



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:

$$[E/D \times 365^*]/B = R \quad (*366 \text{ when a leap year})$$

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 x 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:

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

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

$$D = 1$$

$$E = .0000240627203 \times 61,109,410.53 = 1,470.459 \text{ (Less charges)} \\ (\% \text{ of LAIF} \times \text{LAIF earnings})$$

$$B = 45,330,000.00 \text{ (1 dollar day)}$$

$$R = 1.18 \text{ (Less charges)}$$

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

$$[1,470.459 \times 365]/45,330,000 = 1.184023 \text{ (Less charges)}$$

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 \times 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 |