chapter 4

The accounting process

learning objectives

After studying this chapter you should be able to:

1. Expand the basic accounting equation to include revenues and expenses.
2. Explain how the expanded accounting equation stays in balance after every transaction.
3. Explain how the income statement is linked to the balance sheet through owners’ equity.
4. Analyse a transaction and determine the effects of the transaction on the financial statements.
5. Answer the five questions of transaction analysis.

In order to understand how different transactions affect the financial statements and, in turn, to make sense of the data on the financial statements, it is necessary to understand the mechanical operation of the bookkeeping process. The principal objectives of this chapter are to explain this mechanical process and to introduce a method of analysing the effects of a transaction on the financial statements. Appendix 2 includes explanations of the conventions of double-entry bookkeeping. These issues have been specifically excluded from this chapter to permit you to focus on the conceptual issues underpinning the accounting process.

The accounting process

The accounting process begins with transactions (economic interchanges between entities that are accounted for and reflected in financial statements) and culminates in financial statements. This flow was illustrated in Chapter 2 as follows:

Transactions → [Procedures for sorting, classifying, and presenting (bookkeeping)
Selection of alternative methods of reflecting the effects of certain transactions (accounting)] → Financial statements

This chapter presents an overview of accounting processes that are used in the technology of accounting. Your objective is not to become a technocrat but to learn enough about the mechanical process of accounting so that you can determine the effects of any transaction on the financial statements. This conceptual ability is crucial to the process of making informed judgments and decisions from the financial statements. There are some special terms to describe the accounting processes, and you will have to learn these terms. The bookkeeping process itself is a mechanical process and is presented in Appendix 2. Once you understand the language of the technology, you will see that the process is quite straightforward.

The balance sheet equation—a mechanical key

You now know that the balance sheet equation expresses the equality between an entity's assets and the financing of those assets:

Assets = Liabilities + Owners' Equity

For present illustration purposes, let us consider a firm without liabilities. What do you suppose happens to the amounts in the equation if the entity operates at a profit? Well, assets (perhaps cash) increase and, if the equation is to balance (and it must), then, clearly, owners' equity must also increase. Yes, profits increase owners' equity and, to keep the equation in balance, assets will increase and/or liabilities will decrease. Every financial transaction that is accounted for will cause a change somewhere in the balance sheet equation, and the equation will remain in balance after every transaction.

The Insider's View

CHRIS SHELLABEAR

COULD I GET BY WITHOUT A KNOWLEDGE OF ACCOUNTING?

When I took over the business, armed with my accounting knowledge, I made a lot of changes. Basically, my father's yardstick on profitability was how much money was in the cheque account. I changed the accountants and made sure we put systems in place that I could understand. I meet with my accountant a minimum of once a month. My assistant prepares reports on MYOB. These show me the income stream and expenses for every part of the business so that I know how every division is performing. Each division's performance is expressed as a percentage of the group, and we also measure against last year, month by month, and year to date. We do the same for expenses. This means that for any financial decisions we make—for instance, buying equipment—it is easy to see the cost impact and whether there is a saving on the bottom line, whether there is improved income etc. I can see progressively how we are doing, and also see what the reasons for any anomalies might be. We also have a running balance sheet and a tight list of creditors and debtors. In addition, I run spreadsheets which show me the individual performance of every person who works for me.

Chris Shellabear
Shellabear's Real Estate

My accounting commenced in the proverbial shoe box when I started my business, and I would rather have root canal surgery than the tedium of filling in forms, but it needs to be done because accounting systems are the firm foundation of business. Now, rather than seeing accounting as an interruption to my business, which I did when I first started, I see it as an integral part of it and dedicate certain days towards it. I have to force myself to concentrate on it but I do—unlike some people in small business who are years behind in their books and come unstuck.

I use a number of programs, including MYOB. My bookkeeper does it but I ask for reports so that I know where income comes from and where expenses go. I look at that on a monthly basis. I should probably do it more often but I am not driven necessarily by making money—but by making a difference.

Making money does not motivate me, but not making money motivates me a lot. I also use Quicken, which is more for my super fund. I use spreadsheets, especially for printing books, to look at 'what if' scenarios—that is, if I save 1 cent per copy on paper costs, or if the exchange rate goes up 2 cents. I can work out the unit cost and the most profitable volume to print. One cent may not seem a lot, but it adds up and now that I am exporting, the exchange rate matters.

Catherine DeVrye
CDV Management/Everest Press

Accounting is absolutely vital to me and, unless you have a financial background, you could not call yourself a stockbroker. To give the best advice, you need to be able to analyse a company's assets and performance, so an absolute understanding is needed of the balance sheet, the components of the balance sheet, what the asset mix is, what liabilities there are, how heavily geared the company is to the total asset situation, understanding the earnings per share, and what the capacity of the company is to earn profits and pay dividends in the future. However, you can only give good information if you have honest information to assess. If a company fails to disclose information—as per AMP when they were directing money to the UK—then it is difficult to make an appropriate judgment on the company's situation ...

Fred Bennett
Shaw Stockbroking Limited

LEARNING OBJECTIVE 1

Expand the basic accounting equation to include revenues and expenses.

You have already seen that a firm's net income (profit) or loss is the difference between the revenues and expenses reported on its income statement (Exhibit 2-2). Likewise, you have seen that net profit from the income statement is reported as one of the factors causing a change in the retained earnings part of the statement of changes in owners' equity (Exhibit 2-3). The other principal element of owners' equity is the amount of capital invested by the owners, that is, the contributed capital of Exhibit 2-3. Given these components of owners' equity, it is possible to modify the basic balance sheet equation as follows:

Assets = Liabilities + Owners' Equity

Assets = Liabilities + Contributed Capital + Retained earnings

Assets = Liabilities + Contributed Capital + Retained earnings (beginning balance)
+ Revenues – Expenses

To illustrate the operation of this equation and the effect of several transactions, study how the following **transactions** are reflected in Exhibit 4-1. Note that in the exhibit some specific assets and liabilities have been identified within those general categories and a column has been established for each.

Transactions

1. Investors organised the firm and invested $30. (In this example, the broad category, *contributed capital*, is used, rather than *ordinary share capital*. There is no beginning balance in *retained earnings*, because the firm is just getting started.)
2. Equipment costing $25 was purchased for cash.
3. The firm borrowed $15 from a bank.
4. Merchandise costing $20 was purchased for resale; $10 cash was paid and $10 of the cost was charged on account.
5. Equipment that cost $7 was sold for $7; $2 was received in cash, and $5 will be received later.
6. The $5 account receivable from the sale of equipment was collected.
   Each column of the **exhibit** has been totalled after transaction 6. Notice that the total of all the asset columns equals the total of all the liability and owners' equity columns? They must, unless a numeric error has been made.
   The firm has no revenue or expense transactions yet, and it is hard to make a profit without them, so the transactions continue:
7. Sold inventory that had cost $12 for a selling price of $20; the sale was made **on account** (that is, on credit), and the customer will pay later. Notice that in Exhibit 4-1 this transaction is shown on two lines; one reflects the revenue of $20 and the other reflects the expense, or cost of the merchandise sold, of $12.
8. Wages of $3 have been recorded as an expense, although the amount has not yet been paid. Wages are seldom paid daily. This means that the expense is recorded, even though it has not yet been paid. The wages have been earned by employees (the expense has been incurred) and are owed but have not yet been paid; they will be paid in the next accounting period. The accrual is made in this period so that revenues and expenses of the current period will be matched (the matching concept), and net profit will reflect the economic results of this period's activities.

exhibit 4-1 TRANSACTION SUMMARY

	Assets							=	Liabilities			+	Owners' Equity						
Transaction	Cash	+	Accounts Receivable	+	Inventory	+	Equipment	=	Loan Payable	+	Accounts Payable	+	Contributed Capital	+	Retained Income	+	Revenue	–	Expenses
1.	+30												+30						
2.	–25						+25												
3.	+15								+15										
4.	–10				+20						+10								
5.	+2		+5				–7												
6.	+5		–5																
Total	17	+	0	+	20	+	18	=	15	+	10	+	30						
7. Revenues			+20														+20		
8. Expenses					–12														–12
											+3								–3
Total	17	+	20	+	8	+	8	=	5	+	13	+	30		+5		20		–15

LEARNING OBJECTIVE 2

Explain how the expanded accounting equation stays in balance after every transaction.

Again, each column of the exhibit has been totalled, and the total of all the asset columns equals the total of all the liability and owners' equity columns. If the accounting period were to end after transaction 8, the income statement would report net profit of $5, and the balance sheet would show total owners' equity of $35. Simplified financial statements for Exhibit 4-1 data after transaction 8 are presented in Exhibit 4-2.

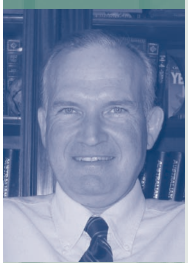
What ? Does It Mean

1 What does it mean to determine 'what kind of account' an account is?

Notice, especially in Exhibit 4-2, how *net profit* on the income statement gets into the balance sheet via the *retained earnings* section of owners' equity. In the equation from Exhibit 4-1, revenues and expenses were treated as a part of owners' equity to keep the equation in balance. For financial reporting purposes, however, revenues and expenses are shown in the income statement. In order to have the balance sheet balance, it is necessary that *net profit* be reflected in the balance sheet, and this is achieved using *retained earnings*. If any retained earnings is distributed to the owners as a dividend, the dividend does not show on the income statement but is a deduction from the retained earnings, shown in the statement of changes in owners' equity. This is because a dividend is not an expense (it is not incurred in the process of generating revenue). A *dividend* is a distribution of income or earnings to the owners of the firm.

What you have just learned is the essence of the accounting process, or transaction analysis. Transactions are analysed to determine which asset, liability or owners' equity category is affected and, also, how each is affected. The amount of the effect is recorded, the amounts are totalled and financial statements are prepared.

The Insider's View



IKE BAIN

Could I get by without a knowledge of accounting?

I always try to hire the most mean and miserly accountant possible, but you still cannot run a business successfully unless you know exactly what the numbers are and what the implications of these figures are. We always got daily sales reports and, every month, a profit and loss report with a full breakdown for every division of the company. We were conservative, too, and didn't gloss the numbers to make the results look better than they were. Our philosophy was to try to be realistic, plan for downturns and not go out on a spending spree or borrow heavily when things are going well. Learn to question the numbers too and don't just accept what the balance sheet tells you. If a number looks too good or too bad, ask for details. You would be amazed how many times we discovered our accounts department had made a mistake!

Ike Bain
formerly of Australian Geographic Pty Ltd and Dick Smth Electronics Pty Ltd

exhibit 4-2 FINANCIAL STATEMENTS FOR EXHIBIT 4-1 DATA

3 LEARNING OBJECTIVE

Explain how the income statement is linked to the balance sheet through owners' equity.

Exhibit 4-1 Data Income Statement for Transactions (1) through (8)		Exhibit 4-1 Data Statement of Changes Owners' Equity	
	$		$
Revenues	20	Beginning balance	0
		Contributed capital	30
Expenses	(15)	Net profit	5
		Dividends	(0)
Net profit	5	Ending balance	$35

Exhibit 4-1 Data Balance sheet after transaction 8			
	$		$
Assets		**Liabilities**	
Cash	17	Accounts payable	13
Accounts receivable	20	Loan payable	15
Inventory	8	Total liabilities	28
Total current assets	45		
Equipment	18	Owners' Equity	
		Contributed capital	30
		Retained earnings	5
		Total owners' equity	35
Total assets	63	Total liabilities & owners' equity	63

BOOKKEEPING LANGUAGE IN EVERYDAY ENGLISH

Many bookkeeping and accounting terms have found their way into the language, especially in the business context. *Debit* and *credit* are no exceptions to this, and some brief examples may stress the left–right definition. The terms *debit* and *credit* are used by banks to describe additions to or subtractions from an individual's cheque account. For example, your account is credited for interest earned and is debited for a service charge or for the cost of any chequebooks that are provided to you. From the bank's perspective, your account is a liability; that is, the bank owes you the balance in your account. Interest earned by your account increases that liability of the bank; hence, the interest is credited. Service charges reduce your claim on the bank—its liability to you—so those are debits. Perhaps because of these effects on a cheque or savings account balance, many people think that debit is a synonym for bad, and that credit means good. In certain contexts these synonyms may be appropriate, but they do not apply in accounting.

An alternative to the credit card that merchants and banks have developed is the 'debit card'. This term is used from the bank's perspective because, when a debit card is used at an electronic point-of-sale terminal, the purchaser's bank account balance is immediately reduced by the amount of the purchase, and the seller's bank account balance is increased. As you can imagine, consumers have been reluctant to switch from credit cards to debit cards because they would rather pay later than sooner for several reasons, not the least of which is that they may not have the cash until later.

LEARNING OBJECTIVE 4

Analyse a transaction, and determine the effects of the transaction on the financial statements.

Understanding the effects of transactions on the financial statements

Whereas accountants use journal entries, debits and credits and T-accounts to explain the effects of transactions on the financial statements, the horizontal financial statement relationship model first introduced in Chapter 2 is quite adequate for achieving this purpose. The **horizontal model** is as follows:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses

The key to using this model is to keep the balance sheet in balance. The arrow from net profit in the income statement to owners' equity in the balance sheet indicates that net profit affects retained earnings, which is a component of owners' equity. For a transaction affecting both the balance sheet and the income statement, the balance sheet will balance only when the income statement effect on owners' equity is considered. In this model, the account name is entered under the appropriate financial statement category, and the dollar effect of the transaction on that account is entered, with a plus or minus sign below the account name. For example, to record the investment of $30 in the firm by the owners, the figures would be shown in this horizontal model as follows:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses
Cash + 30				Contributed capital + 30						

To further illustrate the model's use, assume a transaction in which the firm paid $12 for advertising. The effect on the financial statements is:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses
Cash –12										Advertising expense –12

Notice that in the horizontal model the amount of advertising expense is shown with a minus sign. This is because the expense reduces net profit, which reduces owners' equity. A plus or minus sign is used in the context of each financial statement equation (A = L + OE, and NP = R – E). Thus, a minus sign for expenses means that net profit is reduced (expenses are greater), not that expenses are lower.

It is possible that a transaction can affect two accounts in a single balance sheet or income statement category. For example, assume a transaction in which a firm receives $40 that was owed to it by a customer for services performed in a prior period. The effect of this transaction is shown as follows:

Balance sheet			**Income statement**		
Assets =	Liabilities +	Owners' equity	← Net profit =	Revenues −	Expenses
Cash +40 Accounts Receivable – 40					

It is also possible for a transaction to affect more than two accounts. For example, assume a transaction in which a firm provided \$60 worth of services to a client, \$45 of which was collected when the services were provided and \$15 of which will be collected later. The effect on the financial statements is:

Balance sheet			**Income statement**		
Assets =	Liabilities +	Owners' equity	← Net profit =	Revenues −	Expenses
Cash +45 Acc Receivable +15				Service Revenues +60	

Recall that revenues and expenses from the income statement are increases and decreases, respectively, to owners' equity. Thus, the horizontal model and its two financial statement equations can be combined into the single equation:

Assets = Liabilities + Owners' Equity (beginning balance) + Revenues – Expenses

Notice that, as the balance sheet equation (Assets = Liabilities + Owners' Equity) is expanded to include the results of the income statement (Net profit = Revenues – Expenses), the model includes each of the five broad categories of accounts. Remember that dividends reduce retained earnings, which is part of the owners' equity term. A separate 'Dividends' term has not been included in the model because dividends are not considered a separate account category. Note that the operational equal sign in the horizontal model is the one between assets and liabilities. You can check that a transaction recorded in the horizontal model keeps the balance sheet in balance by putting an equal sign between assets and liabilities as you use the model to record transaction amounts.

Spend some time now becoming familiar with the horizontal model (by working through Exercise 4.1, for example) so that it will be easier for you to understand the effects on the financial statements of transactions that you will encounter later in this book, and in the 'real world'. As a financial statement user (as opposed to a financial statement preparer), you will find that the horizontal model is an easy analysis tool. With practice, you will become proficient at understanding how an amount shown on either the balance sheet or the income statement probably affected other parts of the financial statements when it was recorded.

What ? Does It Mean

2 What does it mean when 'the books are in balance'?

Adjustments

After the end of the accounting period, bookkeepers normally have to record an **adjustment** to certain account balances to reflect **accrual** accounting in the financial statements. As discussed in Chapters 1 and 2, accrual accounting recognises revenues and expenses as they occur, even though the cash receipt from the revenue or the cash payment related to the expense may occur before or after the event that causes the item of revenue or expense to be recognised. Although prepared after the end of the accounting period (when all of the necessary information has been gathered), adjustments are dated and recorded as of the end of the period.

Adjustments result in revenues and expenses being reported in the appropriate financial period. For example, revenue may *be earned* in financial 2005 from selling a product or providing a service, and the customer or client may not pay until financial 2006. (Most firms pay for products purchased or services received within a week to a month after receiving the product or service.) It is also likely that some expenses *incurred* in financial 2005 will not be paid for until financial 2006. (Water, light and electricity costs and employee wages are examples.) Alternatively, it is possible that an entity will receive a cash deposit from a customer or client for a product or service in financial 2005, and the product will not be sold or the service provided until financial 2006. (Subscription fees and insurance premiums are usually received in advance.) Likewise, the entity may pay for an item in financial 2005, but the expense applies to financial 2006. (Insurance premiums and rent are usually paid in advance.) These alternative activities are illustrated on the following time line:

Financial 2005	30 June 2005	Financial 2005/6	30 June 2006	Financial 2006/7
Cash received		Product sold or service provided and revenue earned		Cash received
Cash paid		Expense incurred		Cash paid

There are two categories of adjustments:

1. *Accruals*. Transactions for which cash has not yet been received or paid, but the effect of which must be recorded in the accounts in order to accomplish a matching of revenues and expenses and accurate financial statements.
2. *Reclassifications*. The initial recording of a transaction, although a true reflection of the transaction at the time, does not result in aligning revenues to the period in which they were earned or expenses to the period in which they were incurred, so an amount must be reclassified from one account to another.

The first type of adjustment is illustrated by the accrual of wages expense and wages payable. For example, work performed by employees during March, for which they will be paid in April, results in wages expense to be included in the March income statement and a wages payable liability to be included in the 31 March balance sheet. To illustrate this accrual, assume that employees earned $60 in March that will be paid to them in April. Using the horizontal model, the **accrued** wages adjustment has the following effect on the financial statements:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses
		Wages Payable + 60								Wage Expense – 60

Thus, the 31 March balance sheet will reflect the wages payable liability, and the income statement for March will include all of the wages expense incurred in March. Again, note that the recognition of the expense of $60 is shown with a minus sign because, as expenses increase, net profit and owners' equity (retained earnings) decrease. The balance sheet remains in balance after this adjustment because the $60 increase in liabilities is offset by the $60 decrease in owners' equity. When the wages are paid in April, both the Cash and the Wages Payable accounts will be decreased. (Wages Expense will not be affected by the cash payment entry because it was already affected when the accrual was made.)

Similar adjustments are made to accrue revenues (e.g. for services performed but not yet billed, or for interest earned but not yet received) and other expenses, including various operating expenses, interest expense and income tax expense.

The effect on the financial statements, using the horizontal model, of accruing $50 of interest income that has been earned but not yet received is shown as follows:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses
Interest Receivable + 50								Interest Income + 50		

An example of the second kind of adjustment is the reclassification for supplies. If the purchase of supplies at a cost of $100 during February was recorded initially as an increase in the Supplies (asset) account and a decrease in Cash, the cost of supplies used during February must be removed from the asset account and recorded as Supplies Expense. Assuming that supplies costing $35 were used during February, the reclassification adjustment would be reflected as follows:

Balance sheet					Income statement					
Assets	=	Liabilities	+	Owners' equity	←	Net profit	=	Revenues	–	Expenses
Supplies – 35										Supplies Expense – 35

Adjustments for prepaid insurance (insurance premiums paid in a financial period before the insurance expense has been incurred) and revenues received in advance (cash received from customers before the service has been performed or the product has been sold) are also reclassification adjustments.

The result of adjustments is to make both the balance sheet at the end of the accounting period and the income statement for the accounting period more accurate. That is, asset and liability account balances are correctly stated, all revenues earned during the period are reported, and all expenses incurred in generating those revenues are subtracted to arrive at net profit. By properly applying the matching concept, the entity's ROA, ROE and liquidity calculations will be valid measures of results of operations and financial position.

What ? Does It Mean

3 What does it mean that a revenue or expense must be accrued?
4 What does it mean when an adjustment must be made?

LEARNING OBJECTIVE 5

Answer the five questions of transaction analysis.

Transaction analysis methodology

The key to being able to understand the effect of any transaction on the financial statements is having the ability to analyse the transaction. **Transaction analysis methodology** involves answering five questions:

1. What's going on?
2. What accounts are affected?
3. How are they affected?
4. Does the balance sheet balance?
5. Does my analysis make sense?

1. **What's going on?** To analyse any transaction, it is necessary to understand the transaction—that is, to understand the activity that is taking place between the entity for which the accounting is being done and the other entity involved in the transaction. This is why most elementary accounting texts, including this one, explain many business practices. It is impossible to understand the effect of a transaction on the financial statements if the basic activity being accounted for is not understood. One of your principal objectives is to learn about business activities.
2. **What accounts are affected?** This question is frequently answered by the answer to 'What's going on?', because the specific account name is often included in that explanation. This question may be answered by a process of elimination. First, think about whether one of the accounts is an asset, liability, owners' equity, revenue or expense. From the broad category, it is usually possible to identify a specific account.
3. **How are they affected?** Answer this question with the word *increasing* or *decreasing*. Accountants learn to think in these terms very quickly and you will often hear this expressed as an increase or decrease to a debit or credit. When using the horizontal model, the debit/credit issue is avoided and allows you as a student to move on to understanding the effects on the financial statements more rapidly.
4. **Does the balance sheet balance?** If the horizontal model is being used, it is possible to determine easily that the balance sheet equation is in balance by observing the arithmetic sign and the amounts involved in the transaction. Remember that the operational equal sign in the model is between assets and liabilities. You know by now that if the balance sheet equation is not in balance, your analysis of the transaction is wrong!
5. **Does my analysis make sense?** This is the most important question, and it involves standing back from the trees to look at the forest. You must determine whether the results from your analysis cause changes in account balances and the financial statements that are consistent with your understanding of what's going on. If the analysis doesn't make sense to you, go back to question 1 and start again. (Often the lack of sense is due to an addition error!)

Application of this five-question transaction analysis routine is illustrated in Exhibit 4-3. You are learning transaction analysis to understand more fully how the amounts reported on financial statements got there, which, in turn, will improve your ability to make decisions and informed judgments from those statements.

exhibit 4-3 Transaction analysis

Situation
On 1 September 2006, Cruisers Ltd borrowed $2 500 from its bank at an interest rate of 12 per cent per annum. The loan agreement provided that the loan principal, plus interest, was to be repaid in 10 months.

Required

Analyse the transaction and use the horizontal model to record the transaction.

Solution
Analysis of transaction:
What's going on? The firm signed a loan agreement with the bank and received cash from the bank.
What accounts are affected? Loan Payable (a liability) and Cash (an asset).
How are they affected? Loan Payable increases and Cash increases.
Does the balance sheet balance? Using the horizontal model, the effect of the loan transaction on the financial statements is:

Balance sheet				Income statement				
Assets	=	Liabilities	+ Owners' equity	← Net profit	=	Revenues	−	Expenses
Cash + 2 500		Loan Payable + 2 500						

Yes, the balance sheet does balance; assets and liabilities each increased by $2 500.

Does my analysis make sense? Yes, because a balance sheet prepared immediately after this transaction will show an increased amount of cash and the liability to the bank. The interest associated with the loan is not reflected in this entry, because at this point Cruisers Ltd has not incurred any interest expense, nor does the firm owe any interest; if the loan were to be repaid immediately there would be no interest due to the bank. Interest expense and the liability for the interest payable will be recorded as adjustments over the life of the loan.

Let's get a preview of things to come by looking at how the interest would be accrued each month (the expense and liability have been incurred, but the liability has not yet been paid) and by looking at the ultimate repayment of the loan and accrued interest. Assume that the interest rate on the loan is 12 per cent (remember, an interest rate is an annual rate unless otherwise specified). Interest expense for one month would be calculated as follows:

$$\text{Annual interest} = \text{Principal} \times \text{Annual rate} \times \text{Time (in years)}$$
$$\text{Monthly interest} = \text{Principal} \times \text{Annual rate} \times \text{Time}/12$$
$$= \$2\,500 \times 0.12 \times 1/12$$
$$= \$25$$

Continued...

It is reasonable that the monthly financial statements of Cruisers Ltd reflect accurately the firm's interest expense for the month and its interest payable liability at the end of the month. To achieve this accuracy, an adjustment would need to be made at the end of every month of the 10-month life of the loan. The effects of the monthly adjustments would be:

Balance sheet			Income statement		
Assets =	Liabilities +	Owners' equity	← Net profit	= Revenues	− Expenses
	Interest Payable + 25				Interest Expense − 25

Remember, a minus sign for expenses means that net profit is reduced, not that expenses are reduced.

As explained earlier, if the two financial statement equations are combined into the single equation:

Assets = Liabilities + Owners' equity + Revenues − Expenses

the equation's balance will be preserved after each transaction or adjustment.

At the end of the tenth month, when the loan and accrued interest are paid, the following effects on the financial statements occur:

Balance sheet			Income statement		
Assets =	Liabilities +	Owners' equity	← Net profit	= Revenues	− Expenses
Cash − 2 750	Loan Payable − 2 500 Interest Payable − 250				

Apply the five questions of transaction analysis to both the monthly interest expense or interest payable accrual and to the payment. Also, think about the effect of each of these entries on the financial statements. What is happening to net profit each month? What has happened to net profit for the 10 months?

Transaction analysis methodology can be used to understand the activity that is recorded in an account. What transactions caused a reduction to this account? What transaction would cause Interest Receivable to decrease? The answer: receipt of cash from entities that owed this firm interest. What causes Interest Receivable to increase? The answer: accrual of interest income that was earned this month.

What ? Does It Mean

5 What does it mean to analyse a transaction?

Is the accounting bug starting to bite you? If so, take a look at some of the career opportunities offered by the accounting profession by visiting the web sites of the two accounting professional bodies and searching 'careers' (**www.icaa.org.au** and **www.cpaonline.com.au)** or visit any of the Big 4 accounting firm web sites (referred to in Ch 1, page 6). It's never too early to start thinking about how to turn your knowledge of assets and liabilities into dollars and cents.

BUSINESS ON THE INTERNET

SO WHAT DO YOU THINK ?

You have learned on page 98 that every financial transaction that is accounted for will cause a change somewhere in the balance sheet equation and that the equation will remain in balance after every transaction and, that the balance sheet equation is the mechanical key to the accounting process.

In fact, the balance sheet equation, also known as the *accounting equation*, is more than just a mechanical key: it is the basis of the accounting process and it has relevant economic significance.

Assets = Liabilities + Owners' Equity

Do you agree with the preceding statement? Consider the following questions:

1. What are assets? More precisely, what are assets in the accounting context?
2. Why is the equation expressed in terms of assets?
3. What do the terms *liabilities* and *owners' equity* on the right-hand side of the equation mean?
4. What is the fundamental accounting concept that underlies the equation?
5. From whose viewpoint is the equation expressed?
6. What does the equation tell us?
7. Why is the accounting equation also called the *balance sheet equation*?
8. How is the equality of the equation maintained in the accounting process?
9. What are revenues and expenses, and how do they fit in the equation?

Turn to Appendix 4, page 559 to compare your answers with our views.

Recap

Financial statements result from the bookkeeping (procedures for sorting, classifying and presenting the effects of a transaction) and accounting (the selection of the appropriate methods of reflecting the effects of certain transactions) processes. Accounting procedures for recording transactions are built on the framework of the accounting equation (Assets = Liabilities + Owners' Equity), which must be kept in balance.

The income statement is linked to the balance sheet through the retained earnings component of owners' equity. Revenues and expenses of the income statement are really sub-parts of retained earnings that are reported separately as net profit (or net loss). Net profit for a financial period is added to the retained earnings balance from the beginning of the financial period, in the process of

Continued…

determining retained earnings at the end of the financial period. Net loss for the financial period would be deducted from the beginning retained earnings balance in the process of determining retained earnings at the end of the financial period.

The horizontal model is an easy and meaningful way of understanding the effect of a transaction on the balance sheet and/or income statement. The representation of the horizontal model is:

Balance sheet		**Income statement**
Assets = Liabilities + Owners' equity	←	Net profit = Revenues − Expenses

The key to using this model is to keep the balance sheet in balance. The arrow from net profit in the income statement to owners' equity in the balance sheet indicates that net profit affects retained earnings, which is a component of owners' equity. For a transaction affecting both the balance sheet and the income statement, the balance sheet will balance when the income statement effect on owners' equity is considered. In this model, the account name is entered under the appropriate financial statement category, and the dollar effect of the transaction on that account is entered with a plus or minus sign below the account name. The horizontal model can be shortened to the single equation:

Assets = Liabilities + Owners' Equity + Revenues − Expenses

Adjustments describe accruals or reclassifications rather than transactions. Adjustments usually affect both a balance sheet account and an income statement account. Adjustments are part of accrual accounting, and they are required to achieve a matching of revenue and expense so that the financial statements reflect accurately the financial position and results of operations of the entity.

Transaction analysis is the process of determining how a transaction affects the financial statements. Transaction analysis involves asking and answering five questions:

1. What's going on?
2. What accounts are affected?
3. How are they affected?
4. Does the balance sheet balance?
5. Does my analysis make sense?

Transactions initially can be recorded in virtually any way that makes sense at the time. Prior to the preparation of period-end financial statements, a reclassification adjustment can be made to reflect the appropriate asset/liability and expense/revenue recognition with respect to the accounts affected by the transaction (e.g. purchase of supplies) and subsequent activities (e.g. use of supplies).

Key Terms

accrual	**106**	**on account**	**100**
accrued	**106**	**transaction analysis methodology**	**108**
adjustment	**106**	**transactions**	**100**
horizontal model	**104**		

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Exercises

E4.1 **Record transactions and calculate financial statement amounts.** The transactions relating to the formation of Blue Stores Ltd and its first month of operations are shown below. Prepare an answer sheet with the columns shown. Record each transaction in the appropriate columns of your answer sheet. Show the amounts involved and indicate how each account is affected (+ or –). After all transactions have been recorded, calculate the total assets, liabilities and owners' equity at the end of the month, and calculate the amount of net profit for the month.

2, 4, 5 LEARNING OBJECTIVES

EASY ●○○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

(a) The firm was organised and the owners invested cash of $8 000.
(b) The firm borrowed $5 000 from the bank.
(c) Display cases and other store equipment costing $1 750 were purchased for cash. The original list price of the equipment was $1 900, but a discount was received because the seller was having a sale.
(d) A store location was rented and $1 400 was paid for the first month's rent.
(e) Inventory of $15 000 was purchased, $9 000 cash was paid to the suppliers and the balance will be paid within 30 days.
(f) During the first week of operations, merchandise that had cost $4 000 was sold for $6 500 cash.
(g) A newspaper advertisement costing $100 was arranged for; it ran during the second week of the store's operations. The advertisement will be paid for in the next month.
(h) Additional inventory costing $4 200 was purchased, cash of $1 200 was paid and the balance is due in 30 days.
(i) In the last three weeks of the first month, sales totalled $13 500, of which $9 600 was sold on account. The cost of the goods sold totalled $9 000.
(j) Employee wages for the month totalled $1 850; these will be paid during the first week of the next month.
(k) Collected a total of $3 160 from the sales on account recorded in transaction (i).
(l) Paid a total of $4 720 of the amount owed to suppliers from transaction (e).

Continued...

Answer sheet:

Abbreviations used: Acc = Accounts
Rec = Receivable
Pay = Payable
Inven = Inventory
Equip = Equipment
Contrib = Contributed
Ret E = Retained Earnings
Rev = Revenue
Exp = Expenses

	Assets							=	Liabilities			+	Owners' Equity						
Transaction	Cash	+	Acc Rec	+	Invent	+	Equip	=	Loan Pay	+	Acc Pay	+	Contrib Capital	+	Ret E	+	Rev	−	Exp

Optional continuation of E4.1

Prepare an income statement and balance sheet. After you have completed Parts (a) through (l) above, prepare an income statement for Blue Stores for the month presented and a balance sheet at the end of the month, using the headings shown on the answer sheet.

LEARNING OBJECTIVES 2, 4, 5

EASY ●○○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.2 **Record transactions and calculate financial statement amounts.** The following are the transactions relating to the formation of Cardinal Mowing Services Ltd and its first month of operations. Prepare an answer sheet with the required columns shown. Record each transaction in the appropriate columns of your answer sheet. Show the amounts involved and indicate how each account is affected (+ or –). After all transactions have been recorded, calculate the total assets, liabilities and owners' equity at the end of the month, and calculate the amount of net profit for the month.

(a) The firm was organised and the owners invested cash of $600.
(b) The company borrowed $900 from a relative of the owners.
(c) Two lawn mowers costing $480 each and a trimmer costing $130 were purchased for cash. The original list price of each mower was $610, but a discount was received because the seller was having a sale.
(d) Petrol, oil and several packages of garbage bags were purchased for cash of $90.
(e) Advertising flyers announcing the formation of the business and a newspaper advertisement were purchased. The cost of these items, $170, will be paid in 30 days.
(f) During the first two weeks of operations, 47 lawns were mowed. The total revenue for this work was $705; $465 was collected in cash and the balance will be received within 30 days.
(g) Employees were paid $420 for their work during the first two weeks.
(h) Additional petrol, oil and garbage bags costing $110 were purchased for cash.

(i) In the last two weeks of the first month, revenues totalled $920, of which $375 was collected.
(j) Employee wages for the last two weeks totalled $510; these will be paid during the first week of the next month.
(k) It was determined that at the end of the month the cost of the petrol, oil and garbage bags still on hand was $30.
(l) Customers paid a total of $150 due from mowing services provided during the first two weeks. The revenue for these services was recognised in transaction (f).

Optional continuation of E4.2

Prepare an income statement and balance sheet. After you have completed Parts (a) through (l) above, prepare an income statement for Cardinal Mowing Services for the month presented, and a balance sheet as at the end of the month.

2, 4, 5 LEARNING OBJECTIVES

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.3 Record transactions and adjustments. Prepare an answer sheet with the appropriate column headings. Record the effect, if any, of the transaction on the appropriate balance sheet category or on the income statement by entering the account name and amount and indicating whether it is an addition (1) or subtraction (2). Column headings should reflect the expanded balance sheet equation; items that affect net profit should not be shown initially as affecting owners' equity.

(a) During the month, supplies were purchased for $1 800. The cost of supplies actually used during the month was $1 400.
(b) Paid an insurance premium of $480 for the coming year.
(c) Paid $3 200 of wages for the current month.
(d) Received $250 of interest income for the current month.
(e) Accrued $700 of commissions payable to sales staff for the current month.
(f) Accrued $130 of interest expense at the end of the month.
(g) Received $2 100 on accounts receivable accrued at the end of the prior month.
(h) Purchased $600 of inventory from a supplier on account.
(i) Paid $160 of interest expense for the month.
(j) Accrued $800 of wages at the end of the current month.
(k) Paid $500 of accounts payable.

2, 4, 5 LEARNING OBJECTIVES

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.4 Record transactions and adjustments. Prepare an answer sheet with the appropriate column headings. Record the effect, if any, of the transaction entry or adjusting entry on the appropriate balance sheet category or on the income statement by entering the account name and amount and indicating whether it is an addition (+) or subtraction (–). Column headings should reflect the expanded balance sheet equation; items that affect net profit should not be shown initially as affecting owners' equity.

Continued…

(a) During the month, $1 800 of supplies were purchased. The cost of supplies actually used during the month was $1 400.
(b) During the month, the board of directors declared a cash dividend of $2 500, payable next month.
(c) Employees were paid $2 100 in wages for their work during the first three weeks of the month.
(d) Employee wages of $550 for the last week of the month have not been recorded.
(e) Revenues from services performed during the month totalled $5 100. Of this amount, $2 600 was received in cash and the balance is expected to be paid within 30 days.
(f) A contract was signed with a newspaper for a $200 advertisement; the advertisement ran during this month but will not be paid for until next month.
(g) Merchandise that cost $680 was sold for $1 420. Of this amount, $1 100 was received in cash and the balance is expected to be paid within 30 days.
(h) During the month, supplies were purchased at a cost of $220 and added to the Supplies (asset) account. Supplies totalling $130 were used during the month.
(i) Interest of $270 has been earned on a loan receivable but has not yet been received.
(j) Issued 400 shares ordinary shares for $6 400 in cash.

LEARNING OBJECTIVES 2, 4, 5

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.5 **Record transactions and adjustments.** Enter the appropriate column headings across the top of a sheet of paper. Enter the transaction number in the first column and show the effect, if any, of the transaction entry or adjusting entry on the appropriate balance sheet category or on the income statement by entering the amount and indicating whether it is an addition (+) or a subtraction (–). Column headings should reflect the expanded balance sheet equation; items that affect net profit should not be shown initially as affecting owners' equity. In some cases, only one column may be affected because all of the specific accounts affected by the transaction are included in that category.

(a) Provided services to a client on account; revenues totalled $550.
(b) Paid an insurance premium of $360 for the coming year. An asset, Prepaid Insurance, was increased.
(c) Recognised insurance expense for one month from the above premium via a reclassification adjusting entry.
(d) Paid $800 of wages accrued at the end of the prior month.
(e) Paid $2 600 of wages for the current month.
(f) Accrued $600 of wages at the end of the current month.
(g) Received cash of $1 500 on accounts receivable accrued at the end of the prior month.

LEARNING OBJECTIVES 2, 4, 5

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.6 **Record transactions and adjustments**. Enter the appropriate column headings across the top of a sheet of paper. Enter the transaction number in the first column and show the effect, if any, of the transaction entry or adjustment on the appropriate balance sheet category or on the income statement by entering the amount and indicating whether it is an addition (+) or a subtraction (–). Column headings should reflect the expanded balance sheet equation; items that affect net profit should not be shown initially as affecting owners' equity. In some cases, only one column may be affected because all of the specific accounts affected by the transaction are included in that category.

(a) During the month, Supplies were increased by $1 800 for supplies purchased. The cost of supplies actually used during the month was $1 400.
(b) Received $800 of cash from clients for services provided during the current month.

(c) Paid $500 of accounts payable.
(d) Received $300 of cash from clients for revenues accrued at the end of the prior month.
(e) Received $900 of interest income accrued at the end of the prior month.
(f) Received $1 200 of interest income for the current month.
(g) Accrued $700 of interest income earned in the current month.
(h) Paid $1 900 of interest expense for the current month.
(i) Accrued $600 of interest expense at the end of the current month.
(j) Accrued $2 500 of commissions payable to sales staff for the current month.

E4. 7 **Calculate retained earnings**. On 1 February 2006, the balance of the retained earnings account of Blue Power Corporation was $630 000. Revenues for February totalled $123 000, of which $115 000 was collected in cash. Expenses for February totalled $131 000, of which $108 000 was paid in cash. Dividends declared and paid during February were $12 000.

Required:
Calculate the retained earnings balance at 28 February 2006.

3 LEARNING OBJECTIVE
EASY ●○○
Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

E4.8 **Cash receipts versus revenues**. During the month of April, Macon Ltd had cash receipts from customers of $79 000. Expenses totalled $52 000, and accrual basis net profit was $14 000. There were no other gains or losses during the month.

Required:
(a) Calculate the revenues for Macon Ltd for April.
(b) Explain why cash receipts from customers can be different from revenues.

4, 5 LEARNING OBJECTIVES
EASY ●○○
Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

E4.9 **Loan receivable—interest accrual.** On 1 April 2005, Tabor Co received a 12-month $6 000 loan from a bank to eliminate the current overdraft. The loan bore interest at the rate of 15 per cent per annum, and the loan plus interest was payable on 31 March 2006.

Required:
Use the horizontal model to show the effects of each of these transactions and adjustments:
(a) Receipt of the loan on 1 April 2005.
(b) The accrual of interest at 31 December 2005.
(c) The payment of the loan and interest on 31 March 2006.

4, 5 LEARNING OBJECTIVES
MEDIUM ●●○
Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

E4.10 **Loan payable—interest accrual and payment**. Proco had an account payable of $4 200 due to Shirmoo Ltd, one of its suppliers. The amount was due to be paid on 31 January. Proco did not have enough cash on hand then to pay the amount due, so Proco's treasurer called Shirmoo's treasurer and agreed to sign a loan payable for the amount due. The loan was dated 1 February, had an interest rate of 9 per cent per annum, and was payable with interest on 31 May.

Required:
Use the horizontal model to show the effects of each of these transactions and adjustments for Proco on:
(a) 1 February, to show that the account payable had been changed to a loan payable.
(b) 31 March, to accrue interest expense for February and March.
(c) 31 May, to record payment of the loan and all of the interest due to Shirmoo.

4, 5 LEARNING OBJECTIVES
MEDIUM ●●○
Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

LEARNING OBJECTIVES 4, 5

MEDIUM ●●○

Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

E4.11 Effect of adjustments on net profit. Assume that Cater Co's accountant neglected to record the payroll expense accrual adjustment at the end of October.

Required:

(a) Explain the effect of this omission on net profit reported for October.
(b) Explain the effect of this omission on net profit reported for November.
(c) Explain the effect of this omission on total net profit for the two months of October and November taken together.
(d) Explain why the accrual adjustment should have been recorded as of 31 October.

LEARNING OBJECTIVES 4, 5

MEDIUM ●●○

Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

E4.12 Effects of adjustments. A bookkeeper prepared the year-end financial statements of Giftwrap Ltd. The income statement showed net profit of $16 400, and the balance sheet showed ending retained earnings of $83 000. The firm's accountant reviewed the bookkeeper's work and determined that adjustments should be made that would increase revenues by $3 000 and increase expenses by $5 700.

Required:

Calculate the amounts of net profit and retained earnings after the above adjustments are recorded.

Problems

LEARNING OBJECTIVES 2, 4, 5

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

P4.13 Record transactions. Use the horizontal model for each of the following transactions that occurred during the first year of operations at Kissick Ltd.

(a) Issued 200 000 shares of ordinary shares for $1m in cash.
(b) Borrowed $500 000 from the Oglesby National Bank and signed a 12 per cent loan due in two years.
(c) Incurred and paid $380 000 in salaries for the year.
(d) Purchased $640 000 of inventory on account during the year.
(e) Sold inventory costing $580 000 for a total of $910 000, all on credit.
(f) Paid rent of $110 000 on the sales facilities during the first 11 months of the year.
(g) Purchased $150 000 of store equipment, paying $50 000 in cash and agreeing to pay the difference within 90 days.
(h) Paid the entire $100 000 owed for store equipment and $620 000 of the amount due to suppliers for credit purchases previously recorded.
(i) Incurred and paid electricity expense of $36 000 during the year.
(j) Collected $825 000 in cash from customers during the year for credit sales previously recorded.
(k) At year-end, accrued $60 000 of interest on the loan due to Oglesby National Bank.
(l) At year-end, accrued $10 000 of past-due December rent on the sales facilities.

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P4.14 **Prepare an income statement and balance sheet from transaction data.**

1 LEARNING OBJECTIVE

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

(a) Based on your answers to Problem 4.13, prepare an income statement (ignoring income tax expense) for Kissick Ltd's first year of operations and a balance sheet as of the end of the year.

(b) Provide a brief written evaluation of Kissick Ltd's results from operations for the year and its financial position at the end of the year. In your opinion, what are the likely explanations for the company's net loss?

P4.15 **Calculate profit from operations and net profit**. Selected information taken from the financial statements of Verbeke Co for the year ended 31 December 2006 is presented below:

4, 5 LEARNING OBJECTIVES

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

	$
Gross profit	412 000
General and administrative expenses	83 000
Net cash used by investing activities	106 000
Dividends paid	51 000
Extraordinary loss from an earthquake, net of tax savings of $25 000	61 000
Net sales	741 000
Advertising expense	76 000
Accounts payable	101 000
Income tax expense	83 000
Other selling expenses	42 000

(a) Calculate profit from operations (operating income) for the year ended 31 December 2006. (*Hint: You may wish to review Exhibit 2-2.*)

(b) Calculate net profit for the year ended 31 December 2006.

P4.16 **Calculate profit from operations and net profit**. Selected information taken from the financial statements of Graff Ltd for the year ended 30 June 2006 is presented below:

4, 5 LEARNING OBJECTIVES

MEDIUM ●●○

Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

	$
Net cash provided by operations	38 000
Cost of goods sold	131 000
Selling, general, and administrative expenses	45 000
Accounts payable	36 000
Research and development expenses	27 000
Net loss from discontinued operations, net of tax savings of $20 000	63 000
Income tax expense	17 000
Net sales	367 000
Interest expense	41 000

(a) Calculate profit from operations (operating income) for the year ended 30 June 2006. (*Hint: You may wish to review Exhibit 2-2.*)

(b) Calculate net profit for the year ended 30 June 2006.

LEARNING OBJECTIVES 4, 5

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

P4.17 Alternative adjustments—supplies. On 10 March 2006, the first day of first semester, the cafeteria of the Defiance College purchased for cash enough paper napkins to last the entire 15-week semester. The total cost was $4 800.

Required:

Use the horizontal model to show the effects of recording:

(a) The purchase of the paper napkins, assuming that the purchase was initially recorded as an expense.

(b) At 31 March, it was estimated that the cost of the paper napkins used during the first three weeks of the semester totalled $950. Use the horizontal model to show the effects that should occur as at 31 March, so that the appropriate amount of expense will be shown in the income statement for the month of March.

(c) Use the horizontal model to show the effects of the alternative way of recording the initial purchase of napkins as a asset.

(d) Use the horizontal model to show the effects of the adjustment that should occur at 31 March if the initial purchase had been recorded as in (c).

Are there any differences between these alternative treatments on the:

1. Income statement for the month of March?
2. Balance sheet at 31 March?

LEARNING OBJECTIVES 4, 5

MEDIUM ●●○

Analytical skills of:
- identifying
- finding
- evaluating
- organising
- managing information and evidence.

P4.18 Alternative adjustments—rent. Calco Ltd rents its retail outlet. Rent is $950 per month, payable quarterly, in advance. On 1 July, a cheque for $2 850 was issued to the property owner for the July–September quarter.

Required:

Use the horizontal model to show the effects on the financial statements of Calco Ltd:

(a) To record the payment, assuming that all $2 850 is initially recorded as Rent Expense.

(b) To record the adjustment that would be appropriate at 31 July if your entry in (a) had been made.

(c) To record the initial payment as Prepaid Rent.

(d) To record the adjustment would be appropriate at 31 July if your entry in (c) had been made.

(e) To record the adjustment that would be appropriate at 31 August and 30 September, regardless of how the initial payment had been recorded.

(f) If you were supervising the bookkeeper, how would you suggest that the 1 July payment be recorded? Explain your answer.

LEARNING OBJECTIVES 4, 5

HARD ●●●

Analytical skills of:
- analysing
- reasoning logically
- conceptualising issues.

P4.19 Make corrections and adjustments to income statement and balance sheet. Big Blue Rental Ltd provides rental agent services to apartment building owners. Big Blue Rental Ltd's preliminary income statement for August 2006, and its 31 August 2006 preliminary balance sheet, did not reflect the following:

(a) Rental commissions of $200 had been earned in August but had not yet been received from or billed to building owners.

(b) When supplies are purchased, their cost is recorded as an asset. As supplies are used, a record of those used is kept. The record sheet shows that supplies totalling $180 were used in August.

(c) Interest on the loan payable is to be paid on 31 May and 30 November. Interest for August has not been accrued—that is, it has not yet been recorded. (The Interest Payable of $40 on the balance sheet is the amount of the accrued liability at 31 July.) The interest rate on this loan is 10 per cent.

(d) Wages of $130 for the last week of August have not been recorded.

(e) The Rent Expense of $510 represents rent for August, September and October, which was paid early in August.

(f) Interest of $140 has been earned on Loan receivable but has not yet been received.

(g) Late in August, the board of directors met and declared a cash dividend of $1 400, payable on 10 September. Once declared, the dividend is a liability of the company until it is paid.

BIG BLUE RENTAL LTD
Income Statement
For the month ended 31 August 2006

	Preliminary	Final
	$	$
Commissions revenue	4 500	
Interest revenue	850	
Total revenue	5 350	
Rent expense	510	
Wages expense	1 190	
Supplies expense	—	
Interest expense	—	
Total expenses	1 700	
Net profit	3 650	

BIG BLUE RENTAL LTD
Balance Sheet
At 31 August 2006

	Preliminary	Final
	$	$
Assets		
Cash	400	
Loan receivable	13 000	
Commissions receivable	—	
Interest receivable	—	
Prepaid rent	—	
Supplies	650	
Total assets	14 050	
Liabilities and Owners' Equity		
Accounts payable	120	
Loan payable	2 400	
Interest payable	40	

Continued…

Wages payable	—	
Dividends payable	—	
Total liabilities	2 560	
Contributed capital	2 400	
Retained earnings:		
Balance, 1 August	5 440	
Net profit	3 650	
Dividends	—	
Balance, 31 August	9 090	
Total owners' equity	11 490	
Total liabilities and owners' equity	14 050	

Required:

(a) Use a spreadsheet (like that used in the horizontal method) to make the appropriate adjustments and corrections to the statements, and enter the correct amount in the Final column. Key your adjustments and corrections on the spreadsheet with the letter of the item in the above list. Head up the column names that you have with those on the statements. (*Hint: Use the five questions of transaction analysis. What is the relationship between net profit and the balance sheet?*)

(b) Consider the entries that you have recorded in your answer to Part (a). Using these items as examples, explain why adjusting entries normally have an effect on both the balance sheet and the income statement.

(c) Explain why the Cash account on the balance sheet is not usually affected by adjustments. In your answer, identify the types of activities and/or events that normally cause the need for adjustments to be recorded. Give at least one example of an adjustment (other than those provided in the problem data).

LEARNING OBJECTIVES 4, 5

HARD ●●●

Analytical skills of:
- interpreting data and reports.

P4.20 Capstone analytical review of Chapters 2–4. Calculate liquidity and profitability measures and explain various financial statement relationships for a realty firm. DeBauge Real Estate Ltd is owned by Jeff and Kristi DeBauge. The DeBauge family owns 100 per cent of the company's shares. The following summarised data (in thousands) are taken from the 30 June 2006 financial statements:

For the Year Ended 30 June 2006:	**$000**
Commissions revenue	142
Cost of services provided	59
Advertising expense	28
Operating income	55
Interest expense	5
Income tax expense	16
Net profit	34

At 30 June 2006:	**$000**
Assets	
Cash and short-term investments	30
Accounts receivable, net	40
Property, plant, and equipment, net	125
Total assets	195
Liabilities and Owners' Equity	
Accounts payable	90
Income taxes payable	5
Loan payable (long term)	50
Contributed capital	20
Retained earnings	30
Total liabilities and owners' equity	195

At 30 June 2005, total assets were $205 and total owners' equity was $50. There were no changes in Loan payable or contributed capital during 2006.

Required:

(a) What particular expense do you suppose accounts for the largest portion of the $59 cost of services provided?

(b) The cost of services provided amount includes all operating expenses (i.e. selling, general and administrative expenses), except advertising expense. What do you suppose the primary reason was for DeBauge Real Estate Ltd to separate advertising from other operating expenses?

(c) Calculate the effective interest rate on the Loan payable for DeBauge Real Estate Ltd.

(d) Calculate the company's average income tax rate. (*Hint: You must first determine the net profit before taxes.*)

(e) Calculate the amount of dividends declared and paid to Jeff and Kristi DeBauge during the year ended 30 June 2006. What is the company's dividend policy (i.e. what proportion of the company's earnings are distributed as dividends)?

(f) DeBauge Real Estate Ltd was organised and operates as a partnership rather than a company. What is the primary advantage of the corporate form of business to a real estate firm? What is the primary disadvantage of the corporate form?

(g) Explain why the amount of income tax expense is different from the amount of income taxes payable.

(h) Calculate the amount of working capital and the current ratio at 30 June 2006. Assess the company's overall liquidity.

(i) Calculate ROA (including margin and turnover) and ROE for the year ended 30 June 2006. Explain why these single measures may not be very meaningful for this firm.

P4.21 **Capstone analytical review of Chapters 2–4**. Calculate liquidity and profitability measures and explain various financial statement relationships for an excavation contractor. Gerrard Construction Co Ltd is an excavation contractor. The following summarised data (in thousands) are taken from the 30 June 2006 financial statements:

4, 5 LEARNING OBJECTIVES

HARD ●●●

Analytical skills of:
- interpreting data and reports.

Continued...

For the Year Ended 30 June 2006:	**$000**
Net revenues	1 610
Cost of services provided	570
Depreciation expense	325
Operating income	715
Interest expense	190
Income tax expense	160
Net profit	365
At 30 June 2006:	
Assets	
Cash and short-term investments	140
Accounts receivable, net	490
Property, plant, and equipment, net	3 870
Total assets	4 500
Liabilities and Owners' Equity	
Accounts payable	75
Income taxes payable	80
Loan payable (long term)	2 375
Contributed capital	500
Retained earnings	1 470
Total liabilities and owners' equity	4 500

At 30 June 2005, total assets were $4 100 and total owners' equity was $1 630. There were no changes in Loan payable or Contributed capital during 2006.

Required:

(a) The cost of services provided amount includes all operating expenses (i.e. selling, general and administrative expenses), except depreciation expense. What do you suppose the primary reason was for management to separate depreciation from other operating expenses? From a conceptual point of view, should depreciation be considered a 'cost' of providing services?

(b) Why do you suppose the amounts of depreciation expense and interest expense are so high for Gerrard Construction Co Ltd? To which specific balance sheet accounts should a financial analyst relate these expenses?

(c) Calculate the company's average income tax rate. (*Hint: You must first determine the net profit before taxes.*)

(d) Explain why the amount of income tax expense is different from the amount of income taxes payable.

(e) Calculate the amount of total current assets. Why do you suppose this amount is so low, relative to total assets?

(f) Why doesn't the company have an Inventory account?

(g) Calculate the amount of working capital and the current ratio at 30 June 2006. Assess the company's overall liquidity.

(h) Calculate ROA (including margin and turnover) and ROE for the year ended 30 June 2006. Assess the company's overall profitability. What additional information would you like to have to increase the validity of this assessment?

(i) Calculate the amount of dividends declared and paid during the year ended 30 June 2006.