CHAPTER 8

Taxes and Firm Value

Income and capital gains taxes impact the value of both private and public firms. Tax regimes influence valuation through income taxes at the business entity level, additional taxes on dividends paid to shareholders of C corporations, and capital gains taxes at both the entity level and shareholder level when a firm is transacted. The impact of taxes on the value of an S corporation remains a highly contentious topic.[1] While the tax courts appear to have concluded, at least temporarily, that pass-through entities like S corporations have an added valuation benefit because the proceeds are taxed only once at the shareholder level, this conclusion could change at any moment, although the argument for upholding it suggests that if it is overturned, it will not happen any time soon.[2]

This chapter isolates how tax regimes influence the value of private firms. In particular, we show that S corporations are more valuable than equivalent C corporations. This is true for two reasons. The first is that S corporation distributions flow directly to shareholders and are taxed only at the shareholder level. C corporation income is taxed at the firm level, and any subsequent shareholder distribution made from after-tax corporate income is taxed a second time at the shareholder level. The availability of higher after-tax cash flows to S shareholders relative to C shareholders makes S corporations more valuable than C corporations.

The second reason is that an S corporation can be sold for a higher price pretax than an equivalent C corporation. This occurs because the sale of an S corporation can be structured in such a way that the acquirer can obtain tax benefits related to taking greater depreciation expense on purchased assets whose values have been stepped up, or accounted for at market value, which generally exceeds the book value of purchased assets. In contrast, acquirers of freestanding C corporations cannot take advantage of the step-up because doing so triggers an immediate tax liability that exceeds the present value of tax benefits that accrue from stepping up the purchased assets to their market value. The final section of this chapter summarizes the research conducted by Merle Erickson and Shiing-wu Wang. This research

empirically demonstrates that private S firms sell for higher multiples than comparable private C corporations.

This last result is important for valuing private S firms in particular and other pass-through entities in general. This empirical work makes perfectly clear that the theoretical tax advantages attributed to pass-through entities are, in fact, valuable and that acquirers are willing to pay for such favorable attributes.

DOUBLE TAXATION AND THE VALUE OF S AND C CORPORATIONS

Whether an S is worth more than a C is, in the first instance, related to whether not paying an entity-level tax has value to a buyer. All else equal, the S will be more valuable than an equivalent C, which pays taxes at the entity level and a second time at the shareholder level if shareholders receive distributions from after-tax profits. Since entity-level profits are passed through to the shareholder and taxed only once, at the shareholder level, an S has a valuable tax attribute that a C does not have and therefore should be worth more for this reason, all else equal. However, in practice many S firms pay the tax liability of shareholders, and to this extent such payments appear to be perfectly analogous to an entity-level tax paid by an equivalent C firm. Therefore, the value distinction between an S and a C due to different tax treatment is treated by most valuation professionals as a distinction without a difference. Hence, those who subscribe to this view conclude that an S is not more valuable than an equivalent C.

The following simple example shows how tax rates affect the values of equivalent C and S corporations. Equation 8.1 sets down the valuation identity that relates the value of a C to the value of an S.

$$V_s = V_c + (V_s - V_c) + VTS \qquad (8.1)$$

where V_s = value of S corporation
         V_c = Value of C corporation
         VTS = value of tax saving = (0.15 × dividends paid/C corporation cost of capital), where 0.15 is the statutory rate on dividend payouts

The value identity simply accepts that tax-effecting S pretax profits is equivalent to paying an entity-level tax on pretax profits of an equivalent C. This means that the after-tax cost of capital for the S and C are different to the extent that the entity-level and personal tax rates that shareholders face are not equal. Equation 8.2, the discounted free cash flow model, demonstrates the impact of differential tax regimes on values of C and S corporations.

$$V_i = [\{(R_i - C_i) \times (1 - t) - \text{net cap}X_i\}/(1 + k_i)]$$
$$+ [(R_i - C_i) \times (1 - t)] \times (1 + g_i)/(k_i - g_i)/(1 + k_i) \tag{8.2}$$

where

R = revenue

C = costs

$i = c,s$

k = before-tax cost of capital, and k_i is the after-tax cost of capital based on entity and personal tax rates, ET and PT, respectively.

g_i = growth rate of after-tax cash flow of C and S corporations, respectively

Net cap$X$ = net capital expenditures

Table 8.1 offers an example of how differential tax rates impact the values of Firm C, a C corporation, and Firm S, an S corporation. The table assumes that S and C are equivalent firms. Equivalency means that both firms have the same revenue, profitability, and risk. Capital expenditure levels net of depreciation are equal for both firms, and these expenditures are financed with equity only. The pretax cost of capital is 33 percent, and the after-tax cost of capital varies inversely with the assumed tax rates facing each firm.[3] Equation 8.2 is used to develop the valuations shown in the table.

Table 8.1 indicates that S is more valuable than C under all scenarios. In case 1, the value of S exceeds the value of C by the present value of the tax savings that occurs because S distributions are taxed only once. Consider case 3. Here the entity-level tax rate is lower than the personal tax rate. A priori, one would think that C has an advantage—and from a cash flow perspective it does. While C has more after-tax cash flow than S, the initial value of S still exceeds the value of C ($1,916.67 vs. $1,828.01). This difference emerges because the after-tax cost of capital for C is higher than for S, and the additional cash flow that C generates because of its lower tax rate does not offset its cost-of-capital disadvantage relative to S. This cost-of-capital effect is also present in case 2. Here, the personal tax rate is lower than the entity-level tax rate, and the S premium is lower than in case 3. The reason is that initially the value of C is greater than the value of S, $1,916.67 versus $1,828.01, which is due solely to the fact that the cost of capital is higher for S than for C. However, this difference is more than offset by the value of tax savings. Although not shown, this offset virtually goes away when the personal tax rate declines to 20 percent. The conclusion from this analysis is that S corporations are worth more than C corporations under virtually all plausible tax regimes.

The preceding conclusion is very much dependent on the size of the cost of capital under various tax regimes. What happens if the after-tax cost of capital is held constant and not allowed to vary with tax rates? Here we can say that C will be worth more relative to S according to how low the entity-

TABLE 8.1 Value of S and C under Different Tax Regimes ($g = 5\%$)

	Case 1		Case 2		Case 3	
	ET = 40% (k = 20%) PT = 40% (k = 20%)		ET = 40% (k = 20%) PT = 30% (k = 23.3%)		ET = 30% (k = 23.3%) PT = 40% (k = 20%)	
	C	S	C	S	C	S
Pretax profit	$500	$500	$500	$500	$500	$500
Entity-level tax	$200	$0	$200	$0	$150	$0
Shareholder tax paid by firm	$0	$200	$0	$150	$0	$200
After-tax income	$300	$300	$300	$350	$350	$300
Capital expenditures	$100	$100	$100	$100	$100	$100
Distribution to shareholders	$200	$200	$200	$250	$250	$200
Tax due on distribution	$30	$0	$30	$0	$38	$0
After-tax income to shareholders	$170	$200	$170	$250	$213	$200
Value of C	$1,917	$0	$1,917	$0	$1,828	$0
Value of tax saving if S	$150	$0	$150	$0	$161	$0
Initial value of S	$0	$1,917	$0	$1,828	$0	$1,917
Value of S minus value of C	$0	$0	$0	–$89	$0	$89
Final value of S	$0	$2,067	$0	$1,978	$0	$2,077
Final value of S less value of C		$150.00		$61.34		$249.37

level tax rate is relative to the personal tax rate. Although the result is not shown, imposing the constraint that the after-tax cost of capital is the same for C and S in case 3 results in the value of C exceeding the value of S by $172.62. In general, the value of tax saving will not offset an entity-level tax rate advantage that a C may have under the condition that the after-tax cost of capital does not vary with tax rates. However, this is not likely to be the case in the real world. Thus, under most real-world circumstances, an S will be worth more than an equivalent C.

What happens if no distribution is made and all funds are reinvested? Under the assumption that the entity and personal tax rates are equal, the value of a C and an equivalent S are equal. The reason is that C shareholders are not paying a second level of taxes, and hence the S has no tax advantage. Keep in mind that implicit in this assumption is that C and S face identical growth opportunities and after-tax earnings that are not distributed (i.e., retained earnings are used to finance investments that are designed to take advantage of these opportunities). Put differently, the

expected rate of return on investments made by C and S are exactly equal. If this were not true, the value created by C and S would be different—and unrelated to any tax impact on value, as discussed next.

NON-INCOME-TAX FACTORS THAT AFFECT THE SIZE OF THE S PREMIUM

Non-income-tax factors that influence the size of the S premium include:

- Dollar value of capital expenditures.
- Capital constraints.
- Liquidity of privately held Cs versus equivalent S corporations.
- Capital gains tax on sale of the firm.
- Method of payment when the firm is sold.
- Making a 338 election.

INVESTMENT AND THE S TAX ADVANTAGE

Table 8.1 assumed that capital expenditures are constant across tax regimes. What are the valuation implications of relaxing this assumption while retaining the equivalency of the personal and the entity-level tax rates? More specifically, assume that C capital expenditures increase to $200 and S capital expenditures decline to $50. Because capital expenditures are lower for S than C, S's long-term free cash flow growth is lower, 1 percent versus 5 percent for C in this example. Table 8.2 shows that under these conditions C is worth more than S.

CAPITAL CONSTRAINTS AND THE VALUE OF C AND S

An interesting twist to the investment scenario relates to the financing of incremental investment. Let us assume that both the C and S face the same growth opportunities. To exploit these opportunities, the required amount of investment exceeds their capacity to finance them with internally generated funds. Hence, both firms need to seek outside funding. C can potentially obtain capital from multiple sources. S, on the other hand, is limited to 75 shareholders, none of whom can be institutional investors. S cannot access the capital markets, nor can it obtain equity from private equity sources or venture capital firms. It could potentially increase its debt load by borrowing money from a bank or by seeking privately placed loans with an insurance company. But this would increase S's credit risk, and potentially raise its after-tax cost of capital to the point where the expected after-tax cash flows would not fully warrant making the investment in the first place. Unlike C, S may not be able to take advantage of its growth opportunities because its access to capital is constrained. Thus, to the extent that C can finance its investment

TABLE 8.2 Values of C and S under Different Investment Paths

				C	S
Entity tax Rate	0.40	0.40			
			Revenue	$1,000.00	$1,000.00
Personal Income tax Rate	0.40	0.30			
			Costs	$500.00	$500.00
After-tax cost of capital @40%	0.20				
			Pretax profit	$500.00	$500.00
Tax on dividends	0.15				
			Entity-level tax at 40%	$200.00	$0.00
After-tax cost of capital @30%	0.23				
			Shareholder tax paid by firm	$0.00	$200.00
Growth (C)	0.05				
			After-tax income	$300.00	$300.00
Low growth (S)	0.01				
			Capital expenditures	$200.00	$50.00
			Distribution to shareholders	$100.00	$250.00
			Tax due on distribution	$15.00	$0.00
			After-tax income to shareholders	$85.00	$250.00
			Value of C	$1,833.33	
			Value of tax saving	$75.00	
			Initial value of S		$1,537.28
			Value of S − value of C		−$296.05
			Final value of S		$1,612.28

opportunities and S is capital-constrained, it follows that the value of S will be lower relative to the value of an equivalent C. Therefore, if a firm is facing significant investment opportunities, particularly if these opportunities are strategic in nature, the firm should not make an S election. Rather, it would be better served if it became a limited liability company (LLC) so it can preserve its tax pass-through status and yet still have access to multiple outside capital sources. In addition to capital constraints, private S corporations are also likely to be less liquid than equivalent C corporations, as noted in Chapter 6.

CAPITAL GAINS TAXATION AND THE VALUE OF FREESTANDING S AND C CORPORATIONS

The Tax Reform Act of 1986 removed the tax benefits associated with the sale of a freestanding C corporation. Prior to the passage of the act, the acquirer of a freestanding C corporation could step up purchased assets from their book values. Since depreciating these higher-valued assets gave rise to a higher noncash expense, which was then tax deductible, the acquiring firm could reduce its tax liability and raise its after-tax cash flow. Since the passage of the Tax Reform Act, the tax cost of obtaining the step-up in the acquisition of a freestanding C corporation is almost always greater than the tax benefit from the step-up. In contrast, the benefits from the step-up are still available when subsidiaries of a C corporation and pass-through entities such as S corporations are sold. The example that follows demonstrates that an acquirer will pay more for an S's tax benefits due to stepping up the value of acquired assets than it will for an equivalent C corporation.[4] The structure of a taxable acquisition of a C or S can be of three forms.

1. Taxable stock acquisition without a 338(h)(10) election.
2. Taxable stock acquisition with a 338(h)(10) election.
3. Taxable asset acquisition.

Section 338 of the Internal Revenue Code allows a purchaser to elect to treat a stock purchase of a freestanding C corporation as a taxable asset purchase. The acquirer can make the 338 election if it acquires at least 80 percent of the stock of the target firm within a 12-month period and does so in a taxable manner, which means that a significant amount of the transaction must be paid for with cash. The 338 election is made by the acquirer and does not require the consent of the target's shareholders, and the election must be made within 8.5 months of the acquisition.

In a taxable stock acquisition followed by a Section 338 election, the target corporation is treated, for tax purposes, as if it sold its gross (total) assets to a "new target" for the aggregate demand sale price (ADSP). The definition for ADSP follows, along with an example fact pattern that assumes a sale of a freestanding C corporation.

$$\text{ADSP} = P + L + t(\text{ADSP} - \text{basis}) \qquad (8.3)$$

where
P = the price paid for the stock of the target
L = the liabilities of the target (now assumed by the acquirer)
t = the corporate tax rate
Basis = the adjusted tax basis of the target's gross assets

The 338 election assumes two transactions take place. In the first, the acquirer purchases the stock of the target for P. In the second transaction, the target's assets are sold to a phantom buyer for (ADSP$). Since the target is now a subsidiary of the acquirer, the sale of assets to the phantom buyer at a market value in excess of book value gives rise to a capital gain, which is a liability of the target firm, which is now part of the acquiring firm. This gain is taxable at the corporate income tax rate at the target firm level. Thus the price paid by the acquirer for the C is equal to the price paid for the stock plus the tax liability on the capital gain from the sale of the assets.

Although the acquirer pays the tax, it conceptually represents a tax liability incurred by the target firm. Once the asset sale is completed, the acquiring firm can take an incremental depreciation expense based on the difference between the market value of purchased assets and their book value. This higher noncash depreciation expense can now be written off against pretax income, which means that the acquiring firm's tax liability is now lower than it would be in the absence of this depreciation write-off.

TABLE 8.3   Capital Gains Tax versus Present Value of Tax Savings

**Present Value of Tax Saving versus Capital Gains Tax
Due Step-Up of Purchased Assets**

Purchased assets	$1,400.00		
Book value of			
purchased assets	$200.00		
Capital gain	$1,200.00		
Tax liability @ 35%	$420.00		

Depreciation Write-Off	Annual Incremental Depreciation Expense	Annual Tax Saving	Present Value of Tax Saving
Year 1	$120.00	$42.00	$38.18
Year 2	$120.00	$42.00	$34.71
Year 3	$120.00	$42.00	$31.56
Year 4	$120.00	$42.00	$28.69
Year 5	$120.00	$42.00	$26.08
Year 6	$120.00	$42.00	$23.71
Year 7	$120.00	$42.00	$21.55
Year 8	$120.00	$42.00	$19.59
Year 9	$120.00	$42.00	$17.81
Year 10	$120.00	$42.00	$16.19
Total	$1,200.00	$420.00	$258.07

However, this benefit is almost always completely offset by the capital gain's tax liability, as shown in Table 8.3.

The tax on the capital gain is $420, which is paid when the assets are acquired. The incremental depreciation benefits accrue over time, and so the present value of these payments, $258.07, will always be less than the tax due for discount rates greater than zero. Hence, unless there are additional non-depreciation-related tax benefits that accrue to the acquirer, most acquisitions of freestanding C corporations are structured as stock purchases without a 338 election.

Like a C, a 338 election by an S corporation gives rise to a capital gain at the target firm level, but the tax liability passes through to the shareholder, and thus the target, as part of the acquirer, does not pay an entity-level tax. In short, an S will be worth more to an acquirer than a C when each transaction is structured as a stock purchase followed by a 338 election, because under this structure the C pays a tax at both the entity and shareholder levels, whereas the S is taxed only at the shareholder level.

OPTIMAL ACQUISITION STRUCTURES FOR FREESTANDING C AND S FIRMS: THE IMPACT OF THESE STRUCTURES ON PREACQUISITION PRICES

Let us now consider the following fact pattern.[5]

- TC and TS are identical C and S corporations.
- The net tax basis of each firm's assets is $200 ($400 historical cost, $200 accumulated depreciation).
- Neither firm has liabilities and no net operating loss carryforwards.
- Shareholders of TC and TS face ordinary income tax and capital gains rates of 40 percent and 20 percent, respectively. Shareholders have a net basis in their respective stock of $200.
- The fair market value of TC and TS is $900.
- TC's ordinary income tax and capital gains rate is 35 percent.
- All recaptured depreciation is taxed at the ordinary income tax rate.
- An acquirer wishes to purchase either TC or TS for $900 in a taxable stock acquisition in which the tax basis of the target's assets carries over to the acquirer.

What price will an acquirer pay for each firm and how will each transaction be structured? Table 8.4 shows three types of acquisition structures under which TS and TC can be purchased and the net after-tax cost of each to the acquirer.[6]

TS's shareholders would maximize their wealth by structuring the acquisition as an asset sale. Their after-tax cash would be $873.43. The acquirer would be willing to pay $1,091.79, so the after-tax cost of

TABLE 8.4 Acquisition Prices of Equivalent S and C Corporations

Fact Pattern

Stock purchase price	$900.00	$t_c = 35\%$
Net tax basis in assets	$200.00	$t_o = 40\%$
Historical cost	$400.00	$t_{cg} = 20\%$
Accumulated depreciation	$200.00	$k = 10\%$
		Asset life = 10 yrs
Shareholder's tax basis in target's stock	$200.00	
Liabilities of target	$0.00	

	S Corporation Acquisition Structure			C Corporation Acquisition Structure		
	Taxable Stock Acquisition Without a Section 3.38(h)(10) Election	Taxable Stock Acquisition With a Section 3.38(h)(10) Election	Taxable Asset Acquisition	Taxable Stock Acquisition Without a Section 3.38 Election	Taxable Stock Acquisition With a Section 338 Election	Taxable Asset Acquisition
Purchase price	$900.00			$900.00		
Seller's indifference price[a]		$950.00			$1,276.92	
Acquirer's indifference price[b]			$1,091.79			$1,091.79
Target Corporation						
Taxable gain[c]	$0.00	$750.00	$891.79	$0.00	$1,076.92	$891.79
Tax liability[d]	$0.00	$0.00	$0.00	$0.00	$376.92	$312.13
Shareholder Effects						
Taxable gain[e]	$700.00	$750.00	$891.79	$700.00	$700.00	$579.66
Cash received	$900.00	$950.00	$1,091.79	$900.00	$900.00	$779.66
Tax liability[f]	$140.00	$190.00	$218.36	$140.00	$140.00	$115.93
After-tax cash	$760.00	$760.00	$873.43	$760.00	$760.00	$663.73

Acquirer After-Tax Cost

Gross cost	$900.00	$950.00	$1,091.79	$900.00	$1,276.92	$1,091.79
Less tax benefits[g]	$0.00	$162.29	$191.79	$0.00	$231.60	$191.79
Net after-tax cost	$900.00	$787.71	$900.00	$900.00	$1,045.32	$900.00
Acquirer Tax Basis in						
Target's stock	$900.00	$950.00	$1,091.79	$900.00	n/a	n/a
Target's net assets	$200.00	$950.00	$1,091.79	$200.00	$1,276.92	$1,091.79

[a]The purchase price at which the seller is indifferent between making the Section 338(h)(1) election and not making the election when the purchase price is $900 (column 1) when the target is an S corporation. When the target is a C corporation, the purchase price at which the seller is indifferent between an asset sale and a taxable stock sale without a Section 338 election at a price of $900 (column 4).

[b]The purchase price at which the acquirer is indifferent between making the Section 338(h)(10) election and not making the election when the purchase price is $900 (column 1) when the target is an S corporation. When the target is a C corporation, the purchase price at which the acquirer is indifferent between an asset sale and a taxable stock sale without a Section 338 election at a price of $900 (column 4).

[c]Taxable gain at the target corporation level from the stock sale or the deemed sale of the target's assets (S corporation) or the sale of the target's assets (C corporation).

[d]Tax liability at the target corporation level on the taxable gain from the stock sale, the deemed asset sale (S corporation) or the asset sale (C corporation).

[e]Taxable gain at the target shareholder level. This gain is equivalent to the gain at the target corporation level if the target is an S corporation as the gain passes through to target shareholders. The gain retains its character as it passes through to target shareholders. If the target is a C corporation, this is the gain on the liquidation (redemption of target shares by the target) of the C corporation after the asset sale.

[f]Target shareholder tax liabilities are computed based on (e) and the nature of the gain to the target's shareholders if the target is an S corporation. If the target is a C corporation, the tax liability is the gain (e) multiplied by the capital gains tax rate.

[g]The present value of the tax savings resulting from stepping up the tax basis of the target's assets. Assuming that the step-up is amortized/depreciated straight line over a 10-year period, the applicable tax rate is 35 percent and the after-tax discount rate is 10 percent.

the acquisition would be $900. But this would not be optimal for the acquirer. The acquirer would rather purchase TS for $950, structure the acquisition as a stock purchase, and after purchasing the stock make a 338 election, since the after-tax cost would be $787.71. The actual transaction price would lie between $950 and $1,091.79, because for each dollar above $950, the cash position of TS's shareholders would exceed $760 and the after-tax cost would be more than $787.71 but less than $900.

Compare this outcome to that for TC. The optimal structure of the acquisition is a stock sale. The 338 election results in a higher after-tax cost for the acquirer than does a straight stock transaction or an asset sale. Shareholders of TC will not agree to an asset sale, because after taxes they wind up with less cash than they would under a stock or stock and a 338 election acquisition structure. Hence, TC will be sold for $900 and structured as a stock sale. In contrast, TS will be structured as a taxable stock sale with a 338 election. The transaction price will be at least $950, or $50 plus more than TC's transaction price of $900. This result reinforces the conclusion that an acquirer will pay more for an S corporation than it will for an equivalent C corporation, even under the assumption that the present value of after-tax cash flows are equal. As the earlier examples of the value of tax saving demonstrated, this is not likely to be the case. When one adds the income tax advantage of an S to its advantage when a transaction takes place, then the S premium is likely to exceed the minimum 5.56 percent [($950 ÷ $900) − 1] in the example.

TAX-FREE ACQUISITIONS OF FREESTANDING C CORPORATIONS

As is clear from the preceding discussion, the relationship between tax structures and value is quite complex. An in-depth discussion of these issues is beyond the scope of this book. However, for completeness, here is a summary of the main points that influence the structure of tax-free acquisitions and divestitures:

- The most common tax-free reorganization structures are 368(a), (b), and (c) reorganizations.
  (a) reorganizations are statutory mergers.
  (b) reorganizations require that the acquirer purchase at least 80 percent of the target's stock in exchange for the stock of the acquirer.
  (c) reorganizations require the acquisition of virtually all of the target's assets in exchange for the acquirer's stock.
- For a transaction to qualify as a tax-free reorganization it must have a sound business purpose, demonstrate a continuity of shareholder interest, and offer a plan to continue the business.

■ There are benefits to tax-free structures as well as substantial nontax costs. Tax-free acquisitions involve the exchange of acquirer stock, and this gives rise to two potential costs. From the vantage point of the acquiring shareholder, using stock to make an acquisition results in dilution and may give rise to control issues. This often occurs when the target's ownership is concentrated and the value of the acquisition is large relative to the value of the acquirer preacquisition. By owning a great deal of the acquirer's stock, target shareholders are taking on risk postacquisition that they may not be able to diversify away in a timely way. This results because of limitations on how much of the stock they can sell or (want to sell) without putting significant downward pressure on the stock price.

TAX STRUCTURES AND DIVESTITURES

With some modifications, the tax structures that accompany divestitures are similar to those associated with freestanding businesses. As a general rule, divestitures are taxable events for the parent firm. In a tax-free transaction, the parent often receives illiquid stock of the acquirer that it has no interest in holding. In addition, since many divestitures are part of a strategic plan to redeploy firm assets, and buyers are often firms operating in the same industry, diluting parents would prefer to have the acquisition price paid in cash. The factors that influence the tax structure of divestitures are as follows:

■ The most common divestiture structures are outright subsidiary sales, spin-offs, and equity carve-outs.
A subsidiary sale where cash payment is a taxable transaction.
A spin-off is a tax-free event since there is only an exchange of stock.
An equity carve-out is also tax free, but unlike a spin-off it generates cash flow for the parent.
■ A subsidiary sale can be taxed as stock sale or an asset sale. In an asset sale the assets are stepped up to market value. A stock sale accompanied by a 338 election may be preferable because it allows the step-up basis without incurring the costs associated with transferring the assets from parent/subsidiary to the buyer.
■ A 338 election is wealth-maximizing when the stock and asset basis of the target subsidiary are identical and the purchase price exceeds the net asset basis. In this case the incremental cost of the step-up election is zero. This structure also makes sense when the tax basis of the target's assets is greater than the tax basis of the target's stock, although in most real-world cases these circumstances are not present.

■ The 338 election does not make sense when the parent's tax basis in the sold subsidiary stock far exceeds its tax basis in its net assets. This often occurs when the parent earlier acquired the subsidiary in a taxable stock acquisition, so the capital gain on net assets is far greater than the capital gain on the stock acquired as part of the earlier transaction.

DO ACQUISITION PRICES REFLECT THE VALUE OF TAX ATTRIBUTES?

As a theoretical matter, firms that have valuable tax attributes (e.g., S corporations and other pass through entities) should be worth more than equivalent firms that do not have these attributes. The question is whether there is sufficient empirical evidence to support these theoretical conclusions.

Merle Erickson and Shiing-wu Wang have undertaken research that addresses the issue of whether S corporations sell for higher purchase price multiples than comparable C corporations.[7] The researchers analyzed 77 matched pairs of taxable stock acquisitions of S corporations and C corporations completed during the period 1994 through 2000. Each matched pair was within the same two-digit SIC. Table 8.5 indicates that the 77 matched pairs are very similar across various financial measures. For example, Panel C indicates that the difference between the mean and median target EBITDA-to-revenue ratios for C and S firms is very small. Target revenue growth rates are also similar, with S firms having slightly higher growth than C firms. Transaction values are close, too, suggesting that size differences are not likely to bias statistical results.

The sample includes only private firms. The findings support the hypothesis that the target's organizational form does influence the acquisition's tax structure. All sample S corporation acquisitions were structured in a manner that steps up the tax basis of the target's assets, whereas none of the sample C corporation acquisitions result in a step-up. The authors also found that the purchase price multiples are higher for S corporations than they are for matched C corporation acquisitions. Table 8.6 shows that multiples are uniformly higher for S corporations than C corporations. The median S multiple is higher than the C median multiple by 14.4 percent, using the price-to-revenue ratio, to a high of 68.5 percent, using the median price-to-book-value ratio.

Erickson and Wang also estimated an econometric model where the dependent variable, the acquisition multiple, is a function of the following: organizational form (S or C), whether stock was a component of consideration, whether debt was used as part of the financing, and the growth in a firm's total assets. The results are presented in Table 8.7.

TABLE 8.5   Financial Comparison of Taxable Acquisition of C and S Corporations

Descriptive financial data for the sample of 77 S corporation acquisitions announced during 1994–2000, and the matched sample of C corporation acquisitions (amounts in $ million)

Panel A: 77 taxable stock acquisitions of S corporations

	Transaction Value	Target Book Value of Equity	Target Revenue	Target Pretax Income	Target EBITDA	Target Operating Cash Flow	Target Operating Cash Flow before Working Capital	Target EBITDA to Revenue	Target Revenue Growth
Mean	$50.31	$8.34	$48.80	$3.59	$4.92	$4.18	$4.22	14.77%	15.06%
Median	29.5	5.03	31.64	1.99	3.42	2.54	2.77	8.67%	12.08%
Standard deviation	62.32	10.69	53.14	4.98	5.91	5.54	4.66	18.96%	27.11%

Panel B: 77 taxable stocks acquisitions of C corporations

	Transaction Value	Target Book Value of Equity	Target Revenue	Target Pretax Income	Target EBITDA	Target Operating Cash Flow	Target Operating Cash Flow before Working Capital	Target EBITDA to Revenue	Target Revenue Growth
Mean	$46.24	$12.80	$62.28	$4.86	$7.67	$6.30	$7.10	14.09%	10.65%
Median	22.6	6.57	34.46	2.3	3.93	3.4	3.5	10.17%	8.80%
Standard deviation	60.8	22.82	77.48	9.3	12.61	8.71	10.61	21.09%	19.32%

(continued)

TABLE 8.5 (Continued)

Panel C: Difference in financial measures between target organizational form

	Transaction Value	Target Book Value of Equity	Target Revenue	Target Pretax Income	Target EBITDA	Target Operating Cash Flow	Target Operating Cash Flow before Working Capital	Target EBITDA to Revenue	Target Revenue Growth
Mean	$4.07	($4.46)	($13.48)	($1.27)	($2.75)	($2.12)	($2.88)	0.68%	4.41%
Median	$6.90	($1.54)	($2.82)	($0.31)	($0.51)	($0.86)	($0.73)	-1.50%	3.28%

Notes: Transaction value is the price paid for the target's stock. Target book value of equity is the book value of equity of the target in the period prior to the acquisition. Target revenue is the gross sales for the target in the year prior to the acquisition. Pretax income is income before taxes for the target in the period prior to the acquisition. Target EBITDA is the target's earnings before interest, taxes, depreciation, and amortization for the year prior to the acquisition. Target operating cash flow is the cash flow from the operations for the year prior to the acquisition. Target operating cash flows as reported in the statement of cash flows. Target operating cash flow before working capital adjustments is cash flow from operations before adjustments for changes in working capital (e.g., accounts receivable). For C corporations, we add corporate income tax expense to operating cash flows before adjusting for working capital changes. Target EBITDA to revenue is the target's EBITDA in the period prior to the acquisition divided by revenue for that same period. Target revenue growth is the percentage change in gross revenues from year −1 to year 0, where year 0 is the year prior to acquisition.

TABLE 8.6 Transaction Multiples

Comparison of purchase price multiples across target firm organizational form for 77 matched pairs of S corporation and C corporation acquisitions announced during 1994–2000

Panel A: Price-to-book multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	7.54	4.83	2.71*	2.45*
Median	5.19	3.08	2.11*	1.77*
% positive				65.6%*

Panel B: Price-to-revenues multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	1.29	1.01	0.28*	0.32*
Median	0.95	0.83	0.12*	0.26*
% positive				63.4%*

Panel C: Price-to-pretax-income multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	16.32	12.46	3.86*	3.47*
Median	10.91	10.35	0.56	1.89*
% positive				61.8%*

Panel D: Price-to-EBITDA multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	10.28	7.74	2.54*	2.75*
Median	8.83	6.22	2.61*	2.20*
% positive				63.6%*

Panel E: Price-to-cash-flows-from-operations multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	12.15	8.6	3.55*	4.42*
Median	10.18	6.19	3.99*	3.01*
% positive				66.0%*

Panel F: Price-to-cash-from-operations-before-working-capital-adjustments multiple

	S Corporation Targets	C Corporation Targets	Difference	Matched Pair Difference
Mean	13.16	8.21	4.95*	5.16*
Median	9.38	7.18	2.20*	2.84*
% positive				71.0%*

Notes: The target corporation's book value of equity as of the period prior to the acquisition is the denominator in the price-to-book multiple. Gross revenues is the denominator in the price-to-revenues multiple, while income before taxes (corporate) is the denominator in the price-to-pretax-income multiple. Earnings before interest, taxes, depreciation, and amortization is the denominator in the price-to-EBITDA multiple. Price-to-cash-flows-from-operations uses operating cash flows in the denominator. We add corporate income tax expense to operating cash flows for C corporation targets. Similarly, cash flows from operations before working capital adjustments is the denominator in the price-to-cash-flow-from-operations multiple. We also add corporate income tax expense to the denominator's value for C corporation targets.

*Significant at the 5 percent (10 percent) level (one-tail test).

TABLE 8.7 Acquisition Multiple Model

Estimate of the effect of target organization form, method of payment and growth on acquisition multiples for 77 S and matched C corporation acquisitions announced during 1994–2000

Independent Variable	Predicted Sign	Acquisition Multiple					
		Price to Book Value	Price to Revenue	Price to Pretax Income	Price to EBITDA	Price to Operating Cash Flow	Price to Operating Cash Flow before Working Capital
Intercept		4.35* (4.74)	1.16* (7.82)	12.36* (8.00)	6.97* (8.64)	8.71* (7.56)	8.49* (8.10)
ORGFORM	+	2.64* (2.20)	0.52* (2.61)	4.89* (2.44)	3.43* (3.19)	4.72* (3.11)	5.31* (3.82)
STOCK	+	0.66 (0.44)	−0.50† (−2.00)	−0.18 (−0.07)	−0.24 (−0.18)	−2.54 (−1.35)	1.03 (0.61)
DEBT	?	−1.47 (−0.64)	−0.25 (−0.72)	3.65 (0.93)	1.32 (0.68)	−2.09 (−0.76)	−0.05 (−0.02)
GROWTH	+	4.67* (2.30)	−0.09 (−0.25)	−1.06 (−0.32)	2.50* (1.79)	−1.51 (−0.48)	−2.22 (−0.98)
R^2		0.12	0.09	0.07	0.12	0.11	0.14
$N=$		107	113	100	108	98	106

Notes: The independent variables are defined as follows. ORGFORM is an indicator variable taking the value one if the target is an S corporation, zero if the target is a C corporation. STOCK is an indicator variable taking the value of one when the acquirer stock is a component of the consideration paid to the target's shareholders, zero otherwise. DEBT takes the value of one if the acquirer purchased the target with debt securities, zero otherwise. GROWTH is the percentage change in the target's total assets between year 0 and year −1, where year 0 is the year prior to the acquisition. Acquisition multiples are defined in Table 8.6.

*Significant at the 5 percent (1 percent) level (one-tail test).

†Significant at the 5 percent level (two-tail test).

The organizational form variable is the measure of the S premium. The sign on the coefficient is positive and statistically significant at the 5 percent level, indicating that one can be 95 percent certain that the organizational form coefficient is significantly different from zero. This means that when controlling for other variables that are likely to influence the acquisition multiple, an S firm will have a multiple that is significantly greater than the multiple for an equivalent C firm. This result holds irrespective of how the multiple is defined.

SUMMARY

This chapter demonstrated that theoretically freestanding S corporations are worth more than equivalent C corporations. The S value premium is a function of two factors. The first is that its pretax cash flows of S corporations are subject to only one level of taxation, while C corporations are subject to taxation at the entity and shareholder levels. The second relates to the fact that the acquirer of an S can take advantage of the tax savings produced from increased depreciation expense associated with stepping up the value of purchased assets, while the acquirer of a freestanding C corporation cannot. Research supports the theoretical conclusions and indicates that S corporations sell for higher multiples than equivalent C corporations.

APPENDIX 8A: ACQUIRERS' INDIFFERENCE PRICE EQUATIONS

Indifference acquisition price between a stock and asset transaction for TC shareholders is as follows:

$ATAX_{shareholder}$ = liquidation proceeds − tax basis
$760 = liquidation proceeds − [(liquidation proceeds − $200)20%]
$760 = liquidation proceeds − 20%liquidation proceeds + $40
$720 = 80%liquidation proceeds
Liquidation proceeds = $900   (8A.1)
Liquidation proceeds = price − tax
$900 = price − [(price − $400) × 35% + ($200 × 35%)]
$900 = .65price + $70
Price = $1,276.92

where   ATAX = target shareholder's after-tax cash
       Price = the pretax price paid to target shareholders
       Tax basis = the net asset basis of the target's assets, which is equal
           to the historical cost basis of the target's assets less the
           accumulated depreciation and amortization associated
           with the target's assets
       Liquidation proceeds = proceeds from liquidation
       Tax = tax

Indifference price between an asset and stock transaction for TS shareholders is as follows:

ATAX = price − tax
ATAX = price − (price − basis)tax rate
ATAX = price − [(price − historical cost)t_{cg} + (accum)t_{oi}]
$760 = price − [(price − $400)20% + ($200 × 40%)]   (8A.2)
$760 = price − 20%price + $80 − $80
$760 = 80%price
Price = $950

where   ATAX = target shareholder's after-tax cash
       Price = the pretax price paid to target shareholders
       Basis = the net asset basis of the target's assets, which is equal to
           the historical cost basis of the target's assets less the
           accumulated depreciation and amortization associated with
           the target's assets
       t_{cg} = capital gains tax rate
       t_{oi} = tax rate on ordinary income
       Historical cost = historical cost basis of the target's assets
       Accum = accumulated depreciation and amortization associated
           with the target's assets