Chapter Introduction: Recordkeeping and Control

Episode 42 in the Adventures of …drum roll… Forensic Man!

The caper. It was a dark night in the city. In an alley behind the jewellery store, the famous cat burglar struggled into her tight Mauve Menace costume with “If You’ve Got It, Flaunt It” stencilled on the back. “Oof,” she muttered, “gotta lay off the ice cream bars.” But then it was an easy climb up to the store’s roof and in through a heating duct.

The insider. It was also easy to find the safe. “Canoodling with that doofus Meek Mike from the store’s office was no fun, but at least I got the store layout and part of the safe combination out of the jerk for my trouble.” She evaded the security system with her usual agility, then after only five hours of fiddling with the safe’s lock, got it open.

The loot. The safe was full of just what she was looking for: very expensive custom-made jewellery. She scooped it out into her special loot bag and closed the safe.

The getaway. She returned to the roof through the heating duct, the way she had come, and jumped down to the alley, spraining only one ankle. She tossed the loot to her sidekick, Freddie the Fence (who had fallen asleep waiting), struggled back out of her costume, and limped nonchalantly away. Another perfect crime!
The superhero. Next day, at her day job, her way to the water cooler was suddenly blocked by the massive frame of Forensic Man. (Forensic Man liked to block people’s way because if he had to chase anyone, he was sure he’d get a hernia or have a heart attack, or muss his hair.) “We’ve got you now, Mauve,” he said. “You got nothing on me, Forensic Man,” she laughed, knowing that she had left nothing behind at the store and that Freddie the Fence would be careful when selling the jewellery.

The crooks are foiled. “You picked the wrong store, Mauve,” said Forensic Man. “This store has an internal control system that can identify every item you took and can specify the value of all your loot. We can trace everything back to Freddie the Fence, and we know he couldn’t get into that store through the roof in a thousand years. And colluding with Meek Mike didn’t help you much—he had access to the jewellery, but not to the inventory records, so he couldn’t cover up the theft. We caught him in the store trying to trash the computer, but the internal control system did an automatic back-up of the records every evening, so all he did was draw attention to his guilt. And to top it off, the store has a new tiny video camera that caught you climbing back up to the heating duct—you really should lay off the ice cream bars!”

Learning Objectives

This silly little story introduces internal control, an important feature of accounting that is in the background, not as obvious as the financial statements, but absolutely essential to good business management. This chapter illustrates that producing financial statements is not the only reason for having accounting (which you will also see when you take a course in management accounting). In this chapter you will learn:

- Why internal control is important to managers (such as those of the jewellery store above);
- How accounting records are set up to provide the documentation that is at the heart of internal control (the jewellery store can trace every item the Mauve Menace took);
- How accounting records are used to provide control information against which to compare physical assets and so minimize errors, loss of assets, and even fraud (the jewellery store’s records provided a control that even insider Meek Mike could not compromise);
- How to keep track of funds collected or deducted on behalf of others, especially GST and other sales taxes, and employee deductions like income taxes and union dues (it’s not part of the Mauve Menace story, but the jewellery store would have to collect GST on every item sold and turn the tax collected over to the government);
- How “contra accounts” are used to record estimates necessary to the financial statements, such as bad debts and amortization, without disturbing the internal control accounting for the related assets, accounts receivable, and noncurrent assets (the jewellery store would have more assets to keep under control than just the contents of the safe).
7.2 Accounting’s “Books” and Records

The Importance of Good Records

Complete and accurate records are important: they provide the observations behind the accounting information and the history of the enterprise. Without knowing what has happened, investors and managers cannot make plans for the future, evaluate alternatives properly, or learn from past actions. In today’s complex business environment, especially since enterprises have become very large, the number of business events is much too great for anyone to keep track of without having accurate records (written or, these days, computerized records). Records provide the basis for extrapolations into the future, information for evaluating and rewarding performance, and a basis for internal control over the existence and quality of an enterprise’s assets. Internal control, furthermore, not only provides systematic protection from theft and loss, but also documentation for legal and insurance purposes. Recordkeeping, however, does cost money, and therefore records should be worth their cost. How complex and sophisticated to make one’s records is a business decision, just as is how to price or market one’s product.

These are fundamental points about records:

- Records are the basis of accounting information, as we have seen beginning with the transactional base of financial accounting in Chapter 1. Therefore, the better the records, the better the accounting.

- Records also provide essential evidence of what people do, request, and promise. They are the backbone of managing what happens in and to the enterprise and therefore are fundamental to managers. Without good records, managers are flying blind.

- Many outside parties, like auditors, bankers, and tax authorities, want to scrutinize records that support the enterprise’s claims about the income it has earned, the sales it has made, the bills it has paid, the tax it has collected for the government, the tax it owes on its own income, and so on. Records are so important to income tax, for example, that the law requires enterprises (and individuals) to keep records and allows the taxation authorities to make their own judgments about tax liability in the event good records haven’t been kept.

- And, last but not least, it is very expensive to catch and correct errors, prepare proper financial statements, or any other reports, or uncover fraud, if good records have not been kept. Without good records, enterprises can get into spectacular messes! Here are some real examples:
  - A big American life insurance company called Equity Funding suffered multimillion-dollar losses because its records of issuing life insurance were so unreliable that some fraud artists high up in the company’s management induced it to pay out vast sums for insurance policies that did not exist.
  - A charitable organization in Western Canada let its records get into such terrible shape that it could not even figure out what cash and bank balances it should have. While there did not seem to be any fraud, the charity had to go through the embarrassment and expense of trying to reconstruct events that had happened years earlier, and ended up having to have its board of directors pass a special motion to declare that the charity had to give up trying to sort out the mess and would
deem its bank and cash balances to be whatever the current best guesses were.

- A fired employee took a magnet to the electronic records of a large wholesale company, destroying its records of what customers owed it. There were no back-up copies of the electronic files. The company was forced to rely on the honesty of many customers to pay what they said they owed.

- A large Canadian university implemented a faulty computerized record-keeping system, one of the highly integrated “ERP” (enterprise resource planning) systems that have become popular in recent years. The system generated mysterious information that didn’t seem to make sense, and any errors seemed to multiply like rabbits. By the end of the first year of the new system, the university’s departments had little good information about how much of their budgets had been spent or how much could be carried over from year to year, and the university’s internal financial statements were a tangle, with amounts being added to and subtracted from accounts seemingly at random. Armies of clerks had to be employed to try to connect the documents the university had to the information the computers were producing.

Summary of Financial Accounting’s Procedures

The general steps that should be followed in coming up with a set of audited financial statements, outlined in previous chapters, but repeated here as reminders, are

1. Record transactions as individual journal entries or in specialized records for various routine transactions, such as cash receipts or cheques written.
2. Summarize the transactions by posting them to accounts.
3. Choose accounting methods and policies to be followed consistently in reporting performance and position.
4. In accordance with those methods and policies, make end-of-period accruals, corrections, and other adjustments.
5. Prepare the balance sheet, income statement, and retained earnings statement from the accounts.
6. Prepare the cash flow statement from the other three statements and additional information about changes in noncurrent assets and liabilities and owners’ equity.
7. Prepare the accounting policy notes and other footnote disclosures, and add comparative figures for last year.
8. Have the full set of statements and notes audited (usually, the auditing process begins earlier, before the year-end and before the statements have been prepared).
9. Append the auditor’s report to the set of statements and notes and have the balance sheet signed as approved by the board of directors.
10. Release the statements, notes, and auditor’s report as a set.
11. Somewhere after step 5, close the income, dividends, and retained earnings adjustments accounts to retained earnings to make all those accounts’ balances zero in preparation for next year’s step 1 (the balance sheet accounts continue into the next year and so are not closed). Computerized accounting systems usually do this step automatically.
The Underlying Accounting System

All of these procedures require evidence. We’ve seen some examples already, such as in the evidence needed of an exchange for a transaction to be recorded and of delivery for revenue to be recognized. To help you see the role that the underlying accounting system and the evidence supporting it play in producing the account information we’ve been using in the text, this section shows you examples of how the evidence is assembled, and what some of it looks like. This will also prepare you for the internal control topic later in the chapter, because internal control both depends on and contributes to the enterprise’s recordkeeping system.

a. Source Documents and the Transactional Cycle:
A Real Example

Accounting recordkeeping depends upon sets of source documents to show that transactions have occurred. Such documents trigger the initial recordkeeping and are kept so that the accounting records can be checked and verified to correct errors, permit auditing, be used in case of dispute, and support income tax claims and other legal actions. The transactions themselves reflect various events in operating the business. Examples below were supplied by an Edmonton company, Barcol Doors & Windows Ltd. (www.barcol.com), which is a manufacturer and supplier of doors and windows to the building, retail, and home trade.

1. Barcol sells products made from components and raw materials that it buys from other companies. The first step is to determine what the customer wants and get the customer’s agreement to the product and costs. This is done via a work order, which is Barcol’s record of what it is to make and what will be charged for it. This is not an accounting transaction, as there has been no exchange yet, but it is important evidence in case the customer and Barcol disagree later on what the customer wanted and how much would be paid. See Figure 7.1 for Barcol's work order form. It is dated and prenumbered, and has spaces for details like the agreed terms of payment.

2. The next step is ordering any raw material not on hand but needed to complete the work order. Like the work order stage, ordering raw materials is not an accounting transaction, so orders are not recorded in the accounts. However, documenting and keeping track of orders is very important to Barcol, so it uses “purchase order” forms for this. Figure 7.2 provides an example. You’ll see that it is dated and prenumbered, so that it may be followed up in case of problems, and the items ordered are listed in detail so they can be checked against what actually arrives from the supplier. If you look back at Figure 7.1, you’ll see that near the top it has a space for the “Customer P.O.#” so Barcol is expecting its customers (those that are other businesses, at least) to use purchase orders too.

3. When ordered items arrive, they are checked against purchase orders and the supplier’s packing slips, to ensure the order is correct. A copy of a packing slip from one of Barcol’s suppliers is shown in Figure 7.3. It has no financial details but is evidence that the transaction happened in case there is any disagreement when the supplier bills Barcol or when the customer wonders how the work is going on the product ordered. This document, prepared by Barcol’s supplier, is headed Sales Order because it is the supplier’s version of the same sort of evidence Barcol wanted when it prepared the purchase order in Figure 7.2. The packing slip even quotes Barcol’s purchase order number; you can see what a complete, cross-referenced set of records Barcol, its customers, and its suppliers are creating.
4. Selling the products is what Barcol is in business to do. When the product is complete and delivered to the customer, a *sales invoice* is prepared, specifying various useful details as in the example in Figure 7.4, which is the invoice for the goods involved in the previous three figures. A copy of this invoice supports the sale transaction recorded as DR Accounts receivable and CR Sales revenue. You can see there is $294.56 *GST* on the total, so the invoice also supports a debit to Accounts receivable and a credit to GST payable for the tax, which is not part of Barcol's revenue, but instead is collected on behalf of the government. (We'll see more about accounting for sales taxes like GST later in this chapter.)

5. Barcol's suppliers also send invoices to it for payment of the raw materials it has ordered. At the top of Figure 7.5 is an example of the accounts payable record Barcol creates from these invoices (which it has checked back to its purchase orders, Figure 7.2, and suppliers' packing slips, Figure 7.3). Barcol uses this record to explain to the supplier which invoices it is paying. The top of Figure 7.5 has room to

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**Figure 7.1**

*Work Order*

A sales invoice is Barcol's formal evidence that a revenue transaction has happened.

Barcol keeps track of its purchases and payables as well as its sales, and ties those to cheques written to suppliers.
list several invoices. Only one is given in this example, which also says that cheque #6777 is to pay for the invoice total of $130.54. With this record, both Barcol and the supplier can readily track down any missing or disputed shipments or invoices. The cheque is attached to this record when Barcol pays the amount indicated.

6. Collecting from customers is the last event in Barcol’s revenue generation cycle. Three kinds of collection are illustrated here.

a. Figure 7.6 shows a list of cash received from customers that is being deposited. This is from Barcol’s cash receipts record, which supports the cash records and the credits Barcol posts to reduce customers’ accounts receivable for the payments they have made. Details are given of the customers for tracing to cash sales or accounts receivable records, and the form even specifies that all the cash is in Canadian dollars. Barcol prepares the same sort of list for cheques received from customers (not illustrated).
**Figure 7.3**

Packing Slip

**Figure 7.4**

Sales Invoice

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**Table:**

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<thead>
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<th>PRODUCT CODE</th>
<th>DESCRIPTION</th>
<th>QTY SHIP</th>
<th>QTY S/H</th>
<th>WEIGHT</th>
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<tbody>
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<tr>
<td>NL1202H2</td>
<td>7' HI-LIFT</td>
<td></td>
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<tr>
<td></td>
<td>DO NOT WRAP</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Order Information:**

- **Order Date:** 02/10/10
- **Packing Date:** 02/10/10
- **Shipping Date:** 02/24/10

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**INVOICE:**

<table>
<thead>
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<th>INVOICE NUMBER</th>
<th>INVOICE DATE</th>
<th>DATE SHIPPED</th>
<th>SHIPPED VIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>36352</td>
<td>11/14/02</td>
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<td></td>
</tr>
</tbody>
</table>

**Ship To:**

- **Address:**
  - **SOLD TO:** XYZ LTD.
  - **SHIP TO:**
  - **P.O. NUMBER:** NA
  - **PREP/h/coll:** NA
  - **SALESPERSON:** NA
  - **WOK:** NA
  - **EXEMPTION NO.:** NA

**Terms:** NET30

<table>
<thead>
<tr>
<th>QTY</th>
<th>ITEM NO.</th>
<th>DESCRIPTION</th>
<th>PRICE</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>135&quot;X16&quot; TD134 C/W 3&quot; HARDWARE</td>
<td>$3,472.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7&quot; HIGH LIFT TRACK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CW STEEL DOOR CHANNEL</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>HS023 1/2hp/20V+3ph OPERATOR</td>
<td>$736.00</td>
<td></td>
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<tr>
<td></td>
<td>CW PNEUMATIC REVERSE EDGE INSTALLED</td>
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<td></td>
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</tr>
</tbody>
</table>

**Total Invoice:** $4,208.00

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**Payment Information:**

- **PLEASE MAKE CHECKS PAYABLE TO:** BARCOL DOORS & WINDOWS
- **TAX DATE:** 7% GST
- **SHIPPING AND HANDLING:** N/A
- **Rush order or other expense:** N/A
- **Total:** $4,502.56

**GST:** R109399565

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**Barcol Door Ltd.**

- **Head Office:**
  - **14820 Yellowhead Trail**
  - **Edmonton, Alberta T5L 3C5**
  - **Phone:** (780) 452-7140
  - **Fax:** (780) 451-0724

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**Barcol Door Ltd.**

- **TRUCKER'S COPY**

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**Financial Acct-C07-v3 3/28/06 3:58 PM Page 430**
b. These days, Barcol, like many businesses, relies on credit cards for customers’ payments on many sales. The proportion of sales paid by credit card is continuously growing. When a customer pays by credit card, the credit card slip is deposited into the bank just like cash or a cheque (the credit card company bills Barcol for its fee monthly). Figure 7.7 shows a little form that Barcol’s credit card computer record prints out to go with all the credit card slips; you’ll see that Barcol would be depositing slips from three different credit card companies. You’ll also notice the “Inst paymnt” amount, small on that day but also growing. That is the record of “Interac” direct-withdrawal payments by customers.

c. More electronic, some customers pay Barcol by just notifying their and its banks to transfer the money to pay, without bothering with cheques or credit cards. This sort of electronic funds transfer (EFT) is becoming more common at Barcol, especially by large regular customers. Figure 7.8 is the form a customer faxed to Barcol to tell it that a transfer had been made.

Without keeping track of EFTs, credit card payments, and Interac payments, Barcol would have little idea of what its bank balances should be, because these three forms of customer payment are much more important for Barcol now than cash and cheques combined.

Barcol uses other kinds of documents also. It has more electronic transfers, for example, to pay all employees by direct deposit into their bank accounts. There are many kinds of documents used by various companies. Each company adapts documents to its own needs, especially to provide legal evidence and support accounting transactions records. You can count on two things about any company, government, sports club, or other organization: (1) it will have various documents to back up its accounting system, and (2) those documents will be suited to that organization and so might not be quite like any other organization’s.
b. Books of Original Entry

Based on source documents, accounting transactions are recorded. Because this is when the business event first is recorded by the accounting system, these basic transactional records are often called “books of original entry.” These records specify the accounts to which transactions are to be debited or credited. Typically, transactions of a similar nature are grouped together, and separate, specialized records are used to record frequent routine transactions. Some examples of specialized records are

- a sales journal, listing all sales in sales invoice order;
- a cash receipts journal, listing payments received from customers (Barcol’s collections lists are forms of this); and
• a cheque register or *cash disbursement journal*, recording all cheques issued, in cheque number order. Companies usually have separate cheque registers (and bank accounts) for major areas, such as payment of accounts payable, general payroll, executive payroll, and dividend payments. Records for cash disbursements using EFT or other automatic payment systems are generated automatically by the system.

Each company will also have a “*general journal,” used mainly to originate journal entries for transactions that are not provided for in specialized journals, and for accruals and
adjustments of any kind. No adjustments are just written into the ledger accounts: all must originate with journal entries in the general journal. Journal entries, like the rest of accounting’s records, must be organized and kept on hand for later reference, and they must be supported by documents or calculations of some kind so that they may be verified later (or even just plain understood after the original reasons for the entries have faded from people’s memory).

c. Ledgers

Ledgers are books (or computer records) having a separate page or account code for each individual account referred to in the books of original entry. Each area or page contains a summary of all the transactions relating to that particular account and therefore “posted” to it. (Remember the set of accounts in page format illustrated in Section 2.5.)

*General ledger*—the collection of all the asset, liability, equity, revenue, and expense accounts, summarizing the entire operations of the business. The general ledger is the central record of the financial accounting system and is the basis on which the balance sheet, retained earnings statement, and income statement are prepared. The ledger may be a “book” or it may be space on a computer disk or server. Many companies now keep their records on the computer and print out information only as they require it. As we saw in earlier chapters, a “trial balance” of all the general ledger accounts and their balances is prepared periodically (such as at the end of each month) in order to demonstrate that the ledger is in balance, that the sum of its debit-balance accounts equals the sum of its credit-balance accounts. (A listing of just the account names without balances, useful in designing or redesigning the accounting system and relating it to the financial statements’ format, is called a “chart of accounts.”)

*Specialized (or subsidiary) ledgers*—accounts receivable and accounts payable ledgers are two examples of specialized ledgers. For instance, if a company extends credit to its customers, it may want to keep a separate ledger account for each customer. These ledgers are balanced by making sure that their accounts add up to the same amount as is shown in the relevant general ledger account (for example, the accounts receivable “control” account in the general ledger, which is the account used to prepare the financial statements, should have the same balance as the list of customers’ individual accounts). A subsidiary ledger does not “balance” by having its debits equal its credits, but rather by having its sum equal the amount in the primary account in the general ledger. Making sure this is true is an important way of ensuring that individual customer accounts receivable, for example, are correct. Subsidiary ledgers, therefore, are part of the *internal control* system; their details are not in the financial statements, but they support the validity of the main “control” account that does appear in the financial statements. (More about control accounts is in Sections 7.6 and 7.7.)

d. Electronic Commerce

With the advent of sophisticated interconnected computer systems, especially via the Web, many business transactions are now being conducted entirely electronically. *Electronic commerce* (*e-commerce* or *e-business*) is quite a challenge to financial accounting, and to internal control, because its essence is the absence of the painstaking “paper trail” that has traditionally supported accounting records. Many people, not just accountants, think some sort of credible trail, even if not in paper, needs to be continued in some form, but how? Enterprises still need good records for all the reasons outlined at the beginning of this section, but clearly the form of those records is changing dramatically. These days, Barcol sees little cash and not as many cheques as it used to from customers, with most payments, even by other businesses, being made by credit card or electronically. It doesn’t pay its own employees by cash or cheque, just deposits their pay directly into their personal bank accounts.

E-commerce has other interesting implications for accounting. Here are examples.
1. There needs to be some compatibility between computer systems if the accounting systems on both sides of a transaction are to recognize it properly, and some trust in the electronic media to make the system work. The Web is developing interfaces that provide the compatibility and credibility mechanisms with names like “encryption” and “Web Trust” beginning to appear.

2. There can be a lot of “in-transit” activities, because physical transfers (shipments, deliveries, etc.) are usually slower than the electronic system. If you order a book from an on-line retailer, you, the retailer, and your credit card company will have all the electronic records completed long before the book shows up. The tendency of records to be speedier, and separated from the physical movements, means that it can be a challenge to control and reconcile in-transit items.

3. The parties to e-commerce can be bound together quite closely, with the ability to make enquiries into each other’s computer systems to find out order specifications, progress on production of goods, and other things to smooth the business relationship. This means that not only must the financial statements be right, but the underlying records must be good too, so that business partners’ enquiries are answered reliably. Some external parties, like banks, tax authorities, or securities regulators, may want to go straight to the underlying records without waiting for financial statements. There’s a bit of a paradox here: e-commerce both operates without paper and demands a good trail of evidence.

Financial reporting itself is going on-line and becoming continuous rather than waiting for ritual quarterly or annual reporting dates: numerous references to companies’ Web pages have been made in this book, and many versions of on-line and even interactive financial reporting are being developed. E-commerce and electronic financial reporting are likely to change accounting and financial reporting dramatically in future years. Maybe in the future, books like this will be on-line to match the on-line accounting they will then be describing!

Like most smaller companies, Barcol Doors & Windows has computerized its accounting system, meshing that with the sort of electronic collection and payment methods mentioned above. Rosalie Laibida, in charge of the company’s accounting, said that it seemed to be the right thing to do, and has had many benefits, but it was a huge step to take, and there were many problems getting it all to work; for example,

• Since Barcol is a small company, it didn’t seem feasible to have a custom accounting system developed, so standard commercial accounting software was purchased. Endless trouble resulted in trying to make the software fit the company’s needs. At the beginning, the system wouldn’t produce some needed reports and produced others that made no sense!
• The system wouldn’t allow a change in fiscal year. Not bad—forever stuck in 2001 or whatever: income statement for the period ending in infinity!
• An accident nearby wrecked a transformer, leading to a power surge that wiped out three weeks’ worth of data!

The classic “it could happen to you” happened to Barcol! Now the records are backed up on tapes nightly, and the disks are stored off-site. For extra protection, the essential accounts receivable records are burned onto CDs and also stored off-site.

• Finding that the system was producing ever more paper, Barcol has largely stopped printing out accounting records at all. Queries and analyses are conducted on-screen, which works very well now that the system is working properly. However, the important “aged” list of accounts receivable is still printed out frequently so that it can be used to keep on top of collections, which are Barcol’s lifeblood.
• The human element continues to complicate everything. Barcol keeps lists of work orders, purchase orders and similar documents, because people keep forgetting to complete the things set out in such documents and need reminders if documents seem to get old without action or customers complain that orders have not been filled.
Internal Control

We have so far identified several different uses for financial accounting information, including,

a. evaluation of management’s performance, for the purpose of deciding whether to reward or punish managers;
b. prediction of future performance, for the purpose of deciding whether to invest in or lend to the company; and
c. division of the company’s returns (incomes) into portions for various parties: management bonuses, income taxes, dividends to owners, and so on.

The rest of this chapter focuses on another important use:

d. maintenance of internal control over assets and such day-to-day activities as making sales, collecting cash, and incurring expenses.

An appropriate recordkeeping system for any organization is one that can be used to keep track of resources, thus discouraging misappropriation of the organization’s property or inefficient use of resources and helping management safeguard assets. Yet, it should not be overly cumbersome or bureaucratic. Records also help management meet its responsibility to run the enterprise effectively, and generally to control what is going on. Such internal control is not only a matter of recordkeeping: physical protection, insurance, and proper supervision of employees are also important to internal control. The Barcol Doors & Windows documents in Section 7.2 were part of the company’s internal control system; they were numbered and dated, and contained several details that could be used to follow up if problems arose.

This is a brief introduction to an interesting area of management responsibility that accountants and auditors consider part of their area of expertise. The CICA Assurance Handbook (paragraph 5141.02) provides the following definition for internal control:

*Internal control* is the process designed and effected by those charged with governance, management, and other personnel to provide reasonable assurance about the achievement of the entity’s objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations. It follows that internal control is designed and implemented to address identified business risks that threaten the achievement of any of these objectives.

Main Components of Internal Control

As the CICA Assurance Handbook excerpt above points out, internal control is the responsibility of management. Here are some ways that management can establish proper control over the enterprise’s affairs. After the points have been made, they will be related to a recent really spectacular fraud.
1. **Run the enterprise competently.** Looking after the enterprise’s assets and making sure various activities, including recordkeeping, are done well is just part of being a good manager. A well-run enterprise has a climate of efficiency and records that cross-check each other, as well as competent managers who are likely to realize quickly when something is going wrong. Having a good internal control system contributes to the profitability and efficiency that good managers seek.

2. **Maintain effective records.** Having a comprehensive, connected set of records, as was illustrated for Barcol Doors & Windows, provides an early warning system and helps to motivate good performance by everyone, because the records provide routine monitoring and act as the basis for hourly pay, performance appraisals, bonuses, and other parts of the motivation system. Records also provide an audit trail of events that can be traced back to identify the causes of problems. An effective recordkeeping system goes well beyond accounting transactions (we saw the example of Barcol’s purchase order system), but accounting records are likely to be at the heart of it. Many modern organizations have integrated their accounting and other records into a decision-oriented management information system that can be used to support a wide range of management decisions and evaluations.

3. **Use the records to act and learn.** It is an unfortunate fact of life in many organizations that many records seem to be maintained just for the sake of doing that. We all have chafed at bureaucratic form filling and having to prepare multiple copies of things for no apparent good reason. If management allows records to grow of their own accord, money is wasted, and perhaps equally important, people in the organization learn that the records don’t matter, that mistakes and worse will not be acted upon or corrected. This can seriously undermine the control aspect of recordkeeping, and is likely to produce records that are useless for managers to learn from events, because the records either have too many errors or have become irrelevant to the organization’s current needs.

4. **Keep recordkeeping separate from asset handling.** An effective way of providing security over assets like cash, accounts receivable, and inventories is to have records showing how much of each asset is supposed to be on hand at any time. But if the person who handles assets (say, cash) also keeps the records, then errors or fraud can be hidden by altering the records. Accountants call separation of recordkeeping from handling assets “segregation of duties.” One person collects the cash, and another person maintains the cash records. So if one or the other makes a mistake, a difference will arise between the count of cash on hand and what the record shows should be on hand. This difference then can be investigated and the cause corrected. Segregation of duties can also be used within the recordkeeping system: for example, one person can maintain the general ledger, with the total accounts receivable account, and another can maintain the accounts receivable subsidiary ledger, with the detailed list of customer accounts. It is hard for smaller enterprises with few employees to spread the jobs around enough to segregate all the important tasks, but it should be done as much as is sensible. If segregation of duties doesn’t exist, the boss needs to keep a close eye on important assets, such as cash and inventories.

5. **Adequately pay and motivate employees.** A more positive side of internal control is to pay and reward people for their efforts on behalf of the enterprise, so that they try to do a good job and are not tempted to subvert recordkeeping and other control systems. Disgruntled employees may not care if things go wrong or may even take some pleasure when the enterprise suffers losses. As you can imagine, the control provided by

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**Internal control components**

1. Be competent
2. Keep track
3. Learn
4. Segregate duties
5. Manage people
6. Insure
7. Protect assets
8. Scrutinize
9. Be ethical
segregation of duties is destroyed if the people involved “collude” (work together) to cover up errors or fraud, and while such actions can never be wholly prevented, their probability is reduced if people feel good about the enterprise and feel they are fairly treated.

6. **Carry insurance on assets.** Like anything else, internal control has to be worth its cost. It is probably worth the cost to have a careful control system for the main part of the enterprise’s activities (for example, buying and selling goods), but there will be some unusual circumstances that are not anticipated or for which setting up elaborate controls doesn’t seem worthwhile. Some events, such as earthquakes or fires, may be entirely or mostly beyond management’s control. So it makes sense to protect the owners’ investment by carrying insurance for some events against which internal control systems cannot provide adequate protection. There is a side benefit of insurance: insurance companies tend to want to know a lot about how the enterprise is protecting and managing its assets, and satisfying the insurance company about this can result in improvements in controls.

7. **Physically protect sensitive assets.** This control method is rather obvious, but it’s easy to overlook too. Sensitive assets, such as cash, inventories, and tools, should be behind lock and key, kept in particular storage areas, or otherwise protected from unauthorized or casual access. Many enterprises are sloppy about access to their inventories in particular, and sometimes protection is a good idea for assets you might not think of. For example, many manufacturers produce scrap as a by-product, and the scrap can be very valuable. One Canadian manufacturer put its scrap in the backyard and found out later that thousands of dollars’ worth had been lifted over the back fence and sold on the scrap market.

8. **Welcome independent scrutiny of accounting and governance.** An important, even crucial, aspect of good internal control is a willingness to undergo careful independent scrutiny of the organization’s procedures and governance. The ultimate responsibility is borne by the board of directors (for a corporation; other organizations should have corresponding bodies), which is responsible to the shareholders/owners for the governance of the organization. If others in the organization are to believe that the sorts of controls mentioned in this section are important, the people at the top have to live by them also. Those people at the top should welcome scrutiny of their policies, priorities, performance, and general behaviour. Letting the external auditors do their job is part of this scrutiny, as is having a good internal audit operation within the organization. The board of directors should have an audit committee composed of directors who are not also members of management, and both external and internal auditors should have full and frank access to the audit committee to discuss top management’s behaviour. Even if such scrutiny were not useful in itself, having gone through it is very helpful to top management and the board of directors when problems do arise—as they tend to do, because no organization is going to be flawless.

9. **Take ethics seriously and set an example.** This ties back to the first point, and connects to every other point as well. Top management sets the tone and provides the example that determines whether the whole organizational culture emphasizes ethical behaviour or not. Reacting to one of the latest corporate scandals (WorldCom) in June 2002, US President Bush said, “There is a need for renewed corporate responsibility in America. Those entrusted with shareholders’ money must strive for the highest of high standards.” No internal control system, no corporate governance structure, will work if the people who operate it are not ethical. There is a great deal of controversy about what sorts of ethical standards are appropriate, and to what extent they should include broader responsibilities, such as for the environment, poverty, and human rights. This book cannot even make a start on resolving this controversy, because it goes to the heart of what society and business are all about, but it is clear
that broad principles beyond either the company’s or the manager’s direct self-interest are involved. Being known by others in the organization for following ethical principles and expecting others to do so too is essential.

There is much more to internal control, governance, and ethics. Designing effective control systems requires an understanding of management’s objectives, a sensitivity to the cost-benefit balance needed between tight but costly controls and loose but cheap controls, knowledge of computer systems and other recordkeeping methods, considerable insight into the subtleties of human motivation and behaviour, and more than a little understanding of the human society and culture that allows the organization to exist. It also requires some common sense: complete protection is not possible, and tying the enterprise up in red tape in order to try to get complete protection is not what a good internal control system does.

Effective internal control is common-sense management.

In 2002, a truly massive fraud (US$691 million; over a billion Canadian dollars) was discovered at Allfirst Financial Inc., a Baltimore branch of international bank Allied Irish Banks PLC of Dublin. The fraud was allegedly perpetrated by a currency trader working in Baltimore but trading largely on Asian currency markets. It involved making very large bets on currency fluctuations and covering up losses due to bad bets by making more bets, just like a gambler who wants to play one more round of poker to cover losses already incurred. Here are some comments on some internal control implications of this huge fraud:

- There is some question about the competence of those supervising the trader. Banks have to watch their traders carefully because any trade can be a very large risk to the bank. If anyone had been in any doubt, a fiasco a few years earlier, in which a Singapore currency trader bankrupted Barings Bank, should have been instructive to everyone.
- Records appeared to have been prepared, so later on, the amount of the losses could be measured. Recordkeeping was not a problem, it seems.
- But learning from the records was a problem. Though the trader’s activities could be tracked later on, there apparently was little attention during those activities that might have alerted senior management.
- The trader was responsible for preparing some records of his own activities, and so could disguise what was going on. Not segregating the recordkeeping from the trading behaviour was an elementary error, but it is unfortunately commonly made by managers who are impatient with such procedures or feel they need to trust people.
- We don’t know how well paid or motivated the trader was. It seems the trading losses just started to grow and were not motivated by trying to make personal gains. But the trader was perhaps led astray by being given too much freedom with others’ money.
- Insurance can be hard to get for such potential catastrophes, because insurers would believe good management should prevent them and do not want to underwrite poor management!
- The assets in this case were financial ones, not physical ones, and the real problems came from the potential losses (liabilities) arising from such trading. All of these should have had more careful protection so that a single employee could not risk them.
- Internal audit procedures should have identified the weaknesses noted above. It is not known why they did not.
- There are no apparent ethical problems, other than the overall issue of how top management carried out its governance and stewardship roles and what sort of tone was set for the bank’s internal culture to allow the trader to behave as he did for long enough to create such a catastrophe.
Top Management’s Responsibility for Internal Control

Section 7.3 stated that management, especially top management, is responsible for internal control. Top management’s responsibility for the ethical climate of the organization and the soundness of its accounting and controls cannot be overemphasized, especially in the light of the serious problems in corporate governance that have turned up repeatedly in recent years. Exhibit 7.1 details what top management of CPR said about their responsibility for financial reporting and internal control in the company’s 2004 annual report:

Canadian Pacific Railway Limited
Management’s Responsibility for Financial Reporting

The information in this Annual Report is the responsibility of management. The consolidated financial statements have been prepared by management in accordance with Canadian generally accepted accounting principles and include some amounts based on management’s best estimates and careful judgment.

Management maintains a system of internal accounting controls to provide reasonable assurance that assets are safeguarded and that transactions are authorized, recorded and reported properly. The internal audit department reviews these accounting controls on an ongoing basis and reports its findings and recommendations to management and the Audit, Finance and Risk Management Committee of the Board of Directors.

The Board of Directors carries out its responsibility for the consolidated financial statements principally through its Audit, Finance and Risk Management Committee, consisting of five members, all of whom are outside directors. This Committee reviews the consolidated financial statements with management and the independent auditors prior to submission to the Board for approval. It also reviews the recommendations of both the independent and internal auditors for improvements to internal controls, as well as the actions of management to implement such recommendations.

Michael T. Waites
Executive Vice-President and
Chief Financial Officer
February 21, 2005

Robert J. Ritchie
President and
Chief Executive Officer

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. What should a good internal control system do?
2. What are some components of an internal control system?
The connection between internal control and financial reporting is important. CPR’s top managers are taking responsibility for the whole financial reporting system in this statement, including internal control. Even the auditors’ access to the board of directors through the Audit Committee, which is part of the board’s control at the very top of the company, is mentioned. Control really means that top management knows what is going on around the company, knows what is going on inside the company, and manages the company well in whatever climate of change or turbulence management finds itself. At best, this means prudent management at the top, setting the tone for the whole company and leading to informed and appropriate actions throughout.

For most companies, this works pretty well. But there are many dramatic examples of what happens to companies whose management is not in control: banks fail because of over-lending to questionable borrowers or poorly supervised currency trading (as we saw in Section 7.3); sports stadiums and government buildings cost far more than expected because of loss of control over construction processes; big retail chains lose control over their buying and marketing and so lose their customer base; fast-food chains build more outlets than there are stomachs to fill; and many growing companies let their receivables and inventories get too large as they try to serve all possible customers. About the failure of Enron, a writer commented that the company culture “… led to Enron’s demise: the frenetic pace, the lure of riches and the lack of controls.”

After WorldCom admitted its financial statements had been manipulated to produce higher earnings, the US SEC immediately charged the company with fraud. These are examples of bad management, not just bad control, because in essence, management and control are the same thing. As we turn now to specific control areas, the overriding role of top management in running the business properly should be kept in mind.

### HOW’S YOUR UNDERSTANDING?

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. Why is internal control a top management responsibility?
2. Where does CPR say the ultimate responsibility for the financial statements lies?

### 7.5 Internal Control of Cash

Cash is the asset usually most susceptible to theft because of its liquid and generally anonymous nature.

A real case: Mike, a junior auditor in a northern town, was assigned to do a surprise count of the cash on hand at a local clothing store. The cash counted was short as compared to what was expected based on the auditors’ projections of cash from sales and bank deposit records. The store’s accounting clerk accused Mike of stealing the cash himself while counting it, and so he had to call the police from the store and insist that they search him and so demonstrate that he had not stolen it. It turned out that the accounting clerk had been stealing cash and covering up the thefts by changing the sales records—a classic case of poor internal control through lack of segregation of duties, because the clerk had access to both the cash and the records of the cash. The theft was discovered only because Mike’s surprise cash count referred to sales records that the clerk had not yet altered to cover up the shortage. The clerk was fired, and he promised to make restitution, though it was difficult to tell how much had been taken because sales records had been...
altered for several years. The owner of the store was quite critical of the audi-
tors for “not preventing the loss,” but the auditors showed that they had
indeed warned the owner, who had said that it would be too expensive to
employ someone else to keep the sales records or control the cash.

For cash sales, one of the most common controls is to have locked-in sales registers or
other carefully controlled records. Registers (such as those you would see at any super-
market) usually print a consecutive number on the locked-in tape for each transaction.
The access key is kept by a single person, perhaps a supervisor, who balances cash to sale
records. The proceeds that should have been received will be recorded on the tape. The
person who keeps the key should count the cash with the cashier, compare it to the sales
proceeds, and check that the tape numbers are consecutive from one person’s shift to
that of the next person. If this sort of system is to work, there has to be no collusion
between the people controlling the cash and checking the records—often collusion is
difficult to prevent, so having yet another person provide overall monitoring of the
process is a good idea. And as we saw in the Barcol example in Section 7.2, there are
many forms of “cash” needing control attention besides currency and cheques, including
“Interac” direct payments to the company, credit cards, and electronic funds transfers.

A real case: A large company established a “petty cash” fund in its front office to
be used to pay for small purchases, such as office supplies and courier
charges. The receptionist was given a fund of $1,000 in cash, and when most
of that was spent, submitted all the receipts in an envelope and was reim-
bursed for the cash spent to bring the petty cash fund back up to $1,000. The
internal control therefore was that, at any time, the receptionist should have
cash on hand plus receipts for payments totalling $1,000. What the company
did not know was that the receptionist was involved with the delivery driver
from the store from which the company got most of its office supplies, and
nearly all invoices from that company paid through petty cash were inflated.
The company paid far more than it should have for the supplies, but no one
knew because the people who got the supplies did not see the invoices, which
were kept by the receptionist as evidence of cash payouts. The people who
reimbursed the receptionist had not seen the office supplies and so did not
know the invoices were inflated. The thefts and the collusion between the
receptionist and driver were discovered long after the two had moved to
another city: someone noticed that after the receptionist and driver left, office
supplies costs were lower than they used to be! The company has no good
idea of how much was stolen, but it probably exceeded $10,000 over the years.

Another way to control cash from sales is to have multi-copied, prenumbered sales
invoices, as Barcol has. The invoice copies are then removed by one person: for cash
sales, the amounts are crosschecked to cash records, and for credit sales, the amounts
are crosschecked to accounts receivable records. Any gaps in the invoices’ numerical
continuity are investigated. For this control to work, supervisors must ensure that an
invoice is prepared for each sales transaction. An additional control is to regularly check
inventory and compare it with the sales records. This should prevent, or at least detect,
someone selling inventory and pocketing the cash.

Take, for example, the Mayfield Pro Shop, which accumulated $10,000 in
sales at the end of a month according to the invoice copies in the locked box.
If the inventory at the start of the month was worth $25,000 and at the end of
the month was worth $14,000 (based on the retail price of the goods), the
shop should have sold $11,000 worth of goods. The $1,000 difference could
be due to one of the following:
1. Someone could have kept $1,000 worth of cash from sales and not written any invoices for those sales.

2. Someone could have shoplifted $1,000 worth of goods.

3. The inventory could be inaccurate, or other errors could have occurred.

Point 3 is a reminder that there are usually other reasons for shortfalls besides theft, but keeping track of cash and inventory together is one method of highlighting the possibilities and investigating them.

These examples of cash-control problems are presented to illustrate that accounting records are important beyond their use in preparing financial statements. The examples are not intended to suggest that employees or customers are crooks, but to show that management must be prudent in meeting its responsibility of good stewardship in taking care of the owners’ assets. Part of that responsibility lies in not putting employees or others in such poorly controlled situations that they are tempted to steal, and paying people with responsibility for cash well enough that they do not start thinking of themselves as underpaid and therefore deserving of more money from the company!

A real case: An armoured truck company had developed a good business picking up cash from supermarkets and other stores and delivering it to banks. The company trusted its employees and had never had problems. Usually the trucks were staffed by two people, a driver and a second person that rode in the back. The two had to sign various forms and, in a sense, they kept an eye on each other so no one got tempted: there was often a million dollars or more in unmarked, untraceable cash in the truck. Sometimes, though, one of the two people was sick, or on vacation, or called away on some errand for the company, and there would be just one person to drive the truck and collect the money. On one day like that, there was a particularly large amount of money in the truck, and the driver, apparently on impulse, just took it and departed for foreign parts!

Before leaving the subject of cash control, a major additional control warrants mention. Cash on hand is important, but as we saw with Barcol, most of the company’s cash is likely to be in, or going in and out of, its bank accounts. It is central to cash control to prepare a formal \textit{bank reconciliation} frequently, at least monthly. This example of \textit{reconciliation} was outlined in Chapter 1, Section 1.12. Keeping close track of bank accounts is important not only to prevent (or at least catch) errors and fraud, but also to ensure that managers have accurate accounting information when they are making decisions. A company that is not sure how much cash it has in the bank is likely to be poorly managed, and because errors and other problems are always possible, regular bank reconciliation is essential. (The banks themselves can have trouble with their cash, not just because of robbers toting masks and guns. Banks have very elaborate cash controls, including careful and frequent reconciliations. But sometimes, plain common sense is useful: in April 2000, a branch of government-owned ATB Financial in St. Albert, Alberta, received a deposit of US$7.5 billion, more than the total assets of ATB Financial! It won’t surprise you that the deposit was part of a scam that was exposed by an alert, and amazed, clerk at the branch.)
Accrual accounting has been described so far as a method of going beyond cash flow to produce a more comprehensive measure of income and valuation of balance sheet accounts. But by going beyond cash, accrual accounting also creates records that are very important from an internal control point of view. Here are three general examples:

• The journal entry “DR Accounts receivable, CR Revenue” recognizes revenue that has been earned but not yet collected in cash. While it does that, it also creates the accounts receivable account, which then becomes a record of what customers owe the enterprise. This account, which is often called the accounts receivable control account, is supported by a subsidiary ledger or list of what individual customers owe, and is a very important part of the control system. It should be difficult to forget about a customer or to forget to give a customer credit for paying, because the control account should reflect everything customers have promised to pay, minus everything they have paid, at any date.

• The journal entries (a) “DR Inventory, CR Accounts payable or Cash” and (b) “DR Cost of goods sold expense, CR Inventory” also produce a control account for inventories, telling us what should be on hand at any date. We saw a retail-priced example of this in the Mayfield Pro Shop in the previous section; more explanation about the use of the accounting records for inventory control will be given in Section 7.8.

• The journal entry “DR Expense or Inventory, CR Accounts payable” produces a control account for accounts payable, showing what is owed to suppliers at any date.

For many chapters of this book, we have been preparing and using accounts to generate financial statements. The above examples illustrate that the accounts also play another role: providing internal control information. As we saw with the various top management examples in Sections 7.3–7.5, the resulting financial statements also reflect the internal control within the enterprise: poor control is very likely to lead to unreliable financial statements, or worse. Figure 7.9 illustrates the dual role that accounts play.
To illustrate the use of accounts for control, this section examines a very important use of accounting records for keeping track of some important current liabilities other than the accounts payable in the last example above. This use is in keeping track of money the enterprise owes on behalf of others. Two examples that occur in practically every business and most other organizations as well are:

a. Collecting sales taxes from customers on behalf of the government. The taxes are not the enterprise’s money—it is acting as a tax collector on behalf of the government and so is required to turn it over to the government. When you buy something in a store and the store adds provincial sales tax (PST), the federal goods and services tax (GST), or the blended PST-GST combination used in some provinces (harmonized sales tax, or HST, which works essentially the same way as the GST, from an accounting viewpoint), this is your contribution to the government and the store is just a channel to get it from you to the government.

b. Deducting income tax, pension contributions, union dues, medical insurance fees, and many other possible deductions from employees’ pay. You’ve probably experienced these employee deductions: you think you have earned, say, $250, but your paycheque is perhaps only $180 because of all the deductions. Here again, the employer is acting as a channel to get your income tax and other contributions to the government, the union, the medical insurer, or wherever.

Let’s examine each of these examples, so you can see how the accounting records create control totals, and how each example incorporates its particular economic and legal circumstances.

### Collecting Sales Taxes

The simplest example here is the collection of PST. When a sale, say $100, is made and, say, 6% PST is added, the following journal entry records the transaction:

| DR Cash or Accounts receivable | 106 |
| CR Revenue                   | 100 |
| CR PST due (a current liability account) | 6 |

Legally, the customer must pay $106, now or later, but only $100 is the seller’s revenue. The $6 is owed to the government. You can see that the “PST due” account can be used to accumulate all the PST collected on all the applicable sales. When the PST due is paid to the government, the liability account is reduced:

| DR PST due | xxx |
| CR Cash    | xxx |
At any date, the PST due account shows what has been collected but not yet remitted. It is therefore a control account for the seller’s obligation to the government. It shows the way the seller has been a channel for the government’s money, because it goes up when sales subject to PST are made, and down when the money is sent to the government.

GST (and HST) are more complicated than PST, because the seller is normally able to deduct any GST the seller pays (on its own purchases and expenses) from the amount to be sent on to the government. Therefore the GST due to the government is only the difference between GST collected and GST paid. Suppose we have the following: a $1,000 sale (we’ll ignore recording the COGS on the sale for this example), and a $400 purchase, both subject to 7% GST:

<table>
<thead>
<tr>
<th>DR Cash or Accounts receivable</th>
<th>1,070</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Revenue</td>
<td>1,000</td>
</tr>
<tr>
<td>CR GST due</td>
<td>70</td>
</tr>
<tr>
<td>DR Inventory</td>
<td>400</td>
</tr>
<tr>
<td>DR GST due</td>
<td>28</td>
</tr>
<tr>
<td>CR Cash or Accounts payable</td>
<td>428</td>
</tr>
</tbody>
</table>

Now the seller owes only $42 in net GST, as shown by the GST due control account. When it is remitted to the government, the GST due liability is debited and cash/bank is credited. (It is possible for the GST due account to be a debit (an asset) if the company makes particularly large purchases and has small sales in a given period, but this would be rare.) As you can see from the debit to Inventory in the second entry, the inventory control account and COGS expense are maintained at the goods’ cost without GST, because GST is controlled in a separate account.

The journal entries for PST and GST can be combined to show the total tax in a province that has both taxes or the HST’s blended PST/GST. The point of the example is to show you how the accrual accounting system produces useful control accounts for the PST, GST, or whatever, due to the government. The control accounts can be as sophisticated as the tax law requires (many complications have been left out of these examples).

### Deducting from Employees

Employee deductions have some complications that the accounting system has to handle. One is that each deduction normally has to be sent to a different place: for example, income tax deducted goes to the government, union dues deducted go to the union, United Way donations go to the United Way. A second complication is that the employer often has to pay “fringe benefits” in addition to the amount deducted from the employee. Pensions, Canada Pension, employment insurance, and many kinds of medical and other insurance are examples. Therefore, the wages the employee earns are not the only expense the employer incurs. The accounting system can handle these without difficulty, using control accounts for all.

#### Example

_**Employee’s earnings:** during a period, an employee earned wages of $1,100._

_**Deductions:** income tax, $200; employment insurance, $40; union dues, $50; medical coverage, $65; totalling $355._

_**Take-home pay:** a net of $745 ($1,100 wages minus $355 deductions)._  
_**Fringe benefits** to be paid by the employer: employment insurance, $45; workers’ compensation insurance, $15; medical coverage, $67; totalling $127._

_**Total cost to the employer:** $1,100 wages plus $127 benefits = $1,227 for the period._
The accounting records would show this in the two entries below or one combined entry:

DR Wages expense 1,100
CR Income tax deductions due liability 200
CR Employment insurance due liability 40
CR Union dues due liability 50
CR Medical premiums due liability 65
CR Wages payable liability 745
DR Fringe benefits expense (or include in Wages expense) 127
CR Employment insurance due liability 45
CR Workers’ compensation insurance due liability 15
CR Medical premiums due liability 67

The control accounts show how much is due to be remitted:

• $200 income tax,
• $85 employment insurance ($40 + $45),
• $50 union dues,
• $132 medical premiums ($65 + $67), and
• $15 workers’ compensation insurance.

As in the sales tax examples, the control account balances show how much has been deducted and/or is due as fringe benefits owed by the employer, minus the amounts remitted to the appropriate bodies. It is the company’s legal responsibility to remit these to the outside parties involved. The wages payable account is also a control account, showing how much is to be paid to the employee. Its balance is therefore the sum of the net take-home pay the employees have earned, minus amounts paid to the employees.

The above example was for only one employee: the employer would not likely record each employee separately this way, but would calculate the sums for all employees for the period and record them all together. The control accounts would still work the same way, but would be backed up by detailed wage records showing every employee.

**HOW’S YOUR UNDERSTANDING?**

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. Last month, Apex Retailing had cash sales of $18,000 and collected PST of $1,080 and GST of $1,260 on those sales. In addition, Apex paid GST of $680 on its own cash purchases of $9,700. How would the sales and purchases be recorded, and how much PST and GST were owing for the month?

   

   DR Cash 20,340, CR Revenue 18,000, CR PST due 1,080, CR GST due 1,260.

   DR Inventory 9,700, DR GST due 680, CR Cash 10,380.

   PST due = $1,080; GST due = $580 ($1,260 – $680).

2. In the same month, Apex employees earned wages of $9,000, from which various deductions totalling $2,200 were made. Apex was responsible for fringe benefits of $2,400 on these wages. What was the total expense of having the employees for the month? What was the employees’ take-home pay? What were the total remittances due for the month?

   Total expense = $11,400 ($9,000 + $2,400);
   Take-home pay: $6,800 ($9,000 – $2,200);
   Total remittances due: $4,600 ($2,200 + $2,400).
Control Accounts and Contra Accounts

Just about every balance sheet account can be considered to be a control account.

- Cash is a record of the cash that should be there if counted.
- Accounts receivable is the sum of all the individual customers’ accounts.
- Inventory is the amount that should be found if the company lists or counts all the unsold goods physically on hand.
- GST due is the net amount of GST collected on all sales minus GST paid on all purchases and any remittances to the government.
- The number of shares outstanding should be traceable to the share capital account. (The particular owners may change, for example, due to trading on the stock market, but the company should always know how many shares it has issued and what it originally received for them.)
- Even the property, plant, and equipment asset accounts are controls, as all the assets whose costs are included should be physically present.

The usefulness of all these balance sheet accounts as control accounts is that the amounts in them should be supported by or reconcilable to detailed lists or subsidiary ledgers, or some such background data. What do we do, then, when we want to make a change in a balance sheet account without changing the underlying records and lists? Here are examples of when we might want to change the balance sheet account and at the same time be reluctant to do it:

- There has been an overall decline in the market value of the inventory, so for conservatism we want to reduce the inventory asset account on the balance sheet and record an expense for the loss in value, but do not want to change the inventory control account because it should equal the sum of the costs of all the goods on hand.
- We are worried that we might not collect all the accounts receivable, so for conservatism and proper income measurement, we want to recognize that the value of the accounts receivable has gone down, and record an expense for the “bad debts” implied in this loss of value. But we do not want to change the accounts receivable control account because it should correspond to the list of all customers’ accounts and we are not yet giving up on collecting any. The control feature is still useful.
- The property and plant assets are being used up economically, so we want to record amortization expense as part of our income measurement, but we do not want to change the accounts for the asset costs. Their costs are not changing, but rather their economic values are being consumed.

In all these examples, the financial statement objectives of proper balance sheet valuation and income measurement seem to conflict with maintaining the accounts for control purposes.

What to do? Well, accrual accounting is very flexible. A perhaps peculiar kind of account called a contra account has been invented to allow us to recognize expenses and value changes without changing the control account. It is useful both for income measurement and to preserve the internal control aspects of the accounts, and so provides a bridge between accounting’s roles in internal control and in financial statement preparation. Referring back to Figure 7.9 in Section 7.6, a contra account is part of the vertical dotted arrow connecting financial statement information and internal control information.

Contra accounts have balances that are in the opposite direction to that of the control account with which they are associated; for example, contra asset accounts have credit balances that are “contra” the assets’ debit balances. They are used for managing accruals, usually for expenses, separately from the asset, liability, or equity accounts to which they relate, and therefore they keep the accruals from being mixed into those accounts.
Contra accounts only have meaning in conjunction with the control accounts to which they are matched. We’ll see below how this works.

In this section, we will focus only on the two most common uses of contra accounts: accumulating amortization (depreciation) and allowing for doubtful accounts receivable. Virtually all enterprises have both. These accounts illustrate how the accounting system can meet one objective (expense recognition) and avoid compromising another objective (control) by creating accounts that recognize expenses but do not change the control accounts related to those expenses (asset costs and accounts receivable).

**Accumulated Amortization (Depreciation)**

The *accumulated amortization* contra accounts are used to accumulate *amortization* on fixed assets, such as buildings and equipment. The terminology is changing here: until recently, such amortization was called “depreciation” and the word “amortization” was used for intangible assets, such as goodwill, leasehold improvements, and patents. Many companies still use the word “depreciation,” and call the contra account “accumulated depreciation.”

In the case of amortization, a contra account is created when the periodic expense for using the asset is recognized. For example, the annual amortization charge of $100,000 on a building would be recognized this way:

| DR Amortization expense | 100,000 |
| CR Accumulated amortization | 100,000 |

- The debit is an expense account in the income statement.
- The credit is a contra asset account.
The credit side of the journal entry could have been to the asset account “Building.” Instead the contra account is used, to leave the asset cost account and its control role untouched.

The balance sheet can present the acquisition cost of the asset along with the accumulated amount of expense previously recognized. Showing both of these items allows users to make a rough guess as to how long the asset has been in service.

Accumulated amortization on the balance sheet is the amount of amortization accumulated over the life of the asset to date, whereas the amortization expense recorded this year (to match the revenues the asset consumption is presumed to have helped generate) is on the income statement and added back to income on the cash flow statement.

Let’s look at a simple example involving the dog pound’s purchase of a new truck to catch strays. If the truck cost $50,000 and an annual amortization expense of $8,000 was determined, the annual journal entry to recognize amortization would be:

<table>
<thead>
<tr>
<th>Date</th>
<th>Cost</th>
<th>Accumulated Amortization Contra</th>
<th>Net Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase</td>
<td>$50,000</td>
<td>0</td>
<td>$50,000</td>
</tr>
<tr>
<td>End of first year</td>
<td>50,000</td>
<td>8,000</td>
<td>42,000</td>
</tr>
<tr>
<td>End of second year</td>
<td>50,000</td>
<td>16,000</td>
<td>34,000</td>
</tr>
</tbody>
</table>

If the truck were sold at any time, the cost would be removed from the ledger, but each year the accumulated amortization contra asset account would increase by $8,000. Deducting accumulated amortization from the long-term asset account leaves a figure known as the net book value. So, we would have the following:

<table>
<thead>
<tr>
<th>Date</th>
<th>Cost</th>
<th>Accumulated Amortization Contra</th>
<th>Net Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase</td>
<td>$50,000</td>
<td>0</td>
<td>$50,000</td>
</tr>
<tr>
<td>End of first year</td>
<td>50,000</td>
<td>8,000</td>
<td>42,000</td>
</tr>
<tr>
<td>End of second year</td>
<td>50,000</td>
<td>16,000</td>
<td>34,000</td>
</tr>
</tbody>
</table>

If the proceeds had been $29,000 instead, the debit to Cash would have been $29,000, and there would have been a $5,000 debit to Loss on sale (perhaps included with an account such as “other expenses” in the income statement). The loss is the difference between the $29,000 proceeds and the $34,000 net book value.

- If the proceeds had been $29,000 instead, the debit to Cash would have been $29,000, and there would have been a $5,000 debit to Loss on sale (perhaps included with an account such as “other expenses” in the income statement). The loss is the difference between the $29,000 proceeds and the $34,000 net book value.

Gains and Losses on Sale
Proceeds > Net book value: Gain on sale
Proceeds < Net book value: Loss on sale
No proceeds: Write-off of net book value
• Let’s suppose that at the end of the second year the truck was used to pick up a particularly ornery bunch of dogs, and they turned out to have a highly contagious disease. The truck had to be junked, and the insurance company refused to pay anything because such a risk was not contemplated when the insurance was written. Now we have what accountants call a “write-off”: a disposal without proceeds. The journal entry would still credit Cost for $50,000 and debit the Accumulated amortization contra for $16,000, and there would now be a $34,000 debit to a Loss on disposal or write-off account (probably still included in a line such as “other expenses” on the income statement, unless it was considered material enough to warrant being shown separately). The whole net book value is said to have been written off.

| DR Loss on disposal or write-off (on the income statement) | 34,000 |
| CR Truck asset (removing the cost) | 50,000 |
| DR Truck accumulated amortization (removing the contra) | 16,000 |

There will be more examples and discussion of amortization and gains and losses in Chapter 8.

When intangible assets (noncurrent, nonphysical assets, such as goodwill, patents, franchise rights, or capitalized costs such as development costs or incorporation costs) are amortized, the accumulated amortization is often just deducted from the asset cost on the balance sheet, not shown separately (or disclosed in a footnote) as it is for physical assets’ accumulated amortization. If there is not seen to be an internal control reason for keeping the cost and accumulated amortization accounts separate, the amortization entry may just debit expense and credit the asset account. If there are internal control reasons (keeping track of asset costs), there may well be an accumulated amortization account in the ledger, which is deducted from the asset cost account when the balance sheet is being prepared. Gains, losses, and write-offs on such assets are calculated the same as for the physical assets.

Enterprises may have hundreds of ledger accounts, kept separate for internal control purposes, which are aggregated into the relatively few figures on the balance sheet. Accumulated amortization is a contra account that is typically kept separate in the ledger and disclosed on the balance sheet. We now turn to an example account that is typically kept separate in the ledger but not disclosed on the balance sheet: the allowance for doubtful accounts receivable.

**Doubtful Accounts Receivable**

Now, let’s look at the other most common use of contra accounts, the allowance for doubtful accounts. When a company sells to a customer on account, there will always be some risk that the customer will fail to pay. Therefore, a portion of the sales on account will be doubtful, and that portion should be deducted from revenue on the income statement in the period of sale to match the bad debts expense (resulting from the probable failure to collect) to the revenue recognized that period.

Let’s assume that a company determines, by past experience or current evidence of customers’ troubles, that about $500 of sales on account will likely not be paid. The journal entry to recognize the expense is:

| DR Bad debts expense | 500 |
| CR Allowance for doubtful accounts | 500 |

The credit in this entry is again to a contra asset account, just as it was for amortization. (That account was in the noncurrent assets section of the balance sheet, while this one is in the current assets section.) The reason for not deducting the amount directly from
the accounts receivable asset is to maintain the asset account as a control: even if collection is doubtful, the company may still try to collect on the accounts and therefore doesn’t want to alter the accounts receivable control total, which should tally with the list of individual customer accounts.

We might say that when the bad debts expense and the allowance account are created, this is the “worry stage”: there is doubt about collectibility of some accounts, and that doubt is recorded as an expense because it is thought that some economic value has been lost, but the company has not yet given up on trying to collect all the accounts.

The main difference between this situation and that of amortization is that only the net amount of the accounts receivable minus the allowance for doubtful accounts is usually disclosed on the balance sheet. This contra account is deemed to be less useful for readers of the balance sheet than the accumulated amortization contra account, and perhaps more sensitive if disclosed. Somewhere in the notes, the amount of accumulated amortization is disclosed, but the allowance for doubtful accounts, even that there is such an allowance, is usually not disclosed anywhere. Also, the income statement always discloses the amortization expense but seldom discloses the bad debts expense, which is just included with other expenses somewhere.

Eventually, after pursuing a nonpaying customer for some time, a company may decide to write the account off, to give up keeping the account in the list of customer accounts and the accounts receivable control account. The hope of collecting is now being abandoned, and it is thought not necessary to keep the receivable in the list of accounts whose collection is being pursued and whose total equals the balance in the accounts receivable control account.

Another journal entry is needed because the expense recognition entry above did not touch the accounts receivable control account, and now we do want to change that account because we are not going to bother including it in the list of accounts under control. Suppose the bad account in question equals $100 (it was one of the risky ones contemplated when the allowance was created above), then the write-off entry is:

| DR Allowance for doubtful accounts | 100 |
| CR Accounts receivable             | 100 |

This entry eliminates the account from the books of the company completely, but you’ll notice that it does not affect expenses (or, therefore, income): that effect was created when the allowance and expense were recorded earlier, at the “worry stage.” The power to write off an account is usually quite tightly controlled and great care is taken to keep track of payments received. The reason should be fairly obvious: if you write an account off it is no longer on the books anywhere, and then, if the deadbeat customer pays, the person who receives the money could simply keep it and no one else in the company would know.

You’ll note that this write-off is handled differently from the noncurrent asset write-offs described above. The reason is that the allowance for doubtful accounts is considered to apply to the whole list of accounts receivable, in aggregate. We don’t necessarily know which specific accounts receivable were allowed for: for example, the $500 allowance for doubtful accounts was probably based on an average experience, such as that, say, 15% of accounts over 40 days old will not be collected. We don’t need to know exactly which accounts are doubtful in order to make such an allowance for the aggregate risk being taken. There was a contra accumulated amortization for each building or truck, but there is no particular contra for each account receivable, so both the account receivable asset and an equal amount of the allowance for doubtful accounts contra are just eliminated in the above bad debt write-off. It’s like assuming that the written-off receivable had been 100% allowed for. (We’ll see in Chapter 8 that amortization can be done on a “group basis,” in which case things work much like they do for bad debts.)

Bad debt write-offs can throw the system off if they are large enough. For example, in the above case, what if a customer account for $800 had to be written off? That’s
more than there is in the allowance! There are methods for adjusting the allowance to take such problems into account, but this book will not include them beyond a brief comment in the Jellyroll Sweets example at the end of this section.

It is possible to operate the accounting without an allowance for doubtful accounts. Bad accounts can be written off directly to accounts receivable, by the so-called direct write-off method. Suppose an account totalling $1,500 is to be written off directly. Then the entry would be:

<table>
<thead>
<tr>
<th>DR Bad debts expense</th>
<th>1,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Accounts receivable</td>
<td>1,500</td>
</tr>
</tbody>
</table>

This is equivalent to allowing for it first and then immediately writing it off, using the “worry stage” and “write-off” entries shown earlier:

<table>
<thead>
<tr>
<th>DR Bad debts expense</th>
<th>1,500</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR Allowance for doubtful accounts</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Worry:</strong> DR Bad debts expense</td>
<td>1,500</td>
</tr>
<tr>
<td>CR Allowance for doubtful accounts</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Write-off:</strong> DR Allowance for doubtful accounts</td>
<td>1,500</td>
</tr>
<tr>
<td>CR Accounts receivable</td>
<td>1,500</td>
</tr>
</tbody>
</table>

As this example shows, the allowance can be seen as a temporary holding account for amounts the company worries about, to be cancelled out if the account is ever written off. But during the holding period, an expense has been recognized and the asset value on the balance sheet has been reduced. Using an allowance is thought usually preferable to direct write-off, not only because of the internal control advantages the contra account provides, but also because the allowance provides for a way to have an expense before the company gives up on collection, and so is generally more conservative in its effects on the balance sheet and income statement. Using such an allowance is part of GAAP and is accepted for income tax purposes in Canada, so the direct write-off method is rare, used when a company has few accounts receivable or when a large account not contemplated in the allowance suddenly goes bad.

**Example: Allowance for Doubtful Accounts**

Here is a final example of the use and effect of an allowance for doubtful accounts.

- Jellyroll Sweets Inc. sells confections to retail stores. At the end of 2006, it had accounts receivable of $53,000 and an allowance for doubtful accounts of $3,100. Therefore, the estimated collectible amount of the accounts receivable was $49,900 at the end of 2006.
- During 2007, the company had credit sales of $432,800 and collected $417,400 from customers. Therefore, at the end of 2007, the accounts receivable stood at $68,400 ($53,000 + $432,800 – $417,400).
- At that point, the sales manager went through the list of accounts receivable and determined (1) that accounts totalling $1,200 were hopeless and should be written off, and (2) that an aggregate allowance of $4,200 was required at the end of 2007. Here are journal entries to accomplish what is needed.

<table>
<thead>
<tr>
<th>Write off the bad ones:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Allowance for doubtful accounts</td>
</tr>
<tr>
<td>CR Accounts receivable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Allow for the doubtful ones:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DR Bad debts expense</td>
</tr>
<tr>
<td>CR Allowance for doubtful accounts</td>
</tr>
<tr>
<td>Balance in allowance = $3,100 – $1,200 =</td>
</tr>
<tr>
<td>Allowance needed at the end of 2007 =</td>
</tr>
<tr>
<td>Additional allowance = $4,200 – $1,900 =</td>
</tr>
</tbody>
</table>
The allowance and write-off entries could be done in the other order, but in this case, the sales manager was thinking of really old receivables, from last year, to write off, and newer ones to allow for. The order of entries does not matter as long as the final balances are adjusted to be the same, so the calculation for the allowance entry takes into account any preceding or planned write-off. If the entries were done in the opposite order, the calculation of the allowance entry would start with $3,100 and subtract that from ($4,200 + $1,200 = $5,400) to provide for the planned write-off. The entry would still be for $2,300 more bad debts expense and then the write-off would reduce the allowance from $5,400 to the desired $4,200.

No matter what order the entries were made in, the accounts receivable balance is now $67,200 ($68,400 – $1,200) and the contra balance is $4,200.

- Therefore, the estimated collectible value of the accounts receivable (the net balance sheet value or net book value) is $63,000 at the end of 2007 ($67,200 – $4,200).
- Bad debts expense for 2007 is $2,300.
- The write-off of the hopeless ones cleaned them out of the list of receivables, but did not affect either income or the net book value on the balance sheet. You can see this by redoing the calculation of the allowance and expense entry with no write-off of the hopeless ones:
  - If none had been written off, the allowance balance would still be the $3,100 from last year.
  - But now the allowance needed would be $4,200 for the doubtful ones and $1,200 for the hopeless ones (still in the receivables), totalling $5,400.
  - Subtracting the $3,100 from that total leaves $2,300, so the second journal entry and therefore the bad debts expense would be the same.
  - Now the accounts receivable would be $68,400, and the allowance would be $5,400. So, the estimated collectible amount of the accounts receivable (the net book value) would still be $63,000.

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. Argyll had a building that cost $438,000. At the beginning of the year, the accumulated amortization on the building was $233,000. The building was sold for $190,000 late in the year, after a further amortization expense of $34,000 was recorded. What were the journal entries to record (1) the amortization expense and (2) the disposal?

   (1) DR Amortization expense 34,000, CR Accumulated amortization 34,000.
   (2) DR Cash (proceeds) 190,000, CR Building cost 438,000, DR Accumulated amortization 267,000, CR Gain on sale 19,000. The gain on sale is the proceeds of $190,000 minus the book value of $171,000 ($438,000 – $267,000).

2. Argyll also has accounts receivable. At the end of the year, the total in the accounts receivable control account is $321,000 and the balance in the allowance for doubtful accounts is $22,000 (after recording bad debts expense for the year of $11,000). Upon examination of the accounts, management decides that $5,000 of the accounts is hopeless and should be written off, and that the allowance should be increased by $7,000 after that. What is (1) the bad debts expense for the year, (2) the accounts receivable control account balance at the end of the year, (3) the allowance for doubtful accounts at the end of the year, and (4) the estimated collectible amount at the end of the year (net book value)?

   (1) $18,000 ($11,000 already + $7,000 more needed);
   (2) $316,000 ($321,000 – $5,000 written off);
   (3) $24,000 ($22,000 – $5,000 + $7,000);
   (4) $292,000 ($316,000 control – $24,000 contra).
Demonstration Problem: Contra Accounts

This problem demonstrates that the two contra account examples in Section 7.7, accumulated amortization and allowance for doubtful accounts, are very similar in intent and interpretation. If you understand this well, you will be able to make sense out of other contra accounts you might encounter.

Strand Cable Inc. serves the residents of a medium-sized Ontario city. Among its assets are a building and accounts receivable. Data for a recent year, prior to recording any amortization or bad debts expense for the year, include

- equipment cost: $2,670,000 at beginning of year;
- cost of new equipment acquired during the year: $473,000;
- equipment sold during the year: cost $93,000, accumulated amortization $63,000, cash proceeds $25,000;
- accumulated amortization at the beginning of the year: $1,105,000;
- estimated economic value of equipment lost during the year: $339,000;
- obsolete equipment to be scrapped at the end of the year: cost $51,000, accumulated amortization $37,000;
- accounts receivable from customers at the beginning of the year: $3,762,000;
- credit sales of cable service during the year: $16,973,000;
- collections from customers during the year: $16,438,000;
- doubtful accounts receivable at the beginning of the year: $53,000;
- accounts receivable that became doubtful during the year: $78,000;
- hopeless accounts receivable at the end of the year: $62,000.

An analysis of the various accounts is shown below, followed by some observations and then the journal entries to record the data. Before you read further, see if you can do the journal entries, and calculate the year-end net book value of the equipment and the accounts receivable.

(a) Account analysis

### Equipment

<table>
<thead>
<tr>
<th>Control Account</th>
<th>Contra Account</th>
<th>Net Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of year</td>
<td>$2,670,000</td>
<td>$1,105,000</td>
</tr>
<tr>
<td>New equipment</td>
<td>473,000</td>
<td></td>
</tr>
<tr>
<td>Equipment sold</td>
<td>(93,000)</td>
<td>(63,000)</td>
</tr>
<tr>
<td>Amortization expense</td>
<td></td>
<td>339,000</td>
</tr>
<tr>
<td>Write-offs</td>
<td>(51,000)</td>
<td>(37,000)</td>
</tr>
<tr>
<td>End of year</td>
<td>$2,999,000</td>
<td>$1,344,000</td>
</tr>
</tbody>
</table>

### Accounts receivable

<table>
<thead>
<tr>
<th>Control Account</th>
<th>Contra Account</th>
<th>Net Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning of the year</td>
<td>$3,762,000</td>
<td>$53,000</td>
</tr>
<tr>
<td>Credit sales</td>
<td>16,973,000</td>
<td></td>
</tr>
<tr>
<td>Collections</td>
<td>(16,438,000)</td>
<td></td>
</tr>
<tr>
<td>Bad debts expense</td>
<td></td>
<td>78,000</td>
</tr>
<tr>
<td>Write-offs</td>
<td>(62,000)</td>
<td>(62,000)</td>
</tr>
<tr>
<td>End of year</td>
<td>$4,235,000</td>
<td>$69,000</td>
</tr>
</tbody>
</table>
(b) Some observations

- Only business events and write-offs affect the control accounts.
- Accruals for consumption of the assets are put through the contra accounts.
- A write-off has no effect on net book value if the asset is fully allowed for or amortized (the equipment scrapped had $14,000 unamortized book value).
- For the equipment, book value indicates the portion of the asset’s cost not yet amortized, therefore thought to have economic value into the future.
- For the accounts receivable, the book value is also economic value into the future, being the estimated amount of the accounts receivable that will be collected.

(c) Journal entries

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Accounts Receivable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Additions</strong></td>
<td></td>
</tr>
<tr>
<td>Dr Control</td>
<td>473,000</td>
</tr>
<tr>
<td>Cr Cash</td>
<td>473,000</td>
</tr>
<tr>
<td><strong>Collections</strong></td>
<td></td>
</tr>
<tr>
<td>Dr Cash</td>
<td>25,000</td>
</tr>
<tr>
<td>Cr Control</td>
<td>93,000</td>
</tr>
<tr>
<td>Dr Contra</td>
<td>63,000</td>
</tr>
<tr>
<td>Dr Loss expense</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Asset consumption</strong></td>
<td></td>
</tr>
<tr>
<td>Dr Expense</td>
<td>339,000</td>
</tr>
<tr>
<td>Cr Contra</td>
<td>339,000</td>
</tr>
<tr>
<td><strong>Write-offs</strong></td>
<td></td>
</tr>
<tr>
<td>Dr Contra</td>
<td>37,000</td>
</tr>
<tr>
<td>Cr Control</td>
<td>51,000</td>
</tr>
<tr>
<td>Dr Loss expense</td>
<td>14,000</td>
</tr>
</tbody>
</table>

**How’s Your Understanding?**

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. What is represented by the amount calculated by subtracting the contra account from the control account?

2. If an asset is fully allowed for or amortized on the date it is written off, the write-off has no effect on income. Why is that?

7.9 Inventory Control

This chapter has emphasized the importance of keeping records to provide information to both internal and external users. Many of the records kept have to do with the control of inventory. Inventory control is important for management because a high percentage of working capital may be tied up in inventory, the inventory items may be perishable or become obsolete if held too long, and, due to the physical attributes of some types of inventory, there may be a great potential for theft.

Several different inventory control systems may be used, depending on the nature of the inventory and the objectives of management. The methods explained below are the three most commonly used by businesses. Each provides a different amount of information at a different cost. It is important to note that the choice of inventory control system is a recordkeeping choice as opposed to a reporting choice: management is simply deciding how to record the inventory. How inventory is reported in the financial statements will be dealt with in Chapter 8.
The Perpetual Accounting Control Method

When an order of inventory items is received, the quantity received is added to the quantity recorded as being already on hand. When items are sold, they are deducted from the recorded quantity. Therefore, the perpetual method shows how many items are supposed to be on hand at any time:

\[ \text{Start with the quantity on hand at the beginning of the period.} \]
\[ \text{Add the quantity purchased during the period.} \]
\[ \text{Deduct the quantity sold during the period.} \]
\[ \text{Equals the quantity that should be on hand at the end of the period.} \]

The name *perpetual inventory control method* comes from the idea that the accounting system has a continuously updated figure for the amount that should be on hand. If a physical count of the inventory fails to show that quantity, the company knows that something has been lost or stolen, or that there has been an error in the records. Just as for cash, bank accounts, accounts receivable, and GST due, the records provide *accounting control* in addition to any physical protection. The accounting records tell the company what to expect to be on hand.

If the cost of items is included in the count along with the quantity, the perpetual record can be used to estimate the total cost of inventory at any time, without having to bother counting and pricing everything.

\[ \text{Beginning inventory cost (support with physical count if desired)} \]
\[ + \text{Cost of purchases of inventory (records)} \]
\[ - \text{Cost of inventory sold (records)} \]
\[ = \text{Ending inventory cost (support with physical count if desired)} \]

The perpetual control method has been assumed in most of the examples so far in the text, because purchases have been recorded as debits to inventory asset and cost of goods sold has been credited to the asset and debited to *COGS expense*.

The perpetual method provides additional management information.

- Suppose that after the above calculation, the expected ending inventory cost was $100,000, but a count to support that showed only $96,500 of inventory on hand.
- Management would know there had been a $3,500 shortage or other error, and could intensify controls over inventory if that was thought to be cost-effective.
- If it cost $10,000 to improve the controls, management might well conclude that losing $3,500 was the cheaper option.
- The inventory asset account would be adjusted to the count by an adjusting entry to CR Inventory $3,500 and DR Inventory shortage expense. This is a write-off entry, reducing the control account. The accounts would then show the expense being incurred by the imperfect controls. (If there were more inventory on hand than expected, there could instead be an inventory overage account, a credit balance so a sort of negative expense, though this would probably indicate an error somewhere as it is unlikely any thieves were breaking in and adding inventory!)
The overage/shortage expense account would probably be included with COGS in the income statement, as management would usually consider this information to be an internal matter, and it would not likely, we hope, be large enough to be material in its effect on COGS.

The Retail Accounting Control Method

This is like the perpetual method, except that records are based on selling prices of goods rather than just quantities or costs. In the retail inventory control method, a department or branch is charged with the total selling value (sales price times quantity) of all items for sale delivered to it. Revenue from sales is then deducted from this total value as the items are sold. This ties inventory control to cash control, as in the Mayfield Pro Shop example in Section 7.5. At any point in time, the department or branch should have inventory, plus cash from sales made since the last revenue report, plus records of sales on credit or via credit cards, equal to the current total retail value:

- Start with the retail price of all goods received by the department on hand at the beginning of the period.
- Add goods received during the period, also valued at retail price.
- Deduct the department’s sales (connected to cash, cheque, electronic funds transfer, and credit card control procedures).

Equals inventory that should be on hand, priced at retail.

If a physical count, with items priced at retail, fails to show the expected total retail value, the company knows that some items have been lost or stolen, or that there has been an error in the records. An adjustment for the shortage or overage can be made in the same way as for the perpetual method. Total cost of the inventory can be estimated at any time by deducting the average markup from the current total retail value. The retail method is, however, a little complicated in practice because of the need to keep track of markdowns, returned goods, special sale prices, and other price adjustments if the method is to work accurately.

The Periodic Count Method

When goods are bought, they are put on the shelf or in the storeroom, and when they are sold or used, they are taken off the shelf or out of the storeroom. With the above two control systems, records are kept of these movements, to provide expected quantities or values on hand.

But if complete records of such inventory changes are not kept, the enterprise does not have records to indicate what should be on hand. The only way to tell what is on hand is to go and count it. Because this sort of counting tends to be done only periodically, when an inventory figure is needed for financial statements or insurance purposes, this lack of accounting control is called the periodic inventory control method. While there may be other features of internal control present, such as physical protection and insurance, it lacks the parallel recordkeeping that gives the above two methods their value. There is no way to reconcile counts to records in order to discover errors as in the other two methods because records created for this purpose do not exist, but it is simple and cheap to operate because no continuing records are kept. Recordkeeping does cost money!
The periodic system works this way:

**FORMULA**

\[
\begin{align*}
\text{Beginning inventory (count), priced usually at cost} \\
\quad \text{(or retail minus markup)} + \text{Purchases (records) at cost} \\
- \text{Ending inventory (count), priced at cost} = \text{Cost of goods sold expense (deduced)}
\end{align*}
\]

The cost of inventory apparently sold is *deduced* (rather than known from records). It might not all have been actually sold. Some could have been lost, stolen, evaporated, etc. So under the periodic method, cost of goods sold expense (cost of counted beginning inventory + cost of purchases – cost of counted ending inventory) includes all these other possibilities. They cannot be separated because the necessary records were not kept. *This is not a flaw*, it is just that management did not believe the extra recordkeeping was worth the money it would cost. The adjustment to a separate account for inventory shortage or overage, shown for the perpetual method above, cannot be made, because the deduced COGS includes the “real” COGS plus/minus any shortage/overage. This will be demonstrated below.

**Cost and Benefit of Controls**

The perpetual method can be costly in terms of recordkeeping. (So can the similar retail method, though probably sales records have to be kept anyway, so the extra cost of the inventory control may not be large.) Management must pay someone to record, sort, and compile the information. What type of business uses a perpetual system? The local car dealership is a good example of one. Cars are expensive—therefore a large investment must be made if a good supply is to be on hand for customers to choose from. The high value of cars and the need to keep track for licence and insurance purposes means that serial numbers and other identification information is easily available and usually recorded in various places. Automobiles have a high risk of becoming obsolete because consumer preferences change, and the cost of theft is high even if only one car is stolen. Because of the relatively small quantity of cars sold by most dealerships, recordkeeping costs are not high.

Whenever an accounting control system is used, there must be regular *reconciliation* between the accounting records and any other evidence available. The idea of reconciliation as a useful technique was introduced in Section 1.12 and the value of bank reconciliation in particular was pointed out in Section 7.5. There is no real value to accounting control unless the resulting records are compared to other evidence, such as physical counts for inventories. But valuable though reconciliation is, it does cost time and money to do. Most businesses reconcile sensitive items, such as bank accounts, cash on hand, and high-value inventories, very frequently, but leave other items, such as building assets and low-value inventories, to less frequent reconciliations, often based on just a sample of items.

**Inventory Control Journal Entries: Bransworth Ltd.**

Bransworth Ltd. uses a perpetual accounting control system for its inventory. It has the following data for a recent period:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning accounts receivable</td>
<td>$40,000</td>
</tr>
<tr>
<td>Purchases during period</td>
<td></td>
</tr>
<tr>
<td>(all cash)</td>
<td>114,000</td>
</tr>
<tr>
<td>Cash collected in period</td>
<td>115,000</td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>$23,000</td>
</tr>
<tr>
<td>Sales (all credit)</td>
<td>150,000</td>
</tr>
<tr>
<td>Ending inventory count</td>
<td>28,000</td>
</tr>
</tbody>
</table>
The company's markup is 50% on cost (that is, selling price is 150% of cost, so the company can calculate COGS from sales revenue). Just to make it easier, we'll assume all sales, purchases, and collections were in single transactions. Here are summary journal entries for the company's system:

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchases</td>
<td>DR Inventory asset 114,000</td>
<td>CR Cash 114,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Purchases during the period.</td>
</tr>
<tr>
<td>Sales</td>
<td>DR Accounts receivable 150,000</td>
<td>CR Sales revenue 150,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sales on credit during the period.</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>DR Cost of goods sold expense 100,000</td>
<td>CR Inventory asset 100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COGS expense: $150,000 revenue minus 50% markup on cost.</td>
</tr>
<tr>
<td>Count adjustment</td>
<td>DR Inventory shortage expense 9,000</td>
<td>CR Inventory asset 9,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shortage: record indicates inventory should be $23,000 + $114,000 – $100,000 = $37,000, but only $28,000 is on hand.</td>
</tr>
<tr>
<td>Collections</td>
<td>DR Cash 115,000</td>
<td>CR Accounts receivable 115,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customer collections during the period.</td>
</tr>
</tbody>
</table>

Let’s review two accounts here, to ensure you see how the accounting figures help with the control:

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>The inventory account:</td>
<td></td>
</tr>
<tr>
<td>Beginning cost balance</td>
<td>$ 23,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>114,000</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>(100,000)</td>
</tr>
<tr>
<td>Expected balance on hand</td>
<td>37,000</td>
</tr>
<tr>
<td>Adjustment for loss*</td>
<td>(9,000)</td>
</tr>
<tr>
<td>Revised ending cost balance</td>
<td>$ 28,000</td>
</tr>
</tbody>
</table>

*Because the count showed less than expected on hand.

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>The accounts receivable account:</td>
<td></td>
</tr>
<tr>
<td>Beginning</td>
<td>$ 40,000</td>
</tr>
<tr>
<td>Sales</td>
<td>150,000</td>
</tr>
<tr>
<td>Collections</td>
<td>(115,000)</td>
</tr>
<tr>
<td>Ending balance</td>
<td>$ 75,000</td>
</tr>
</tbody>
</table>

There is accounts receivable control here. The company can check with the customers or otherwise verify that this amount really is a collectible asset. Cash control
follows from this, too. The collections figure from the accounts receivable account is part of the deposits to cash, so it becomes part of the record-based control system for cash.

For comparison, let’s see how the entries above would change if Bransworth used the periodic system, without accounting control. Using the same journal entry references as above, we’d have:

<table>
<thead>
<tr>
<th>a. Purchases</th>
<th>DR Purchases expense (or similar account name) 114,000</th>
<th>CR Cash 114,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Sales</td>
<td>Same entry as for perpetual method</td>
<td></td>
</tr>
<tr>
<td>c. COGS</td>
<td>No entry: the company does not record COGS when sales are made</td>
<td></td>
</tr>
<tr>
<td>d. Count adjustment</td>
<td>DR Beginning inventory expense 23,000</td>
<td>CR Inventory asset 23,000</td>
</tr>
<tr>
<td></td>
<td>Transferring beginning inventory to expense.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DR Inventory asset 28,000</td>
<td>CR Ending inventory “expense” 28,000</td>
</tr>
<tr>
<td></td>
<td>Recording ending inventory by removing its cost from expense (that is, from Purchases + Beginning inventory).</td>
<td></td>
</tr>
<tr>
<td>e. Collections</td>
<td>Same entry as for perpetual method</td>
<td></td>
</tr>
</tbody>
</table>

The cost of goods sold must be deducted as the net sum of the three expense accounts above:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning inventory</td>
<td>$23,000</td>
</tr>
<tr>
<td>+ Purchases</td>
<td>114,000</td>
</tr>
<tr>
<td>– Ending inventory</td>
<td>(28,000)</td>
</tr>
<tr>
<td>= COGS</td>
<td>$109,000</td>
</tr>
</tbody>
</table>

This is the same as the perpetual method’s total of COGS $100,000 + Shortage expense $9,000. So there is no effect on the net income of choosing between the two control methods, because each contains an adjustment to the actual amount counted at the end of the year. There is no effect on the balance sheet either, because both adjust to the same $28,000 ending amount. The differences between the methods are in their control and management information.

**How’s your understanding?**

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. What is the role of recordkeeping in internal control?
2. Granot Inc. uses the perpetual inventory method. At the beginning of the month, inventory costing $145,890 was on hand. Purchases for the month totalled $267,540 and the cost of goods recorded as sold totalled $258,310. At the end of the month, a count showed inventory costing $152,730 to be on hand. What, if anything, was the inventory shortage for the month?

$145,890 + $267,540 – $258,310 = $155,120 expected to be on hand, minus $152,730 counted = $2,390 shortage.
A Procedural Review

By this time, you should be “thinking double-entry”: aware that when one account is affected, another must be too. This is fundamental to accrual accounting, and to internal control provided by the double-entry accounting records. Consider the following examples:

<table>
<thead>
<tr>
<th>a. Revenue cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognition:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Collection:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Doubtful account cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowance:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Write-off:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Purchases cycle (perpetual method)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Payment:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Recognition:</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Capitalization/amortization/disposal cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquisition:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>or Capitalization:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Amortization with a contra account:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>or Amortization without a contra account:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Disposal:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Write-down or write-off:</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
Here is this chapter’s list of terms introduced or emphasized. Make sure you know what they mean in accounting, and if any are unclear to you, check the chapter again or refer to the glossary of terms at the back of the book.

- Accounting control
- Accumulated amortization
- Allowance for doubtful accounts
- Amortization
- Amortization expense
- Audit committee
- Bad debts expense
- Bank reconciliation
- Books of original entry
- Capitalized costs
- Cash disbursements journal
- Cash receipts journal
- Chart of accounts
- Cheque
- COGS expense
- Contra account
- Control account
- Corporate governance
- Direct write-off
- E-commerce
- EFT
- Electronic commerce
- Electronic funds transfer
- Employee deductions
- General journal
- General ledger
- GST
- HST
- Intangible assets
- Internal control
- Management information system
- Net book value
- Packing slip
- Periodic inventory control method
- Perpetual inventory control method
- Petty cash
- PST
- Purchase order
- Reconciliation
- Retail inventory control method
- Sales invoice
- Sales journal
- Sales taxes
- Segregation of duties
- Source documents
- Specialized ledgers
- Subsidiary ledgers
- Work order
- Write-off (bad debts)
- Write-off (noncurrent assets)

**How’s Your Understanding?**

Here are two questions you should be able to answer based on what you have just read. If you can’t answer them, it would be best to reread the material.

1. The term “write-off” is used with reference to both long-term assets and accounts receivable. What does the term mean in those cases and how does it differ between the two?

2. Flimsy’s accounts receivable at the end of 2006 totalled $78,490. The allowance for doubtful accounts had been $2,310, but it was decided that this would be increased by $1,560 and then that $1,100 in hopeless accounts would be written off. What was the net collectible value of the receivables as shown on the balance sheet at the end of 2006 and the bad debts expense for 2006?

Collectible value = $78,490 – ($2,310 + $1,560) = $74,620

(The $1,100 in hopeless accounts would be deducted from the control account and the allowance and so has no effect on the collectible value.);

Bad debts expense = $1,560

How’s your understanding?
After recording the transactions to February 28, 2007, in Installment 6, the trial balance of Mato Inc.’s general ledger was (credits are bracketed):

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>6,418</td>
<td>(227,656)</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>13,709</td>
<td>(138,767)</td>
</tr>
<tr>
<td>Inventory</td>
<td>33,612</td>
<td>0</td>
</tr>
<tr>
<td>Automobile</td>
<td>10,000</td>
<td>0</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(1,000)</td>
<td>0</td>
</tr>
<tr>
<td>Leasehold improvements</td>
<td>63,964</td>
<td>67,480</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(6,396)</td>
<td>10,102</td>
</tr>
<tr>
<td>Equipment and furniture</td>
<td>32,390</td>
<td>4,014</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(744)</td>
<td>24,000</td>
</tr>
<tr>
<td>Computer</td>
<td>14,900</td>
<td>3,585</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(1,490)</td>
<td>5,933</td>
</tr>
<tr>
<td>Software</td>
<td>4,800</td>
<td>6,239</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>(480)</td>
<td>441</td>
</tr>
<tr>
<td>Incorporation cost</td>
<td>1,100</td>
<td>1,000</td>
</tr>
<tr>
<td>Bank loan</td>
<td>(47,500)</td>
<td>6,396</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>(36,656)</td>
<td>744</td>
</tr>
<tr>
<td>Deductions payable</td>
<td>(2,284)</td>
<td>1,490</td>
</tr>
<tr>
<td>Salaries payable</td>
<td>(2,358)</td>
<td>480</td>
</tr>
<tr>
<td>Loan payable</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Share capital</td>
<td>(125,000)</td>
<td></td>
</tr>
</tbody>
</table>

It was time to prepare the financial statements for the year ended February 28, 2007. Before that could be done, the following adjustments had to be made:

a. Based on the amortization calculations made during the first six months, the amounts for the second six months would be:
   - Car, leasehold improvements, computer, and software: 1/2 year × 20% of cost.
   - Equipment and furniture: 1/2 year × 10% of cost.

The expenses for the second six months would therefore be: car, $1,000; leasehold improvements, $6,396; computer, $1,490; software, $480; equipment and furniture, $1,620.

b. Estimated unpaid bank loan interest to February 28 was $230.

c. Unfortunately, some of the boutique customers had run into financial difficulty. One customer who owed $894 had gone bankrupt and other accounts totalling $1,542 were doubtful.

d. Tomas had been getting some accounting assistance from a local public accountant. No bill had yet been received for this help, but Tomas estimated that the company owed about $280 at the end of February.

e. It turned out that included in the revenue figure was a deposit of $500 made by a customer on a special order from Africa that had not yet arrived.
f. Included in the office and general expenses was an insurance policy costing $1,050, good for two years from March 1, 2006.
g. Mavis and Tomas decided that they should pay the company back about $200 for Mavis and $425 for Tomas for personal use of the company automobile. Automobile expenses were included in the travel expense account.
h. Mavis was concerned that the accounts receivable list “didn’t look right,” as she put it. Upon checking, she discovered that shipments totalling $2,231 in revenue had been made in late January and early February, but had not yet been billed. The cost of the goods shipped had been correctly removed from the inventory account and charged to cost of goods sold.
i. Tomas decided that the sales taxes due to the government, which had been included in accounts payable, should be put in a separate account. The amount due at February 28 was $1,843. Beginning March 1, this account would be used for all GST and PST collected and remitted.

**RESULTS FOR INSTALLMENT 7**

Adjusting journal entries at February 28, 2007, to take the above information into account:

<table>
<thead>
<tr>
<th>Description</th>
<th>Debit Amount</th>
<th>Credit Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Amortization expense—auto.</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Accumulated amortization—auto.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization expense—leasehold</td>
<td>6,396</td>
<td>6,396</td>
</tr>
<tr>
<td>Accumulated amortization—leasehold</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization expense—computer</td>
<td>1,490</td>
<td>1,490</td>
</tr>
<tr>
<td>Accumulated amortization—computer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization expense—software</td>
<td>480</td>
<td>480</td>
</tr>
<tr>
<td>Accumulated amortization—software</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amortization expense—equipment and furniture</td>
<td>1,620</td>
<td>1,620</td>
</tr>
<tr>
<td>Accumulated amortization—equipment and furniture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Interest expense</td>
<td>230</td>
<td>230</td>
</tr>
<tr>
<td>Accounts payable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Bad debts expense</td>
<td>2,436</td>
<td>2,436</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>($894 + $1,542 = $2,436)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>894</td>
<td>894</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>280</td>
<td>280</td>
</tr>
<tr>
<td>d. Office and general expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>e. Revenue</td>
<td>525</td>
<td>525</td>
</tr>
<tr>
<td>Customer deposits liability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Prepaid insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office and general expense</td>
<td>525</td>
<td>525</td>
</tr>
<tr>
<td>($1,050 over two years = $525 per year)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Accounts receivable</td>
<td>625</td>
<td>625</td>
</tr>
<tr>
<td>Travel expense</td>
<td></td>
<td></td>
</tr>
<tr>
<td>($200 + $425 = $625)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h. Accounts receivable</td>
<td>2,231</td>
<td>2,231</td>
</tr>
<tr>
<td>Revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Accounts payable</td>
<td>1,843</td>
<td>1,843</td>
</tr>
<tr>
<td>Sales taxes due</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
After posting the adjusting journal entries to the trial balance given at the beginning of this installment, the following adjusted February 28, 2007, account balances were produced (credits are bracketed as usual):

<table>
<thead>
<tr>
<th>Account</th>
<th>Balance</th>
<th>Account</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>6,418</td>
<td>Revenue</td>
<td>(229,387)</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>15,671</td>
<td>Cost of goods sold expense</td>
<td>138,767</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>(1,542)</td>
<td>Bad debts expense</td>
<td>2,436</td>
</tr>
<tr>
<td>Inventory</td>
<td>33,612</td>
<td>Salary—Mavis</td>
<td>0</td>
</tr>
<tr>
<td>Prepaid insurance</td>
<td>525</td>
<td>Salary—Tomas</td>
<td>0</td>
</tr>
<tr>
<td>Automobile</td>
<td>10,000</td>
<td>Salary—other</td>
<td>0</td>
</tr>
<tr>
<td>Accumulated amortization—auto</td>
<td>(2,000)</td>
<td>Travel expense</td>
<td>9,477</td>
</tr>
<tr>
<td>Leasehold improvements</td>
<td>63,964</td>
<td>Phone expense</td>
<td>4,014</td>
</tr>
<tr>
<td>Accumulated amortization—leasehold</td>
<td>(12,792)</td>
<td>Rent expense</td>
<td>24,000</td>
</tr>
<tr>
<td>Equipment and furniture</td>
<td>32,390</td>
<td>Utilities expense</td>
<td>3,585</td>
</tr>
<tr>
<td>Accumulated amortization—equipment</td>
<td>(2,364)</td>
<td>Office and general expense</td>
<td>5,688</td>
</tr>
<tr>
<td>Computer</td>
<td>14,900</td>
<td>Interest expense</td>
<td>6,469</td>
</tr>
<tr>
<td>Accumulated amortization—computer</td>
<td>(2,980)</td>
<td>Inventory shortage expense</td>
<td>441</td>
</tr>
<tr>
<td>Software</td>
<td>4,800</td>
<td>Amortization expense—auto</td>
<td>2,000</td>
</tr>
<tr>
<td>Accumulated amortization—software</td>
<td>(960)</td>
<td>Amortization expense—leasehold</td>
<td>12,792</td>
</tr>
<tr>
<td>Incorporation cost</td>
<td>1,100</td>
<td>Amortization expense—equipment</td>
<td>2,364</td>
</tr>
<tr>
<td>Bank loan</td>
<td>(47,500)</td>
<td>Amortization expense—computer</td>
<td>2,980</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>(35,323)</td>
<td>Amortization expense—software</td>
<td>960</td>
</tr>
<tr>
<td>Customer deposits liability</td>
<td>(500)</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Sales taxes due</td>
<td>(1,843)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deductions payable</td>
<td>(2,284)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries payable</td>
<td>(2,358)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loan payable</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share capital</td>
<td>(125,000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

That’s enough for now! We’ll do some more work with these balances, including preparing financial statements, in later installments.
## Homework and Discussion to Develop Understanding

The problems roughly follow the outline of the chapter. Three main categories of questions are presented.

- Asterisked problems (*) have an informal solution provided in the Student Solutions Manual.
- EXTENDED TIME problems grant a thorough examination of the material and may take longer to complete.
- CHALLENGING problems are more difficult.

For further explanation, please refer to Section 1.15.

### Accounting and Recordkeeping • Section 7.2

#### Explaining Accounting Documentation

* **PROBLEM 7.1** Describe accounting’s documents and books of original entry

The financial statements are prepared from account balances from the general ledger. Behind these balances, however, are numerous documents and books of original entry. Describe the main kinds of documents used to support financial accounting and the books of original entry that are prepared from those documents.

**PROBLEM 7.2** Necessary source documents and purpose of trial balance

1. Make a list of the source documents you expect would be needed to back up the transactional records in an accounting system and describe in ten words or so why each document would be useful.
2. Why does the bookkeeper (or the computer system) produce a trial balance of the general ledger regularly?

**PROBLEM 7.3** Accounting documentation in e-commerce

Musi.ca, the on-line CD seller, takes orders and collects payments via credit card numbers supplied by customers on its high-security Web page. Orders are transmitted automatically to CD warehouser Disko Inc., which ships the CDs to customers and receives payment from Musi.ca electronically as each CD is shipped. Musi.ca makes its money by charging just a little more to customers’ credit cards than Disko Inc. charges it.

One day, you go to Musi.ca’s Web page, order the new hit album from Sing’em, type in your credit card number, and your CD arrives in the mail less than a week later. Outline the source documents and “books of original entry” that this e-commerce transaction would probably generate for all four parties involved: you, Musi.ca, Disko Inc., and your credit card company.

#### Explaining the Reasons For Recordkeeping

* **PROBLEM 7.4** Recordkeeping differences in large versus small businesses

Identify some differences you might expect to find between the transaction filters and accounting books and records of a large corporation and those of a corner store run by one person. What effects might those differences have on the company’s accounting policies?

**PROBLEM 7.5** Explain the value of recordkeeping to a businessperson

At a recent Student Accounting Club wine and cheese party, local businesspeople mixed with students. One small business entrepreneur was heard to say, “All that financial accounting information you students learn about is not relevant to me. I just started up
my business. I only have five employees: four people in the shop building the product and one person in shipping/receiving. I’m out on calls, drumming up business, so I have my finger on the real pulse of the firm—that’s sales. My brother pays the bills and does up the payroll every two weeks. Once in a while I write cheques too. It’s all simple and smooth, so why add a lot of time-consuming, costly recordkeeping to it all? All those books and financial statements are fine for the big public companies. I can do without the complications.”

Prepare an appropriate response to the businessperson.

**Problem 7.6** Recordkeeping differences in nonprofit groups

Mike and Ted have been friends since their university days. After graduation, Mike took a job at a large head office in the city while Ted opted to work for a small nonprofit charity. The two regularly meet for lunch to discuss their experiences in the two jobs.

Today, Ted explains his frustrations; “I don’t understand why I have to fill out all of these accounting forms each day. There always seems to be a mountain of paperwork to complete. I feel like I spend all day creating copies of forms, filing them, and entering information into the computer. Why is all this paperwork necessary?”

Mike explains his situation, “At my work, we have a detailed control system. Transactions are carefully recorded and we keep a long list of source documents to verify what is occurring. It often seems like a lot of paperwork but I’m beginning to see how important it is to keep good records.”

1. Explain to Ted why a strong underlying accounting system would be needed for a nonprofit organization. Examine the issue from the point of view of:
   a. a donor
   b. a beneficiary of the charity
   c. the charity’s board of directors
   d. the government

2. Would a nonprofit organization differ from a large corporation in the way it needs to keep detailed accounting records?

**Internal Control • Sections 7.3–7.5**

**Identification of Internal Control Problems**

**Problem 7.7** Identify violated components of internal control

In each of the following cases, what component of good internal control is being violated (if any)? (See Section 7.3 if you can’t remember the components.)

a. Tough Inc. pays all its employees minimum wage and does not have pleasant working conditions.

b. Fred is a very conscientious employee and does such a good job that he does pretty much all of Whisp Ltd.’s office tasks.

c. Garand Inc. has a sophisticated internal control system that prints out various reports on discrepancies, which company management gets the accounting clerks to investigate and resolve.

d. John runs a small warehousing business. He’s proud of saving money on accounting. For example, he doesn’t keep track of purchases and shipments of goods because he can “look at the shelves and see if everything is all right.”

e. Wildwood Restaurant is proud of its “family approach” to its employees, taking great care to make them feel important and trusted. Everyone has a key to the restaurant and several employees can often be found there in off hours, helping to clean and prepare for the next day.
f. Hadlee Corp’s founder, getting on in years, has turned the president’s job over to his playboy son, who is quite interested in horse racing and turns up at the office only occasionally.

**PROBLEM 7.8 Identify missing features of internal control**

Read the following description of a sports club and indicate what features of good internal control seem to be missing. Are any of those offset by strength in other features?

The club earns revenue from members’ fees, and from selling tickets to its games and advertising in its programs. Advertising receipts are mainly by cheque; other receipts are primarily cash, with an increasing percentage by credit card. Most expenditures are in cash, except for equipment, facility rentals, and the three employees’ pay, all done by cheques. One employee does some coaching, schedules games, and coordinates players and officials. The second employee (who is married to the first) looks after equipment, prepares rental facilities for games, makes travel arrangements, and does various miscellaneous jobs. The third employee looks after cash, payroll, and accounting. The club’s board of directors meets monthly and always has monthly (or annual) financial reports to scrutinize. All three employees are members of the board and other board members rely on them.

The club has a rented office/storeroom, where all employees work most of the time and where all the club’s equipment and various supplies are stored. Cash, cheques, and credit card slips are deposited into the bank every two weeks, and payment cheques are issued as needed. Cash expenses are paid out of cash collected from members’ fees and ticket sales, so often there is not enough cash to bother depositing. Sometimes there is not enough cash to pay cash expenses, in which case the third employee, who is authorized to sign all cheques, just writes a cheque to “cash” and cashes it at the nearby bank where the club’s bank account is maintained. The board of directors discusses all major trips, equipment purchases, and other large expenditures in advance, and gives general approvals (or denials) to the employees to then look after the details.

**PROBLEM 7.9 Earnings management or internal control problem?**

According to *The Economist*, June 2002, “Almost 1,000 American companies have now restated their earnings since 1997, admitting in effect that they had previously published wrong or misleading numbers.” In Chapter 3 or 6 of this book, we might have noted this situation as earnings management or general misuse of accrual accounting. But 1,000 companies is a lot, so it is plausible that such problems were not always deliberate.

Explain how the restatements *The Economist* referred to could be evidence of internal control problems, referring to the ideas in Sections 7.3 and 7.4.

**PROBLEM 7.10 Top management responsibility for internal control**

The proud owner of Beedle Inc., a successful high-tech company, is very good at hiring and motivating excellent people to develop and sell products. Delegation is the key, says the owner: “Hire good people and get out of their way!” As part of this philosophy, the owner hired the best accountants available and turned over to them all accounting, control, and finance functions. The owner concentrates on strategy and business planning, and the company has grown steadily for several years.

Explain to the owner what top management responsibilities are being neglected here. Given that the company is so successful, does such neglect really matter?
Problem 7.11 Identify cash control problems

Many companies put a great amount of effort into controlling their cash, both that on hand and in banks, often more than for any other asset.

1. Why do you think such great effort is required to control cash?
2. List the control problems you’d expect in each of the following cases. To answer, try to visualize how the cash would probably flow into and out of the company and its bank accounts:
   a. Cash collected at the sales counter of the local dollar store.
   b. Wages being paid to construction employees working on a large highway project.
   c. Donations to the local charity being collected by door-to-door volunteer canvassers.
   d. Money deposited into vending machines.
   e. Cash provided to the receptionist by the company at the main entrance, to be used to pay for deliveries, buy emergency supplies, and other minor things.

Components and People Involved in Internal Control

Problem 7.12 Explain components of internal control

Ingram Inc. has the following features in its internal control system. Explain why each is a useful component of the company’s controls:

   a. One person looks after the accounts receivable records and another person is in charge of receiving and depositing cash.
   b. The receptionist has a petty cash fund.
   c. The company uses the retail inventory method.
   d. The company keeps its inventory in a locked warehouse.
   e. Each month, the bookkeeper reconciles the balances in the liability accounts for various employee deductions to payroll and payment records.

Problem 7.13 Explain the nature and purpose of internal control to a manager

A friend, Janet, has accepted a job as president of a local company. During a meeting you attended, an accountant mentioned to Janet that she would be responsible for internal control of the company. When the accountant left the room, Janet turned to you and asked, “What is internal control, and why should I care about it?” Answer Janet’s question, using clear language without technical jargon.

Problem 7.14 List factors for evaluating whether to improve internal control

You work for Sydney Industries Ltd. The president has been reading other companies’ annual reports and has become concerned that the company’s internal controls may not be adequate. On the other hand, the president does not want to spend the company’s money unnecessarily.

List the factors you would suggest the president consider in evaluating whether better internal controls would be worthwhile.

Problem 7.15 Internal control — theatre admissions

Your date has taken you to a classical music concert. More interested in your financial accounting course than the music, you begin to think about the appropriate internal controls needed to ensure that all cash is received by the theatre operator and that all
patrons pay for their admission. You and your date purchased your tickets at the box office paying cash, but you noted on entering the theatre that other people had purchased their tickets earlier. When you moved from the foyer to the theatre, a theatre employee examined your ticket, advised you of the location of your seat, tore your ticket, and returned the stub to you. You then proceeded to the auditorium entrance where an usher checked your ticket and directed you to your seat.

Ignoring the sounds coming from the stage, list the control procedures you observed and any you think should be in place.

Sales Tax and Employee Deductions to Be Remitted • Section 7.6

Calculating Sales Tax and Employee Deductions

**Problem 7.16** Record sales taxes and employee deductions

Montane Tours Inc. provides guiding services in high alpine areas and operates Mountain Crest souvenir shops in some resort towns. Two groups of transactions the company recently had are described below. The payments indicated were for the amounts due before the transactions, because such remittances follow the transactions creating the amounts due.

a. The company earned sales revenue of $72,000, on which it charged PST of $4,320 and GST of $5,040. Customers paid $69,030 of the total during the month, and the company expected to collect the rest within 60 days. The company paid the provincial government $3,900 on account of PST and the federal government $3,100 on account of GST. GST paid was lower because the company incurred $1,840 GST on its own $26,286 purchases.

b. Employees earned $39,250 in wages, from which the company deducted income tax of $11,180 and other deductions of $4,990. The company incurred fringe benefit costs of $6,315 on those wages. During the month, the company remitted $12,668 to the government on account of income taxes and remitted $11,894 to various government bodies, pension trustees, and other organizations on account of other deductions and fringe benefits.

Record the transactions described.

**Problem 7.17** Calculating GST and PST due

Kate’s Cards & Gifts is a small retail outlet. At the end of the year, Kate needs your assistance in calculating the amount of GST and PST that she still needs to remit to the governments. For the following transactions, write out the journal entries and then calculate the total GST due and PST due.

a. Kate’s Cards & Gifts had sales of $493,000 for the period. Included in this amount were GST at 7% for $30,009 and PST at 8% for $34,295. Cash collected was $361,760 and the remainder is owing to the company.

b. The store made its own purchases of inventory in the period that came to $297,000. Included in this amount was GST of $19,430 while the company is exempt from paying PST. An initial cash payment of $190,000 was made while the remainder was on credit.

c. The company paid the federal and provincial governments $8,000 of GST and $20,000 of the PST, respectively.
**Problem 7.18** Answer questions about sales taxes and employee deductions

A partial list of Havefun Wedding Planners Ltd.’s accounts is below.

<table>
<thead>
<tr>
<th>Account</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales taxes payable</td>
<td>$7,620</td>
</tr>
<tr>
<td>Employee tax deductions due</td>
<td>10,480</td>
</tr>
<tr>
<td>Other employee deductions and fringe benefits due</td>
<td>6,530</td>
</tr>
<tr>
<td>Wages payable</td>
<td>22,460</td>
</tr>
<tr>
<td>Revenue</td>
<td>629,530</td>
</tr>
<tr>
<td>Wages expense</td>
<td>315,210</td>
</tr>
<tr>
<td>Fringe benefits expense</td>
<td>26,870</td>
</tr>
</tbody>
</table>

1. The company has no expense account for sales taxes, though it does have expense accounts for corporate income tax and property taxes on its building. Why is that?
2. The company also has no expense account for employees’ income taxes, even though it has to pay such taxes to the government. Why is that?
3. Over a period of time, will the amounts debited to wages expense equal the amounts credited to wages payable? Why or why not?
4. After the above balances were determined, the company recorded revenue on a wedding plan of $40,000 and charged 7% GST and 8% PST on that sale. Which of the above accounts were affected by the sale, in what direction(s), and by how much?
5. Also after the above balances were determined, the company paid its accountant $6,420, on which it paid GST of 7%. Which of the above accounts were affected by the payment, in what direction(s), and by how much?
6. The company accountant wanted to write cheques to the provincial and federal governments for all PST and GST due. Taking into account items 4 and 5, how much would the cheques total?
7. Again, after the above balances were determined, some employees turned in extra time sheets, showing they had overtime totalling $2,200. The company incurred $570 in holiday pay, pension contributions, and other fringe benefits in addition to this, and deducted $760 in income tax and $93 in other deductions. Which of the above accounts were affected by all this, in what direction(s), and by how much?

**Contra Accounts • Sections 7.7 and 7.8**

**Calculating Doubtful Accounts Receivable**

**Problem 7.19** Answer questions about doubtful accounts receivable

Dragon Designs Ltd. had the following general ledger accounts for last year, using the T-account format. All the company’s sales are on credit to retail stores across the country. The first amount in each account is the balance at the beginning of the year; the last amount, under the solid line, is the balance at the end of the year. Other amounts are transactions and adjustments during the year.

<table>
<thead>
<tr>
<th>Accounts Receivable</th>
<th>Allow. for Doubt. Accts.</th>
<th>Bad Debts Expense</th>
</tr>
</thead>
<tbody>
<tr>
<td>244,620</td>
<td>11,914</td>
<td>0</td>
</tr>
<tr>
<td>1,693,784</td>
<td>9,117</td>
<td>9,117</td>
</tr>
<tr>
<td>331,106</td>
<td>12,738</td>
<td>9,117</td>
</tr>
</tbody>
</table>
Answer these questions:
1. What was the company’s revenue for the year?
2. How much was collected on account of revenue for the year?
3. How much of the uncollected revenue did the company give up on during the year?
4. What was the expense the company incurred from taking the risk of extending credit to customers during the year?
5. On average, how much did the company lose on each dollar of sales? Answer this two ways: by looking at the bad debts expense, and at the bad debts written off. What are the values of each way from management’s point of view?
6. What was the estimated collectible value of the accounts receivable at the end of the year?
7. What was the estimated collectible value of the accounts receivable *prior* to the year-end write-off of uncollectible accounts?

**Problem 7.20** Calculate bad debt allowance and expense

Windhook Technologies Ltd. has been having difficulty collecting its accounts receivable. For the year 2006, the company made provisions for bad debts of $66,650, bringing the balance in the allowance for doubtful accounts to $110,000. At the end of 2006, accounts receivable equaled $643,250. When the year-end audit was being done, it was decided that a further $83,700 of accounts receivable were doubtful and that $55,800 of accounts receivable previously deemed doubtful should be written off altogether.

Calculate the following:
- b. Allowance for doubtful accounts at the end of 2006.
- c. Estimated collectible value of accounts receivable at the end of 2006.

**Problem 7.21** Accounting for doubtful accounts and bad debt expense

Coldlink Company uses an aging of accounts receivable to estimate the needed allowance for doubtful accounts on the basis that the more delinquent an account becomes, the less likelihood of collection. The following is the result of the aging of accounts receivable at December 31, 2007, and the proportion of the balances that Coldlink believes is needed for proper matching of bad debts expense to the period:

<table>
<thead>
<tr>
<th>Account Status</th>
<th>Account Balance</th>
<th>Estimated Loss Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>$500,000</td>
<td></td>
</tr>
<tr>
<td>Not yet due</td>
<td>$200,000</td>
<td>1%</td>
</tr>
<tr>
<td>Past Due:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1–30 days</td>
<td>100,000</td>
<td>3%</td>
</tr>
<tr>
<td>31–60 days</td>
<td>50,000</td>
<td>4%</td>
</tr>
<tr>
<td>61–90 days</td>
<td>120,000</td>
<td>5%</td>
</tr>
<tr>
<td>Over 90 days</td>
<td>30,000</td>
<td>30%</td>
</tr>
</tbody>
</table>

1. Calculate the required ending balance in the doubtful accounts allowance at December 31, 2007.
2. Assuming the balance in the allowance for doubtful accounts is $2,500 prior to the year-end adjustment, calculate the bad debt expense that Coldlink will report in 2007.
3. Write the journal entry to adjust the doubtful accounts allowance account at December 31, 2007.
4. On January 4, 2008, the company is informed that customer John Henry, who went bankrupt while owing the company money, has been discharged in bankruptcy and
no further payments will be received from him. It is decided to write off Mr. Henry’s account balance of $642. Write the journal entry to record this write-off.

**PROBLEM 7.22** Analysis of effects of decisions on net accounts receivable

Gallumphing Gourmet Inc. sells imported fancy kitchenware to retailers. Lately, the company has been having increasing problems collecting its receivables and has been forced to consider increasing its allowance for doubtful accounts. Accounts receivable at the end of last year were $922,000 and at the end of this year are $1,332,000. The allowance for doubtful accounts was $40,000 at the end of last year and has not been revised yet for this year’s experience. Instead, the company has just written off some accounts receivable directly to bad debts expense; the expense therefore shows a balance of $34,000 of these write-offs for this year. The company is considering three different actions to take its current poorer collection experience into account:

a. Directly writing off additional, apparently hopeless accounts totalling $51,000.
b. Adjusting the allowance for doubtful accounts to $92,000 to include the accounts in (a) and some doubtful accounts, but not giving up on the hopeless ones just yet.
c. Combining (a) and (b) by increasing the allowance to include all the hopeless and doubtful ones and then writing off the hopeless ones.

Analyze the three possible actions, calculating for each what the revised balances are in (1) accounts receivable, (2) allowance for doubtful accounts, and (3) bad debts expense, and showing what the effect of each is on (4) net collectible value of the accounts receivable, (5) working capital, and (6) income for the year.

**Amortization and Write-offs**

**PROBLEM 7.23** Answer questions about factory assets and amortization

Aaron Manufacturing Inc. had the following general ledger accounts for last year, using the T-account format. The first amount in each account is the balance at the beginning of the year; the last amount, under the solid line, is the balance at the end of the year. Other amounts are transactions and adjustments during the year.

<table>
<thead>
<tr>
<th>Factory Assets</th>
<th>Accumulated Amortization</th>
<th>Amortization Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,497,888</td>
<td>1,977,321</td>
<td>0</td>
</tr>
<tr>
<td>1,032,568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>843,992</td>
<td>411,883</td>
<td>793,220</td>
</tr>
<tr>
<td>89,245</td>
<td>59,200</td>
<td>793,220</td>
</tr>
<tr>
<td>5,597,219</td>
<td>2,299,458</td>
<td></td>
</tr>
</tbody>
</table>

Answer these questions:
1. What was the portion of the factory assets estimated to have been consumed economically in earning revenue during the year?
2. How much was spent acquiring additional factory assets during the year?
3. The assets that cost $843,992 brought $350,000 in proceeds. Did their sale result in a gain or a loss on disposal? Write the journal entry that would have recorded the sale.
4. The assets that cost $89,245 were retired and written off, bringing no proceeds. Write the journal entry that would have recorded the write-off.
5. What was the net book value of the factory assets at the end of the year?

**PROBLEM 7.24** Calculating net book value

An air cargo supply company decides to purchase a new jumbo cargo plane for $145,000,000. The plane will be in use for a period of 20 years. For the following events, write out the applicable journal entries. Treat each event individually.
a. Five years after purchase, the company sells the plane for $85,000,000. To date, amortization on the plane was $35,000,000.
b. Eight years after purchase, the company sells the plane for $95,000,000. At this point, total accumulated amortization on the plane was $56,000,000.
c. The plane catches fire on the ground in a country where a war is going on and is destroyed. Unfortunately, the insurance company refuses to pay anything because the insurance excludes war-related damage. The company has to write off the plane. At the point of the fire, the plane had been amortized $42,500,000.

**Problem 7.25** Answer questions about contra accounts and write-offs

A partial list of Boomber Inc.’s asset and income statement accounts is below.

<table>
<thead>
<tr>
<th>Account Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts receivable control account</td>
<td>$8,423,119</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>113,402</td>
</tr>
<tr>
<td>Investment in Magnifico Manufacturing Inc. (cost)</td>
<td>1,560,000</td>
</tr>
<tr>
<td>Equipment and furniture (cost)</td>
<td>10,399,163</td>
</tr>
<tr>
<td>Accumulated amortization on equipment and furniture</td>
<td>3,725,021</td>
</tr>
<tr>
<td>Bad debts expense</td>
<td>56,286</td>
</tr>
<tr>
<td>Amortization expense on equipment and furniture</td>
<td>1,025,120</td>
</tr>
</tbody>
</table>

1. What did it cost Boomber this year to extend credit to customers who are unlikely to pay?
2. What did it cost Boomber this year to use equipment and furniture in its revenue-generating business activities?
3. What is (a) the net collectible value of the accounts receivable and (b) the net book value of the equipment and furniture?
4. After seeing the above figures, Boomber’s chief accountant decided that $69,579 of worthless accounts receivable should be written off. What effect would doing this have on: (a) accounts receivable, (b) allowance for doubtful accounts, (c) bad debts expense, and (d) net collectible value of accounts receivable?
5. The chief accountant also decided that some of the furniture had no use in the business anymore and should be written off. No proceeds were expected on selling the furniture; instead, it would be donated to a local charity. The furniture had cost $55,250 and had accumulated amortization of $50,950. What effect would this decision have on (a) the cost of equipment and furniture, (b) accumulated amortization on equipment and furniture, (c) net book value of equipment and furniture, and (d) income for the year?
6. The chief accountant, while she was at it, suggested that 80% of the investment in Magnifico be written off. Magnifico was in serious financial trouble and it looked as if Boomber would be unable to sell it for much more than 20% of cost. What effect would this decision have on (a) total assets of Boomber, and (b) income for the year?

**Inventory Control • Section 7.9**

**Calculating Inventory Using the Periodic and Perpetual Methods**

**Problem 7.26** Periodic and perpetual inventory control calculations

You are the senior accountant for a shoe wholesaler that uses the periodic inventory method. You have determined the following information from your company’s records, which you assume are correct:
a. Inventory of $246,720 was on hand at the start of the year.

b. Purchases for the year totalled $1,690,000. Of this, $1,412,000 was purchased on account; that is, accounts payable were credited for this amount at the time of the purchase.

c. The ending balance in accounts payable was $47,500 higher than the opening balance.

d. A year-end inventory count revealed inventory of $324,800.

1. Calculate cost of goods sold according to the periodic inventory method.

2. Assume now that your company uses the perpetual method of inventory control, and that your records show that $1,548,325 of inventory (at cost) was sold during the year. What is the adjustment needed to correct the records, given the inventory count in item (d) above? What might the need for this adjustment indicate about company operations?

3. If the perpetual method generally provides more control over inventory for management, why don’t all companies use it?

**Problem 7.27A**

Recording inventory and sales-related transactions

Edenvale Toys Inc. had the following transactions relating to its inventory held for resale in its first month of operations:

<table>
<thead>
<tr>
<th>Date</th>
<th>Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 3</td>
<td>Edenvale purchased from Southern Novelties Inc. 200 cases of toys at $25 per case plus GST at 7% on account.</td>
</tr>
<tr>
<td>June 7</td>
<td>Edenvale sold 55 cases of toys to Tiny Tots Stores at $60 per case plus GST at 7% on account.</td>
</tr>
<tr>
<td>June 12</td>
<td>Tiny Tots returned 10 cases of defective toys to Edenvale.</td>
</tr>
<tr>
<td>June 14</td>
<td>Edenvale returned the 10 cases of defective toys to Southern Novelties Inc.</td>
</tr>
<tr>
<td>June 20</td>
<td>Edenvale received a payment on account from Tiny Tots in the amount of $1,800.</td>
</tr>
<tr>
<td>June 22</td>
<td>Edenvale paid Southern $4,000 on account.</td>
</tr>
<tr>
<td>June 28</td>
<td>Edenvale sold another 75 cases of toys to Tiny Tots on account at $70 per case plus GST at 7%.</td>
</tr>
</tbody>
</table>

1. Write journal entries to record each of the transactions above assuming Edenvale uses the perpetual inventory control method.

2. Calculate the balance on Edenvale’s books at June 30 for:
   a. Accounts receivable from Tiny Tots.
   b. Accounts payable to Southern.
   c. Inventory purchased from Southern held for resale.
   d. The amount of GST due resulting from these transactions.

**Problem 7.27B**

Interpreting financial statements—cost of goods sold

The Consolidated Statements of Operations in the 2004 Annual Report for Gap Inc. show the following:
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>$16,267</td>
<td>$15,854</td>
<td>$14,455</td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>9,886</td>
<td>9,885</td>
<td>9,541</td>
</tr>
<tr>
<td>Gross profit</td>
<td>6,381</td>
<td>5,969</td>
<td>4,914</td>
</tr>
</tbody>
</table>

Note A to the financial statements reveals the following:

**Cost of Goods Sold and Occupancy Expenses**

Cost of goods sold and occupancy expenses include the cost of merchandise, inventory shortage and valuation adjustments, inbound freight charges, purchasing and receiving costs, certain payroll costs associated with our sourcing operations, inspection costs, warehousing costs, rent, occupancy, and depreciation for our stores and distribution centres.

1. Why do you think Gap Inc. reports cost of goods sold in this manner?
2. Calculate Gap Inc.’s gross profit as a percentage of sales, using Gap’s figures.
3. Using your result from part 2, but additionally assuming that only 75% of Gap’s “Cost of goods sold and occupancy expenses” actually relate directly to inventory costs, determine the cost to Gap Inc. of an item it sells for $100.
4. Based on your own research, does your answer in part 3 seem reasonable? Explain.

**Problem 7.28** Calculations and entries for various control account transactions

*Parts 2 and 3 may be done independently of part 1, and vice versa.*

You have the following information for Blue Mountain Products Inc.:

- Balances beginning of year: Cash, $328,600; Accounts receivable, $721,310; Inventory, $806,220; Prepaid expenses, $93,760; Accounts payable, $518,640; GST due, $33,260.
- Transactions for the year: Sales on credit, $4,218,140 plus GST, $295,270; Collections, $4,602,380; Purchases (all on credit), $2,289,715 plus GST, $160,280; Payments to suppliers, $2,186,410; GST remitted, $163,200.
- The company’s selling prices are determined by adding 100% to its cost for products.
- All the prepaid expenses were consumed during the year, and a further $14,220 were incurred but unpaid by the end of the year.
- The company operates a perpetual inventory system. At the end of the year, the inventory count showed inventory costing $968,320 to be on hand.

1. Based just on the above data, calculate the year-end balance in the following:
   a. Cash control account
   b. Accounts receivable control account
   c. Inventory control account
   d. Prepaid expenses
   e. Accounts payable control account
   f. GST due control account
2. Write journal entries to record all the transactions and other relevant information.
3. Assume the company used the periodic inventory method instead. Identify which entries from part 2 are different and write the periodic method entries.
**Integrated Problems**

**Recordkeeping and Control Accounting**

**PROBLEM 7.29** Explain accounting terms in plain English

Your aunt, a prominent businessperson, learns you are studying accounting and, one evening, asks you to explain the following terms to her. Your aunt is smart and successful and, maybe for that reason, is impatient with jargon, so she wants the answers to be short, to the point, and in jargon-free English.

a. Adjustments
b. Contra accounts
c. Internal control
d. Control accounts
e. Books of original entry
f. Write-off of uncollectible accounts
g. Accounting control

**PROBLEM 7.30** Match terms to descriptions

Match each term on the left with the most appropriate phrase on the right.

1. Allowance for doubtful accounts  
   a. Says what should be there
2. Intangible assets  
   b. Not a control method
3. Chart of accounts  
   c. Look them up to verify
4. Periodic inventory method  
   d. Provides an expense without changing the asset
5. Segregation of duties  
   e. Based on selling prices
6. Bad debt write-off  
   f. Don't let anyone do too much
7. Source documents  
   g. Trial balance with no numbers
8. Books of original entry  
   h. A contra account is not usually used for these
9. Control account  
   i. The basis for amounts posted to ledgers
10. Retail inventory method  
   j. Doesn't change the financial statements

**PROBLEM 7.31** Evaluate statements about accounting and recordkeeping

State whether or not you agree with each of the statements below and, in a few words, tell why.

a. HST due is not a true liability of the company because it is the government’s money.
b. Internal control is the sole responsibility of the accountants in an organization.
c. If an event satisfies all four of the transaction criteria, you can be sure it will be recorded by the entity’s accounting system.
d. E-commerce transactions between a company and its customers are not accounting transactions in the company’s records because no cash is ever involved.
e. The perpetual method of accounting for inventory provides better internal control than the periodic method.
f. A properly designed system of internal control over cash will prevent employee theft of cash.

**PROBLEM 7.32** Write a paragraph each on various topics

Write a paragraph on each of the following topics. Feel free to go beyond this chapter’s specific content to add your own experiences or views.
a. The relationship between corporate managers’ responsibility for internal control and their responsibility to earn income for the shareholders.

b. The value of financial accounting’s double-entry system in assisting with internal control.

c. The importance of documents to the credibility of financial accounting information.

d. The relationship between the way the enterprise records transactions and the kinds of adjustments required to meet the objectives of accrual accounting.

e. The role of the enterprise’s accounting system in meeting its legal obligation to collect taxes on behalf of governments.

Contra and Control Account Issues

* PROBLEM 7.33 Outline how internal controls mutually reinforce each other

Outline how, in accounting for routine purchase and sale transactions, double-entry accounting can provide control accounts for cash, accounts receivable, inventories, accounts payable, and GST that interrelate and mutually reinforce each other.

PROBLEM 7.34 Answer questions about control topics

Answer the following questions briefly in nontechnical language.

1. Why is an accumulated amortization contra account standard practice for physical noncurrent assets but not for intangible noncurrent assets?

2. Why is using an allowance for doubtful accounts considered preferable to just writing bad debts directly off to expense?

3. Since the perpetual inventory approach provides better internal control than the periodic method, what are the advantages of the periodic method that prompt many companies, especially smaller ones, to use it for all their inventories and even large companies to use it for supplies inventories?

4. Why does the purchase of goods for resale result in the reduction of GST liability?

5. The chief accountant for a company that has a lot of short-term investments suggests setting up a contra account for market value declines in such investments. Such a contra account, which some companies use, has not been mentioned in the chapter: using the chapter’s content, give some likely reasons why it would be proposed.

PROBLEM 7.35 Discuss some issues in contra accounts and sales taxes

1. Most companies net the contra account for accounts receivable (allowance for doubtful accounts) against the accounts receivable balance in their balance sheet and so show only the net collectible value of the receivables. On the other hand, it is standard practice under GAAP to report the contra account for factory assets (accumulated amortization) separately on the balance sheet, or in a note, so that the reader can see the cost of the assets, the amortization accumulated, and the net book value of the assets. The contra accounts for other noncurrent assets, such as amortization on patents or goodwill, are usually not disclosed, so the reader of the financial statements can see only the net book value, much as for accounts receivable. Do these differences strike you as awkward, or unnecessary? Can you make a case for disclosing either all contra accounts or none of them?

2. It is usual to argue that since sales taxes, such as PST and GST, are collected on behalf of the government with no discretion by the company collecting them, they are not expenses of the company. The company is acting as a tax collector and just transferring the money from customers to governments. But the customers likely consider the sales taxes to be part of the cost of buying the goods or services, and if the company reduces the price of what it sells, the customers are glad to see the
taxes go down too. In fact, if the company didn’t even charge the tax explicitly but just sent a portion of its revenue in to the government as the tax (such as in a “no GST sale” where the customer pays say $10.00, the company’s revenue is only 100/107 of that, or $9.35, and the tax is 7% of $9.35, or $0.65), the customers would be even happier. Can you make a case for such sales taxes being considered as expenses of the company, which would be shown on the income statement?

Preparing Adjusting Journal Entries

* PROBLEM 7.36 Write journal entries to adjust accounts

Write a journal entry, if any is needed, to adjust the accounts for each of the following independent items. State any assumptions you find necessary.

a. The allowance for doubtful accounts was $2,800 too low.
b. Amortization of $7,200 was needed on a truck.
c. GST of $420 was paid on the purchase of inventory and debited to the Inventory asset account.
d. Employee tax deductions of $39,650 were remitted to the government and debited to Wages expense.
e. It was decided to give up trying to collect an old account receivable of $235.
f. A machine with a cost of $72,600 and book value of $19,700 was sold for $14,200.
g. Upon comparing the inventory count to the perpetual records, a shortage of $4,620 was discovered.
h. An employee stole $35,000 cash that customers had paid on their accounts receivable. Insurance will cover $10,000 of the loss.
i. A storage shed that cost $89,000 and had accumulated amortization of $63,000 blew over in a storm and had to be scrapped.
j. Accounts receivable were studied and it was determined that the net collectible value was $787,000. The accounts receivable control account showed $813,000 and the allowance stood at $26,000.

* PROBLEM 7.37 Write entries to adjust accounts for various items

Write a journal entry, if any is needed, to adjust the accounts for each of the following independent items.

a. $23,500 amortization of goodwill is needed.
b. The development costs asset stands at $185,000, before considering $380,000 more spent this year and charged to expense. It is decided to capitalize half of this year’s expense and then amortize the resulting asset evenly over five years.
c. A truck with a book value of $38,650 and accumulated amortization of $73,250 is sold for $45,000, to be paid by the purchaser in 30 days.
d. A building that cost $800,000 and has accumulated amortization of $250,000 has increased in value on the real estate market, going up from $600,000 last year to $675,000.
e. Another building, costing $300,000 and having accumulated amortization of $40,000, is sold for $320,000 cash.
f. An employee stole inventory costing the company $20,000 and hid the theft by altering the company’s perpetual inventory record. Caught red-handed, the employee has promised to repay the company within 60 days if no legal action is taken by the company. The company agrees.
g. Fringe benefits costing $93,210 are paid to various outside parties and the total is debited to Wages expense.
h. GST of $16,260 added on to purchases by suppliers is deducted from the $47,380 GST added to sales by the company, and the net $31,120 is remitted to the government.
i. Land costing $236,640 that has become swampy and unusable is written off.

j. A large customer that the company was worried about went bankrupt. The $69,800 account receivable had been half allowed-for already because the company had believed it would collect half. Now the bankruptcy trustee advises that creditors of the bankrupt company will receive only 10% of the amounts owing.

PROBLEM 7.38 Correct accounts for errors by bookkeeper

The bookkeeper for Granny’s Goodies Inc. (GGI) was recently appointed to that position after years as chief goodie taster. The president is not interested in accounting and thinks it is not important, so the goodie taster got the job in spite of having little accounting knowledge. Below are some items about the company and the journal entries the bookkeeper made in relation to those items. For each item, complete or correct what the bookkeeper has done.

a. The company issued some shares and sold them to employees. The bookkeeper debited cash and credited revenue $50,000.

b. The company bought a truck at a price of $38,000, paying $15,000 down and financing the rest over 5 years with a bank loan. The bookkeeper debited truck asset and credited cash $15,000.

c. The bookkeeper recorded amortization expense for the year of $10,200, which included 10% amortization on the truck, in accordance with company policy. The amortization was debited to amortization expense and credited to accumulated amortization.

d. The company sold a cookie cutter machine it no longer needed for $200. The machine had cost $2,100 and had accumulated amortization of $1,660. The bookkeeper decided that $200 should be credited to cash and did that, but did not complete the entry, throwing the general ledger out of balance. Knowing the ledger should be in balance, the bookkeeper added an account to the ledger called “imbalance revenue” and put $200 in it so everything would balance.

e. During the year, the company deducted $78,200 in income taxes from employees’ pay and remitted it all to the government. When the taxes were remitted to the government, the bookkeeper debited income tax expense and credited cash. The company’s wages payable account showed a rather large balance at the end of the year because employees had been paid only the net amounts.

f. At the end of the year, the company’s perpetual inventory asset account showed a balance of $6,400. The bookkeeper thought that was a little high, because the company pretty well sold its goodies as it made them—there’s little market for old goodies! Sure enough, when the goodie inventory was counted on that day, it had a cost of only $3,700. The rest appeared to have been eaten by employees, rats, customers, or whatever. The bookkeeper had no idea whether any entry should be made and so didn’t do one.

g. At the end of the year, the company owed $150 in unpaid interest on its bank loan. The bookkeeper debited interest expense and credited interest payable for $150.

h. GGI sold some of its goodies on credit to coffee shops. It had never had any bad debts or had to make any allowance for them. But at the end of this year, two coffee shop customers were in financial trouble. One had been closed down by the health department and had gone out of business, owing GGI $320. The other had become very slow in paying since a national coffee chain had opened next door, and the bookkeeper doubted the $405 it owed would be paid. The bookkeeper recorded all this by debiting bad debts expense and crediting accounts receivable $85 ($405 – $320).
i. A customer, making a big order for goodies to be delivered later, came in and gave 
the company a $400 deposit on the last day of the year. This was included in the 
cash revenue for the day.

j. On the last day of the year, the company declared a dividend of $5,000 to be paid 
20 days later. The bookkeeper debited dividends expense and credited retained 
earnings $5,000.

k. Net income for the year worked out to $52,340, as the bookkeeper calculated it. 
This amount was credited to retained earnings and debited to cash.

Calculating the Income Effects of Various Events

* Problem 7.39 Calculate income effects of various phenomena

Calculate any effect on income of each of the following independent cases.

a. A building cost $250,000. Accumulated amortization on it was $240,000. Building 
sold for $28,000.

b. An account receivable was $7,800. There was an allowance of $5,000 on it. 
Collection abandoned.

c. Goodwill cost $800,000, amortized down to book value $350,000. Remainder written 
off.

d. Inventory control account showed $2,850,000. Inventory count showed $2,698,000.

e. A machine cost $37,000. Accumulated amortization on it was $29,000. Machine 
written off.

f. Inventory purchased for $180,000 on credit. GST of 7% added on.

g. Building cost $250,000. Accumulated amortization on it was $240,000. Sold for 
$6,000.

h. Development expenses total $700,000. Half of these were capitalized.

i. Employees earned $110,000 plus $19,000 fringe benefits. Deductions from employees 
were $34,000.

j. An account receivable was $14,000. Payment of $12,000 received by electronic funds 
transfer.

Problem 7.40 Calculate financial statement effects of various events

For each item below, give the dollar amount and direction of the effects on current 
assets, noncurrent assets, and net income (ignoring income tax).

a. A Ltd. writes off $2,500 of previously allowed-for accounts receivable.

b. B Ltd., which has a perpetual inventory system, counts its year-end inventory and 
determines its cost to be $739,600. The inventory control account has a balance of 
$746,400.

c. C Ltd. sells for $179,000 cash a building that cost $690,000 and has accumulated 
amortization of $438,000.

d. D Ltd. is surprised by the bankruptcy of a major customer and has to record a direct 
accounts receivable write-off of $149,000.

e. E Ltd. writes off an old building that cost $420,000 and has accumulated amortiza-
tion of $420,000.

f. F Ltd. discovers a fraud by an employee. The loss is $58,000 in cash, $30,000 of 
which will be covered by the company’s insurance.

g. G Ltd. buys a shipment of inventory, paying $60,000 cash plus 7% GST. The 
company has considerable GST due, collected on its own sales.
**Problem 7.41** Identify and determine effect on net income of a group of adjustments

The accountant for Discher Industries Inc. made a number of year-end adjustments to the accounts. Here are the company’s balance sheet accounts before and after the adjustments. Identify what adjustment was probably behind each account change and specify its effect on net income for the year.

<table>
<thead>
<tr>
<th>Account</th>
<th>Unadjusted</th>
<th>Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>17,500</td>
<td>17,500</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>84,900</td>
<td>80,400</td>
</tr>
<tr>
<td>Allowance for doubtful accounts</td>
<td>6,400</td>
<td>7,900</td>
</tr>
<tr>
<td>Inventory</td>
<td>115,600</td>
<td>109,200</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>4,200</td>
<td>3,500</td>
</tr>
<tr>
<td>Land</td>
<td>35,000</td>
<td>35,000</td>
</tr>
<tr>
<td>Factory</td>
<td>248,200</td>
<td>245,200</td>
</tr>
<tr>
<td>Accumulated amortization</td>
<td>108,700</td>
<td>100,900</td>
</tr>
<tr>
<td>Investments</td>
<td>65,500</td>
<td>65,000</td>
</tr>
<tr>
<td>Bank loan</td>
<td>74,000</td>
<td>74,000</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>81,600</td>
<td>85,000</td>
</tr>
<tr>
<td>Accrued liabilities</td>
<td>2,100</td>
<td>3,400</td>
</tr>
<tr>
<td>Wages and deductions payable</td>
<td>13,400</td>
<td>16,300</td>
</tr>
<tr>
<td>Sales taxes due</td>
<td>2,800</td>
<td>2,800</td>
</tr>
<tr>
<td>Income taxes payable</td>
<td>600</td>
<td>9,200</td>
</tr>
<tr>
<td>Mortgage payable</td>
<td>74,000</td>
<td>74,000</td>
</tr>
<tr>
<td>Future income tax liability</td>
<td>32,100</td>
<td>34,300</td>
</tr>
<tr>
<td>Warranty liability</td>
<td>17,500</td>
<td>18,200</td>
</tr>
<tr>
<td>Share capital</td>
<td>100,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>62,700</td>
<td>19,800</td>
</tr>
</tbody>
</table>

**Problem 7.42** Inferring missing amounts based on income statement relationships

In each of the following independent cases, use your knowledge of income statement relationships to calculate the missing values.

<table>
<thead>
<tr>
<th>Case</th>
<th>Sales Revenue</th>
<th>Beginning Inventory</th>
<th>Purchases</th>
<th>Total Available</th>
<th>Ending Inventory</th>
<th>Cost of Goods Sold</th>
<th>Gross Profit</th>
<th>Expenses</th>
<th>Pretax Income (Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>$850</td>
<td>$150</td>
<td>$800</td>
<td>$ ?</td>
<td>$200</td>
<td>$ ?</td>
<td>$100</td>
<td>$25</td>
<td>$ ?</td>
</tr>
<tr>
<td>B</td>
<td>900</td>
<td>?</td>
<td>750</td>
<td>?</td>
<td>100</td>
<td>?</td>
<td>?</td>
<td>50</td>
<td>75</td>
</tr>
<tr>
<td>C</td>
<td>800</td>
<td>?</td>
<td>650</td>
<td>975</td>
<td>?</td>
<td>?</td>
<td>75</td>
<td>?</td>
<td>(50)</td>
</tr>
<tr>
<td>D</td>
<td>?</td>
<td>200</td>
<td>?</td>
<td>?</td>
<td>325</td>
<td>775</td>
<td>425</td>
<td>150</td>
<td>?</td>
</tr>
<tr>
<td>E</td>
<td>950</td>
<td>100</td>
<td>650</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>150</td>
<td>125</td>
</tr>
</tbody>
</table>
CASE 7A

INTERNAL CONTROL REQUIREMENTS OF TWO ORGANIZATIONS

Tiffany recently graduated with a business degree and got a job with local plumbing, electrical, heating and air conditioning distributor Mountain Crest Supply Inc., working in the company’s office. Her new employer has asked her to review its internal control systems and suggest ways of improving their effectiveness and efficiency. She also has been a member of Earth Friends, an environmental awareness group and, with her studies behind her, will be taking a more active role in the group, having just been elected president and head of the group’s board of directors.

Mountain Crest Supply buys most of its goods (ranging from large air conditioning and lighting units all the way down to nuts, bolts and cleaning rags) from manufacturers worldwide and sells them to building contractors, tradespeople, government agencies, hydroponic gardeners, general businesses and home renovators locally and in the region. It has a small manufacturing operation of its own, making some plastic piping and other simple parts. The company has a strong reputation in the region as the place to go when you need a part no one else can supply, and has even fabricated parts for such occasional exotic uses as hot air balloons and beer brewing. The quality of its piping and electrical systems is so good that, to the company’s distress, its products keep turning up in places raided by the police for pot growing.

Virtually all of the company’s sales are on credit it extends (after a credit check for new customers), or paid for by customers’ credit cards, but some is on Interac and a little is for cash. For a fee, deliveries are made to just about anywhere in the region, and the company is known for getting parts to a customer within hours of receiving an order. To maintain its competitive position, the company cheerfully takes back products that turn out not to meet the customer’s needs, or that are in excess of need. Many of its contractor customers therefore buy in bulk and return significant proportions of what they originally bought. Given all this service, the company’s prices are a little higher than competitors’ and to compete, it will offer lower prices on the condition that customers pay a restocking fee on returned goods that are not defective. Its inventories are also larger than competitors’ and include numerous items that are one-of-a-kind products or parts for products sold years ago.

Mountain Crest Supply’s employees are known for their product knowledge and their eagerness to help customers. Many employees have worked in sales, the parts room, the office and delivery, and tasks in those areas are regularly done by whichever employee happens to be available at the moment. It’s quite common for a single employee to take down a customer order, locate the items needed in the store, complete the customer invoice, and even deliver the goods. (Nearly all employees are licensed to drive the delivery trucks and vans, keys for which are kept on pegs at the back of the storeroom.) The company encourages employees to go out on delivery, see the customers’ job sites, show an interest, and suggest additional products the customer might find useful. Tiffany has already been out on several deliveries and has helped on the sales floor and in tracking down parts and supplies, as part of getting to know the business.

Earth Friends has a history of low-key effectiveness in local and regional environmental issues. It publishes an environmental watch newsletter, has an active Web site, and arranges numerous one-on-one sessions of its members with people thought to be opinion leaders or decision makers. Its efforts were largely responsible for the diversion of several highways around sensitive wetlands, for revision of several municipal water and air standards, for effective environmental awareness campaigns in the schools, and for a series of useful conferences bringing local environmentalists, business leaders and politicians together. Meeting the president of Mountain Crest Supply at one of those conferences led eventually to Tiffany’s job with the company.

Earth Friends’ activities are financed through memberships, donations from bodies and businesses thought not to be harming the environment, occasional government grants, and occasional fundraising from the general public. The revenues come in by cash or cheque (recently some donations by credit card have been accepted), and the expenses are paid mostly by cheque, much of that to reimburse members who have used their own funds to meet people or to travel to environmentally sensitive sites, but a good part also to pay increasingly significant
office costs, such as for the newsletter and Web site. Only recently, the group has begun to pay people as part-time staff, for Web services, newsletter production and conference organizing.

An elected board of directors manages Earth Friends’ activities and performs required tasks such as certifying that funds have been spent as promised to donors or granting agencies. All directors are volunteers like Tiffany, and most put in considerable time on this labour of love.

**CASE 7B**

**INTERNAL CONTROL AND TOP MANAGEMENT**

Top management of modern businesses faces increasingly challenging problems. The business must be managed day-to-day and there should be some sort of coherent strategy to guide this managing. Earnings and cash flow must be sufficient to satisfy investors and creditors, and to keep the business on track when tough times occur. An internal culture that is ethical and effective in meeting corporate goals and society’s expectations should be nurtured and supported. Through all of this, top management is responsible for exercising effective control over the whole business and has to answer to owners, employees, creditors, customers and society at large if problems arise. As we have seen in recent years, many problems do arise!

Discuss top management’s role in exercising control over the business and meeting the expectations of others. If it is helpful, place the discussion in the context of a specific interesting company. Just to get you started, below are some remarks heard on phone-in shows and in other conversations about the recent corporate disasters and related issues.

“The pressure on top management to generate returns for shareholders leads to a natural attempt to maximize those returns and ignore control and social responsibility. In fact, since top management works for the shareholders, it would be irresponsible and unethical not to behave this way.”

“Ascribing all the recent problems to shareholder pressures for earnings maximization overstates management’s willingness or ability to manipulate accounting. Many problems are just a result of insufficient control, of a buccaneer culture where the ends are valued no matter what the means, so the company’s people get themselves and the company into trouble.”

“We have seen some problems recently, all right, but most of them are the result of over-exuberance, mainly in the technology sector, and in spite of them the results for society have been positive. It is certainly preferable to have a wide-open, entrepreneurial culture in the company than to put it in charge of conservative, control-minded bureaucrats.”

“What we have is a moral failure. Top managers have been setting a poor example for their people, in paying themselves huge salaries, taking stock options and generally behaving as if they had no responsibility for the shareholders’ money, or the employees’ future.”

“It’s ‘that vision thing,’ as President Bush the First used to say. The problem is that top managers who are thought to be visionary leaders are appointed and then operate by charisma rather than competence. Poor management is bound to include poor control and stewardship of other people’s interests. It doesn’t have to be malicious, just incompetent. Boards of directors
should start appointing dull, careful top managers who know their stuff.”

“Much of our economy runs on confidence: the confidence of shareholders, employees, customers and suppliers. If that confidence is eroded because companies are out of control, the whole economic system grinds to a halt.”

“Our Western economic system depends on self-policing. We have loose controls on companies because we assume they have good control on themselves. If that is not true, society will impose regulations and conditions that will hurt all companies, not just the bad eggs. Top management therefore has a responsibility to keep their part of free enterprise under control, or someone else will do it for them to the cost of all of us.”

“Managers are people, and if they misbehave, it is ultimately their personal choice to do so. Therefore it comes down to the personal ethics and responsibility of each manager. If a company is not well managed or controlled, it is because individual managers have made bad choices.”

“Managers are people, so they get trapped by the demands of their jobs. If you have a mortgage, kids, aged parents, even a desire for the good life yourself, you can’t just act according to your own preferences, no matter how moral. You can’t just quit when you feel like it. You have to fit in, and this is just as true for top managers as it is for the mailroom clerk. If you are in a go-go company in which the poorer performers are fired each year (as seems to have been the case in Enron), you can’t put control concerns first. You won’t survive doing that, so you won’t be around to be a sober manager anyway.”

“It’s a matter of incentives. If top managers fail to exercise sufficient control over their companies and their accounting, it is because their incentives don’t lead them to that. They are rewarded for short-term results, so they maximize those. They are penalized for investments in office costs, controls, caution, so they minimize those. If you want to make top managers pay more attention to their control responsibilities, you have to change their incentives.”

NOTES

1. Thanks to Rosalie J. Laibida, the accountant at Barcol Doors & Windows Ltd., for providing the examples of the company’s documents and permission to use them.


