



TITAN
CONSULTING

ESSBASE DATA MODEL

THE BASICS OF AN ESSBASE DATA MODEL IN SAP-BW



In many SAP BW implementations, the following scenario exists: SAP New GL is used to capture actual ledger activity, but the business has chosen to use Essbase for Planning and Estimating. In this case, General Ledger reporting with Actual to Plan comparison will not be possible unless the Actual in ECC can be brought together with the Plan from Essbase. While it is possible to build a custom interface for the Essbase Plans to go directly into ECC where it becomes an ECC Plan, the purpose of this paper is to discuss an alternative where the Essbase Plan goes into BW. Once the Plan data is in BW, it can be combined with Actual General Ledger data, which can be made available through standard SAP to BW extractors.

In order to bring the Essbase Plan into BW and combine it with SAP, there are three main points to consider: the data model in Essbase, the General Ledger Account mapping and the Functional Area mapping.

With the Essbase data model, determine how much of the SAP coding block is available in the Plan, and design with as much flexibility in BW as possible. Since the Planning is likely seeded with Actual data to form a starting point, much of the Actual dimensions are available. However, given the flexibility in Essbase many of the dimensions will include non-SAP generated values. For example, the GL account level may be at a Profit and Loss line level as shown next:

| |
|---------------------|
| Gross Sales Service |
|---------------------|

It might be the case where the dimension has both as shown next:

| |
|------------------------------|
| Gross Sales Service |
| GL 3000100 (Service Revenue) |

In either case, it is important to know all the coding block dimensions that will have mixed values. Another typical dimension from SAP with mixed values in Essbase is the Entity dimension. In SAP this would be the OCOMP_CODE object with values similar to the following:

| | |
|------|-----------------------------|
| 1000 | North American Legal Entity |
|------|-----------------------------|

In Essbase, the members in this dimension may be at an equivalent level that is shown next:

| | |
|---------|-----------------------------|
| CO_1000 | North American Legal Entity |
|---------|-----------------------------|

There is a possibility of the following values as well:

| | |
|---------|-----------------------------|
| CO_1000 | North American Legal Entity |
| HE_NA | North American Group |



The important part to remember about this situation is the Essbase Plan does need to have alignment back to the SAP General Ledger coding block. This means a custom InfoObject has to be used with the SAP coding block dimension as an attribute. The result would look like the following example:

Custom InfoObject - ZESSENT

| Key | OCOMP_COND Attribute |
|---------|----------------------|
| CO_1000 | 1000 |
| HE_NA | 1000 |

Some of the Essbase member levels, like the value 'HE_NA', might be unnecessary for report integration with SAP GL reports. These could be high level adjustment groupings that exist along with the other valid company code values. If this is the case, the attribute would default to 'unassigned', and as a result would be appropriately excluded from the GL reports.

Custom InfoObject - ZESSENT

| Key | OCOMP_COND Attribute |
|---------|----------------------|
| CO_1000 | 1000 |
| HE_NA | # |

This means the most important member levels in Essbase for Plan integration with SAP GL is the lowest member level. Many of the higher grouping levels will not be necessary because they are roll ups of the lower member's data.

After the general assessment of the Essbase Model, the next piece of the model to consider is the General Ledger account mapping. The column to the left is an example of how in Essbase the GL Accounts used may be at a Profit and Loss Line level. This is common in Essbase Planning, and for that matter, common in most planning applications. The business does not have the resources to plan at every GL Account level either way.

The Plan not being at GL Accounts does cause a challenge when integrating with SAP General Ledger Profit and Loss Reports. The reason is there are two components for creating a P&L Ledger line in SAP-BW, and the first component is the GL account sets/groups. The second is the Functional Area sets/groups, but this will be discussed later.

In order to map the Essbase Ledger lines to the GL Account sets/groups, a custom InfoObjects is required that has the SAP GL Account as an attribute. In this way, the Essbase Plan data can be joined at the GL Account level. The SAP Actual data would join on the GL Account as a Characteristic, and the Essbase Plan would join on the Navigational Attribute of GL Account from the custom InfoObject. This custom object would look like the following example:

Custom InfoObject - ZESSACCT

| Key | OGL_ACCOUNT Attribute |
|------------------------------|-----------------------|
| Gross Sales Service | 3000100 |
| GL_3000100 (Service Revenue) | 3000100 |

In addition to mapping the Essbase Plan to the GL Account via an attribute, this InfoObject can be used to assign the signage for the GL Account using a debit/credit attribute. The advantage of assigning the signage using an attribute of the custom Account InfoObject is the rollup calculations in the Profit and Loss Structure do not have to change to accommodate the Essbase Plan data. This would change the custom InfoObject to look as follows:

Custom InfoObject - ZESSACCT

| Key | OGL_ACCOUNT Attribute | ODCINDIC Attribute |
|------------------------------|-----------------------|--------------------|
| Gross Sales Service | 30001000 | 3000100 H (Debit) |
| GL_3000100 (Service Revenue) | 3000100 | 3000100 H (Debit) |



Remember, the Structure is built from a combination of GL Account and Functional Area sets, and it does not include the Key Figure from the General Ledger. With the Debit/Credit attribute, the Key Figure Structure can include a Plan value with a Calculated Key Figure that is the result of all Debit attributes less all Credit attributes. Another benefit of this Debit/Credit attribute to align the signage is the calculations from Essbase are not necessary in order to calculate the high levels in Profit and Loss rollup such as 'Net Sales' or 'Gross Sales'. These calculations would be provided by the Profit and Loss Structure. The result would look as follows:

Custom InfoObject – ZESSACT

| Profit and Loss Structure | Value restricted by the Debit attribute (hidden) | Value restricted by the Credit attribute (hidden) | Total Plan (Debit less Credit) |
|---------------------------|--|---|--------------------------------|
| Net Sales | | | \$700.00 |
| → Gross Sales Service | \$1,000.00 | | \$1,000.00 |
| → Discounts | | \$300.00 | -\$300.00 |

The next piece of the model to consider is the Functional Account mapping. Discussed above was the use of the GL Account as an attribute in order to build the Profit and Loss Structure. The same practice will be necessary for the Functional Area mapping. Again, the reason to discuss this mapping is it is one of two components for creating a P&L Ledger line in SAP-BW. The first component is the GL account sets/groups, and the second is the Functional Area sets/groups.

In order to map the Essbase Functional Area sets/groups, a custom InfoObjects is required that has the SAP Functional Area as an attribute. In this way, the Essbase Plan data can be joined at the Functional Area level. The SAP Actual data would join on the Functional Area as a Characteristic, and the Essbase Plan would join on the Navigational Attribute of Functional Area from the custom InfoObject.



The custom InfoObject for the Functional Area mapping is a flexible solution. In Essbase, Functional Area assignment can come from different member levels, and this can result in mixed values in the dimension. Functional Areas can be assigned by GL Accounts, Cost Centers or directly from Functional Area. This unique solution requires mapping the Functional Areas source to the key of the custom Info Object. Logic in the transformation to load the data should determine if the key will be from GL Account, Cost Center or Functional Area. The result of this custom object would look like the following example:

Custom InfoObject - ZESSFNCT

| Key | OFUNC_AREA Attribute |
|--------------------|-----------------------------------|
| GL_3000100 | 100 (Sales) |
| CC_SALESCOSTCENTER | 300 (Selling Expense) |
| FA_OTHERNONRECURR | 600 (Other Non-recurring Expense) |

These Functional Area assignments might be challenging to maintain since the master data in this InfoObject could become large, but it is possible to do a load from the OGL_ACCOUNT and OCOSTCENTER master from ECC to fill in the Functional Area attribute assignments.

The custom InfoObject for Functional Area along with the custom object for GL Account discussed above will enable the flexible integration of the Essbase Plan with the SAP data.



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