

Using a Structured Chart of Accounts

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EXECUTIVE SUMMARY

A well-organized accounting system can significantly reduce errors while substantially improving the company's ability to quickly extract information from its computer system. This article discusses best practices for creating an accounting chart of accounts.

ORGANIZING THE CHART OF ACCOUNTS

The curriculum in business school typically does not spend a great deal of time instructing students how to establish an effective financial reporting system. A well-thought-out chart of accounts is the foundation of a solid financial reporting system. Many times, accountants inherit a chart of accounts that was established by their predecessor using old-fashioned methods that resemble those used in the days of manual ledger books.

In the "old days," before computers, the general ledger and general journal were physical books with paper pages. Posting from the general journal to the general ledger was performed manually. The process was prone to human error and often made "balancing the books" the most time consuming step during period-end close. Since the time spent identifying and correcting errors increased exponentially as the number of general ledger accounts increased, accountants were reluctant to add new accounts so that they could close period-end as quickly as possible. Financial statement preparation also could be streamlined by numbering accounts in the same order as they appeared on the financial statements.

Accordingly, a common numbering scheme still used by many companies is as follows:

- 1xx Assets
- 2xx Liabilities & Equity
- 3xx Revenues
- 4xx Cost of Sales – Purchases
- 5xx Operating Costs – Labor
- 6xx Operating Costs – Benefits
- 7xx Operating Costs – Other
- 8xx Administrative Costs
- 9xx Non-Operating Costs

This method assigns a definition to the first number in the series. Using the 1-Series for Assets and the 2-Series for Liabilities is almost universal. Equity is generally in the 29x or 3xx series and revenues are often 3xx or 4xx.

It is also common to find a chart of accounts that assigned a definition to the second digit. For example, 10x is typically a cash account, 11x is accounts receivable, 20x is accounts payable and 29x is usually an equity account. Account numbering schemes in pre-computerized days were usually three digits, thus, there were only ten account numbers available for most types of accounts, e.g. 100-109 for cash or 110-119 for accounts receivable. When a company required more accounts, it was common to assign sub-accounts labeled 100-1, 100-2, 100-3, etc., creating the possibility of 100 accounts for an account type. In practice, financial managers discouraged the addition and proliferation of accounts.

Many organizations that computerized in the 1970s and 1980s merely converted their manual system to the computer, usually adding more digits to allow “room for growth.” As years passed, financial managers often added more accounts to accumulate and report desired detail. Today, the general ledger systems of many companies are a hodge-podge of derelict accounts or account numbers with derelict digits as part of a chart of accounts that has very little rhyme or reason.

Unfortunately, many companies continue to use Chart of Accounts schemes that have not fully evolved from the days of manual bookkeeping. Accounting literature suggests that approximately 90% of all financial information is used for internal purposes. Thus, general ledger systems must be organized to support internal financial requirements, such as financial planning, responsibility reporting, cost accounting and ad hoc analysis.

Financial managers are often asked many different kinds of questions or are asked to present information in many different formats. Such requests may include:

- “How much overtime was worked this period in each department?”
- “How much overtime was worked by office personnel?”
- “What is the cost of the sales function including overtime and benefits?”

These questions may be either easy or difficult to answer depending on the organization of the general ledger system.

Modern Best Practice

A common problem with financial reporting systems is that the organizational structure expressed in the Chart of Accounts does not match the real organization structure, the organizational chart or the information provided in the payroll system. As a matter of fact, the organizational chart may not reflect the real operating structure of the organization. A company consisting of 100 to 200

people may have 15 functional departments according to the organization chart, 8 departments in the Chart of Accounts, 4 departments in the payroll system and 12 departments based on how the company actually operates. In a case such as this, the Chart of Accounts and the payroll systems should be reorganized to match the real structure of the organization.

The Hierarchical Chart of Accounts

Best practices today incorporate a hierarchical structure to take advantage of the benefits offered by computerized accounting environments.

For a company with multiple regions, locations or divisions, the chart of accounts should mimic the organizational structure while maintaining the same basic account-department scheme across all locations. For example, if accounts #12-5000-90 (Location-Account-Department) means South Bend-Regular Wages-Administration and location #14 is the location number for Indianapolis, then Regular Wages-Administration for Indianapolis should be #14-5000-90.

Most large organizations use a hierarchical chart of accounts that allows financial reports to be prepared for specific segments of the organization to meet the varied needs of a wide audience of financial statement users. Such structures might appear as follows.

Company-Division-Location-Account	C-DD-LLL-AAAA
Company-Location-Department-Account	C-LL-XX-AAAA
Company-Account-Department	CC-AAAA-XXX

General ledger software system requirements often dictate the order in which segments must appear to please the software’s report generator module. For example, since a trial balance is generally printed in account number order, the department may need to appear after the account base for most reports to appear in an order that is “logical” to financial managers.

A single location company might structure its chart of accounts in the following manner:

Account-Department	AAAA-XX
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A modern chart of accounts might be organized in the following manner:

1000 – 1999	Assets
2000 – 2899	Liabilities
2900 – 2999	Equity
3000 – 3999	Revenue
4000 – 4999	Materials or Purchased Goods
5000 – 5999	Wages
6000 – 6999	Benefits
7000 – 7999	Departmental Supplies and Services

The major differences are that a modern **account base** consists of four digits rather than three and like accounts for operating departments and administrative departments share the same account base. For example, instead of placing Operating Wages in the 5XX series and Administrative Wages in the 8XX series, all wages might appear in the 5XXX series.

The Account Base

A four-digit account base is currently the most universal segment length. Where a longer account base is present, one or more digits are frequently derelict, redundant (sometimes repeating the department code) or used for a function better performed by a cost accounting module. Information systems personnel often encourage accounting to create a longer account base to allow “room for growth.” What they fail to realize is that businesses typically grow by adding divisions, locations and departments, not by inventing a new type of asset that will need to be squeezed between cash and accounts receivable.

Locations and Departments

One of the most significant benefits of a hierarchical chart of accounts is to be able to publish financial statements for an individual location, as well as for individual department managers. Such reports become an important tool for managers trying to meet their objectives. Each manager should bear the responsibility, or “own” the accounts within their location or department. All expenses that the manager has budgeted and is responsible for should be posted to one of their accounts.

A popular method of setting up departments in the general ledger is to list all of the functional departments from the organization chart in the order from most direct to least direct and number them with two digits by fives or by tens (10, 20, 30, 40...). All zeros (“00” or “000”) are conventionally used for expenses not associated with a single department. For example, a year-end adjustment to Accrued Workers Compensation Insurance might be posted to department “00” rather than apportioned among the actual “real” departments.

Organize to Answer “What if?” Questions

Many companies experience difficulty extracting answers to “what if?” questions from their general ledger because their chart of accounts is organized in the order that the accounts appear on the financial statements. For instance, if the CEO asks the financial manager to find out how much overtime the corporation paid last period, it is more difficult to extract the information from the system if manufacturing overtime begins with “51xx” and administrative overtime begins with “71xx.” This request becomes even more difficult if the CEO wants to know the total cost of running a single function with a chart of accounts that is not departmentalized.

Like expenses should have the same account base regardless of location or department. For example, each department might have the following expenses that are processed through accounts payable:

#7100	Supplies & Department Expenses
#7200	Repairs
#7500	Travel & Lodging
#7600	Meals & Entertainment
#7800	Training

Most people-related department expenses can be posted directly by the payroll system.

#5000	Regular Pay
#5100	Overtime Pay
#5200	Double time Pay
#5300	Vacation Pay
#5400	Holiday Pay
#5500	Bonus Pay
#6000	Cafeteria Plan Expense
#6100	FICA Expense
#6200	FUTA Expense
#6300	SUI Expense
#6400	Workers Compensation Expense

In each of these examples, the most commonly used expenses have been given account numbers with a single significant digit to make them easy to remember. Related expenses are listed in series to facilitate the extraction of data. An inquiry on all accounts beginning with a "5" would provide total company wages or "6" would provide all benefits.

An implication of a structured chart of accounts is that even a one-location company with one hundred employees may have five hundred to a thousand different account/department combinations. This quantity is actually easier to manage than a much smaller number of accounts that are part of an unstructured numbering scheme because this method uses a logical combination of prefixes and suffixes to make the account numbers. In the above illustration, with 10 departments (including the "00" default department) there would be 160 resulting account/department combinations. Employees who work with the account numbers on a regular basis would have little to learn because the most prolific part of the structured chart of accounts, payroll and payroll related benefits, is normally posted directly from the payroll software and doesn't need to be memorized. It still wouldn't be that difficult to remember if the payroll was posted manually since "5" means "Wages" and "6" means "Benefits." It is easy to remember the order in the series where each account segment falls. Accounts payable clerks also appreciate a structured chart of accounts because this

architecture generally has fewer types of accounts since the account department combinations accumulate the detail required by operating managers.

Make Account Numbers Logical and Easy to Remember

Logical numbering schemes reduce coding errors and data entry work. It is best to avoid using more digits than necessary. If a company has ten locations, a two-digit location code provides ample room for growth. For most companies that are a bit larger, a three-digit location code will suffice. Make the numbers easy to remember by using successive digits to sub-divide higher level categories.

For example, if “1” means “Assets,” you might use the following numbering scheme.

1 <u>0</u> xx	Cash
1 <u>1</u> xx	Accounts Receivable
1 <u>2</u> xx	Inventory
1 <u>5</u> xx	Fixed Assets
1 <u>6</u> xx	Accumulated Depreciation

Thus far we have talked in terms of account numbers being entirely numeric; however, some organizations might choose to use alphabetic characters for one or more segments instead. For example, using three digit airport codes (LAN, LAS, LAX) or two digit state codes (ND, NJ, NY) would make it easy to associate an account with a particular city or state.

QuickBooks users sometimes dispense with account identifiers altogether and just use account descriptions. Regardless of whether descriptions are used with or without account numbers, it is a big help in finding the account that you want if account descriptions are named hierarchically as well. For example:

- Wages, Regular – Sales
- Wages, Regular – Administration
- Wages, Overtime – Administration
- Wages, Vacation Pay – Sales
- Wages, Vacation Pay – Administration

Avoid Accounts without an Assigned Responsibility

It is advisable to avoid the temptation of assigning an account number that is not associated with a department or a location. If the maintenance department controls cleaning supplies then they should be assigned as an expense of that department. If someone in administration handles office supplies, the expense should be included in that department’s budget. Thus #7127-00 Cleaning Supplies becomes #7100-60 Supplies – Maintenance and #8470-00 Office Supplies becomes #7100-90 Supplies – Administration. Alternatively, office supplies could be charged to each department or location according to actual usage.

Activity-Driven Assignments

Some organizations automatically apportion costs among departments or locations according to specific measurement of that area's consumption of the resource. For instance, floor space costs such as rent and utilities may be automatically distributed according to the floor space occupied by each department. This is an acceptable method as long as the following factors exist:

- The apportionment percentage is objectively determined.
- Responsible managers understand (and agree) with the assignment of costs.
- Managers can discontinue or reduce using the resource, thus avoiding all or a portion of the cost.

Even when overhead costs are objectively assigned to departments, these cost assignments should be physically separated on reports intended for department managers, always appearing after the total line for the manager's controllable expenses.

Balance Sheet Structured Accounts

Hierarchical account identification techniques should also be used within the balance sheet where appropriate. For a company with several locations, the location code should be used in the balance sheet to identify the bank accounts, inventory and fixed assets associated with each location. This makes the job much easier when preparing tax returns for various states and municipalities or when attempting to calculate return on investment by location.

Account numbers for prepaids, withholdings, and accrued liabilities can be made easy to remember by combining balance sheet and income statement prefixes. Thus, if #21xx means Withholdings, #2200 means Accrued Liability, #5xxx means Payroll and #9900 is Federal Income Tax Expense, then a logical number scheme would appear as follows:

#2199	Withholding: Federal Income Tax
#2250	Accrued Liability - Payroll
#2299	Accrued Liability: Federal Income Tax

These methods allow accounting systems users to forget about memorizing accounting numbers because they can quickly look an account number up or better yet, easily figure out what an account number should be based on the company's account numbering conventions.

CONVERTING TO CURRENT BEST PRACTICES

The amount of work necessary to convert to these best practices will depend on many factors including:

- How far is the company's current method from best practices?
- Are the proper segments currently defined and of the right length?

- Does the company's software have a structured view of the account numbers or is the account number a free-form field?

The conversion job is usually easiest if the accounting software views the account number as a free-form field. In such cases, the Controller may create additional account numbers that co-exist with the old account numbers. This may be possible even if the old account numbers and the new numbers are of a different format. Such a conversion may even be done mid-year as both the old numbers and new numbers co-exist in the general ledger.

Many software packages view general ledger account numbers as segmented. While these packages tend to have more advanced features than those that treat the account number as a free-form field, one trade-off is that if the old and new defined segments are not the same or if they are of different lengths, the accountant may have no choice but to reinstall the general ledger software.

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