CHAPTER 21

Tax Aspects of Corporate Financing

Corporations, in particular public corporations, can obtain capital funding in a great number of ways. The basic capital funding alternatives are these: debt, equity, and leasing. Within each of these basic categories, there are numerous sub-alternatives, including bonds, debentures, common shares, various types of preferred shares, and lease arrangements with varying terms and conditions.

Each of the basic financing methods has different tax implications, to both the corporation and the investor who provides the capital. These varying tax treatments affect the after-tax cost of obtaining corporate capital. The corporation's goal is always to develop a cost-efficient financial structure. While the financing treatment chosen may be influenced mainly by the existing financial structure and by market conditions, tax is also an important consideration.

An efficient capital structure is one that minimizes the after-tax cost of financing to the corporation and, at the same time, maximizes the after-tax returns to the investor. It is therefore critical that the decision maker examine financing options on a global basis by integrating corporate and investor tax considerations.

This chapter will examine the tax consequences of the basic financing alternatives. Specifically, this chapter will examine:

(a) the tax implications of choosing debt, rather than equity, from the perspective of both the corporation and the investor;

(b) the tax treatment of financing charges relating to the issuing of debt and equity securities; and

(c) the tax implications of leasing assets, rather than purchasing them.

I. Debt versus Equity

As already mentioned, the cost of financing is influenced by the tax treatment to both the corporate issuer of securities and the investor who purchases those securities. The potential investors in corporate securities include individuals, private corporations, other public corporations, and an array of pension and other investment funds; each of these entities is subject to a different tax treatment. A particular type of security that will enhance the tax position of a particular type of investor may be in greater demand so that a corporation can issue it at a higher price, with the result being lower financing costs. For example, investors with capital losses may prefer securities that pay nominal dividends but offer greater capital growth because this maximizes capital gains, which can then be offset against capital losses.

In order to take advantage of a tax-sensitive marketplace, the corporation must be familiar with investor tax concerns and, whenever possible, attempt to satisfy those concerns. A corporation must consider its finance costs in the context of investor needs.

A. Cost of Corporate Debt and Equity

The real cost of financing is the after-tax cost. Debt is serviced by the payment of interest, which is fully deductible by the corporation in arriving at its taxable income.[1] On the other hand, equity capital is serviced by the payment of dividends, which are not deductible and must be paid from after-tax corporate income. From the investor's perspective, interest income on debt is fully taxable, whereas dividend income receives special treatment.

The implications of this are shown in the following simplified situation.

Situation:

A corporation that is subject to a tax rate of 27% intends to raise $100,000 of capital for expansion purposes. Current market conditions indicate that debt funding would require an interest rate of 8%. As an alternative, the company could raise the capital by issuing preferred shares having a fixed dividend rate of 7%.

1 ITA 20(1)(c).

Analysis:

While the dividend rate of 7% on the preferred shares is less than the interest rate of 8% on debt, this is not reflected in the resulting tax consequences to the corporation. When comparing the two alternatives, it is useful to determine the amount of corporate income required to service the dividends and the interest, respectively.

If debt is issued, the corporation can service the interest payments with $8,000 of corporate income as follows:

Corporate income required	$ 8,000
Interest paid (8% of $100,000)	(8,000)
Net income to corporation	$ -0-
Tax to corporation	$ -0-

However, if preferred shares are issued, the corporation must pay $7,000 of dividends from after-tax corporate profits. This means that the corporation must earn $9,589 to service $7,000 of dividends, calculated as follows:

Corporate income required	$ 9,589
Corporate tax: $9,589 @ 27%	(2,589)
Net after-tax income	$ 7,000
Dividends paid	(7,000)
Net cash to corporation	$ -0-

In order to fund debt interest of 8%, the corporation must invest the borrowed funds to return at least 8%. In comparison, to fund a dividend of 7%, the corporation must invest the funds obtained to return at least 10% (9.59%). In other words, the cost of an 8% debt is 8% but the cost of a 7% dividend is actually 10% (rounded).

This analysis indicates that debt financing has an advantage over equity financing. This advantage stems from the fact that, by choosing to pay interest and thereby shifting income directly to the investor, the corporation avoids double taxation. Note that in this example, if the corporate tax rate had been12% to 17%, the cost of equity capital would have been more in line with the cost of debt capital. In Chapter 11, it was shown that the high corporate tax rate on business income is 27%.

The above comparison of debt and equity was examined in the context of equity in the form of preferred shares, which bear a stated dividend rate but do not otherwise participate in corporate profits. In this context, except for the fact that the tax treatment is different, preferred share financing and debt financing are similar from the perspective of the holder of common shares. Because common share equity participates in corporate profits, it is difficult to compare the cost of debt with the cost of common share financing.

In comparing the cost of debt with the cost of preferred share financing, the difference between the required interest rate and the required dividend rate is obviously important. In the previous example, the cost comparison was made by arbitrarily choosing an 8% interest rate as an alternative to a 7% dividend rate. The required dividend and interest rates are influenced not only by the financial strength of the company and by market conditions, but also by how the investor is taxed on the different types of returns received. This variable in financing costs is discussed below.

B. Tax Treatment to Investors

Capital markets that provide financing to corporations are sensitive to how investment returns are taxed. Interest, dividends, and capital gains are all taxed in a different manner when received by the investor. Also, the tax treatment of each type of return may vary, depending on the nature of the investor. Investors can be taxable entities, such as individuals, private corporations, and public corporations; or they can be non-taxable entities, such as pension funds, retirement savings funds, and charitable organizations.

The marginal tax rates for the different types of investment returns were developed in previous chapters and are summarized in Exhibit 21-1. It is important to remember that these rates are based on assumed federal and provincial rates of tax applicable in the particular year, and should be updated by the reader for current decision making.

Exhibit 21-1:

*Tax on Investment Returns by Type of Entity**

		Dividend		Capital gain
	Interest	Eligible	Non-eligible	
Individuals:				
Low bracket	24%	0%	13%	12%
Second bracket	32	10	22	16
Third bracket	40	21	31	20
Fourth bracket	45	28	37	23
Top bracket	50	35	43	25
Canadian-controlled private corporations	50 2/3	38 1/3	38 1/3	25†
Public corporations	27	0	0	14

* These rates include an assumed provincial tax rate (see Chapters 10 and 13).
† 1/2(50 2/3%), rounded.

Exhibit 21-1 indicates that interest income is taxed at the normal rates applicable to individuals and corporations. The tax rate on capital gains is simply one-half of the tax rate on interest, reflecting the fact that only one-half of capital gains are taxable (subject to the lifetime capital gain deduction for individuals). The tax rate on dividend income for individuals is the normal rate of tax less the dividend tax credit (see Chapter 10). Portfolio dividends received by private corporations are subject to a special refundable tax of 38 1/3% (see Chapter 13), whereas dividends received by public corporations are not taxable at all (see Chapter 11).

By applying the varying tax rates given in Exhibit 21-1, both the investor and the corporation issuing securities can determine which investment yields provide equivalent after-tax returns. For example, an individual in the top tax bracket can receive a 10% interest return, a 7.7% eligible dividend, an 8.8% non-eligible dividend, or a 6.7% capital gain, and achieve the same after-tax rate of return, calculated as follows:

		Dividend		
	Interest	Eligible	Non-eligible	Capital gain
Tax rate	50%	35%	43%	25%
Income	$100	$77	$88	$67
Tax	(50)	(27)	(38)	(17)
After-tax return	$ 50	$50	$50	$50
Rate of return	5%	5%	5%	5%

Therefore, ignoring at this time the relative risk of each investment, individual investors in the highest tax bracket would be indifferent to whether they receive 10% interest, a 7.7% eligible dividend, an 8.8% non-eligible dividend, or a 6.7% capital gain, as each alternative provides an after-tax return of 5%.

The equivalent yields for a different type of investor may be quite different. For example, if the investor is a public corporation, a 10% interest return will result in the same after-tax income as a 7.3% dividend or an 8.5% capital gain, calculated as follows:

	Interest	Dividend	Capital gain
Tax rate	27%	NIL	14%
Income	$100	$73	$85
Tax	(27)	-0-	(12)
After-tax return	$ 73	$73	$73

Note that because intercorporate dividends received by a public corporation are not taxable, a 7.3% dividend received by such an entity provides the same after-tax return as 10%

interest; whereas an individual would have to receive a 7.7% eligible dividend or an 8.5% non-eligible dividend to achieve what is equivalent to a 10% interest return.

A profile of *equivalent yields* is presented in Exhibit 21-2. *It is based on the assumed tax rates provided in Exhibit 21-1.* This exhibit shows the pre-tax returns required to yield equivalent after-tax returns on interest, dividends, and capital gains for each type of investor. A 10% interest rate is used as the base rate of comparison. Similar comparisons can be made using different rates of interest.

Exhibit 21-2:

Equivalent Pre-Tax Yields

		Dividend		
	Interest	*Eligible*	*Non-eligible*	*Capital gain*
Individuals:				
Low bracket	10%	7.6%	8.7%	8.6%
Second bracket	10	7.6	8.7	8.1
Third bracket	10	7.6	8.7	7.5
Fourth bracket	10	7.6	8.7	7.1
Top bracket	10	7.7	8.8	6.7
Canadian-controlled private corporations	10	8.0	8.0*	6.7
Public corporations	10	7.3	7.3	8.5

* Assume received from non-connected corporation.

The type of information provided in Exhibit 21-2 is essential to corporations that are examining various financing alternatives, as it indicates how potential investors will view the security being considered for issue. For example, if current interest rates are 10% and the corporation is considering issuing preferred shares with a fixed eligible dividend rate of 7%, it will be wise to note that those shares will be less attractive than an interest-bearing security for all potential investors.

Similarly, when contemplating different types of equity issues, the issuing corporation should recognize that dividends and capital gains receive different tax treatment. Equity issues of common shares, or of preferred shares that are convertible into common shares, can provide the investor with both dividends and capital gains because they participate in corporate earnings. However, when the investor is an individual, the tax rate on dividends can be higher or lower than on capital gains, depending on the particular tax bracket. Because of this, some investors prefer greater dividend returns, even though capital growth will be lower, whereas other investors prefer capital growth despite the resulting reduced dividends. A corporation that issues both common shares with low dividends and higher growth potential, and convertible preferred shares with a high dividend rate and a lower growth potential, can attract a larger group of investors. This, in turn, results in a tax-efficient capital structure, which ultimately reduces the overall costs of financing.

The tax relationship between interest, dividends, and capital gains often changes when tax laws are revised. The amount of the dividend tax credit, for example, has been changed several times in the past few years. Similarly, the treatment of capital gains has undergone numerous changes. When such changes occur, corporations must re-evaluate their financial structures and develop alternative methods of obtaining capital that are consistent with the new tax regime.

C. Preferred Share Financing

The offering of preferred shares as an alternative to debt financing is severely constrained, owing to the non-deductibility of dividend payments. With corporate tax rates being in the range of 26% to 31% (2018), corporations must earn a substantially higher dividend rate in order to meet their commitments on preferred share dividends.

Also, preferred share financing may be subject to a further tax burden, the nature of which was not discussed in previous chapters. Under Part VI.1 of the *Income Tax Act*, all Canadian

corporations are subject to a special tax on preferred share dividends in excess of $500,000 annually.[2] This tax is payable by the payer of the dividend, rather than the recipient. The rate of tax varies, depending on the nature of the preferred shares; however, in most cases, the tax is 40% of dividends paid in excess of $500,000. While this tax appears excessive, it is fully recoverable against the normal income tax to which the company is subject. For example, if the corporation is usually subject to 27% tax on income, the special tax on preferred shares reduces the normal income taxes by an equivalent amount, thus completely eliminating the tax on the preferred share dividend. Provided that the corporation is subject to normal rates of tax, the preferred share dividend tax is effectively eliminated. The special tax is not eliminated if the corporation has no taxable income, but even in this case, through a carry-forward mechanism, it can be recovered in future years when taxable income is earned.

The purpose of the special tax on preferred share dividends is to prevent corporations that are not taxable from paying dividends to other public corporations that receive the dividends on a tax-free basis. In such circumstances, if it were not for the special tax, neither the payer nor the recipient would be subject to tax.

The special preferred share dividend tax prevents a narrow form of tax abuse; at the same time, however, it creates a risk for all large corporations issuing preferred shares. Although the tax is non-existent if the payer is normally taxable, the payer cannot be certain that future circumstances will be the same. Consider, for example, a company that has issued preferred shares but, at some future time, incurs losses that cause the company to be temporarily non-taxable. When dividends are paid on the preferred shares, the special tax applies, although it may be recoverable through the carry-over mechanism. Of course, the tax could be avoided by not paying the dividend in those particular years, but that, in turn, would lessen the attractiveness of the security to the investor.

There is no doubt that current tax laws make preferred share financing difficult for corporations. In spite of this burden, corporations still consider preferred share financing viable when debt loads reach their maximum. From the common shareholder's perspective, preferred share issues are always viable if expected returns are greater than the related high financing costs.

In particular, "perpetual" preferred shares, which have no fixed redemption requirements, increase the equity base of the corporation; this adds to its financial strength, which, in turn, permits it to obtain additional debt financing at a lower cost. In other words, the disadvantages of preferred share equity must be weighed against the benefits, which are increased borrowing power and lower debt-financing costs.

Perpetual preferred shares with no fixed redemption date may be less attractive to investors if the shares have a fixed dividend rate, as such shares are subject to value changes if market interest rates fluctuate significantly. In recent years, this problem has been overcome with the emergence of "floating rate preferred shares," which have a dividend rate that fluctuates in relation to the prime rate of interest. This built-in mechanism stabilizes the value of the shares, which are thus more attractive to the investor.

In summary, in spite of the tax burden to the corporate issuer, preferred share financing is a viable alternative to debt financing, especially if the share issue is so designed that it enhances the after-tax returns of potential investors.

II. Tax Treatment of Financing Charges

In addition to the normal costs of interest (on debt) and dividends (on equity issues), the process of obtaining capital funding may incur other types of costs. For both debt and equity securities, the corporation may incur certain costs in the process of implementing and selling the securities on the open market. Also, it may be necessary to issue the securities at a price other than the stated price of the security, the result being a discount or premium on sale. The tax treatment of these items is discussed briefly in the next section.

2 ITA 191.

A. Expenses Incurred to Issue Shares or Borrow Money

The corporation may incur certain costs in the process of developing securities and issuing them to investors. Such costs include the following:

1. Legal fees for the preparation of a prospectus
2. Accounting and auditing fees to certify the financial statements and prepare other financial information
3. Costs of printing the security certificates and the related prospectus
4. Fees paid to a registrar or transfer agent
5. Costs of filing information with any regulatory body
6. Commissions and fees for the services of salespeople, agents, or dealers in securities
7. Mortgage registration, processing, and appraisal fees

8 Premiums on life insurance policies assigned as a collateral requirement of a debt obligation

These and other similar costs are of a capital nature because they provide a long-term benefit over the life of the securities. As capital expenditures, these costs would not usually be permitted as a current deduction for tax purposes. However, by specific exception (see Chapter 5), expenses other than life insurance premiums, if incurred in the process of issuing shares or borrowing money, can be deducted in arriving at net income for tax purposes over a five-year period at the rate of one-fifth of the total cost per year.[3] Premiums on life insurance policies used as collateral for a debt are fully deductible when incurred, provided that the premium is an annual amount.

The after-tax cost of financing is therefore affected by the tax treatment of the associated costs. While the cost of interest or dividends is spread out over the life of the security, the implementation costs are arbitrarily subjected to a five-year allocation, even though the costs are incurred at the outset. When making business expansion decisions that involve financing by new capital, the decision maker must determine the after-tax cost of financing; this means considering the tax treatment of both the implementation costs and the ongoing service costs of interest or dividends.

B. Securities Issued at a Discount or Premium

In some circumstances, a corporation issuing a debt or equity security may receive a price less than or greater than the stated value of the security. This discount or premium affects the issuing corporation's financing costs. The related tax treatment of the discount or premium is an important factor in establishing those costs.

Debt and equity securities can be issued at amounts greater than or less than their stated amount. This normally occurs as a result of a change in economic conditions between the time the security is developed and the time it is put on the market. For example, a $100 bond bearing a 7% interest rate may end up selling for only $98, if interest rates have increased between the time the bonds were developed and the date of their issue. A price variance may also result if the investors' perception of the security's attractiveness is different from what was anticipated by the issuing company.

A premium or discount on equity issues for common and preferred shares has no tax impact on the issuing corporation. As the cost of equity financing through dividends is not tax deductible, the related discount or premium is similarly treated. Therefore, when a $100 preferred share bearing a 4% dividend is issued at $98, it simply means that the dividend rate is actually 4.08% ($4 ÷ $98) and must be financed from after-tax profits. However, in the case of debt securities, such as bonds and debentures, since the interest cost is deductible, the tax treatment of a premium or discount affects the after-tax cost of such securities. Because of all this, the comments that follow apply only to debt securities, and we examine discounts and premiums separately.

3 ITA 20(1)(e), (e.2); IT-341R4 (archived).

1. Issuing Debt Securities at a Discount

When a debt security is issued at a discount, the borrowing corporation receives an amount that is less than what it is obliged to repay at the end of the debt. The issuing company is also obliged to pay interest at the stated rate times the face value of the security. The issuing company therefore has two costs—the cost of interest, which is paid annually, and the cost of the discount, which is paid at the end of the debt term.

The tax treatment of the discount depends on the amount of the discount.[4] For tax purposes, debt issued with a discount of 3% or less is referred to as a "shallow" discount, while a discount of more than 3% is referred to as a "deep" discount. The full amount of a shallow discount is deductible as a business expense when it is repaid (which is usually at the end of the term of debt). However, only one-half of a deep discount can be deducted as a business expense. In effect, a deep discount is treated as if it were a capital loss, except that it is deductible from business income.

In this way, the issue of debt at a discount changes the timing of the tax deduction; in the case of deep discounts, it also changes the amount of the tax deduction. Consequently, the after-tax cost of financing debt issued at a discount is different from the after-tax cost of financing debt issued at face value, even though the pre-tax cost may be the same. Consider the following situation.

Situation:

A corporation issues a $100,000, 10-year bond paying interest annually. Market conditions dictate that investors require an interest return of 9.25%. The after-tax cost of financing the debt is analyzed below. It is assumed that the corporation issued the bonds bearing an interest rate of 9.25%, 9%, or 8.5%. Assume a corporate tax rate of 27%.

Analysis:

If the bonds are issued with an interest rate of 9.25%, which is the same as the market demands, they maintain their face value of $100,000 and incur annual interest costs of $9,250 before tax.

If the bonds are issued with a 9% interest rate, they are discounted to $98,000 (rounded to the nearest thousand) in order to yield 9.25% to the investor, and the company pays $9,000 interest annually (9% × $100,000) for 10 years. While the company pays lower annual interest costs ($9,000, rather than $9,250), it has an additional up-front cost of $2,000 from the discount ($100,000 − $98,000 = $2,000). The discount of $2,000 constitutes a shallow discount, which is fully deductible for tax purposes *at the end of Year 10.*

If the bonds are issued with an interest rate of 8.5%, they are discounted to $95,000 (rounded to the nearest thousand) in order to yield the investor 9.25%. Annual interest costs decline to $8,500 (8.5% × $100,000). However, because the discount amount of $5,000 is greater than 3% ($5,000 ÷ $100,000 = 5%), this constitutes a deep discount, of which only one-half (½ of $5,000 = $2,500) is deductible for tax purposes at the end of Year 10.

In each case, the company incurs a pre-tax cost of financing of 9.25%. However, each alternative results in a different rate of cash flow and a different tax result, and therefore a different after-tax cost in cash-flow terms. This is summarized in the following table:

Interest rate	9.25%	9.00%	8.50%
Face value of bond	$100,000	$100,000	$100,000
Issue price	$100,000	$ 98,000	$ 95,000
Financing costs:			
Interest (Years 1–10)	$ 9,250	$ 9,000	$ 8,500
Tax saving (27%)	(2,498)	(2,430)	(2,295)
Annual cost	$ 6,752	$ 6,570	$ 6,205
Discount (Year 1)	$ -0-	$ 2,000	$ 5,000
Tax saving (in Year 10)	-0-	(540)	(675)
	$ -0-	$ 1,460	$ 4,325
Pre-tax cost	9.25%	9.25%	9.25%
After-tax cost, considering timing of cash flows	6.75%	6.81%	6.86%

4 ITA 18(1)(f), 20(1)(f).

This analysis shows the impact of financing costs on after-tax cash flow. A discount tends to increase the cost of financing, and this must be considered when a debt issue is contemplated. The tax treatment outlined above is applied to most interest-bearing debt securities. In some cases, corporations will issue debt securities with no stated interest rate, which allows those securities to be substantially discounted in accordance with prevailing interest rates. In such cases, the discount is considered to be interest and is allocated over the term of the security based on a simple compound-interest approach.

2. Issuing Debt Securities at a Premium

When a debt security is issued at a premium, the borrowing corporation receives a price greater than the security's stated amount. For example, a $100,000 bond bearing 8% interest may be issued at $102,000, if the market interest rate at the time of issue is less than 8%. The issuing corporation will pay a higher rate of interest in exchange for a premium gain, because it is required to repay only the stated value of the security ($100,000 in the previous example).

The tax treatment of a premium to the corporation issuing the security is extremely favourable. Unless the issuing corporation is in the business of lending money, the premium is not taxable. Therefore, issuing debt securities at a premium will usually reduce the after-tax cost of financing; this is the opposite of what happens when securities are issued at a discount. For example, consider the issue of a $100,000, 10-year corporate bond bearing interest at 10%, at a time when market interest rates are only 9.5%. To yield 9.5%, the bond could be issued for $103,000 (rounded to the nearest thousand); this would provide the issuer with a $3,000 tax-free gain. The combination of a tax-free $3,000 gain and annual interest costs of $10,000 ($7,300 after tax, assuming a 27% tax rate) would result in a net after-tax financing cost of 6.9%. If the security had been issued at its par value of $100,000, with interest at the market rate of 10%, the after-tax cost of financing would have been 7.3% (10% − tax savings of 27% = 7.3%).

Both discounts and premiums are designed to compensate for interest rate fluctuations. However, since they are subject to special tax treatment, they must be considered a distinct item of financing costs; this means that their impact must be anticipated before any type of debt security is developed and issued. Premiums and discounts may also have tax consequences for the investor who purchases the securities.

3. Tax Treatment of Discounts and Premiums to the Investor

An investor who purchases a debt security at a discount will receive a lower-than-normal rate of interest but will also receive a gain when the security is repaid at its face amount. The reverse is true when the security is purchased at a premium. From the investor's perspective, as from the issuing corporation's, the discount or premium represents an adjustment of the interest rate and is subject to varying tax treatments.

When the lender (investor) is in a position to negotiate the terms of the loan, the premium or discount is treated as income and is fully taxable when the debt is repaid. When the security is a public issue (for example, a corporate bond or a debenture), the investor cannot usually dictate terms but can only react to the market situation. If this is the case, the tax treatment to the investor varies with the nature of the investor. When the purchasing of bonds and debentures is part of the investor's business, the gain or loss on a discount or premium is fully taxable at the time the debt is repaid. When the investor is not in the business of acquiring securities but, rather, is simply investing savings, and when the investment in such securities is infrequent and forms a minor part of that investor's income-earning activity, the gain or loss is considered to be a capital gain or loss, only one-half of which is taxable.

An investor may generate more after-tax income by purchasing a bond at a discount (and thus achieving a capital gain) than by purchasing a bond at face value with a higher interest rate. The yield on a given corporate debt security varies with the tax position of the investor who purchases the security. While issuing bonds at a discount may be more costly to the issuer (as demonstrated above), it may also attract those investors who will receive favourable

tax treatment as a result of purchasing that security and increase the likelihood that the debt issue will be successful.

Both the corporate issuer and the investor are sensitive to the tax treatment of discounts and premiums. Any decision to raise debt capital must include an analysis of the impact of discounts and premiums on both the company and the potential investors.

III. Leasing—An Alternative to Debt Financing

The value of an asset to a business arises from its use in the income-earning process. The right to use an asset can be obtained through ownership or through a lease arrangement. When a business secures the right to use an asset for a desired period of time in exchange for rental payments, it relieves itself of the financing costs required for ownership. In this way, leasing is an alternative to debt financing.

When a business is choosing between owning and leasing, it must consider a number of factors, of which a primary one is the effect on cash flows. Accordingly, the method of payment and the related tax treatment are both vital components in the decision process. This section of the chapter compares the after-tax cost of leasing with the after-tax cost of owning in the context of financing *equipment*. The analysis that follows can also be applied to real estate; however, such analysis is complicated by the fact that real estate is usually an appreciating asset.

A. Types of Leases

The right to use equipment can be obtained through an operating lease or a financial lease. A *financial lease* provides the business (the lessee) with the right to use the asset for a long period of time—usually for most of its useful life. In most cases, the lessee will be the only user of the equipment. The lease term and the rental payments under a financial lease are structured so that the leasing company can recover the full cost of the asset and, in addition, achieve a normal return on its investment; in this way, financial lease payments are similar to amortized loan payments. Most financial leases also provide the user with the option to purchase the asset either at the end of the lease term or during the term, or to release the equipment after the initial term for a substantially reduced rental. This is possible because the leasing company has recovered the full cost of the asset and earned a normal return over the initial time period. Because a financial lease provides a right of long-term use and because the rental rates are tied to the cost of the equipment and normal interest rates, it is considered to be a direct alternative to purchasing assets with debt financing.

Operating leases are usually short-term and are used to obtain the use of short-lived, lower-cost assets, such as office furniture, equipment, and automobiles. Because such assets have a short life span, it makes little difference, in taxation terms, whether they are owned or leased. In such cases, the advantages of leasing have to do with the simplified administration of frequently changed assets.

B. Tax Treatment of Financial Leases

The tax treatment of leasing costs is not complex. Annual rental payments are fully deductible in arriving at net income for tax purposes. Therefore, provided that the business has taxable income, the rental payments will directly reduce taxable income by the amount of the lease payments. In other words, cash payments and tax savings occur simultaneously.

In comparison, if assets are purchased, the tax deductions may not occur at the same time the debt payments are made. Cash payments must be made for both the principal and the interest on the loan. At the same time, tax deductions for owned assets are determined by the applicable rate of capital cost allowance and the payment of interest. Payments relating to loan principal are not deductible.

When a business can choose between leasing and owning, it must compare the after-tax cash flows of each alternative. This analysis is demonstrated in the situation described below.

Situation:

A company requires new equipment that has a cost of $100,000. If the asset is purchased, the company must borrow the full $100,000; this will require principal repayments of $20,000 annually for five years, as well as interest payments at 8%. The equipment is a class 8 asset for tax purposes, and so has a capital cost allowance rate of 20% (see Chapter 6). It is estimated that the equipment has a useful life of 10 years and no apparent salvage value.

Alternatively, the company can enter into a financial lease that requires an annual rent (payable in monthly instalments) of $25,000 over a five-year lease term. The company can renew the lease for a further five years at a substantially reduced annual cost of $2,100. The payment of $25,000 per year in the first five years reflects the fact that the leasing company will recover its full cost of $100,000 and, in addition, earn 10% before tax.

For demonstration purposes, the company pays tax at an assumed rate of 27%.

Analysis:

If the company purchases the equipment with a $100,000 loan bearing 8% interest, it will be required to make the following pre-tax payments in the first five years:

Year	*Principal*	*Interest*	*Total*
1	$ 20,000	$ 8,000	$ 28,000
2	20,000	6,400	26,400
3	20,000	4,800	24,800
4	20,000	3,200	23,200
5	20,000	1,600	21,600
	$100,000	$24,000	$124,000

However, the above annual cash costs are reduced by tax savings at 27% of the interest component and by the capital cost allowance. The 20% capital cost allowance is applied on a diminishing-balance basis (see Chapter 6), and only one-half of the normal rate is applied in the first year. In addition, the capital cost allowance will continue beyond five years, creating continued tax savings after the loan is fully paid off.

Under the lease arrangement, pre-tax cash costs in the first five years total $125,000 ($25,000 × 5 y). As well, if the equipment is used for a further five years, additional lease costs of $10,500 ($2,100 × 5 y) will be incurred. As the lease costs are fully deductible, tax savings in each year amount to 27% of the annual lease payments.

The after-tax cash cost, together with a net present value analysis, is summarized below for each alternative.

Year	*Net Cash Out*		*Leasing advantage (disadvantage)*
	Purchase	*Lease*	
1	$23,140	$18,250	$ 4,890
2	19,810	18,250	1,560
3	19,620	18,250	1,370
4	19,230	18,250	980
5	18,680	18,250	430
	100,480	91,250	9,230
6–10	(9,950)	7,670	(17,620)
	$90,530	$98,920	$ (8,390)
Net present value cost	$75,560	$77,030	$ (1,470)

This analysis indicates that an asset purchase will result in after-tax costs in the first five years of $100,480, but will result in cash *savings* in the second five years (from capital cost allowance) of $9,950; thus, the total after-tax cost of this arrangement is $90,530. In comparison, the lease alternative results in higher total after-tax costs of $98,920. However, it is important to recognize that the timing of these costs is different for each alternative. In the first five years, leasing costs are lower by $9,230, whereas in the latter five years they are higher by $17,620. When these timing differences are analyzed on a net present value basis (discounted at the borrowing cost of 8%), it can be seen that purchasing holds a marginal advantage over leasing ($75,560 as opposed to $77,030).

In the previous example, purchasing presents only a marginal advantage over leasing; however, the cash-flow situation in the early years is important. Note that in the first year, leasing provides $4,890 of additional cash flow to the business; over the first five years, it provides a total of $9,230 of additional cash flow. Every business expansion involves risk, and that risk is often higher in the early years. In this particular case, the leasing option reduces the risk of expansion failure by creating more cash flow in the early years when it may be most needed. This advantage is difficult to quantify but is an important consideration when a choice is being made between the two alternatives.

There is no general rule that can be used to decide between leasing and owning. Each particular situation has its own unique circumstances. The terms attached to financial leases are negotiable, just as the terms of debt financing are negotiable. The decision-making process involves analyzing the after-tax cost of each alternative on a net present value basis.

Recent changes in the tax rules offer a second option relating to the tax treatment for leased equipment.[5] Under certain conditions, the lessee can treat a lease contract for tax purposes as if it were a purchase—in effect, the lessee can forgo rent payment deductions and claim capital cost allowance and an imputed interest deduction. This treatment requires agreement with the lessor; even so, it provides added flexibility to the financial lease alternative.

IV. Summary and Conclusion

This chapter has examined the impact of taxation on the cost of corporate financing through debt, equity, and leasing. All of these methods raise corporate capital by providing a return to an investor. These returns can take the form of interest, dividends, or rents. Each of these forms has a different tax treatment to the corporate issuer, and so results in a different after-tax cost. Similarly, the tax treatment of the returns for the investor that provided the financing also varies.

Raising capital by issuing debt requires the payment of interest, which is fully deductible against the corporation's income for tax purposes. Therefore, debt can be serviced without profits being affected as long as the borrowed funds can be used by the corporation to earn a return equal to the interest rate on the debt.

In comparison, raising capital by issuing new equity in the form of preferred shares requires the payment of dividends, which are not deductible in arriving at net income for tax purposes. This means that in order to service equity, the corporation must use the funds to earn a substantially higher amount of income because it must fund the dividend payment with after-tax dollars. As a result, the cost of equity is usually higher than the cost of debt.

From the investor's perspective, interest received on debt is fully taxable; whereas dividends are tax-free to other public corporations, subject to a special refundable tax of 33⅓% to other private corporations, and taxable at a reduced rate (net of the dividend tax credit) when received by individuals. All of this means that the relationship between interest and dividends depends on the nature of the investor, and so there are different market demands for different securities.

In addition to the cost of interest and dividends, the issuing corporation may incur costs for developing and issuing the securities. Even though these costs are incurred in the year of issue, most of them are deductible for tax purposes in equal amounts over a five-year period.

In some cases, corporate debt is issued at a price less than or greater than the face value of the security. Such premiums or discounts arise when the stated interest rate is different from the market interest rate. When debt is issued at a discount, the issuer receives less money up front but pays a lower rate of interest. However, because the cost of the discount is deductible only when the security is paid off, there is a significant gap between the time the cost is incurred and the time it can be deducted for tax purposes. Also, if discounts are

5 ITA 16.1; Regulations 8200 and 1100(1.13).

greater than a defined limit, the future deduction is limited to one-half of the discount cost. This increases the overall costs of debt financing. When debt securities are issued at a premium, the reverse is true: the issuer receives more money up front, but the interest costs are higher. The premium received is usually not taxable, and so the after-tax cost of debt issued at a premium is reduced.

The right to use an asset can also be obtained through a financial lease. Because a financial lease bases the required rental payment on the full repayment of the asset's cost plus a reasonable return to the lessor, it is comparable with purchasing an asset with borrowed funds. However, the after-tax cost of leasing is different from the after-tax cost of owning because of the timing of the related tax deduction. Lease payments in the form of rentals are deductible when incurred; when an asset is purchased, only interest and capital cost allowance can be deducted.

Since different financing schemes receive different tax treatments, the decision maker must examine the related costs on an after-tax basis, taking timing differences into account. The decision maker must also anticipate the tax positions of the various types of investors in the marketplace, since they also calculate their rates of return on an after-tax basis. This global approach will assist in developing an efficient financial structure that minimizes financing costs to the issuer and maximizes returns to the investor.

REVIEW QUESTIONS

1. Why is it important to examine the corporate cost of financing alternatives in conjunction with the tax position of the potential investors?

2. If a corporation is subject to a 27% tax rate, why may it be advantageous for it to issue debt as opposed to preferred shares?

3. If the corporate tax rate is 13%, what difference does it make whether the corporation issues debt bearing 8% interest or preferred shares with a 6¾% dividend rate?

4. A corporation issues 7% bonds, as well as preferred shares with an annual 5.5% dividend rate. Excluding the risk factor, what type of investor would prefer the bond and what type would prefer the shares? Explain.

5. An investor who is an individual could earn a 10% return either from shares that pay a low dividend and have high growth, or from shares that pay a high dividend and have low growth. Assuming that the risk related to each is the same, which investment would the individual prefer?

6. If the cost of preferred share financing is greater than debt, why are such securities issued by public corporations?

7. Briefly describe the tax treatment applied to expenses incurred to issue shares or borrow money (the cost of a prospectus, commissions to brokerage firms, and the like). What impact does this tax treatment have on the after-tax cost of financing?

8. If a corporation issues a bond at a price less than the face value of the security, the discount is amortized, for accounting purposes, over the life of the bond. How does this treatment of the discount compare with the treatment for tax purposes?

9. If a corporation issues a bond at a discount, will the after-tax cost of financing to the issuing corporation be higher or lower than if it had issued the bond at its face value? Explain.

10. Is the after-tax return to a casual investor who purchases a bond at a discount greater than or less than the after-tax return on a bond purchased at its face value? Explain.
11. How does the issuing of a bond at a premium affect the after-tax cost of financing to the corporate issuer?
12. Explain the difference between a financial lease and an operating lease.
13. What is the difference, in tax terms, between leasing and owning?

PROBLEMS

PROBLEM ONE

The Canadian Queen's Bank of Industry Ltd. is a large national Canadian bank. It has significant expansion opportunities. However, its ability to raise additional debt capital from bonds or debentures is restricted because of the debt/equity regulations of Canada's *Bank Act*.

The bank has decided to issue preferred shares. The financial highlights of the prospectus are as follows:

- *Proposed issue* 4,000,000 floating rate, class A preferred shares (cumulative, redeemable, and without par value).
- *Price* $100 per share.
- *Dividends* Dividends will be payable monthly. The dividend rate will float in relation to changes in the prime interest rate as set by the bank. The initial annual dividend rate will be equal to 2/3 prime plus ½% per annum. As dividends will accrue and be payable monthly, the normal dividend payment will be 1/12 of the annual rate.
- *Redemption* The shares will be redeemable at the option of the bank in whole or in part from time to time.

At the time the prospectus was issued, the bank published the following interest rates for its customers:

Prime lending rate	7.5%
Savings account (interest monthly)	3.0
1-year term deposits	6.0
30-day term deposits	4.0

The bank is subject to an income tax rate of 27%.

Required:

1. Assume that the bank will issue all of the preferred shares proposed in the prospectus. What amount of additional income must the bank earn in order to service the preferred shares without diminishing the amount of earnings currently available to the common shareholders?
2. How would your answer to Requirement 1 be different if the bank could issue bonds with an interest rate equal to 1.5% less than the prime rate?
3. Are the preferred shares attractive to investors? Explain.

PROBLEM TWO

Orpin Industries Ltd. is about to make its first bond issue in the public market. Orpin is a small but growing company, and its shares are starting to be recognized. For the past two years, they have consistently traded at a price equal to 12 times the after-tax earnings per share.

The proposed bond issue will raise $20,000,000, which will be used to expand the corporation's retail operations into western Canada. The expanded operations should provide a minimum return on investment of 22%.

After receiving financial advice, the company decides to issue the bonds in units of $1,000 with an annual interest rate of 10% (interest payable annually). The financial advisor indicates that at this interest rate, the bonds can be sold (with a 10-year term) at their par value.

Just before the issue date, long-term interest rates in the market increase by half a percent. Orpin realizes that it will have to issue its bonds at a discount in order to obtain the full $20,000,000. Alternatively, the company could delay the issue for a short time, revise the prospectus, and print new bonds to reflect the higher interest rate. This would, of course, create additional costs. Before making the decision, Orpin wants to know if there would be any benefit to revising the interest rates.

Orpin is subject to a 27% tax rate.

Required:

1. If Orpin issues the bonds as originally proposed (that is, with an interest rate of 10%), how much will it have to discount them? Ignore any tax implications to the potential investors.
2. Based on your answer to Requirement 1, determine the after-tax cost of financing the bond issue under both the discount option and the revised interest rate option.
3. Assuming that the interest rate on the bond is revised, how may this affect the trading value of Orpin's common shares?
4. If the company chooses to issue the bonds at a discount, could the amount of the discount be affected by the tax treatment to the potential investor? Explain.

PROBLEM THREE

Anderson Enterprises Ltd. is a Canadian corporation wholesaling auto parts in eastern Canada. The company has decided to expand and will require new equipment costing $80,000. The equipment qualifies as class 10 for income tax purposes and will be the only property in that class.

Anderson's bank has agreed to provide a term loan to finance the entire purchase. The terms of the loan call for monthly payments of $1,235 for eight years. Due to high risk, the payment includes interest at 10½%. The bank provides the company with a payment schedule, which is roughly summarized on an annual basis in the table below.

Year	*Principal*	*Interest*	*Total*
1	$ 7,000	$7,820	$14,820
2	7,500	7,320	14,820
3	8,500	6,320	14,820
4	9,000	5,820	14,820
5	10,000	4,820	14,820
6	11,000	3,820	14,820
7	13,000	1,820	14,820
8	14,000	820	14,820

It is estimated that the equipment will have a useful life of 10 years and will be scrapped at the end of that time.

Anderson has also obtained some quotes for leasing the equipment. The quote with the most favourable terms involves a six-year lease with monthly payments of $1,565, and an option to renew on an annual basis for a mere $2,000 per year. Anderson likes this alternative because the company would not have to renew after six years if it wanted to acquire more modern equipment.

However, at this point, the company anticipates that it will use the equipment for its useful life of 10 years, at which time it will acquire replacement equipment.

Assume the company is subject to a 27% tax rate. It has expansion opportunities that can yield a minimum before-tax return of 22%.

Required:

1. Determine the financial cost to Anderson of leasing rather than owning the manufacturing equipment. Assume that at the end of 10 years, the company will scrap the equipment and purchase new equipment.
2. How would your answer to Requirement 1 change if, after 10 years, Anderson Ltd. leased, rather than purchased, the equipment?
3. What other factors, if any, should the company consider when making the decision?

PROBLEM FOUR

Brandi Manufacturing Ltd. has decided to expand. To raise additional capital, the company is considering selling $300,000 of its present manufacturing equipment to an insurance company and leasing it back for eight years, which is the estimated useful life of the equipment. The equipment will have no residual value after eight years. The annual rent on the lease-back would be $54,000.

The equipment to be sold under the sale-and-lease-back arrangement is not all of the equipment owned by the company. The undepreciated capital cost of all of the company's manufacturing equipment (class 53) was $800,000 at the end of the previous year. Of this $800,000, approximately $100,000 relates to the equipment that the company is thinking of selling.

The equipment that would be sold is used to manufacture a single specialized product. The equipment generates annual pre-tax revenues of $60,000 and is expected to continue to do so in the future.

Brandi is interested in the sale-and-lease-back arrangement because it will enable the company to obtain $300,000 of immediate funds with a related annual payment of $54,000, which appears to be equivalent to a low rate of interest. Assume the company is subject to a corporate tax rate of 27%. The company considers 12% to be a reasonable after-tax rate of return.

Required:

1. If Brandi does not sell the equipment, how much cash flow will be generated, in net present value terms, from the ownership and operation of that equipment?
2. What rate of interest is reflected in the lease arrangement?
3. What net present value cash flow would be obtained as a result of the sale-and-lease-back arrangement?