Chapter 9

Current Liabilities, Contingent Liabilities, and the Time Value of Money

Key Concepts:

- What accounts are most likely to be called current liabilities?
- What are contingent liabilities?
- How do the concepts of simple and compound interest affect financial reporting?
- How is payroll accounted for?
Chapter Outline

**LO 1**

**Current Liabilities**

Current liabilities

- Obligations which will be satisfied within one year
- Finances the working capital of the company
- Some companies list liabilities in order of payment due date on the balance sheet
- Recorded at face value
  - time value of money is not taken into consideration because current liabilities are paid in a short time

**NOTE:** interest and present value are discussed later in the chapter in LO 5, 6, 7.

- Tied to entity’s liquidity
  - sufficient cash, or assets that can be converted to cash quickly to pay current liabilities in a short period of time
  - liquidity problems arise when this is not the case
  - current ratio = current assets / current liabilities
  - 2 to 1 is a comfortable ratio

Specific accounts listed as current liabilities:

- *Accounts payable* are a verbal contract
  - amount owed for the purchase of inventory, goods, or services acquired in the normal course of business
  - usually the first current liability listed
  - discounts given for early payment, typically 2/10, net 30

- *Notes payable* are a formal contractual agreement
  - interest-bearing, with interest accounted for in a number of ways
    - interest plus principal may be paid on *due date*
    - *if a discounted note is issued, the lender deducts interest at the face rate in advance, borrower pays face amount of note on due date*
    - discount on notes is a contra liability
    - results in a higher *effective* rate because the borrower has the use of less cash than the face amount of the note

- *Current maturities of long-term debt*
  - the principal is paid in installments, over more than one year, making the note a long-term liability
  - however, the installments *due within the current year* are a current liability, and are thus the “current portion of long-term debt”

**LO 2**

**Accruing Current Liabilities**

**Taxes Payable**

Various federal, state, and local agencies collect *taxes*.

- The largest dollar amount is usually for state and federal income taxes
Taxes are an expense of the business
Most often tax on income is calculated at year-end, but is not paid until March 15 or April 15, depending on the type of business
- estimate and record the liability at December 31

Other Accrued Liabilities

An accrued liability is an amount incurred due to the passage of time, but has not been paid.
- adjusting entry is necessary
- examples are, wages payable and interest payable

Reading the Statement of Cash Flows for Changes in Current Liabilities

Decreasing a liability involves decreasing cash (Exhibit 9-3).
- Most current liabilities are operating items
  - exception: notes payable may be in the financing section

Contingent Liabilities

A contingent liability is an existing item whose outcome is unknown because it is dependent on some future event.
- A potential liability
- The amount of the liability can only be estimated
  - two accounting questions:
    ♦ should it be recorded?
    ♦ if so, at what amount?

Contingent liabilities that are recorded:
- Liability is probable
- Amount can be reasonably estimated
  - judgment call
    ♦ users, auditors want to err on the side of conservatism, fuller disclosure
    ♦ companies should not be required to disclose every remote possibility
- Warranties, guarantees, premiums, coupons are examples of contingencies that are estimated and recorded

Contingent liabilities that are disclosed but not recorded on face of statements:
- Do not meet probable criterion, but are “reasonably possible”
- Disclosed in footnotes, but not reported on Balance Sheet
  - some accountants believe that explaining contingent liabilities in the footnotes has less impact than Balance Sheet disclosure
- Legal claims, guarantee of debt of another company, or tax disputes with IRS

Contingent Liabilities versus Contingent Assets

- Liabilities are reported as soon as they become reasonably possible, however assets are not recorded until the gain actually occurs
- Conservatism principle dictates that contingent assets, are not recorded until they are realized
**LO 5**

**Simple and Compound Interest**

**Simple interest** is the amount of interest earned on the principal amount alone

- \[ I = P \times R \times T \]
- \( I \) = interest amount
- \( P \) = amount of principal
- \( R \) = interest rate
- \( T \) = time in years

**LO 6**

**Future Value and Present Value**

**Interest Compounding**

**Compound interest** is the amount of interest earned on the principal, plus the interest earned on any accrued but unpaid interest.

- Compounding may occur at any interval, not just annually
- Banks often compound daily
- For convenience we use annually or semiannually for assignment problems
  - since interest is usually expressed as an annual rate, adjust the rate and the number of periods to take into account compounding that occurs more frequently than annually

**Future value “FV” of a single amount**

- Knowing the principal “P” which we have now, we want to calculate what that amount will accumulate to in the future, given the rate of interest “i” it will earn, and the number of periods “n” over which it will earn that interest
- How do we calculate the future amount?
  - formula: \[ FV = P(1 + i)^n \]
  - calculator: some calculators will do future value and present value calculations automatically, if the proper values are entered
  - tables have been constructed using the formulae for present and future value, for future value at a number of rate/time combinations (Table 9-1)
    - factors are calculated for the value of $1 at various rates, and for different numbers of periods; read across to the proper rate, and down to the correct number of periods to find a “factor” to multiply by the principal amount “P,” your investment, to determine the future value of that amount
    - \[ FV = P \times (factor) \]

**Present value of a single amount**

- Knowing the future amount we will need, or receive, or pay; we want to calculate the present value, the amount at the present time that will accumulate to the known future amount if held for “n” periods at “i” rate of interest
  - we can use a formula: \[ PV = P \times (1 + i)^{-n} \] or \[ PV = P \div (1 + i)^n \]
  - we can use a calculator, as with FV
  - or we can refer to a table for the present value of $1 (Table 9-2)
    - \[ PV = P \times (factor) \]
Future value of an annuity
- Sometimes a calculation involves not just a single present amount, but rather a series of known payments whose future accumulated value we want to determine
  - any series of equal payments, equally spaced, is an annuity
  - we could calculate the future value of each individual payment, based on the number of periods it will be held, and add all these together, but this is cumbersome
  - instead, we use a table for the future value of an annuity, which performs the series of calculations, using a factor, in one step (Table 9-3)
    - again, adjust the interest rate and the number of periods for compounding more frequently than annually
  - financial calculators are also programmed to calculate the future value of an annuity

Present value of an annuity
- Sometimes a series of payments will occur in the future, and we must determine what one single amount will allow those “n” payments to be made if the balance remaining after each payment continues to earn interest at “i” rate
  - the present value could be calculated for each payment, and these calculations summed for the total present value, but a table makes this calculation in one step (Table 9-4)
  - a calculator can be used as in all the other compound interest calculations

Applying Compound Interest Concepts
Once you are familiar with the general formula:

\[ FV = P \times \text{table factor} \quad \text{or} \quad PV = P \times \text{table factor}, \]

these concepts can be used to solve for any unknown within the formula.

- the number of periods required for a given result
- the interest rate implied in a loan contract

Payroll Accounting
Salaries and wages are the largest cash outflow for many firms.

Calculation of gross wages
- Gross wages equals salary, or hourly rate times hours worked, before any deductions are made

Calculation of net pay
- Net pay equals gross pay less any deductions
  - most of these deductions do not remain with the company, but become a current liability for the company, who must remit them to the proper agency
  - income tax: federal, state, local
  - FICA: “Federal Insurance Contribution Act”
    - Social security
    - 7.65% on the first $72,600
    - assessed on both employee and employer
  - voluntary deductions: insurance, pensions, savings, union dues
Employer payroll taxes

- **Employee payroll taxes** create a liability for employer, but not an expense
- **Employer taxes** create a liability *and* an expense for the employer
  
  - *employer FICA* is an additional amount paid by the employer, equal to the amount deducted from employee
  
  - *unemployment tax* is based on the company's past employment history
    
    ♦ 3.4% on the first $7,000

**Compensated Absences**

**Compensated absences** are absences from employment, such as sick, holiday, and vacation days, for which employees will be paid.

- Expensed and accrued as they are earned by employees
  
  - services have been rendered
  
  - rights to days off accumulate
  
  - payment is probable and can be reasonably estimated
CHAPTER 9 — CURRENT LIABILITIES, CONTINGENT LIABILITIES, AND THE TIME VALUE OF MONEY

Lecture Suggestions

Show the connection between current liabilities and current assets for evaluating liquidity. A good analogy is the balance in a student’s bank account and what is owed to the student, and the debts they have to be paid from those assets.

To illustrate the current portion of a long-term liability, many students can readily identify with the current portion of a car payment contrasted to the total amount owed.

Discuss examples of contingent liabilities, for example legal claims, and ask students how they would reasonably estimate the outcome. Ask students whether putting an item in the footnotes obscures it, or serves the same purpose as locating that item on the face of the statement.

This example, in a number of variations, can be used throughout the chapter to show the effects of the different ways of calculating interest. Begin with a small discounted note of $100. Calculate the interest at 5% for a year on the chalkboard. Then, deduct that interest, $5, to arrive at the principal. Make sure students understand that $95 is the actual amount of cash that they will walk out of your bank with. Now, let your students calculate what percentage of $95 (what they borrowed) the $5 (the amount of the interest) is. They will see that $5 is really 5.26% of $95, not 5%. Thus we say that the “face rate” is 5%, but the “effective rate” is 5.26%.

A simple series of examples illustrates present and future value concepts.

**Future value of a single amount:** Start with an example students can calculate easily by hand, then check their answer with the table, so they see how the table works. Suggest they will put $100 in the bank at 5%, compounded annually, and collect their balance in a year. They’ll calculate $100 * .05 = $5, so that in 1 year they’ll have $100 + $5 = $105. Checking against Table 9-1, $100 * 1.050 = $105.

**Present value of a single amount:** The students will now make a slight change in the calculation. What if they want to have $100 in a year? What should they deposit now? See if they can calculate it intuitively, by hand, then check with the table. They want to find “N” where

\[ N + .05N = 100 \]

yielding a value for N of $95.23. Using Table 9-2 to check, $100 * .952 = $95.20.

**Future value of an annuity:** Go back to the $100 deposit. Table 9-3 assumes an *ordinary annuity*, that is, the payments/deposits are made at the *end* of each period. We will modify the example to accommodate that. However, you may not want to enter into this discussion with your class, and therefore might skip this example. Let students assume this time that they will deposit $100 a year from today, then another $100 in a year from that. How much will they have at the end of the second year, that is, in two years from today? Again, calculate by hand, then check the table. The first $100 earns $5 during the second year, becoming $105. The second $100, deposited at the end of the second year, earns no interest, so that the total will be $105 + $100 = $205. Using Table 9-3, $100 * 2.050 = $205.
Present value of an annuity: Finally, modify the assumption about wanting $100 in a year. This time, students assume they want $100 a year from now, and another $100 two years from now. This is a bit more difficult for students to calculate by hand. You may not want to have your class go to the trouble. The students already found that if they want $100 in a year, they need to deposit $95.30 today. If they want $100 in 2 years, their principal (what they deposit) will be compounded twice. Now they want to calculate “N” where

\[ N + .05N + \left( (N + .05N) \times (.05) \right) = 100 \]

\[ N = \$90.70 \] to be deposited today in order to get the second payment of $100. The total deposit will be

\[ \$95.30 + 90.70 = \$186.00 \] to receive two annual payments of $100.

Checking against the Table 9-4, \$100 \times 1.859 = \$185.90.

LO 8
Discuss briefly with your class the “stable work force” policies practiced by many companies. The company may have more than one reason to preserve this. Students can list potential benefits, and potential disadvantages, for the company.

LO 9
If time permits, discuss with your students the fact that compensated absences are usually recorded (accrued) at the employees’ current rate of pay, but may be used or paid at a higher rate in the future, if the employee has received a pay raise.
Projects and Activities

Current Liabilities

In-class exercise: Current ratio: McDonald’s

Using the current assets and current liabilities sections of McDonald’s balance sheet reproduced below, calculate the current ratio. Comment on this ratio.

### McDonald’s Corporation ($ millions)

<table>
<thead>
<tr>
<th>Current assets:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and equivalents</td>
<td>$299.2</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>609.4</td>
</tr>
<tr>
<td>Inventories, at cost, not in excess of market</td>
<td>77.3</td>
</tr>
<tr>
<td>Prepaid expenses and other current assets</td>
<td>323.5</td>
</tr>
<tr>
<td>Total current assets</td>
<td>$1,309.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Current liabilities:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Notes payable</td>
<td>$686.8</td>
</tr>
<tr>
<td>Accounts payable</td>
<td>621.3</td>
</tr>
<tr>
<td>Income taxes</td>
<td>94.2</td>
</tr>
<tr>
<td>Other taxes</td>
<td>143.5</td>
</tr>
<tr>
<td>Accrued interest</td>
<td>132.3</td>
</tr>
<tr>
<td>Other accrued liabilities</td>
<td>651.0</td>
</tr>
<tr>
<td>Current maturities of long-term debt</td>
<td>168.0</td>
</tr>
<tr>
<td>Total current liabilities</td>
<td>$2,497.1</td>
</tr>
</tbody>
</table>

**Outside assignment: Follow-on to in-class exercise**

Gather the current ratios of two or three similar companies.

- How do these current ratios compare to McDonald’s?
- Are you persuaded that these companies are “stronger” than McDonald’s? More liquid? What other information would you want in order to make this judgment?

**Solution**

\[
\frac{CA}{CL} = \frac{1,309.4}{2,497.1} = .52 \text{ to 1 ratio}
\]

To shed some light on this rather low ratio, here is what McDonald’s has to say in the Management Discussion of their 1998 Annual Report:\

The Company generated positive free cash flow in 1998 for the eighth consecutive year. This trend is expected to continue. In 1998, operations outside the U.S. generated positive free cash flow for the first time in our history, and this is expected to continue into the foreseeable future. In addition to its free cash flow, the Company can meet short-term needs through commercial paper borrowings and line of credit agreements. Accordingly, the Company strategically maintains a relatively low current ratio-.52 at year-end 1998.

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Outside assignment: Current ratio

Ask students to find, calculate, and compare other fast food restaurants such as Wendy’s. The results will vary slightly depending on the year of the annual report.

- 1999 ratios:
  Wendy’s 1.23

Depending on the companies the students research, there may be quite a variation of ratios. Ask students why there is such a difference. The discussion will no doubt lead to one of corporate philosophy, asset management, turnover, and differences among types of business. How quickly non-cash assets become cash, compared to how soon current liabilities require cash, as well as the use of short-term debt at favorable rates, are important factors. This is an opportunity to point out the risk of using one ratio to analyze a situation.

Outside assignment: Current ratio: JC Penney Company, Inc.

Review the JC Penney Company balance sheet in the textbook. Ask students to calculate JC Penney’s current ratio. Ask students the following questions:

- How do JC Penney’s current liabilities differ from McDonald’s? If you did not know the companies’ identities (that is, if there were no name at the top of the statement), are there items that might give you any clues as to the type of business each was in?
- To which companies would you prefer to compare JC Penney? Why? Find current ratios for two of these.
- How do you think JC Penney’s current liabilities change in the four quarters of the year? How would you expect a quarterly statement of cash flows to reflect this?

Solution

- $\frac{CA}{CL} = \frac{11,125}{5,970} = 1.86$ to 1.
- McDonald’s and JC Penney are in very different businesses, McDonald’s is fast food and JC Penney is a department store. Although total assets are similar for the two, asset and liability composition differs at first glance. The major portion of JC Penney’s current liabilities (58%) is accounts payable and accrued expenses, whereas McDonald’s accounts payable is only 25%, and the remainder is spread over a number of items, notably notes payable (27%). JC Penney’s notes payable, called short-term debt, is 32% of current liabilities. Many of McDonald’s miscellaneous current liabilities, however, may very well be items that JC Penney includes in the “accrued expense” category. The current liabilities for the two, therefore, may not be very different after all, except in total amount. It would be difficult to identify the type of company by looking only at the liabilities.
- Students may find current ratios for any of a number of companies. For example, the 1998 current ratio for Kmart Corporation was 2.0\(^3\), and 1.2\(^5\) for The Gap.

These obviously are better comparisons because they are in the same industry, and the analyst is comparing apples to apples.

- Lastly, JC Penney’s revenues are seasonal, and this affects liabilities. Accounts payable peak before the busiest season, as inventories are built up, and lines of credit are used to finance them, then paid off when the cash from the sales is collected. For most retailers the Christmas season accounts for the majority of the year’s profits. Stock for this season is received and paid for before the peak receipts of the season begin.

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http://www.investquest.com/InvestQuest/w/wen/fin/annual/
\(^4\) Kmart Corporation, Annual Report, Jan. 1999
Outside assignment: Early payment discounts

How important is it to take early payment discounts? Many companies, especially small businesses, tend to dismiss cash discounts on invoices as trivial.

- Assume your small hardware store just received an invoice from a supplier for a shipment of nails. The total invoice is $364.80, with terms 2%/10, n/30. If you pay within 10 days, how much will you save? Are you impressed? Is it worth paying 20 days early in order to take this discount? What reasons might a small business person give to justify not taking these discounts?

- Search the Wall Street Journal financial pages for current interest rates. You will find a number of rates listed there. Which one do you think would apply to your business? Alternatively, call a local bank and ask what their lending rate is on a short-term loan to a small retail business.

- Now that you know your borrowing rate, what if you borrow the money to pay this invoice? You would probably have to pay a full month's interest, not just 20 days, on the loan. Based on your research, how much interest (in $, not %) would you have to pay? Now is the discount worthwhile?

- Do you think you, as the owner of the business, would be aware of how many invoices with similar terms your firm receives, and their total dollar amount? Do you think that would be useful knowledge? Why or why not?

- Look at JC Penney’s liability section in your textbook. What is their accounts payable balance at the end of 1998? Suppose half of their suppliers offer early payment discounts, and the average discount offered is 2 percent. How much could JC Penney save each time accounts payable are liquidated by taking these discounts? Now do you think these discounts are worth keeping track of and taking?

Solution

- Your savings: $364.80 * .02 = $7.30 Seven dollars doesn't seem like much of a savings to most students. They might think a small business would find it a lot of “bother” to keep track of such a trivial amount of money. The savings would not justify the time involved.

- Depending on the prime rate at the time you are doing this exercise, they will find on the financial pages a number of interest rates, and you might encourage them to speculate on the variety. A call to the bank will seem easier to many of them, but then they will have to decide how big this hypothetical business is. They will quickly see, anyway, that a “small” business is not going to receive the prime rate, and will become informed on interest rates.

- Let's assume the business can borrow, short-term, at 9 percent. They would pay $364.80 * .09 * 1/12 = $2.74 in interest on the loan. The difference ($7.30 - $2.74 = $4.56) is not earth-stopping, but that's a 62 percent savings, so the relative difference is material.

- Now that we have demonstrated the relative savings, the next question is about economies of scale. We have based calculations on one invoice. The business probably receives quite a few, every month, so these amounts multiply. If a regular payment schedule is established to take the discount dates into consideration, borrowing probably wouldn't be necessary, or only in peak periods. If the owner is letting the discounts pass without thinking about how many there are, he or she probably doesn't know how much money could really be saved. The information is essential, not merely useful, to good cash management.

- JC Penney’s average accounts payable of ($4,059 + $3,465) ÷ 2 = $3,762 million dollars illustrates this point. If we calculate 2 percent of this amount and then divide by 2 (assuming only half the invoices offer early payment discounts), $37.62 million is the potential savings. If accounts payable turns over approximately 6 times a year, this is a

6 http://info.wsj.com
substantial amount. Few students will still wonder if JC Penney’s “bothers” with early payment discounts.

**LO 3**

**Reading the Statement of Cash Flows for Changes in Current Liabilities**

**In-class discussion: JC Penney current liabilities**

Look at JC Penney’s Current Liabilities section.

- What causes current liabilities to change? How do you think these accounts change throughout the year? Is the annual increase significant? On what do you base this conclusion?
- Accounts payable and accrued expenses have increased this year over last year. Does this mean that JC Penney is paying its bills more slowly? Are they buying more? What would you expect the usual behavior of accounts payable to be in a growing company?
- Can you think of anything else that might be in other accrued expenses in addition to accrued wages and accrued interest?

**Outside assignment:**

Now answer the questions above for McDonald’s, using the current liabilities in the first exercise for this chapter. How do the two companies differ?

**Solution**

- Students often jump to the conclusion (not always false) that if liabilities, especially accounts payable, are increasing the company is not paying its bills. But a company must increase liabilities to grow. As inventories increase, the overall level of accounts payable increases, even if average payment time is the same. More employees cause higher payroll accruals. Higher income causes higher tax accruals. Thus growth, a positive factor, causes liabilities to increase. Changes throughout the year depend on business cycles. All companies have peak and slack times when inventories, and payables, are building, or declining, as demand increases and decreases. JC Penney’s current liabilities showed mixed changes. Accounts payable decreased 17%, but short-term debt increased 26%. Overall however, current liabilities decreased only 1%.

- JC Penney, as we have noted before, is a cyclical business. The increase in accounts payable may be a cyclical fluctuation, or it could indicate a change in payment or inventory financing. It could also reflect a change in inventory management. It is not a very significant change.

- Other accrued liabilities could include any accrued expense (see Chapter 4 on adjusting journal entries): utilities, unearned revenue, taxes and insurance.

**McDonald’s:**

- Many of the general comments apply to both companies. The differences reside in the individual components.
- McDonald’s accounts payable decreased by about 4%. Overall, current liabilities decreased 20%, influenced heavily by the decrease in current maturities of long-term debt and notes payable which decreased by 88%. McDonald’s uses operating cash to pay off debt as quickly as possible.

**Contingent Liabilities**

**In-class exercise: Contingent liabilities**

The Sunday papers often contain coupon supplements. Each gives the consumer the ability to purchase an item for less—usually from $.20 to $1.00—than the store’s usual price. Why not take one of those supplements, cut out a stack of coupons, and hand them out in class. Who is interested in more than the product, and how much you save? Now everyone will be!
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Read the fine print. What is the company promising? Is this a recorded liability or a disclosure in the footnotes? Explain.

If a liability is recorded, how much does the company that issued the coupons record? Is it the total of all the coupons they printed? Some percentage of the total? How do they calculate that percent?

Whose revenue is reduced, the store that redeems the coupon or the company that makes the product?

If the manufacturer takes the reduction, does redeeming the coupon cost the store anything? How do you think the store accounts for coupons?

Someone who has impatiently waited in line to buy bread and milk behind another customer who has presented the clerk with 30 coupons might well grumble that coupons are more trouble to everyone than they are worth. Are they? What is their value to the manufacturer? To the store? To the customer? Are they worth it?

Solution

Here’s a breakfast cereal coupon. I can buy a box of cereal for $1.00 less than my grocer's marked price if I hurry down there and use this coupon by June 30, 2000. I cannot use more than one coupon on a single box, and I have to pay sales tax if applicable on my purchase. The manufacturer promises to pay my grocer the $1.00 plus an additional 8¢ for handling.

This is a question of reasonably possible versus highly probable. It is very likely that at least some of these coupons will be redeemed, and that the company will have to pay $1.08 for each one. The manufacturer must estimate by the best method available (past experience, market research) what proportion will be redeemed, and record a liability, in this case, for the amount they expect to have to pay. Ask students where they would record the debit.

The manufacturer's revenue is reduced when the coupon is used. However, remembering accrued liabilities and the conservatism principle, the issuer of the coupon should not wait that long, but must make an accrual when they issue the coupons, fully expecting that some portion will be redeemed. At redemption, the liability is reduced, not revenue. The company will debit an expense and credit a liability when they issue the coupons, reducing revenue, effectively, at that point. The grocer actually gains a “handling fee,” presumably to cover the expense of handling, sorting, accounting, mailing, and cash flow lag. They probably credit the fee to miscellaneous revenue, and debit the coupons collected to a receivable until the manufacturer redeems them.

Where's the value? The manufacturer hopes to reduce the price of the product low enough to encourage more people to try this brand instead of buying their usual brand, or (even better) to try something they’ve never bought. The store probably doesn't make a profit on the coupon, but once consumers are in that aisle they might pick up extra items, even some they had not planned to buy. Someone may spend an extra $10 to save $1.

Are coupons worthwhile? Consumers think so. They clip thousands of them, research indicates. People who clip and buy selectively save considerable amounts. The retailer gets customers into the store. And the enormous product choice available makes it imperative for manufacturers to distinguish themselves in as many ways as possible. Coupons are one way to do this. Considering the bulk of the coupon sections in the newspapers, the extra revenue generated must justify the money spent to publish the coupons.

Food for thought: Reserves for litigation costs

Amre, Inc. was under investigation by the SEC for violation of securities laws in connection with their accounting treatment of inventoried costs. A Wall Street Journal article said the company

…expects to continue to rack up “significant” attorney's fees from pending shareholder litigation. However, Amre said it hasn't made any provisions related to

those costs. A spokesman said the company doesn't have to establish reserves for the costs because it can't estimate the size of damages or a settlement. The company said its year-end auditor's letter notes that the impact of the litigation on the company's finances is uncertain.

- What does Amre mean by “establish reserves?” What would these reserves be? On which financial statements would they appear, if any?
- What is Amre doing instead? Are readers of the financial statements being given the information they need?
- Are these costs a contingent liability?

Solution

- Amre would accrue a liability for the amount of the legal fees and settlements, with an appropriate expense, if the amounts could be reasonably estimated. Amre would put the liability on the balance sheet and the expense on the income statement.
- Amre did not believe they could estimate the costs at the time, and therefore only disclosed them as contingent liabilities, so that readers at least knew that a negative event was possible, even if its dollar impact could not be determined reliably.
- The costs are a contingent liability. If the litigation develops, and if the courts rule against Amre, they will have to pay as yet undetermined amounts of money to their shareholders.

LO 6

Interest Compounding

Outside assignment: Present value of winning a contest

You received a notice on January 2 saying that you are a finalist in a publisher's $5 million sweepstakes, to be awarded on December 31. You believe in planning ahead, so you want to decide which of their three payment options to accept:

Option 1: Receive $5 million in one lump sum on December 31.
Option 2: Receive $167,000 on December 31, and on each (29) succeeding December 31, for a total of 30 annual payments
Option 3: Receive $14,000 on December 31, and every month thereafter for a total of 360 months

- Without making any present value calculations, which option appears to be the most attractive? Why?
- Now calculate the present value of each option. Assume an interest rate of 9%. (The present value of an annuity of $1 at 9% for 30 periods is 10.274. The present value of an annuity of $1 at .75% (9% ÷ 12) for 360 periods is 120.738.) Which option now is more attractive? Explain.
- Compare and comment on your answers to the two questions above.

Solution

- Clearly, the more money you receive up front, the better, so Option 1—$5 million all at once—is most attractive. Option 2 the second, and Option 3 last. Thus students should see intuitively how at least the relative values of the present value calculations should come out.
- Present values:
  Option 1: The present value of $5 million cash is $5 million
  Option 2: $(167,000 * 30 = 5,010,000) 
  $167,000 * 10.274 = $1,715,758
  Option 3: $(14,000 * 360 = 5,040,000) 
  $14,000 * 120.738 = $1,690,332
CHAPTER 9 — CURRENT LIABILITIES, CONTINGENT LIABILITIES, AND THE TIME VALUE OF MONEY

- Obviously the present values fall in the same order as the absolute values. You collect a total of about $5 million in every case, but tax questions complicate this considerably.

Applying Compound Interest to Common Situations

**Outside assignment: Automobile leases**

A car dealer advertises a lease that gives the lessee the choice of making a single lease payment of $4,628, or paying $1,000 down, and $169 per month for 24 months. You may need a reference from the library, or a computer database, to find a table with the values you need. You can also interpolate from an existing table.

- What is the interest rate implicit in the payment arrangement? You will not find the precise number you are looking for in your table, but if you round to the nearest rate your answer will come out close enough.
- At the end of the lease, the car can be purchased for $8,811.30. What is the present value of this amount at the interest rate you calculated above?
- What is the approximate cash value of the car?
- Look at other advertisements in your newspaper for automobile leases. What are the implied rates? Are they higher or lower than this one? What features or terms in the leases affect the interest rate? Why do you think this is true?

**Solution**

- $PV$ of $169 @ I\%$ for 24 periods $= 3,628$ ($4,628$ less down payment of $1,000$)
- So $169 \times (\text{factor for } I\% \text{ for } 24 \text{ periods}) = 3,628$
- Factor $= 3,628 \div 169 = 21.4675$
- Using a table that goes low enough, the monthly interest rate implicit here is about .75%, or 9% annually.
- The present value of $8,811.30 in two years at 9% per year is $8811.3 \times (0.8375) = 7,379$.
- Thus the cash value of the car is $4,628 + 7,379 = 12,007$, which is approximately (allowing for rounding) their quoted manufacturer's suggested retail price of $11,570.
- The arithmetic may elude some students, but the concept is important. Leases are a method of financing a purchase, and have interest built into the price. The papers are full of lease offers, so students shouldn't have trouble finding other examples. Rates are influenced by down payments, length of lease, type of car, geographic area, and prevailing rates. Students will probably find additional special features in the ads that influence the interest rate charged.

Understanding Deductions and Expenses in Payroll Accounting

**Ethical Decision: Reporting requirements**

You are the accountant for a small private school. The school is on a very tight budget and experiences frequent cash flow crises. You have just prepared the month-end payroll checks when the school director comes in to discuss the payroll with you.

“I notice you've written the paychecks. We have to distribute those tomorrow, of course. But I'd like you to hold off writing the checks for the withholding taxes and the payment to the health insurance company. We have a mortgage payment due this week. With that plus the payroll, and another payroll coming up in two weeks, I don't think we have enough cash on hand to cover it all. I'm going to have to try and get some of the tuition payments in early. The next payments aren't really due until the first of next month, but some of the people will pay as soon as they get our bill. We need to hold on to as much cash as we can to pull through this. By the end of next month enough tuition money will have come in so that we can make up these overdue payments as well as next month's current ones. It isn't as though we don't plan to pay, and it won't be a big hardship on those people to wait a couple of weeks for their money.”
“But I thought,” you say, “that we were required by law to submit FICA and withheld federal and state taxes promptly?” This instruction sheet that comes with the form we file states clearly that we have to file by the end of this week, or be subject to penalties that sound serious to me. The end of next month is stretching it pretty far, isn’t it? And the insurance bill was due on the 25th. It's already overdue! What if they suspend our coverage?

“They won't, don't worry. These things don't happen that fast. Besides, I can talk to them, and buy a little time. It isn't that long. As soon as we get some cash we'll pay. The government probably won't even notice.”

- What should you do? What are your responsibilities to the school director? to the other employees? To the board of directors of the school? To the government and other creditors? To yourself?

Solution

This exercise could also be assigned to teams. Members take on the roles of the director, the accountant, an employee representative, a Board member, and a creditor/government representative. One person could moderate the discussion and direct the team to a final conclusion.

The accountant is in an awkward position, not an uncommon situation. The employee is being asked to do something that at least on the surface is not illegal, and told that the intent is not to cheat anyone, but in fact to do some good by helping the school through a tough time.

- Your responsibility to the director is to do your job to the best of your professional ability. To this end, it is your job to know the rules as they apply to your job, and to apply them, as well as to make them known to anyone they might influence, including the director. You must make her aware of the risks she faces, despite her best intentions.

- The payroll taxes were withheld from the employees. It is your duty to see that they are paid to the proper agencies on time. You, as the representative of the school, are the collection agent, and have no right to divert these funds, even temporarily, and even for the most noble of reasons. Remind students that the withholding taxes were actually deducted from the employees’ pay before their checks were written, so it is the employees’ money the school is using for a “float.”

- The board of directors is responsible for impartial oversight of school operations; the school expects you to perform your job to the highest professional standards, even if that means violating personal loyalty to the director who hired you.

- The government holds you just as guilty as the director if you went along with this action. They require taxes to be paid in full, on schedule, and the laws provide severe penalties if this does not occur. The government will notice. If they found a deliberate plan to delay payment, your professional career could suffer a serious setback.

- The same reasoning is true for the other creditors, who have a right to be paid funds that were collected in their names, or at least to be dealt with honestly. At least in this case the director should call the insurance provider beforehand and ask for time, before their collection department contacts her. The result is likely to be more positive. In fact, the IRS might even be willing, if asked up front, to negotiate time into the payment schedule for the amount owed.

- What do you owe yourself? As an accountant you are expected to be ethical in your profession. You owe yourself a longer-term view of your position, and your career. Is this position so valuable that you are ready to throw away your future? In broader terms, how important is integrity to you? Do the ends justify the means?

This is a real case, only the accountant's role was less than clear. However, the director, who herself wrote many of the checks the school issued, actually had not paid payroll taxes for some four months. One sunny morning when parents came to drop off their children they found that the IRS had attached a chain and padlock to the front doors, and an official notice indicating that the institution was closed until further notice pursuant to the relevant federal laws. Some unpleasant times followed.
In-class exercise: Understanding a pay stub

Below are the important details of the “pay stub” from the paycheck of Jill Berglin, a manager in an investment firm.

| Gross salary | 3,375.00 |
| Net salary   | 2,216.48 |
| Employee federal tax | 384.99 |
| Employee state tax | 174.28 |
| Employee FICA | 244.56 |
| Employee life insurance | 23.48 |
| Employee health insurance | 169.80 |
| Employee family dental | 8.16 |
| Employee retirement | 101.25 |
| Employer FICA | 244.56 |
| Employer dental | 16.86 |
| Employer life insurance | 6.82 |
| Employer travel/accident | 0.13 |
| Employer health insurance | 329.61 |
| Employer retirement | 236.25 |
| Parking | 52.00 |

- What is Jill's monthly salary?
- Which items were deducted from Jill's salary?
- How much does Jill actually “take home?”
- Which items are liabilities for Jill's employer? What is the employer's total liability to Jill? to all others?
- Which items constitute an expense for Jill's employer? (The employer owns the parking lot. The retirement funds are invested in the employees' names with an outside investment firm.)
- How do you think the employer accounts for the parking fee?
The auditor was holding to the accounting standard, discussed in the chapter appendix, that compensated absences must be accrued, and recognized as expense, as they are earned. Dean, however, countered that his employees do not earn vacation pay differently than they earn their other pay. He gives it to them, so no accrual is necessary. He feels that the time they spend away from the
office is the same as time spent in the office, but a different account is charged. He does not grant
vacation earned for time worked, so no accrual is necessary.

Most students feel that an accounting rule must be followed strictly, and dispute Dean on that basis
alone. A few argue for the right of the businessman to account for his expenses as he sees fit, within
reason. Dean, in reality, did win his point.

Dean's employees were almost all salaried professionals, which helped his case. You might try to elicit
some discussion from students about the difference in the way a salaried person is paid, versus an
hourly employee, and connect this to how these employees might earn vacation or other “privileged”
paid time. If another company had a large number of hourly workers, or unionized help, with union
contracts or employee benefits books that measure vacation time based on years of service and time
worked during the year, they would have more difficulty arguing in favor of not accruing vacation
pay. Vacation pay is clearly being earned as people work.