FEDERAL RESERVE BANK OF DALLAS
DALLAS, TEXAS 75222

Circular No. 70-246
October 20, 1970

PROPOSED AMENDMENTS TO REGULATION Q

To All Member Banks
in the Eleventh Federal Reserve District:

The Board of Governors of the Federal Reserve System on October 12, 1970, announced the following proposed amendments to Regulation Q that would permit member banks to pay simple daily interest and interest compounded daily or continuously by using 360 or 365 as the denominator of a fraction in which the numerator generally is the actual number of days the deposit earns interest:

(1) By changing § 217.3(e) to read:

(e) **Computation of interest on time deposits.** In the computation of simple daily interest, the time factor should be expressed as a fraction in which the actual number of days the funds are on deposit is the numerator, and the denominator is either 360 or 365. When a time deposit matures in one month (or multiples thereof), the bank may use 30 days in the numerator (or corresponding multiples thereof).

(2) By deleting the last sentence of § 217.6(b).

Printed on the reverse side are further observations by the Board in connection with the proposal.

To aid in the consideration of this matter by the Board, interested persons are invited to submit relevant data, views, or arguments. Any such material should be submitted in writing to the Secretary, Board of Governors of the Federal Reserve System, Washington, D.C. 20551, to be received not later than November 16, 1970. Such material will be made available for inspection and copying upon request, except as provided in § 261.6(a) of the Board's Rules Regarding Availability of Information.

Yours very truly,

P. E. Coldwell

President

EXPLANATORY COMMENTS

The effect of the proposed amendments can best be viewed in the light of the methods of computing interest presently permitted:

a. The maximum rate of simple interest that a member bank may pay on a deposit is established by § 217.7. In January 1970, the Board established certain rates on deposits with a maturity of "1 year or more." To qualify for a rate that may be paid on such a deposit, the deposit must not mature before one full year — 365 or 366 days as the case may be — from the date of deposit.

b. The formula for continuous compounding is $A = Pe^{RN}$, where A is the final amount, P is the amount on which interest is compounded, e is the base for Naperian or natural logarithms, R is the nominal rate, and N is the number of years. At the present, in view of the intent of § 217.3(e), in expressing the number of years, the numerator is the actual number of days the funds are on deposit — except if the grace periods of § 217.3(e) apply — and the denominator must be 365. If the proposed amendment is adopted, the denominator could be either 360 or 365. This would be consistent with § 217.3(a), which provides that the effects of compounding may be disregarded in determining whether a member bank is paying interest in excess of the rates established in § 217.7. For example, on a deposit made on February 1 for one month the time element could be expressed as 30/360 or 30/365 rather than 28/360 or 28/365.

c. The formula for other than continuous compounding is $A = P\ (1 + R/M)^{N}$, where A is the final amount, P is the amount on which interest is compounded, R is the nominal rate, M is the number of compounding periods in a year, and N is the actual number of periods for which interest is compounded. At present, when compounding interest daily, the number of compounding periods in a year must be 365. Again, if the proposed amendment is adopted, the denominator could be either 360 or 365. For example, a bank could compound 5 per cent interest daily on a $10,000 deposit for 91 days in accordance with either of the following: $A = \$10{,}000\ (1 + .05/360)^{(91)}$ or $10,127.20; or $A = \$10{,}000\ (1 + .05/365)^{(91)}$ or $10,125.40.

d. The formula for computation of simple interest is A = PRT, where A is the final amount, P is the amount on which interest is computed, R is the nominal rate, and T is the time period. In stating the time period § 217.3(e) presently authorizes (1) the use of 360 in the denominator *only* with respect to deposits of 30 days or multiples thereof, and (2) the use of 30 (and multiples thereof) in the numerator on a deposit for one month (or multiples thereof). The proposed amendment would (1) authorize the use of 360 as the denominator for any deposit, and (2) continue the present practice of authorizing a bank to consider 1 month as 30 days. For example, a bank would be permitted to consider the time factor for simple daily interest on a 365-day deposit as 365/360 or 365/365. On a 360-day deposit, the factor could be 360/360 or 360/365; it could not be 365/360. The present provisions for technical grace periods are derived from the current requirement for 365 in the denominator for deposits with maturities of other than 30 days, or multiples thereof. Since the proposed amendment would authorize the use of 360 in the denominator on all deposits, the references to such grace periods in the caption of § 217.3(e), and in the third sentence of § 217.6(b) would be deleted.