

5 Chapter 5 – Choosing the Optimal Organization Form: The United States, almost alone among the nations of the world, imposes a classic corporate double tax; that is, income earned in corporate solution is taxed to the corporation when earned and then is taxed a second time when recognized by the shareholders (either in the form of dividend distributions or dispositional gain). There is no intrinsic reason why such a double tax must be employed. Corporations could be taxed on profits as earned and then shareholder returns could be exempted for taxation. Or corporations could be exempt from taxation and shareholder returns fully taxable. (Note that if all shares were traded over thick, public markets, the corporate tax could be eliminated and shareholders could be required to report their corporate investment on a mark-to-market basis, thereby eliminating the corporate double tax and the realization doctrine.) Most countries employ neither of these methods of fully integrating the corporate and individual income taxes but instead employ a method of partial integration such as dividend imputation as described in Appendix 5.1. Because we see both corporations and partnerships compete in an active, competitive market for capital, they should (in general) offer equivalent after-tax returns. That means either the corporate double-tax must result in the equivalent of a single, shareholder-level tax or frictions and restrictions must preclude operation of some businesses in an otherwise tax-preferred form. Note also that it can be expensive, in both tax and non-tax terms, to change the form of a business organization once business activity has begun. In terms of the tax cost, it generally is cheap to move from a partnership to a corporation, but it generally is expensive to move from a corporation to a partnership.

#### 5.1 Organizational Forms for Producing Goods and Services

5.1.1 Sole Proprietorship: A sole proprietorship is a business run by an individual, and the tax items arising from that business are reported on the owner's individual tax return.

5.1.2 Partnership: A partnership is not a taxable entity. While it computes an informational tax return as if it were taxable, its taxable items are passed through to and reported by its partners. This is true even if the profits of the venture are not

currently distributed, potentially forcing the partners to pay taxes on income they have not yet received. Many partnership agreements provide for mandatory tax distributions. Note that the effective tax rate on partnership profits is the tax rate of the individual partners, and those partners may be in very different tax circumstances. In particular, a partnership may be composed of fully taxable investors as well as tax-exempt investors such as charitable organizations or pension funds. Losses of the venture pass through to the partners (who may themselves be other partnership, corporations, or individuals), and the ability to claim partnership losses on the partner's individual tax return can be limited by various loss limitation provisions such as the passive loss limitations. There also are limitations on claiming capital losses (*and for individuals capital losses can be carried only forward*). For individuals, excess business losses can offset a limited amount of other income (such as salary, interest and dividend income, and investment gains), with the limit initially set at \$250,000 for unmarried individuals as of 2018 and adjusted annually for inflation. For married couples filing jointly, the limitation amount is doubled.

- 5.1.3 Limited Liability Company: LLCs can be taxed either as corporations or as partnership (so long as they have two or more owners) at the election of the owners. Almost always, they are taxed as partnerships. Thus, LLCs offer the taxation of a partnership with the limited liability of a corporation.
- 5.1.4 Data on Partnerships and LLCs: As you can see from the chart on page 5-5, there has been an explosive growth in the number of LLCs.
- 5.1.5 S Corporation: An S Corporation is an entity taxable as a corporation that elects corporate status and which makes a valid S election. In order to make such an election, the corporation must have no more than 100 shareholders (where

all members of a family are treated as a single shareholder), all of the shareholders are individuals subject to US taxation on their worldwide income (i.e., US citizens and resident aliens) along with some specialized trusts and estates. An S corporation is not taxed on its income but rather that income is pass through to and included by its shareholders. S corporations have been useful to minimize the FICA taxes (social security and Medicare) imposed on wages although its usefulness in this area is now less certain.

5.1.6 C corporation: A Corporation is a taxable entity, giving rise to the corporate double tax of approximately 21% + 20% (on the remaining 79%, possibly deferred), or a total potential tax burden of 36.8%.<sup>1</sup> Note that the impact of the corporate tax can be ameliorated in several ways including: (1) the distribution of corporate profits as tax-deductible payments such as interest, rent, and wages; (2) a reduced tax rate on corporate returns at the shareholder level (capital gains and dividend distributions are now generally taxed at 20%); (3) a reduced tax rate at the corporate level such as the preferential treatment of savings and loan associations and REITS; and (4) the deferral of the shareholder-level tax by accumulating rather than distributing corporate profits.

5.2 Computation of After-Tax Returns to Pass-Through and Non-Pass-Through Forms of Organizations: Because pass-through entities such as partnerships are not taxable, the after-tax rate of return is simply  $\$I[1 + R(1 - t_{qbi})]^n$ , the same as the type I vehicle considered in Chapter 3. (Note that  $t_{qbi}$  may vary with each partner.) Because operating profits are taxed annually at ordinary rates, this form of business organization does not offer deferral or conversion into capital gain. (We are assuming all operating profits are generated from the sale of inventory or services rather than capital assets held

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<sup>1</sup> High-bracket taxpayers must pay an additional 3.8% on their investment income, meaning that qualified dividends are effectively taxed at 23.8%. This increases the aggregate double tax burden to 40.6%.

for more than a year.) However, if the same business activity is conducted in corporate form and the investors realize all of their gain at liquidation of the entity after  $n$  years, then the after-tax return is  $\$I\{[1 + R(1-t_c)]^n - t_{cg}[(1 + R(1 - t_c))^n - 1]\}$ . This equation can be rearranged to  $\$I[1 + R(1 - t_c)]^n(1 - t_{cg}) + t_{cg}\$I$ .

5.2.1.1 In the case of a single period investment horizon (that is, when  $n = 1$ ), an investment in partnership form will dominate the same investment in corporate form if  $(1 - t_p) > (1 - t_c)(1 - t_{cg})$ .

5.2.1.2 If the investment horizon becomes longer, the analysis becomes more complicated. We can make the following two assertions: (1) the longer the investment horizon, the higher the after-tax corporate return becomes although the partnership return does not change, and (2) if the corporate form dominates when  $n = 1$ , it will dominate over all longer investment horizons.

5.2.1.3 If the corporate tax rate equals the individual tax rate and shareholder returns from corporate investment are untaxed, then the after-tax returns on corporate investments equals the after-tax returns on partnership investments; i.e., the corporate and individual income taxes have been fully integrated.

5.2.1.4 If the corporate tax rate equals the individual tax rate and shareholder returns from corporate investment are taxed at any positive amount, then the after-tax return from a corporate investment always will be lower than the same investment in partnership form, with the difference going to zero as the investment horizon lengthens.

5.2.1.5 If the corporate tax rate is less than the individual tax rate and shareholder returns from corporate investment are untaxed, the investment in the corporate form dominates investment in the partnership form.

5.2.1.6 If the corporate tax rate is less than the individual tax rate and shareholder returns to corporate investment are taxed at any positive amount such that  $(1 - t_p) > (1 - t_c)(1 - t_{cg})$ , then the partnership investment dominates for a one-period investment but the corporate investment dominates if the investment horizon is sufficiently long (with the actual length determined by all of the relevant tax rates).

5.3 Start-Up Enterprises: Decision Factors, Expectations, and Observed Data: What form of business organization should be adopted by a start-up?

5.3.1 Most start-up ventures lose money. If the start-up is formed as a C corporation, the operational loss will be recognized by the owners only when the venture is terminated. That defers the loss and, because loss from disposition of shares usually is a capital loss, generally makes the losses more difficult to use.

5.3.2 Operating losses of an S corporation can be deducted by the owners in the year incurred by the S Corporation (subject to the various loss limitation rules such as the passive loss limitations) to the extent of their investment in the S Corporation. Such operating losses pass through as ordinary losses. Note that debt-financed operating losses of an S Corporation generally are suspended until the time (if ever) that additional capital is invested in the venture or corporate-level profits are generated.

5.3.3 Operating losses of a partnership can be deducted by the owners in the year incurred by the partnership as ordinary losses. This is true even of debt-financed losses, although such losses ultimately will generate offsetting income upon termination of the venture unless additional capital is contributed.

5.3.4 If the taxation of flow-through entities seems preferable to C Corporations, why are almost all start-ups formed as C

Corporations? Possible answers include: (1) the traditional corporate form is more familiar and the non-tax implications both more familiar and more predictable (while an LLC can issue convertible preferred debt, it is more difficult to implement and to explain); (2) Qualified Small Business Stock can be used (in relatively small dollar amounts) to eliminate all tax on exit; (3) Special investors including tax-exempt organizations and foreign investors may be unwilling to include operational income from US sources (a result that can be avoided by using an LLC with appropriate Blocker corporations); (4) the decision may be made by a management group that does not share in losses and so is indifferent to the treatment of such losses (though this violates the assumption that all parties want to minimize aggregate taxation); and (5) pass-through entities potentially impose annual taxation on investors without providing any cash with which to pay the resulting tax liability, a possibility many investors are unwilling to face.

- 5.4 Changing Preferences for Organizational Forms Induced by Tax-Rule Changes: In terms of capital under control, the corporate form has always dominated all other forms of business organization. The frictions imposed on noncorporate forms of business organization have declined significantly in recent years with the popularity of the limited liability company. However, because *publicly-traded business organizations will be taxed as corporations regardless of the state law form of organization (other than certain publicly-traded partnerships limited to investment in financial products, certain natural resources, and oil and gas distribution)*, corporations will continue to dominate. But for business organizations that will not be publicly traded, more limited liability companies are formed than traditional (i.e., "C") corporations.

#### 5.4.1 The Required Before-Tax Rates of Return on Corporate and Partnership Activities

5.4.1.1 Given any specific rate of return available to a partnership investment ( $R_p$ ), any specific individual ordinary income tax rate ( $t_p$ ), any specific corporate tax rate ( $t_c$ ) and any specific capital gains tax rate ( $t_{cg}$ ), we can ask the following question: what investment return must a corporation generate ( $R_c$ ) to equalize the after-tax return available to investment in partnership form, assuming an investment horizon of  $n$  periods? The answer is that  $R_c$  must satisfy the following equation:  $\$I[1 + R_p(1 - t_p)]^n = \$I[1 + R_c(1 - t_c)]^n(1 - t_{cg}) + t_{cg}\$I$ . An equivalent question is: what after-corporate-tax return  $r_c = R_c(1 - t_c)$  is equivalent to the after-tax partnership return  $r_p = R_p(1 - t_p)$ ? Now, the answer is that  $r_c$  must satisfy  $(1 + r_p)^n = (1 + r_c^*)^n(1 - t_{cg}) + t_{cg}$ . This can be written as:  $r_p = [(1 + r_c^*)^n(1 - t_{cg}) + t_{cg}]^{1/n} - 1$ ; that is, the after-tax internal rate of return in corporate form must equal the annual after-tax return in partnership form (duh). **Equation 5.6** at page 5-14 solves for  $r_c$  directly, and this equation is useful for computations but offers no intuitive assistance.<sup>2</sup>

5.4.1.1.1 Looking at **equation 5.6**, which variables will be hard to estimate? Presumably  $R_p$  should be relatively easy, and  $r_p$  is just  $R_p(1-t_p)$ . But is  $t_p$  easy to estimate? While the tax rates are easy to find in the Internal Revenue Code, the existence of the qualified business income deduction in §199A can add significant complexity to estimating  $t_p$ . The QBI deduction equals (I'm simplifying) the lesser of (a) income

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<sup>2</sup> By definition,  $r_c = R_c(1 - t_c)$ . Because  $R_c$  is the annual rate of investment return,  $r_c$  is the annual after-corporate-tax rate of investment return. Neither  $R_c$  nor  $r_c$  is "annualized" in the sense that it is a blended rate that accounts for different investment returns over different time periods. Thus, calling  $r_c$  an "annualized" after-corporate-tax rate of return is unhelpful. Additionally, transmuted  $r_c$  in equation 5.3 into  $r_c^*$  in equations 5.5 and 5.6 is equally unhelpful because  $r_c^* = r_c$ .

from a qualified business and (2) the amount of wages paid in the qualifying business. (Note that salary received is never QBI.) For high-bracket taxpayers, qualified businesses exclude a variety of profit-seeking activity including health care, legal services, consulting, and entertainment.

5.4.1.1.1.1 Let us consider the simplest case where the taxpayer runs a qualified business without the need for any employees. To generate a wage base, the taxpayer forms an S corporation to run the business and the taxpayer will be the sole employee of the S corporation. Note that the wages paid will be includible to the taxpayer as ordinary income but the net profit generated by the S Corporation may qualify to some extent for the QBI deduction and so only 80% of the QBI will be includible to the taxpayer (in her capacity as owner of the S corporation). Any non-QBI generated by the S corporation will be includible in full to the taxpayer (as owner of the S Corporation) as ordinary income. If we ignore all other factors, what percentage of the S corporation's profit should be paid in wages? Exactly two-thirds, because that generates a wage base of exactly one-third (i.e., one-third of wages paid), and that is the net profit of the corporation after deduction of the wages so that all of the pass-thru profit

qualifies as QBI. Paying an additional amount of wages would increase the wage base but would decrease the amount of QBI because there would be too little net profit in the corporation to benefit from the full wage base. And if a little less were paid in wages, there would be more net profit in the corporation, but there would be less QBI because of the reduced wage base.

5.4.1.1.1.2 Depending on the taxpayer's income level, there might be other complicating factors. First, wages received are subject the FICA taxes while pass-thru earnings from an S corporation are not, and this creates pressure to avoid paying salary to the owner of the S corporation. In addition, for low bracket taxpayers, the QBI deduction is allowed without the need to fully satisfy the wage base requirement, which again might justify a smaller share of profits paid in wages.

5.4.1.1.2 Is  $t_{cg}$  easy to measure? Perhaps not: in **equation 5.6**, it is the tax imposed when corporate earnings are extracted from the corporation. But recall that if the taxpayer dies shortly before those earnings are extracted, the basis step-up at death rule eliminates the (deceased) shareholder's gain, effectively reducing the value of  $t_{cg}$  to zero.

5.4.1.2 Table 5.1 at page 5-15 provides some examples of what the after-corporate-tax rate of return must be to equalize an investment in partnership form, using three

different values for the individual tax rate and five different investment horizons, always assuming that the capital gains tax rate is 40% of the ordinary tax rate and that the partnership before-tax rate of return equal 10%. Note that as the investment horizon lengths, the burden of the corporate double tax declines, proving once again the value of deferral (of the shareholder-level tax imposed at capital gains rates on the after-tax corporate accumulation at the end of the investment horizon).

- 5.4.2 The Required Rate of Return on Stocks in the Presence of Dividends: Distribution of dividends by a corporation paid out of annual earnings eliminates the benefit of deferral otherwise available to an individual shareholder. If dividends are taxed more harshly than capital gain, dividend distributions also increase the effective tax rate on the corporate investment. Thus, if annual dividends are distributed,  $r_c^*$  must increase. This can be seen by comparing Table 5.1 (page 5-15) with Table 5.2 (page 5-16). (Note that we must make some assumption about what the shareholder does with the dividend distribution. See the sentence on page 5-16 at footnote call number 20.)
- 5.4.3 The Effective Annualized Tax Rate on Shares:  $t_s$ : We might ask the following question: what single level of annual shareholder tax ( $t_s$ ) is equivalent to the actual tax a shareholder will pay on annual dividends plus the capital gain at the end of the investment horizon? We call  $t_s$  the "effective annualized tax rate" on shares (more accurately, the effective annual tax rate on share returns). If  $r_c$  is the after-corporate tax internal rate of return, then a shareholder's after-tax annual return from the corporate investment equals  $r_c(1 - t_s)$ . For that special case when the corporate return exactly equals the partnership return, we have  $r_c^*(1-t_s) = r_p$ , or  $t_s = 1 - r_p/r_c^*$ .

#### 5.4.4 Required Before-Tax Rate of Return: Corporation Versus Partnerships: $R_c^*$

5.4.4.1 Using the definitions  $r_c^* = R_c^*(1 - t_c)$  and  $r_p = R_p(1 - t_p)$ , we get:  $R_c^*/R_p = (1 - t_p)/(1 - t_c)(1 - t_s)$ .

5.4.4.2 Table 5.3 (p. 5-18) sets forth the values of  $r_c^*$ ,  $t_s$ , and  $R_c^*$  for various values of  $R_p$ ,  $t_c$ ,  $t_p$ , and  $t_{cg}$ , in each case assuming a 10% pre-tax return for a partnership investment, an investment horizon of 10 years, and no dividends paid by the corporation.

5.4.4.3 Pre-1981 Economic Recovery Tax Act (ERTA 1981): Prior to 1981, the individual tax rate on ordinary income was 70%, much greater than the 46% corporate tax rate. Dividends were taxed as ordinary income while capital gain was taxed at only 28%. Accordingly, there was a strong tax bias in favor of the corporate form of business organization, and dividends generally were not declared. In fact, Congress enacted specialty penalty provisions applicable to taxpayers who incorporated largely passive assets or whose corporations reinvested profits in excess of the reasonable needs of the business.

5.4.5 Post-1981 Economic Recovery Tax Act (1981-1986): From 1981 through 1986, the highest individual tax rate was reduced to 50% and the capital gains rate was lowered to 20%. Absent a very long investment horizon, the corporate form was slightly disfavored.

5.4.6 Post-1986 Tax Reform Act (1987, 1988-1990): Starting in 1987 and continuing through 1990, the top individual marginal tax rate fell below the corporate tax rate, thus making the corporate form or organization tax disadvantaged for all investment horizons.

5.4.7 Post-1990 Revenue Reconciliation Tax Acts (1991-1996): In 1991, the top individual tax rate was increased slightly. Starting in 1993, the corporate tax rate was decreased below

the highest individual tax rate, reducing the disincentive to use the corporate form and in fact giving an advantage to the corporate form with long investment horizons.

5.4.8 Post-1997 Taxpayer Relief Act (1997-2000): The capital gain rate was reduced from 28% to 25%, reducing the investment horizon necessary to equalize the net corporate and partnership effective tax rates.

5.4.9 Post-2000 Economic Growth and Tax Relief Reconciliation Act (2001-2002) and the Jobs Growth and Tax Relief Reconciliation Act of 2003 (2003 On): The highest individual tax rate became 35%, capital gain generally was taxed at 15%, and the corporate tax rate was 35%. However, for domestic manufacturing corporations the effective tax rate generally was 32% because of the deduction in I.R.C. section 199 (equal to 9% of the lesser of (a) one-half of w-2 wages paid in domestic manufacturing and (2) taxable income. A deduction of 9% of taxable income for a corporation paying tax at a rate of 35% reduces the effective tax rate by 0.09 times 35%, or about 3%.) Note: §199 was repealed as of 2017.

5.4.10 Further Analysis of the 2003 Tax Act:

5.4.10.1 The JGTRCA of 2003 not only reduced the ordinary income tax rate to 35% but also reduced the tax to individual shareholders on dividend distributions to the capital gain rate, then 15% but now 20%. For the first time in US history, there was no shareholder rate penalty on dividend distributions. Be sure to note, however, that dividend distributions relinquish the deferral otherwise available on corporate returns. See Table 5.5 at page 5-20 for the value of deferral as indicated in the second row of the table.

5.4.10.2 By reducing the effective rate of tax on corporate investments, Congress reduces the corporate cost of equity capital. Note that reducing the tax rate on

dividends does not affect the cost of capital of corporations that adopt the tax-minimizing strategy of eschewing dividend distributions.

5.4.10.3 Prior to reducing the rate of tax imposed on dividends from ordinary income to capital gain, the cost of capital for a firm distributing 100% of its earnings as dividends dropped from 154% of the non-corporate earnings return to 118%, thereby reducing the corporate disincentive considerably. Of course, because retention of profits until liquidation offers deferral that dividend distributions do not, the cost of capital for a corporate retaining earnings for 10 years is lower still, at about 110% of the non-corporate earnings return.

5.4.11 The TCJA, Changing Organizational Form, and Tax Planning: Choice of business entity has become much more complex since enactment of the TCJA. Prior to 2018, there were several well-established rules of thumbs such as never put real estate into a C corporation and prefer a pass-thru whenever possible. But now, the decision requires complex modeling and assumptions built into the model must be made explicit (especially with regard to the QBI deduction). One difficult issue is the possibility that some of the new provisions will be repealed. In my opinion, the low corporate tax rate will remain (although it might be adjusted up slightly) and the basic international provisions will stay. But the QBI deduction almost certainly will be repealed, and many of the new loss limitations will go. As the text observes, it is expensive (in a tax sense) to convert from a corporation to a pass-thru entity. If the advantages of the corporate form are expected to be transitory, it is very hard to know what to do.

5.4.12 Progressive Personal Income Tax Rates:  $t_p$  and  $t_{cg}$ : While the progressive rate structure potentially affects the shareholder's after-tax investment return, almost all investment assets

directly held by individuals are held by individuals who are in the top tax bracket every year.

## 5.5 Other Organizational Forms Used to Organize Production Activities

### 5.5.1 Hybrid Corporate Forms

#### 5.5.1.1 Small Business Corporation (Section 1244):

Limited amounts of small business corporation stock can be issued to founding owners. Capital losses from such stock generally is not subject to the usual capital loss limitations.

#### 5.5.1.2 Qualified Small Business Stock (Section 1202):

Individuals holding stock of a qualified small business corporation can exclude **100%** of the gain realized upon sale if the stock is held for at least 5 years prior to sale. The amount of gain that can be excluded by any particular taxpayer is limited to the *greater* of \$10 million or 10 times the individual's basis in the stock. Other limitations apply.

#### 5.5.1.3 Closely Held Corporations: No special tax rules apply to corporations simply because their stock ownership is limited to a few, usually related shareholders. But because the ownership of the venture is contained within a small group of individuals, many of the frictions associated with the corporate form of organization may be avoided. When the owners of a corporation are also the managers, the corporate double tax largely can be avoided by paying out the firm's operating revenue in the form of deductible salary, rent, and interest. Eliminating corporate profits through deductible payments to related individuals or organizations is called *income stripping*.

#### 5.5.1.4 Not-For-Profit Corporations: Many organizations (not limited to charitable organizations) do not pay corporate income taxes on their operational profits. A

small subset of such exempt organization also escape taxation on their investment returns. Note, though, that exempt organizations are subject to a corporate-tax equivalent on their net Unrelated Business Taxable Income.

5.5.1.5 Master Limited Partnerships (MLP): A non-specific name for widely held limited partnerships, largely eliminated as the result of changes to the taxation of partnership whose shares are publicly traded.

5.5.1.6 Publicly Traded Partnerships (PTP): Partnerships whose interests are traded over a public exchange or on an active secondary market will be taxed as a corporation regardless of the state-law form adopted by the entity unless the partnership qualifies for the PTP exception. To qualify for this exception, either at least 90% of the partnership's income must come from passive-type investments (such as interest, dividends, rents, and gain from the disposition of capital assets), or the partner's income derives from the exploitation (including pipeline delivery) of natural resources including timber.

5.5.1.7 Limited Liability Partnerships (LLP): Essentially a limited liability company created specifically for publicly regulated service partnerships such as accounting firms and law firms. Liability for breach of professional responsibility generally is not limited.

5.5.1.8 Real Estate Investment Trust (REIT): A type of corporation that generates almost all of its income from real estate assets (including mortgages on real estate held by others) and that distributes most or all of its profits each year. A REIT is only taxable on its *undistributed* profits.

5.5.1.9 Real Estate Mortgage Investment Conduits (REMICs): A special type of tax-exempt entity allowing individuals to pool their capital and purchase mortgages on real estate. Unlike REITs, REMICs cannot directly own real estate assets other than mortgages.

5.6 Nontax Advantages of Operating in Corporate Form: Frictions and Restrictions

5.6.1 Transaction Costs of Large Partnerships: There is nothing in the partnership arena equivalent to the corporate law of Delaware, making it more expensive (because more uncertain) to reorganize or restructure a large partnership as compared with a corporation.

5.6.2 Access to Capital Markets: With a very limited exception, entities taxable as partnerships do not have access to the broad capital markets where the relative cost of capital is low.

5.6.3 Control of Managers: Corporate law has developed well-defined rules for the market for corporate control; there is nothing equivalent in the partnership arena. This potentially increases the agency cost of using the partnership form for non-managing partners.

5.7 **[Not assigned]** Appendix 1: Dividend Imputation in the Corporate Form: Many western nations partially integrate the corporate and individual income taxes using a dividend-imputation system. Corporate taxes are essentially treated as a non-refundable withholding on shareholder-level taxes. So, for example, if a corporate is taxed at a rate of 40% and earns \$100 of income, the corporation pays \$40 in taxes. That amount will be imputed to the shareholder when dividends are paid. For example, if a \$60 dividend is paid, that is treated as if a dividend of \$100 was declared and then \$40 was sent by the corporation to the government as a withholding of the shareholder-level tax on the \$100 grossed-up dividend. If the corporate tax rate and the shareholder tax rate are equal and profits are distributed annually, dividend imputation results in full

integration. Note that dividend-imputation means that profits earned in corporate solution are taxed at the higher of the corporate tax rate and the shareholder's tax rate.

## 5.8 Appendix 2: Additional Investment Vehicles:

5.8.1 Private Equity Fund: A private equity fund is a fund formed to acquire majority equity stakes in existing corporations (thereby taking them private), restructuring them, and then selling them in an IPO or similar event (thereby returning them to public capital markets). Private equity funds usually anticipate holding a particular corporation for about 5 years. Private equity funds almost always are formed as partnerships or limited liability companies with blocker companies used to accommodate the tax preferences of special investors such as tax-exempt organizations, foreign investors, and sovereign wealth funds. Managers of private equity funds are compensated for the services they provide both with a fixed fee (generally about 2% of assets under management) and a share of dispositional gains (usually about 20%). A hurdle may be set so that the managers do not receive their incentive compensation except to the extent the IRR of the investment exceeds the hurdle rate.

5.8.2 Hedge Fund: A hedge fund is an investment fund that purchases stock of public corporations, foreign currency, and other investment assets with the goal of generating a short-term profit (usually with an investment horizon of about 6 months). The managers receive both a fixed fee and incentive compensation at about the same rate as the managers of private equity funds.

5.8.3 Exchange Fund: An exchange fund is a special entity used by wealthy investors who hold a large position in a single corporation. If such an investor wishes to diversify without incurring an immediate tax, she can contribute her assets to an exchange fund while others do the same. After all the

contributions have been made, each shareholder has diversified across the various assets contributed to the exchange fund. One important limitation is that at least 20% of the assets held by the exchange fund cannot be undiversified liquid assets. Real estate makes a good illiquid asset.

## 5.9 Discussion Questions (p. 28):

5.9.1 Question 1: "Corporations are subject to double taxation" in the sense that profits earned by a corporation are taxed immediately at the corporation's tax rate and then a second time when realized by the shareholder either via a dividend distribution or as gain from the sale of shares (possibly sold back to the corporation). For some corporations (S corporations and REMICs), there is no double taxation while for others (REITs), there is limited double taxation only to the extent of undistributed profits. Even for C corporations, there is only a double tax to the extent corporate receipts are distributed to equity owners: wages, interest on debt capital, and the cost of goods sold are all deductible by the corporation, thereby eliminating the corporate-level tax on revenues given to employees, creditors, and suppliers. "Pass-through entity taxation" means that the entity is not itself a taxpayer. Rather, it files an informational return with the IRS and then its tax items are allocated among and taxed directly to the equity owners. Note that the owners of a pass-through entity must pay taxes on entity-level profits even if those profits are not distributed currently, potentially making the generally illiquid investment expensive to hold.

5.9.2 Question 2: Corporations allow its equity owners to defer tax at the shareholder level by not paying dividends. By not paying dividends, shareholder-level taxes are deferred until the shareholder sells his shares. Historically, dividends were taxed at ordinary income rates while gain from the sale of shares generally qualified for the lower capital gain rate. Thus,

avoiding dividends also permitted shareholders to realize their gains at lower taxable rates.

5.9.3 Question 6: The 1986 Tax Act lowered the personal tax rate, thereby increasing the after-tax return to partnerships for a given pre-tax rate of return. While the corporate tax rate also decreased, the personal tax rate on ordinary income was below that of the corporate tax rate. This made corporations particularly tax disfavored. In addition, the personal tax rate on capital gains increased from 20% to 28% (the same rate as on ordinary income), thus offering little advantage to favorable capital gains treatment to shareholders who sold their shares. But more firms did not convert to partnership form because it is not costless to convert from one organizational form to another (contracts have to be rewritten and corporate-level taxes generally must be paid at the time of conversion to partnership form) and partnerships have higher nontax costs of operation arising from lack of transferability of ownership rights (making it difficult to raise new capital for the entity), higher administrative costs, and partners do not have limited liability. In addition, most publicly traded corporations will be taxed under the corporate regime regardless of the state law form of organization. This was not always true, and T. Boone Pickens converted Mesa Petroleum into a partnership when publicly traded partnerships could be taxed as partnerships.

5.9.4 Question 7:

5.9.4.1 Corporate, personal, and shareholder-level tax rates can vary cross-sectionally for a variety of reasons, including progressive tax rates, different tax rates applying to different activities (ordinary income or capital gain), different tax rates applying to activities undertaken in different tax jurisdictions (state tax variation), different tax rates applying depending on the manner in which the activities are taxed (taxation of

loans versus other financing transactions such as sale/leasebacks), differences across taxpayers in the manner in which investments are liquidated (historical difference between ordinary income and capital gain), and differences in the length of investment horizons. Tax rates can also change over time for many reasons including changes in statutory rates, the possibility of incurring net operating losses, and variability of income from different tax jurisdictions.

5.9.4.2 To achieve effective tax planning, planners must consider the tax rates facing all parties to a transaction and therefore must consider cross-sectional differences in corporate, personal, and shareholder-level tax rates. In multi-period tax-planning problems, planners must also consider how these tax rates will change over time. Tax policymakers must consider how differential tax rates among individuals or corporations will lead investors to take advantage of these differences through their investment, financing, and organizational-form choices. Policymakers must also realize that changes in rates will affect the timing of transactions as tax planners take account of changes in tax rates over time.

5.9.5 Question 8: *Looking only at tax rates and assuming corporate and noncorporate pretax returns are equal*, the partnership form always will be preferred if the investor's individual tax rate ( $t_p$ ) is less than the corporate tax rate ( $t_c$ ). The corporate form will always be preferred if  $(1 - t_p) < (1 - t_c)(1 - t_{cg})$ . If the investor does not fall into either of these two easy cases, one form will be preferable to another based on the investment horizon. If pre-tax corporate returns are greater than non-corporate pre-tax returns, the analysis becomes even more complex but still depends on the investor's marginal tax rate.

Non-tax considerations include the value of liquidity and potential control of management.

5.10 Exercises (p. 29):

5.10.1 Exercise 17:

5.10.1.1 Part (a): True, assuming that not all corporate earnings are paid out as dividends, investing in corporate form allows a taxpayer to defer capital gains taxes until the end of the holding period. Longer holding periods therefore allow the investment to compound at the before-shareholder-level tax rate for longer, yielding a higher rate of return. The proceeds from investing in corporate form are equal to  $\$1[1+R(1-t_c)]^n (1-t_{cg}) + t_{cg}\$1$ , or  $\$1[1+0.15(1-0.21)]^n (1-0.20) + .20\$1$ , or  $[1.1185]^n(.80) + .20$ , and hence the annualized after-tax rate of return is equal to  $\{[1.1185]^n (.80) + .20\}^{1/n} - 1$ . If  $n=1$ , this rate of return is 9.45%. If  $n=5$ , the rate is 9.86%, and if  $n=10$ , the annualized after-tax rate of return is 10.24%.

5.10.1.2 Part (b): False. For partnership investments, all taxes are paid annually, so the investment horizon does not affect the annual rate of return. The proceeds from investing in partnership form are equal to [Recall  $t_p$  is either the ordinary rate or  $t_{qbi}$  if the taxpayer qualifies for the qualified business income deduction.]  $\$1[1 + R(1 - t_p)]^n$  and hence the annualized after-tax rate of return is equal to  $r_p = \{\$1[1 + R(1 - t_p)]^n\}^{1/n} - 1$  which simplifies to  $= R(1 - t_p)$ . This rate of return does not change with changes in  $n$ . In the question,  $R(1 - t_p) = .15(1 - .37) = .0945$ , or 9.45%.

5.10.1.3 Part (c): False. The total tax burden on corporate income is higher when a corporation pays dividends than when it does not. Therefore, holding the pretax return on projects constant, the after-tax return to shareholders is reduced as dividends are paid out. The

before-tax returns to shareholders, however, are unaffected. In both cases, the pretax return to shareholders is the after-corporate-tax rate of return of  $15\% \times (1 - .21)$  or 11.85%. In fact, if share prices reflected the tax disadvantage of paying dividends, the before-tax rate of return to shareholders would be *higher* for dividend-paying stocks than for non-dividend-paying stocks. That is, non-dividend-paying stocks would bear an implicit shareholder-level tax to reflect the tax advantage of receiving returns in the form of deferred capital gains relative to dividend-paying stocks.

5.10.1.4 Part (d): False. The corporate form will be preferred for all investment horizons only if  $(1 - t_p) < (1 - t_c)(1 - t_{cg})$ .

5.10.1.5 Part (e): False. If  $(1 - t_p) > (1 - t_c)(1 - t_{cg})$ , the partnership form will be preferred for single-period investments. But assuming  $t_c < t_p$ , there is an investment horizon beyond which the corporate form will be preferred.

5.10.2 Exercise 18: If the after-tax rates of return to investment in partnerships and corporations are equal, then  $[(1 + r_c)^n(1 - t_{cg}) + t_{cg}]^{1/n} - 1 = r_p$  where  $r_c$  is the rate of return on corporate investments after corporate taxes but before shareholder-level taxes, and  $r_p$  is the rate of return on partnership investments after personal taxes.  $r_c^*$  can be solved for by rearranging  $r_c^* = \{[(1 + r_p)^n - t_{cg}]/(1 - t_{cg})\}^{1/n} - 1$  and, after the 1986 Tax Act,  $r_c^* = \{[(1 + 0.15)^8 - 0.28]/(1 - 0.28)\}^{1/8} - 1 = 0.1839$  or 18.39%. We can determine the needed pre-tax return by grossing up the after-tax returns. Thus, for a partnership to generate a 15% return after the partner's income taxes, it must generate a pre-tax return ( $R_p$ ) of  $15\%/0.72$ , or 20.83%. For a corporation, it must generate a return before corporate taxes ( $R_c$ ) of  $18.39\%/0.65$ , or 29.83%. This is high because the corporate tax rate of 35%

was much greater than the individual tax rate of 28%. Under this tax regime, many businesses will choose to produce goods and services as partnerships because the before-tax rate of return required for partnerships to return the targeted after-tax rate to their investors is much lower than for corporations

### 5.10.3 Exercise 19:

5.10.3.1 Part (a): The after-tax accumulation in the corporation is given by  $\$100,000[1+R(1-t_c)]^n (1-t_{cg}) + t_{cg}\$100,000 = \$100,000[1 + 0.15(1 - 0.21)]^{20}(1 - 0.20) + 0.20(\$100,000) = \$100,000(9.39117) (0.80) + \$20,000$ , or \$771,294. This accumulation can be converted to an annualized after-tax rate of return of  $(\$771,294/\$100,000)^{1/20} - 1 = 10.75\%$ .

5.10.3.2 Part (b): The annualized after-tax rate of return to the S-corporation is  $0.15(1 - 0.296) = 10.56\%$  so the regular corporation is tax preferred. The regular corporation pays tax at a relatively low corporate rate of 21% and defers the double taxation at the investor level for 20 years. (Note that for a one year investment when the pass through qualifies for the QBI deduction, the S corporation would be preferred. But as the time horizon increases, the C corporation becomes preferred because of the benefits of deferral.)

## 5.11 Tax-Planning Problems (p. 29)

### 5.11.1 Problem 25:

5.11.1.1 Part (a): It is not advantageous for capital to be raised in one corporation (the Parent) simply to invest in the stock of other corporations (the Children) if all returns will be distributed annually and any tax is imposed on corporate-level dividends: the investors are better off buying stock of the Children directly (or through a partnership). If, however, the Children will pay dividends taxable at high rates to individual investors

(historically true), it may make sense to interpose the Parent corporation and then allow the returns to accumulate in the Parent, ultimately to be removed as capital gain. This assumes the personal holding company tax (imposed on "incorporated pocketbooks") and the accumulated earnings tax (imposed on corporations that accumulate earnings beyond the needs of its business) can be avoided.

5.11.1.2 Part (b): If a corporation has liquidity needs, it will invest its excess cash in readily-tradable debt instruments such as T-Bills or some equivalent. Adjustable-rate preferred stock almost certainly will be better because the same before-tax rate will be received but most of the return will go untaxed because of the dividends-received deduction of at least 50%.

5.11.1.3 Part (c): But will a corporation issue adjustable-rate preferred stock? If it issues debt instruments, it can deduct the interest it pays while if it issues equity of any kind (including adjustable-rate preferred stock), the dividends are not deductible to the dividend-paying corporation. Since the interest deduction equals 100% of the periodic payment but the dividends-received deduction to the Parent corporation may be as little as 50%, it makes more sense to issue debt rather than equity.

5.11.1.4 Part (d): In Canada, the 100% dividends-received deduction means that the net effect of dividends paid and interest paid are the same so long as the payor and the payee are in the same tax bracket.

## 5.12 Problem 27:

5.12.1 Part a: Practicing as a sole proprietor (or as a partner) yields an after-tax return of  $0.15(1 - 0.70)$ , or 4.5%, regardless of the investment horizon. Investment in corporate form yields an

after-tax rate of return equal to  $\{[1 + 0.15(1 - 0.48)]^n(1 - 0.35) + 0.35\}^{1/n} - 1$ . For the three investment horizons, these rates of return are: 5.33% for a 5-year investment, 5.68% for a 10-year investment, and 5.88% for a 15-year investment. In each case, the corporate investment is superior. Note that for a one-year investment horizon (assuming the corporate after-tax accumulation is taxed to the shareholder as long-term capital gain), the corporate investment offers a return of  $0.15(1 - 0.48)(1 - 0.35)$ , or 5.07, a higher rate than using the non-corporate form. If the corporate form is superior for a one-year investment horizon (assuming accumulations are taxed as long-term capital gain), it will be superior for all longer investment horizons.

- 5.12.2 Part (b): For converting the corporate investment into a partnership (or sole proprietorship) investment after 5 years, the total accumulation for each dollar invested will equal  $\{[1 + 0.15(1 - 0.48)]^5(1 - 0.25) + 0.25\}$  times  $[1 + 0.15(1 - 0.50)]^n$ . With  $n$  equal to 5, this equals \$1.93; with  $n = 10$ , this equals \$2.77. For keeping the investment in corporate form, the total accumulation will equal  $[1 + 0.15(1 - 0.48)]^{5+n}(1 - 0.25) + 0.25$ . For  $n = 5$ , this equals \$1.84 and for  $n = 10$ , this equals \$2.56.