



C A M B R I D G E A S S O C I A T E S L L C

AN INTRODUCTION TO UNITIZATION

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Background

A unitized accounting system is one that provides the mechanism for an organization to pool a number of different funds together for both investment and reporting purposes. For example, if a university has a number of different endowments, it may assign unit values to the amount of funds each endowment contributes to the total university pool. Thus, the university is able to manage funds from multiple donors as one pool from an investment standpoint. The unitized system also enables the institution to allocate income and changes in market value to each individual fund within the pool by allocating these returns on a per unit basis.

There are several compelling reasons for an organization to group otherwise unrelated funds into a unitized pool for investment purposes. The unitized pool serves to

- spread the total risk for each fund and make the risk equal for all pooled funds;
- enhance the performance relative to that of a smaller fund;
- potentially reduce management fees;
- minimize uninvested cash; and
- simplify the accounting burden.

Also, a unitized pool assists in portfolio performance measurement since individual unit values are only impacted by performance of the pool and not by gifts or other receipts added to the pool.

The following discussion briefly describes the mechanics of a "typical" pool, giving particular attention to issues an organization must resolve in administering the pool.

Mechanics

The major mechanical issues created by the unitized pool relate to

- its creation;
- unit valuation;
- adding and withdrawing units; and
- income allocation and distribution.

These issues, presented in the context of XYZ Pool, are discussed below.

Creation

The participating funds are merged into a pooled fund which, for share allocation purposes, is valued at market value. A beginning unit value, often \$100.00 is selected and units are assigned to each fund based on their relative contribution.

For example, if three funds, A, B, and C, with market values of \$20, \$25 and \$55 million are merged to create the XYZ Pool, the pool value will be \$100 million and it will have one million units (at \$100/unit). The share allocation will be as follows:

<u>Fund</u>	<u>Market Value</u>	<u>Number of Units</u>
A	\$20,000,000	200,000
B	\$25,000,000	250,000
C	<u>\$55,000,000</u>	<u>550,000</u>
Total	\$100,000,000	1,000,000

Appreciation (Depreciation) Allocation

This is the process of revaluing the units to reflect the realized and unrealized gains (losses) of the pooled fund. Revaluation is necessary to determine the unit value of funds added or withdrawn from the pool. Many organizations revalue quarterly, but it can be done more or less frequently, depending on the organization's preference and accounting capability.

New unit values are determined by dividing current market value (as of the revaluation date) by the number of outstanding shares. For example, if the XYZ Pool had no additions or withdrawals but \$10 million in unrealized gains and \$5 million in realized losses, the new value per unit would be:

Beginning market value	\$100M
Unrealized gain (loss)	10M
<u>Realized gain (loss)</u>	<u>(5M)</u>
Ending market value	\$105M/1000K units = \$105.00/unit

Creating New Units

New units are created any time additional funds are merged into the pooled fund or new additions are made to the principal of any fund already in the pool. The new shares are typically allocated based on the value per unit as of the most recent valuation. In assigning a number of shares to additional funds the value of additional funds is divided by the prevailing unit price.

For example, if \$6 million was added to Fund B, then 57,142.9 new units would be created and allocated as follows:

Fund B:	\$6M/105.00 unit price =	57,142.9 units
New units added to XYZ Pool		57,142.9 units

Shares in the XYZ Pool, now worth \$111 million, are allocated as described below:

<u>Participating Fund</u>	<u>Number of Units</u>
A	200,000.0
B	307,142.9
C	<u>550,000.0</u>
Total XYZ Pool	1,057,142.9 x \$105.00 per unit = \$111M

Withdrawing Units

The number of outstanding units is reduced any time a fund or some portion of a fund is withdrawn from the unitized pool. The withdrawal calculation is usually similar to the addition calculation. If, for example, after the above transaction Fund A is reduced by a transfer out of \$6 million, the resulting calculation would be:

$$\frac{\$6,000,000}{105.00} = 57,142.9$$

XYZ Pool would be reduced by \$6 million and by 57,142.9 units. The new share allocations would be:

<u>Fund</u>	<u>Number of Units</u>
A	142,857.1
B	307,142.9
C	<u>550,000.0</u>
Total XYZ Pool	1,000,000 units x \$105.00 per unit = \$105M

The new value of each fund would be:

<u>Fund</u>	<u>Number of Units</u>	<u>Value</u>
A	142,857.1	14,999,995.50
B	307,142.9	32,250,004.50
C	<u>550,000.0</u>	<u>57,750,000.00</u>
Total XYZ Pool	1,000,000.0	\$105,000,000.00

Income Allocation and Distribution

Income allocation is the process of allocating income (e.g., interest, dividends, and rents; not capital appreciation) earned on the pooled funds to the individual participating funds. As suggested above, this process is complicated by the fact that there may be a regular flow of funds into and out of the pooled fund. As a result, the institution must first establish policies for the frequency of unit revaluation (to determine the unit amount for additions and subtractions) and for the timing of unit additions to and withdrawals from the pool. Units may be revalued on a daily, monthly, or quarterly basis, depending on the resources and preferences of the organization. Once the revaluation timing is determined, the organization must decide if a unit will earn income in the period in which it is added or withdrawn. Specifically, the organization must decide the unit value to be used in adding or subtracting units from the pool. For example, if an organization re-values units quarterly, they then need to decide if an addition will be valued at the unit value at the beginning of the quarter (participating in the returns for the period), at the end of the quarter, or at the average value during the quarter.

After revaluing the shares and determining any additions to or subtractions from the total unit number, the income to be distributed is divided either by the total number of shares to determine a per unit income distribution or by unit value to determine the number of new units to be added. These units are distributed to the participating funds based on their percentage of the total pool (i.e., a fund that represents 10% of the total pool receives 10% of the total shares from the income distribution). In the first case, the value of a unit increases and the total number of units stays the same, while in the second the total number of units increases and value per unit stays the same.