. You have a grace period of ten (10) calendar days after the maturity date to withdraw the funds without being charged a penalty. ◀

* * * * *

Board of Governors of the Federal Reserve System, November 21, 1993.

(signed) William W. Wiles
William W. Wiles
Secretary of the Board