Managerial Accounting for Arborists

Part 2: Cash vs. Accrual Accounting

By James Komen

This is the second article in a five-part series on Managerial Accounting. It relies upon terminology introduced in Part 1: Accounting Basics. (*Editor's Note: This can be found in the 'Member's Only' section of the SCA Website at www.sca-trees.org*)

There are two basic types of accounting systems: cash accounting and accrual accounting. Cash accounting is the most commonly used for very small businesses and individuals. It records income when it is received and expenses when they are paid, not necessarily when they are earned or used respectively. It is a desirable system for its simplicity because it requires much less bookkeeping than accrual accounting. However, it has the potential to distort the financial picture of a company in several ways discussed later in this article.

Accrual accounting shows when income and expenses are earned and used. It is more complex than cash-based accounting and requires more time to implement. However, when used correctly, it gives a clearer picture of the financial performance of a company. Consider the following example of the difference between the two:

Cash Accounting for Insurance

Suppose a business pays its $6,000 annual liability insurance premium in 10 monthly payments according to the schedule shown in Figure 1. A cash accounting system would show a $1,500 insurance expense in January, a $500 insurance expense in each of February through October, and no insurance expense in November and December. Looking at the company's profit and loss report, it would appear that the company performed poorly in January and performed well in November and December, all else being equal. But this is not true! The company "used" its liability insurance equally each month, so the cash accounting system distorted the true financial picture.

Month	Insurance Expense
January	$1500
February	$500
March	$500
April	$500
May	$500
June	$500
July	$500
August	$500
September	$500
October	$500
November	$0
December	$0

Figure 1: Example schedule of a typical general liability insurance premium payment schedule for a company with an annual premium of $6,000.

Accrual Accounting for Insurance

An accrual accounting system would use two separate sets of transactions to address this problem. The first set of transactions would show the funds paid to the insurance company. The second set of transactions would show the insurance value as it is "used." Each time a check is written to the insurance company, there would be a credit of the cash account and an equal offsetting debit to a prepaid insurance asset account. Each month, exactly one twelfth of the annual insurance premium would be credited from the prepaid insurance asset account and debited to the insurance expense account. See the example in Figure 2.

Note that the accrual method "smooths" out irregular expenses so the profit and loss report does not show any month-to-month distortion of the insurance expense account. The profit and loss report will reflect the actual performance of the company as it "uses" its liability insurance equally in each month.

Accrual accounting requires a more complex set of transactions, but the advantage is it avoids distortions of the profit and loss sheet. Furthermore, most of these transactions can be automated by most accounting software, so this method doesn't take much additional time once the accrual accounting system is understood by the user.

Accrual Accounting for Client Deposit Payments

The same process as above can be applied to client deposit accounts. Imagine a client that pays a deposit and several progress payments for a contract to be performed in the future. A cash accounting system would record the deposit payment as income immediately. Looking at the profit and loss sheet, it would appear that the company had a windfall in the period the deposit was received – it made a large amount of money and didn't do any work! And in the months between progress payments, it would appear the company was performing poorly – it would have been performing work and not getting paid! Such false conclusions can result

Month	Prepaid Insurance Asset			Insurance Expense		
	Debit	*Credit*	*Balance*	*Debit*	*Credit*	*Balance*
January	$1500	$500	$1,000	$500		$500
February	$500	$500	$1,000	$500		$1,000
March	$500	$500	$1,000	$500		$1,500
April	$500	$500	$1,000	$500		$2,000
May	$500	$500	$1,000	$500		$2,500
June	$500	$500	$1,000	$500		$3,000
July	$500	$500	$1,000	$500		$3,500
August	$500	$500	$1,000	$500		$4,000
September	$500	$500	$1,000	$500		$4,500
October	$500	$500	$1,000	$500		$5,000
November	$0	$500	$500	$500		$5,500
December	$0	$500	$0	$500		$6,000

Figure 2: Example ledger showing the journal entries for an accrual accounting system of general liability insurance.

in poor subsequent managerial decisions such as spending excessively or terminating beneficial client relationships.

An accrual accounting system would solve this problem by creating two separate sets of transactions: one for the deposits and progress payments received and one for the amounts earned as the work is performed. Rather than tracking advance payments from clients as income, those amounts may be stored as current liabilities until they are earned. Then, each time work is performed, an appropriate amount would be debited from the liability account and transferred as a credit to the income account. See Figure 3 for an example of a typical municipal or HOA pruning contract.

The municipality or HOA customer pays an initial deposit of $3,000, two installment payments of $1,000 each, and one payment at completion of $7,000. However, the work is performed at a constant rate each month as the crews gradually service the trees in the contract. In this accrual accounting system, the income account shows a steady stream of earned income, despite the uneven payment schedule of the contract. Note that in this example the client deposit liability account becomes negative beginning in May. From May through December, the customer owes the company a balance.

Accrual Accounting for Contracts with Irregular Increments

Accrual accounting systems do not require a constant rate of work completion to be applied as in the example above. Nor does it require the debits to be equal amounts. If work is performed in the first month of each quarter, the client deposit liability account may be debited proportionately to the amount of work done. Imagine the same scenario of client payment schedule, but suppose work is completed in the first month of each quarter and half of the total work for the year is completed in January. The ledger may show transactions that appear as in Figure 4.

Common Accrual Accounting Mistakes

Accrual accounting systems require more work from a bookkeeping perspective, but they present a clearer picture of the company's financial health if they are implemented correctly. However, if they are implemented incorrectly, they may further distort the balance sheet and profit and loss reports. There are two common mistakes made in managing an accrual accounting system:

1. ***Forgetting to release value stored in temporary accounts:*** When value for prepaid assets or client deposits is stored in current asset or current liability accounts, it must subsequently be allocated to an expense or income account with another set of transactions. Without that second set of transactions, balances will continue to accrue over time. If client deposits are not transferred to earnings when work is completed, the current liabilities will continue to weigh down the balance sheet, and income will incorrectly display as lower than in reality. Conversely, if prepaid assets are not released to expense accounts, the company's profits will display incorrectly as higher than in reality, and the company will appear to have more assets than it actually does.

2. ***Making transactions that do not reflect the accrual of expenses or income:*** Sometimes costs and value are accrued on a basis that is not constant with time. For example, worker's compensation premiums are "used" proportionately to payroll (see *Workers Compensation*

Month	Client Deposit Liability			Income		
	Debit	*Credit*	*Balance*	*Debit*	*Credit*	*Balance*
$1,000	$3,000	$2,000		$1,000	$1,000	$6,000
$1,000		$1,000		$1,000	$2,000	$6,000
$1,000		$0		$1,000	$3,000	$6,000
$1,000	$1,000	$0		$1,000	$4,000	$8,000
$1,000		-$1,000		$1,000	$5,000	$8,000
$1,000		-$2,000		$1,000	$6,000	$8,000
$1,000		-$3,000		$1,000	$7,000	$10,000
$1,000	$1,000	-$3,000		$1,000	$8,000	$10,000
$1,000		-$4,000		$1,000	$9,000	$10,000
$1,000		-$5,000		$1,000	$10,000	$12,000
November	$0		-$7,000		$0	$12,000
December	$0	$7,000	$0		$0	$12,000

Figure 3: Example ledger showing the journal entries for an accrual accounting system of income earned from a one-year contract with work performed in equal monthly increments.

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as COGS). When payroll is low during a slow time, accrual transactions crediting the prepaid worker's compensation account should be smaller than during busy times. When worker's compensation or other variable expenses are "smoothed" evenly over all periods, then the profit and loss sheets will show unusually poor company performance during slow periods and unusually high company performance during busy periods. This distortion may lead to poor management decisions based on incorrect information.

Conclusion

This article discussed the difference between cash and accrual accounting systems. The primary difference between the two systems is the timing of when transactions are recorded affecting how they are presented in accounting reports. The next article in this series introduces cost classification and depreciation, methods of treating costs and asset purchases based on the frequency they are incurred.

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Month	Client Deposit Liability			Income		
	Debit	*Credit*	*Balance*	*Debit*	*Credit*	*Balance*
January	$6,000	$3,000	-$3,000		$6,000	$6,000
February	$0		-$3,000		$0	$6,000
March	$0		-$3,000		$0	$6,000
April	$2,000	$1,000	-$4,000		$2,000	$8,000
May	$0		-$4,000		$0	$8,000
June	$0		-$4,000		$0	$8,000
July	$2,000		-$6,000		$2,000	$10,000
August	$0	$1,000	-$5,000		$0	$10,000
September	$0		-$5,000		$0	$10,000
October	$2,000		-$7,000		$2,000	$12,000
November	$0		-$7,000		$0	$12,000
December	$0	$7,000	$0		$0	$12,000

Figure 4: Example ledger showing the journal entries for an accrual accounting system of income earned from a one-year contract with work performed in unequal and irregular increments.