Accounting – The Data Warehouse Toolkit

Megan Cusey

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# Case Facts

## The information collected through the process of accounting represents important key performance indicators to most organizations and is used in a variety of ways. For example, at the end of a fiscal year, the organization is tasked with creating internal and external reports that summarizes financial activity. This report often represents the financial health of an organization which is viewed with an eagle’s eye for management and external stakeholders such as shareholders.

In addition to a fiscal year report, there are many instances where an organization needs to review the details of the accounting transactions. Therefor, detailed information of all accounting transactions needs to be available for business users to review from a BI tool.

Lastly, accounting data is used for budgeting purposed for future costs. Reviewing historical data helps an organization better prepare for a new fiscal year for allocating a certain amount for costs, tracking the committed costs, and payments. At the end of the year, organizations can identify the actual amount of the costs, the budgeted amount of costs, and the variance between the two numbers.

# Data Warehouse Concepts

## Step 1: Select the Business Process

The accounting process can be broken down into the following steps:

* Accounting collects information regarding accounts payable, accounts receivable, and assets to prepare reports that represent the financial health of an organization.
* Managers and organization executives use the information generated by accounting to manage risk, make important business decisions, budget costs, and identify costs/areas of wealth.

## Step 2: Declare the Grain

* General Ledger Periodic Snapshot – One row for each accounting period.
* General Ledger Journal Entry - One row for each for each general ledger journal entry transaction.
* Budget – one row identifies what the organization can spend for a particular purpose.
* Commitment – one row identifies a cost commitment that the organization has made.
* Payment – on row identifies a payment that the organization has made.

## Step 3: Identify the Dimensions/Attributes

* General Ledger Period Snapshot
  + Accounting Period: Accounting Per Key (PK), Accounting Period Number, Accounting Period Description, Accounting Period Fiscal Year
  + Account: Account Key (PK), Account Name, Account Category, Account Type
    - Based off a view of the Date Dimension Table, named uniquely for the requested shipment date.
  + Ledger: Ledger Key (PK), Ledger Book Name
  + Organization: Organization Key (PK), Cost Center Name, Cost Center Number, Department Name, Department Number, Division Name, Business Unit Name, Company Name
* General Ledger Journal Entry
  + Post Date: Date Key (PK), Calendar Date YYYY-MM-DD, Day of the Week, Quarter, Season, Holiday, Weekend
    - Based off a view of the Date Dimension Table, named uniquely for the post date.
  + Account: Account Key (PK), Account Name, Account Category, Account Type
    - Based off a view of the Date Dimension Table, named uniquely for the requested shipment date.
  + Ledger: Ledger Key (PK), Ledger Book Name
  + Organization: Organization Key (PK), Cost Center Name, Cost Center Number, Department Name, Department Number, Division Name, Business Unit Name, Company Name
  + Debit-Credit Indicator: Debit-Credit Indicator Key (PK), Debit-Credit Indicator Description
* Budget
  + Month
  + Account (see above)
  + Organization (see above)
  + Budget: Budget Key (PK)
  + Budget Name
  + Budget Version
  + Budget Approval Date
* Commitment
  + Month (see above)
  + Organization (see above)
  + Account (see above)
  + Budget (see above)
  + Commitment: Commitment Key(PK), Commitment Description, Commitment Party
* Payment
  + Month (see above)
  + Organization (see above)
  + Account (see above)
  + Budget (see above)
  + Commitment (see above)
  + Payment: Payment Key (PK), Payment Description, Payment Party

## Step 4: Identify the Facts

* General Ledger Period Snapshot
  + Period End Balance Amount
  + Period Debit Amount
  + Period Credit Amount
  + Period Net Change Amount
* General Ledger Journal Entry
  + Journal Entry Number (DD)
  + Journal Entry Amount
* Budget
  + Budget Amount
* Commitment
  + Commitment Amount
* Payment
  + Payment Amount

# Summary

As stated above, the accounting data is used in many areas of the business and it important for describing fiscal health, reviewing cost-payment related details, and budgeting. This information may be required on a fiscal year basis, or in a detailed format. The information is also used to make budgeting decisions and tracking the related budgeting details to what the organization has committed to purchasing and releasing payment on.

The General Ledger Period Snapshot table enables a fiscal year “roll-up” offers a summary view of information. This level of detail is necessary for generating year end reports for internal and external stakeholders.

The General Level Journal Entry table provides a line by line detailed view of information that is necessary for internal users to review all transactions made by an organization. The different dimensions offer the ability to slice the data in a multitude of ways. Perhaps the most important dimensions are the organization/account dimensions that allow users to slice information by cost center.

The Budget, Committed, and Payment Fact tables allow the organization to track budget line items by their purpose, identify what management has committed for purchasing, and when the payment has been made. These three fact tables are useful because the information can be combined to identify the budgeted amount, actual amount spent, and the variance for each budget line item.