



How to Calculate Quarterly Earnings & Apportionment

Following are three examples of how the apportionment of quarterly earnings is computed, based on 12/31/17 quarter-ending portfolio information.

The first example simply equates the information to a mathematical formula used to compute the earning rate for the entire pool. The formula is a true yield annualized calculation, which is also adjusted to reflect leap year, when necessary.

The second example, using the information derived from the portfolio and verified by calculation, breaks the numbers down to a LAIF percentage participation. As of 12/31/17, the LAIF balance represented 29.92837626% of the total pool.

The third example carries the breakdown further to reflect the individual participation, earnings, and apportionment of a single account in the LAIF. The process of determining the weighted deposits, as well as, the final dollars credited is outlined and adjusted to reflect any appropriate charges.

Note: These examples do not include interest earned on the CalPERS Supplemental Pension Payment pursuant to Government Code 20825 (c)(1).

QUARTERLY EARNINGS & APPORTIONMENT (POOL)

D = Number of days in the quarter

E = Interest income \pm sales gain/loss

B = Average quarterly book total

R = Quarterly earnings rate

Quarterly earnings calculation:

$$[E/D \times 365^*]/B = R$$

(*366 when a leap year)

For example purposes, figures for quarter ending 12/31/17 will be used throughout as follows:

$$D = 92$$

$$E = 204,185,519.43$$

$$B = 68,417,942,886.17$$

$$R = 1.184023$$

or stated as a formula:

$$[204,185,519.43/92 \times 365] / 68,417,942,886.17 = 1.184023$$

Note: Actual Apportionment Rate is figured after charges have been subtracted.

QUARTERLY EARNINGS & APPORTIONMENT (LAIF)

Book value x # of days in the quarter = Dollar days of pool

$$68,417,942,886.17 \times 92 = 6,294,450,745,527.64$$

6,294,450,745,527.64 dollar days = 100% of pool

LAIF is 29.92837626% of the pool = 1,883,826,902,971.40 dollar days

D = 1 (Since the book value has been converted to 1 dollar day)

E = 29.92837626% x 204,185,519.43 = 61,109,410.53 (Less charges)

B = 1,883,826,902,971.40 (1 Dollar day)

R = 1.184023 (Less charges)

or stated as a formula:

$$[E/D \times 365]/B = R$$

$$[61,109,410.53 \times 365]/1,883,826,902,971.40 = 1.184023 \text{ (Less charges)}$$

QUARTERLY EARNINGS & APPORTIONMENT (LAIF/PARTICIPANT)

AGENCY: ABC Water District

Beginning Balance: 500,000

	<u>Transaction Amount</u>	<u>Balance</u>
10/09/17	-5,000	495,000
10/29/17	+5,000	500,000
11/02/17	-10,000	490,000
12/03/17	+10,000	500,000
12/19/17	-20,000	480,000

Ending Balance: 480,000

10/01/17 - 10/09/17	8 Days x 500,000	=	4,000,000	Dollar day
10/09/17 - 10/29/17	20 Days x 495,000	=	9,900,000	Dollar day
10/29/17 - 11/02/17	4 Days x 500,000	=	2,000,000	Dollar day
11/02/17 - 12/03/17	31 Days x 490,000	=	15,190,000	Dollar day
12/03/17 - 12/19/17	16 Days x 500,000	=	8,000,000	Dollar day
12/19/17 - 12/31/17 inc.	<u>13 Days</u> x 480,000	=	<u>6,240,000</u>	Dollar day
	92 Days		45,330,000	Dollar day (Total)

QUARTERLY EARNINGS & APPORTIONMENT (LAIF/PARTICIPANT)

D = 1

E = .0000240627203 x 61,109,410.53 = 1,470.459 (Less charges)
(% of LAIF x LAIF earnings)

B = 45,330,000.00 (1 dollar day)

R = 1.18 (Less charges)

[E x 365]/B = R

[1,470.459 x 365]/45,330,000 = 1.184023 (Less charges)

LAIF CHARGES

Total charges for LAIF for the quarter were \$392,500.00

ABC Water District is .002406272% of LAIF

ABC Water District share of charges =
.00002406272 x 392,500.00 = \$ 9.44

Apportionment will reflect this charge:

ABC Water District computed earnings:	1,470.46
Less share of charges:	<u>- 9.44</u>
Apportioned earnings:	1,461.02

Computed earning rate:	1.184023
Less share of charges:	\$ 9.44
Actual earning rate:	1.176418