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Valuing C Corps and Pass-Through Entities under the New Tax Law **[Daniel R. Van Vleet, ASA](#) and [William P. McInerney, ASA](#)**

Overview

On December 22, 2017, President Donald J. Trump signed into law the *Tax Cuts and Jobs Act of 2017* (the “Act”).¹ The Act is the most comprehensive tax reform package since the *Tax Reform Act of 1986*. The Act contains sweeping changes to corporate and individual tax rates, deduction limitations, foreign income taxation, and the tax treatment of pass-through entities (PTEs) such as S corporations and limited liability companies.

In this article, we will discuss the valuation-related characteristics of the Act and provide a series of conceptual and quantitative solutions that address these characteristics. These solutions address the tax law changes as well as the changing nature of the absolute and relative values of C corporations (“C corps”) and PTEs. We will focus the discussion on tax attributes as they relate to businesses operating in the U.S. The foreign tax characteristics of the Act are complicated and deserving of another article devoted solely to these issues.

In this article, we will not address valuation issues such as control, marketability, liquidity or standard or premise of value. We will use general terminology such as enterprise value, debt, equity, and cash flow without specific definition. This is not to suggest that these issues are not important. However, the variability of these issues in conjunction with the new tax law creates a nearly infinite variety of situations that would require individualized analyses. Consequently, the objective of this article is to provide a conceptual framework for the conduct of valuations in this changing tax environment.

Legislation Timeline

The legislation timeline of the Tax Cuts and Jobs Act (the “Act”) is an important consideration when conducting engagements with valuation dates prior to 2018. The seeds of the Act were sown during the 2016 presidential campaign of Donald J. Trump. As a candidate, Mr. Trump promised to lower corporate tax rates, reduce taxes on the repatriation of foreign earnings, and make American companies more profitable and competitive. Mr. Trump was elected president on November 8, 2016. The other important dates in this Legislation Timeline are as follows:

- Sept. 29, 2017 – U.S. Senate (“Senate”) releases fiscal 2018 budget allowing for tax cuts.
- Oct. 26, 2017 – U.S. House of Representatives (“House”) passes Senate budget, which opens the door for budget reconciliation to be used for passage of omnibus tax reform bill with a simple majority vote.
- Nov. 2, 2017 – House Republicans release the “Tax Cuts and Jobs Act”. This document provides substantial detail about where the House was heading on tax reform.

¹ The Act was originally introduced to Congress as the “Tax Cuts and Jobs Act of 2017,” though this title was not approved by the Senate in the final enactment of the reconciliation law.



- Nov. 9, 2017 – Senate releases its version of a tax reform bill. There are differences in the House and Senate versions, but the general direction of Congress regarding tax reform can be ascertained at this point.
- Dec. 4, 2017 – House and Senate versions of the tax bill are submitted to a conference committee for resolution.
- Dec. 20, 2017 – Conference committee provides its version of the Act to the House and Senate, which approve the amendments and send the bill to the President for signature.
- Dec. 22, 2017 – President Trump signs the Act into law.

Once the Act came out of the conference committee on December 20, 2017, the President's signature was simply a formality. Consequently, when conducting engagements with valuation dates on or after December 20, 2017, the valuation-related tax attributes of the Act should be considered, absent a compelling reason not to do so.

When conducting engagements with valuation dates occurring earlier in the Legislation Timeline, a probability weighted analysis of the provisions of the Act and previous tax law may be appropriate. Components of the Act and the level of probability for any given date are a matter of professional judgement after taking into consideration the Legislation Timeline listed above.

Business Tax Changes

Primary valuation-related tax changes in the Act that affect businesses at the entity level are as follows:

- Permanent reduction in the federal corporate income tax rate from a top marginal rate of 35% to a flat rate of 21%.
- Permanent limitation on the deductibility of business interest expense.
- Temporary "bonus" (accelerated) depreciation.

Corporate Tax Rate

Table 1 provides an example of the combined effective federal and state corporate tax rates applicable to C corps under the previous tax law and the Act.

Table 1

Corporate Tax Rates	2017 Tax Law	2018 Tax Law
(1) Federal Corporate Tax Rate	35.0%	21.0%
(2) Average State Corporate Tax Rate	6.3%	6.3%
(3) Federal Tax Deduction @ 35% & 21%	<u>2.2%</u>	<u>1.3%</u>
(4) Effective State Corporate Tax Rate	4.1%	5.0%
(5) Combined Effective Corporate Tax Rate	<u>39.1%</u>	<u>26.0%</u>

As demonstrated on Line 1 of Table 1, the Act reduces the federal corporate tax rate from a top marginal rate of 35% to a flat rate of 21%. The assumed average state corporate tax rate of 6.3%



on Line 2 is held constant but is tax affected using a 35% federal tax rate for 2017² and a 21% federal tax rate for 2018.³ As demonstrated on Line 4, the effective state corporate tax rate on Line 4 increases from 4.1% to 5.0% due to the lower federal corporate tax rate in 2018. Adding the tax rates from Line 1 and Line 4 results in the combined effective federal and state corporate tax rate of 39.1% under 2017 tax law and 26.0% under 2018 tax law.

The reduced corporate tax rate has the potential to materially change the way companies operate and perform financially beginning in 2018. In addition, it will be more difficult to estimate the effective tax rates of publicly traded or privately held companies using historical tax rates. Of particular concern is the estimation of 2018 tax rates for companies that operate internationally. Changes in international tax recognition, foreign tax credits, the global intangible low-taxed income (“GILTI”) tax, repatriation transition taxes, and the change from a worldwide tax system to a territorial tax system will impact the taxes paid by companies that operate internationally.

Business Interest Expense

Under the terms of the Act, the ability of businesses to deduct business interest expense⁴ is limited to 30% of adjusted taxable income (ATI). During 2018 through 2021, the Act generally defines ATI as earnings before interest, taxes, depreciation and amortization (EBITDA). After 2021, the Act generally defines ATI as earnings before interest and taxes (EBIT).

This expense limitation will apply to businesses that report average annual revenues in excess of \$25 million during the three-year period prior to the tax year at issue. There are exceptions for companies that use floor plan financing, such as automobile dealerships. In addition, there are specific provisions for PTEs that should be considered when analyzing this limitation. Disallowed interest expense in any given year may be carried forward to offset taxable income in future years.

This provision of the Act has the potential to impact the after-tax cost of debt capital used to calculate the weighted average cost of capital (WACC) when conducting a debt-free analysis for companies impacted by the business interest expense limitation.

“Bonus” (Accelerated) Depreciation

Under the terms of the Act, companies may deduct up to 100% of their expenditures on qualified property⁵ until 2022. After 2022, this 100% figure declines by 20 percentage points per year until 2027, when the percentage becomes zero.

² References to 2017 tax law are based on the assumption that the tax law in effect prior to the enactment of the Act is the relevant tax law. References to 2018 tax law assume the Act is the relevant tax law.

³ Under the Act, state and local taxes remain deductible for corporations. The same is not true for individuals, who are now limited in their ability to take such deductions on their personal income tax returns.

⁴ The interpretation of what qualifies as “business interest expense” is complicated. Issues such as “earnings stripping”, PTE deductions, and floor plan financing can impact how the business interest expense limitation is calculated. We recommend readers becoming familiar with the language of the Act prior to making adjustments for the business interest expense limitation.

⁵ In general, the Act defines qualified property as tangible property subject to depreciation under the modified accelerated cost recovery system (“MACRS”) with a recovery period of 20 years or less.



Bonus depreciation has the potential to alter the timing of a company's projected cash flows for the next 10 years, or more. A discussion of this provision of the new law is beyond the scope of this article. However, Joseph Thompson and David Neuzil have authored an article titled "[Valuing Bonus Depreciation under the New Tax Law](#)". We use the value conclusions for bonus depreciation contained in that article in our demonstration exhibits.

Weighted Average Cost of Capital (WACC)

Table 2 provides a WACC analysis based on the tax rates reflected in the Act. We will be using the WACCs provided in Table 2 in subsequent sections of this article.

Table 2

<u>Weighted Average Cost of Capital</u>	<u>2017 Tax Law</u>	<u>2018 Tax Law</u>
(1) Equity Rate	14.2%	14.2%
(2) Debt Rate	5.0%	5.0%
(3) Tax Deduction @ 39.1% & 26%	-2.0%	-1.3%
(4) Tax Affected Debt Rate	3.0%	3.7%
(5) Capital Structure - Debt	45.1%	40.4%
(6) Capital Structure - Equity	54.9%	59.6%
(7) WACC	9.16%	9.96%
(8) Long-term Growth	0.0%	0.0%
(9) WACC Capitalization Factor	<u>9.16%</u>	<u>9.96%</u>

As demonstrated in Line 9 of Table 2, the WACC increases from 9.16% in 2017 to 9.96% in 2018. The reasons for this are twofold: (1) lower combined effective federal and state tax rate on Line 3 is used to tax affect the debt rate on Line 2 and (2) equity capital on Line 6 has become a larger component of the overall capital structure.

The change in capital structure is attributable to the increase in equity value associated with the decline in the corporate tax rate. An iterative capital structure analysis results in a heavier weighting on equity capital, which tends to increase the overall WACC. In Table 2, the iterative capital structure is based the values of debt, equity, and enterprise value reflected in the single period capitalization (SPC) method presented in a subsequent section of this article.

The calculations presented in Table 2 are intended to demonstrate a concept rather than actual analysis. The equity rate of return, debt rate, and iterative capital structures could be materially different in 2018, as opposed to 2017. In addition, the business interest expense limitation may impact the tax-affected interest rates used in the WACC. For ease of explanation, we assume the capital structures of the subject company and guideline companies are consistent with the iterative capital structure.

C Corporation Valuation Example

Our analysis of a C corp value using the valuation-related characteristics of the Act is based on the following attributes:



- Use of a single period capitalization (SPC) method.
- Valuation date of December 31, 2017.
- Combined effective federal and state corporate tax rates provided in Table 1.
- Capital expenditures are equal to depreciation.
- Incremental working capital is zero in perpetuity.
- SPC method does not reflect bonus depreciation calculations.
- Business interest expense limitation is not applicable.
- WACC is adjusted for the impact of the new tax rate on the after-tax cost of debt capital and the changing nature of the iterative capital structure.

Single Period Capitalization Method

Table 3 illustrates our SPC method analysis using the tax rates from Table 1.

Table 3

<u>2018 Projected Income Statements</u>	<u>2017 Tax Law</u>	<u>2018 Tax Law</u>	
(1) Earnings Before Interest & Taxes	\$ 200,000	\$ 200,000	
(2) Corporate Taxes @ 39.1% & 26%	<u>(78,200)</u>	<u>(52,000)</u>	
(3) Debt Free Net Income	<u>\$ 121,800</u>	<u>\$ 148,000</u>	
<u>Valuation Analysis</u>			
(4) Debt Free Net Income	\$ 121,800	\$ 148,000	
(5) Depreciation Expense	100,000	100,000	
(6) Capital Expenditures	<u>(100,000)</u>	<u>(100,000)</u>	
(7) Debt Free Cash Flows	121,800	148,000	
(8) WACC Capitalization Factor	<u>9.16%</u>	<u>9.96%</u>	
(9) Enterprise Value	1,329,084	1,485,915	Value
(10) Debt	<u>(600,000)</u>	<u>(600,000)</u>	Increase
(11) Equity Value	<u>\$ 729,084</u>	<u>\$ 885,915</u>	<u>21.5%</u>

As demonstrated on Lines 1 through 3 of Table 3, debt-free net income (DFNI) is calculated by tax affecting EBIT by a 39.1% rate under the 2017 tax law and by a 26% rate under the 2018 tax law. Since capital expenditures and depreciation are equal and we have assumed that incremental working capital is zero, the DFNI is equal to debt-free cash flow (DFCF). We then capitalized DFCF using a WACC of 9.16% (2017 tax law) and 9.96% (2018 tax law). The resulting enterprise and equity values are illustrated on Lines 9 and 11, respectively.

Market Approach

The market approach is generally comprised of the guideline public company (GPC) method and the merger & acquisition (M&A) method. We discuss the impact of the Act on each of these valuation methods below.



GPC Method

Under the Efficient Market Hypothesis,⁶ the prices of publicly traded equity securities incorporate information available in the marketplace. As discussed in the Legislation Timeline section of this article, the pendency of tax reform began in earnest on November 8, 2016 (when President Trump was elected) and concluded on December 22, 2017 (when the Act was signed into law). Analysts will have to determine when, and to what extent, the expectation of tax reform became incorporated in the pricing of publicly traded equity securities. Certainly, by December 22, 2017, all speculation had ended regarding the components of the Act and the certainty of passage. Consequently, it is reasonable to assume that the prices of publicly traded equity securities have reflected the characteristics of the Act since December 22, 2017.

If the valuation date for the subject company occurs on or after December 22, 2017 and the GPCs used in the analysis are substantially similar to the subject company, tax-related financial adjustments to the GPCs and/or subject company may not be necessary. However, if the GPCs and subject company are not substantially similar, tax characteristics such as bonus depreciation, interest expense limitations, and taxation of foreign earnings may impact the financial comparability of the GPCs and the subject company. When this is the case, financial performance adjustments may be necessary.

A comprehensive discussion of this issue is beyond the scope of this article. However, we look forward to the research and modeling that the academic and valuation communities will present on this issue. For the purpose of this article, we assume the GPCs are identical to the subject company and no financial adjustments are necessary. Given the valuation date used in our example is December 31, 2017, we assume the GPC method provides an indication of value that reflects the relevant characteristics of the Act. Consequently, we assume the indications of value provided by the GPC method and SPC method are identical.

M&A Method

If both the valuation date for the subject company and the guideline transaction used in the analysis occur on or after December 22, 2017, tax-related financial adjustments to the target company and/or subject company may not be necessary, assuming the M&A target company is identical to the subject company. However, similar to the GPC method, financial adjustments may be necessary if the tax attributes of the Act affect the target company and the subject company in a dissimilar manner. For the purposes of this article, we assume the target company was acquired in 2016 and is a C corp that is identical to the subject company. The following Table 4 and Table 5 illustrate a valuation issue that may arise when a 2016 corporate transaction is used to value a subject company as of a 2018 valuation date.

⁶ The Efficient Market Hypothesis is a market theory that evolved from a 1960s dissertation by Eugene F. Fama, Ph.D. Professor Fama is a Nobel Prize Laureate in Economic Sciences and finance professor at the University of Chicago, Booth School of Business. The Efficient Market Hypothesis is a foundational component of modern business valuation theory.



Table 4

2016 Transaction	Target Company
(1) 2016 Enterprise Value	\$ 1,329,084
(2) 2016 EBITDA	300,000
(3) 2016 EBITDA Multiple	4.43

Based on the information provided in Table 4, the 2016 EBITDA multiple is 4.43. As demonstrated in Table 5, the application of this multiple to the 2018 EBITDA of the subject company will result in the exact same enterprise value as the 2016 transaction.

Table 5

Subject Company	2018 Valuation
(1) 2018 EBITDA	300,000
(2) 2016 EBITDA Multiple	4.43
(3) 2016-Based Enterprise Value	\$ 1,329,084

The conclusion of value in Table 5 may be incorrect because the earnings multiple derived from a 2016 corporate transaction would not reflect the tax attributes of the Act, including the reduction of the corporate tax rate from 35% to 21% and changes in the cost of capital.

For the purposes of this article, we will assume the tax related valuation differences in enterprise value between a 2016 corporate transaction and a 2018 valuation date are twofold: (1) increase in the WACC from 9.16% to 9.96% and (2) reduction in the federal corporate tax rate from 35.0% to 21.0%. These two factors have disparate impacts on the enterprise value of the subject company for a 2018 valuation date, when compared to a 2016 corporate transaction. The higher WACC results in a lower enterprise value and the lower corporate tax rate increases the after-tax earnings and resulting enterprise value. To correct for these issues, the first step is to calculate the WACCs of the subject company as of the 2016 transaction date and the 2018 valuation date. The second step is to identify the corporate tax rates applicable to 2016 and 2018. Once these numbers are determined, the following formula can be used to adjust the enterprise value of the subject company when a 2016 corporate transaction is used to estimate enterprise value in 2018.

Enterprise Value Adjustment Multiple (EVAM)

$$\frac{(1 - 2018 \text{ Tax Rate})}{(1 - 2016 \text{ Tax Rate})} \times \frac{2016 \text{ WACC}}{2018 \text{ WACC}} = 1.1180$$

Where:

2018 Tax Rate	=	26.0%
2016 Tax Rate	=	39.1%
2016 WACC	=	9.16%
2018 WACC	=	9.96%



Table 6 demonstrates the application of the enterprise value adjustment multiple (EVAM). The EVAM may be used to adjust the enterprise value (or enterprise value multiple) of the subject company when using an M&A multiple derived from a corporate transaction that does not reflect the tax attributes of the Act.

Table 6

	2018
Enterprise Value Adjustment Multiple	Valuation
(1) 2018 EBITDA	\$ 300,000
(2) 2016 EBITDA Multiple	4.43
(3) 2016-Based Enterprise Value	1,329,084
(4) Enterprise Value Adjustment Multiple	1.1180
(5) 2018 Act-Adjusted Enterprise Value	1,485,915
(6) Debt	(600,000)
(7) 2018 Act-Adjusted Equity Value	\$ 885,915

As demonstrated in Table 6 above, we multiply the 2018 EBITDA of the subject company by the 2016 EBITDA multiple to conclude a 2016-based enterprise value of \$1,329,084. The EVAM of 1.1180 is then applied to the 2016-based enterprise value to calculate the 2018 Act-adjusted enterprise value of \$1,485,915 on Line 5. If the objective is to value equity, the debt may be subtracted from this amount to calculate the 2018 Act-adjusted equity value of \$885,915.

There are a few caveats regarding the use of the EVAM in the M&A method. The EVAM only corrects for the change in the WACC and corporate tax rates attributable to the Act. There are other issues that may impact the purchase price and structuring of corporate transactions that may be as important, or more important, than the WACC or corporate tax rates attributable to the Act (including, for example, the availability of bonus depreciation under the Act). In addition, the condition of the capital markets and various micro- and macro-economic conditions may have a substantial impact on the value of a target company involved in a 2016 transaction as compared to a 2018 valuation of a company. In addition, changes in the assumed or iterative capital structures used in the WACC calculations can have a material impact on the enterprise value of the subject company, as well as the EVAM.

Having said this, the reduction of the corporate tax rate provided in the Act will impact the WACC, cash flows, and enterprise values of many companies. Therefore, it is important to consider these corporate tax changes when conducting an M&A method that uses pre-Act corporate transactions to value a subject company with a valuation date that occurs during the Legislation Timeline or after the Act became law.

Individual Tax Changes

Individual taxation is important to PTE business valuation because owners of PTEs are taxed at individual tax rates based on their pro-rata share of the earnings of the PTE. The primary valuation-related tax changes in the Act that affect individuals are as follows:

- Temporary implementation of a new graduated individual income tax structure, with a top marginal tax rate of 37.0% (down from 39.6%).



- Temporary limit of \$10,000 (in the aggregate) for certain itemized deductions, including state and local taxes (SALT).
- Temporary 20% deduction of Qualified Business Income (QBI) of PTEs.

New Graduated Individual Tax Rate Structure

The Act temporarily replaces the existing federal individual income tax rate structure with a new structure for tax years beginning in 2018 and ending in 2025. For example, during the next eight years there will be seven marginal tax brackets for single individuals, starting at 10.0% for taxable incomes below \$9,525 and going up to 37.0% for taxable incomes in excess of \$500,000. This provision is temporary, in that it sunsets in 2025. Consequently, in 2026 the tax brackets and rates revert back to their pre-ACT (i.e., 2017) levels. For the purposes of this article, we will be using the 37.0% top marginal tax rate in our analysis.

State and Local Income Taxes (SALT)

Under the old tax law, state and local taxes (SALT) were deductible for federal tax purposes on individual tax returns. This deduction effectively reduced state income tax rates for individuals in states that tax income. Under the Act, individuals will be limited to \$10,000 in itemized deductions for items such as SALT. This deduction limitation, which begins in 2018 and ends in 2025, will effectively increase the state income tax rates on individuals in states that tax income. In addition, since the Act maintains the existing top federal tax rate of 20% on dividends and capital gains, the SALT deduction limitation effectively increases the combined federal and state income tax rates on dividends and capital gains in states that tax this form of income.

The earnings of PTEs are subject to state income taxes on the individual tax returns of their owners. Although the top federal income tax rate for individuals is somewhat lower under the Act, the SALT deduction limitation will serve to offset this tax benefit, particularly in high-tax state jurisdictions. Consequently, the combined federal and state income tax rates on PTE earnings will be somewhat similar to what they were under the old tax law for high income individuals.

Qualified Business Income Deduction

Under the Act, individuals may deduct up to 20% of their pro rata share of the qualified business income (QBI) of certain PTEs for tax years beginning in 2018 and ending in 2025. The Act essentially defines QBI as the taxable income of a PTE business. In order to qualify for the 20% deduction, income must be derived from business operations located in the United States.

In general, individuals that fully qualify for this deduction are all PTE business owners except owners of certain service businesses. The Act generally defines service businesses as a business in which the principal assets of the firm are the reputation or skill of the firm's employees and/or owners. The Act specifically excludes engineering and architecture firms from the definition of service-based businesses.

For all PTEs, the Act limits the 20% QBI deduction to the greater of: (1) 50 percent of W-2 wages paid to employees, or (2) the sum of 25% of W-2 wages paid plus 2.5% of the unadjusted basis of qualified property employed in the business. In addition to these limitations, the Act phases in the disallowance of the QBI deduction for service-based PTEs when the owner's taxable income exceeds \$157,500 for individuals or \$315,000 for joint returns.



The following Tables 7 and 8 provide a summary example of the individual tax rates used in this article.

Table 7

Dividend / Capital Gains Tax Rates	2018 Tax Law			
	Temporary Period 2018-2025		Permanent Period 2026 and Beyond	
(1) Federal Dividend/Capital Gains Tax Rate	20.0%		20.0%	
(2) Average State Individual Tax Rate	5.5%		5.5%	
(3) Federal Tax Deduction @ 0% & 39.6%	0.0%		2.2%	
(4) Effective State Individual Tax Rate	5.5%	5.5%	3.3%	3.3%
(5) Net Investment Income Tax (NIIT)		3.8%		3.8%
(6) Combined Effective Dividend/Capital Gains Tax Rate	<u>29.3%</u>		<u>27.1%</u>	

Table 8

Individual Income Tax Rates	2018 Tax Law			
	Temporary Period 2018 - 2025		Permanent Period 2026 and Beyond	
(1) Federal Individual Tax Rate	37.0%		39.6%	
(2) Average State Individual Tax Rate	5.5%		5.5%	
(3) Federal Tax Deduction @ 0% & 39.6%	0.0%		2.2%	
(4) Effective State Individual Tax Rate	5.5%	5.5%	3.3%	3.3%
(5) Net Investment Income Tax (NIIT)		3.8%		3.8%
(6) Effective Tax Rates - PTE Service Business	46.3%		46.7%	
(7) 20% Qualified Business Income Deduction	9.3%		0.0%	
(8) Effective Tax Rate - PTE Non-Service Businesses	<u>37.0%</u>		<u>46.7%</u>	

In the following section of this article, we will address how the changes in individual tax rates listed above affect the relative values of C corps and PTEs.

Van Vleet Model

The Van Vleet Model is based on a formula referred to as the S Corporation Equity Adjustment Multiple (SEAM). The SEAM is used to adjust the equity value of a PTE when such value has been estimated using C corp data.

The Van Vleet Model accounts for the tax treatment differences of C corps, PTEs, and their respective shareholders and is the most widely used PTE model in the U.S. A comprehensive discussion of the Van Vleet Model is beyond the scope of this article; however, the following Table 9 provides a conceptual demonstration of the model and how the SEAM would be calculated under the previous tax law. Table 9 was prepared using the following assumptions:

- Entity-level combined effective corporate tax rate = 39.1%
- Entity-level state income tax rate on PTEs = 1.0%
- Dividend/distribution ratio = 75%



- Shareholder-level dividend/capital gains tax rate = 27.1%
- Shareholder-level combined effective individual income tax rate = 46.7%

Table 9

All PTE Businesses	2017 Tax Law	
	C Corp.	PTE
(1) Earnings Before Taxes	\$100,000	\$100,000
(2) Entity Taxes @ 39.1% & 1%	(39,100)	(1,000)
(3) Net Income	60,900	99,000
<u>Dividends / Distributions</u>		
(4) Dividends / Distributions @ 75%	45,675	74,250
(5) Dividend Taxes @ 27.1%	(12,378)	NM
(6) Individual Taxes @ 46.7%	NM	(46,233)
(7) Net Dividend / Distribution Benefit	33,297	28,017
<u>Capital Appreciation</u>		
(8) Capital Appreciation	15,225	24,750
(9) Capital Gains Taxes @ 27.1%	(4,126)	NM
(10) Net Capital Appreciation Benefit	11,099	24,750
<u>Net Economic Benefit</u>		
(11) Net Dividend / Distribution Benefit	33,297	28,017
(12) Net Capital Appreciation Benefit	11,099	24,750
(13) Total Economic Benefit	\$ 44,396	\$ 52,767
(14) PTE Business vs C Corp Benefit		18.86%
(15) S Corporation Equity Adjustment Multiple (SEAM)		1.1886

As demonstrated in Table 9 above, the earnings of the C corp and PTE are taxed at the entity-level on Line 2 and at the shareholder-level on Lines 5, 6 and 9. Line 13 provides the total economic benefit derived by the shareholders of C corps and PTEs after recognition of both entity-level and shareholder-level taxation. The two measurements of economic benefit on Line 13 are then compared to each other in order to determine the relative economic benefit difference of being a C corp shareholder as compared to a PTE shareholder. On Line 14 of Table 9, this relative economic benefit difference is converted to a percentage difference of 18.86%. By adding 1.0 to this number, the SEAM is quantified at 1.1886. This SEAM may then be used to adjust the C corp equivalent value of equity of a PTE to a PTE equity value when the tax rates used in Table 9 are appropriate for the analysis.

The following Table 10 provides the SEAMs for non-service and service businesses for the temporary and permanent periods included in the Act.



Table 10

SEAM Components	2018 Tax Law		
	Temporary SEAM		Permanent SEAM
	Non-Service PTE	Service PTE	All PTEs
(1) Combined Effective Corporate Tax Rates	26.00%	26.00%	26.00%
(2) Combined Effective Individual Tax Rates	37.00%	46.30%	46.70%
(3) Pass-through Entity State Tax Rate	1.00%	1.00%	1.00%
(4) Combined Effective Capital Gains Tax Rates	29.30%	29.30%	27.10%
(5) Combined Effective Dividend Tax Rates	29.30%	29.30%	27.10%
(6) Assumed C Corp Dividend Payout Ratio	75.00%	75.00%	75.00%
(7) PTE vs C Corp Benefit	19.21%	1.62%	-2.19%
(8) SEAM	1.1921	1.0162	0.9781

$$SEAM = 1 + \frac{(t_c + t_{cg} - t_s - t_i + t_s t_i - t_c t_{cg} + D_p t_d - D_p t_{cg} - D_p t_c t_d + D_p t_c t_{cg})}{(1 - t_c - t_{cg} + t_c t_{cg} - D_p t_d + D_p t_{cg} + D_p t_c t_d - D_p t_c t_{cg})}$$

SEAM Components

- t_c = Combined Effective Corporate Tax Rate
- t_i = Combined Effective Individual Tax Rate
- t_s = Pass-through Entity State Tax Rate
- t_{cg} = Combined Effective Capital Gains Tax Rates
- t_d = Combined Effective Dividend Tax Rates
- D_p = Assumed C Corp Dividend Payout Ratio

The tax rates used in Table 10 are obtained from Tables 7 and 8. The SEAMs that result from these calculations are attributable to non-service and service PTEs for the temporary period (2018 through 2025) and the permanent period (2026 and beyond). After the SEAMs are calculated in this manner, the next step is to weight the applicable SEAMs by the proportional contribution that the temporary and permanent periods make to the overall conclusion of enterprise value. The weighted SEAM is then applied to the C corp equivalent equity value to conclude a PTE equity value.

Table 11 demonstrates a method that may be used to calculate the contributory weights of the temporary and permanent periods to the overall enterprise value.



Table 11

	Projected Cash Flow	Present Value Factors @ 9.96%	Present Values
<u>Temporary Period Cash Flows</u>			
(1) 2018 Present Value of Cash Flow	\$ 148,000	0.9094	\$134,594
(2) 2019 Present Value of Cash Flow	148,000	0.8270	122,403
(3) 2020 Present Value of Cash Flow	148,000	0.7521	111,315
(4) 2021 Present Value of Cash Flow	148,000	0.6840	101,232
(5) 2022 Present Value of Cash Flow	148,000	0.6220	92,063
(6) 2023 Present Value of Cash Flow	148,000	0.5657	83,724
(7) 2024 Present Value of Cash Flow	148,000	0.5145	76,140
(8) 2025 Present Value of Cash Flow	\$ 148,000	0.4679	69,243
(9) Value of Temporary Period Cash Flows			<u>\$790,715</u>
(10) Temporary Period Cash Flows	\$ 790,715	53.2%	
(11) Permanent Period Cash Flows	<u>695,201</u>	<u>46.8%</u>	
(12) Enterprise Value	<u>\$1,485,915</u>	<u>100.0%</u>	
<u>Non-Service Business</u>			
	SEAM	Weights	Weighted SEAM
(13) Temporary Non-Service SEAM	1.1921	53.2%	0.6344
(14) Permanent SEAM	0.9781	46.8%	0.4576
(15) Weighted Non-Service SEAM			<u>1.0920</u>
<u>Service Business</u>			
	SEAM	Weights	Weighted SEAM
(16) Temporary Service SEAM	1.0162	53.2%	0.5407
(17) Permanent SEAM	0.9781	46.8%	0.4576
(18) Weighted Service SEAM			<u>0.9984</u>

As demonstrated in Table 11, the projected cash flows for the 2018 through 2025 temporary period are \$148,000 per year as derived from the SPC method demonstrated in Table 3. These eight years of projected cash flows are discounted at the WACC of 9.96% and then summed to a total value of \$790,715 as provided on Line 9. The total enterprise value of the subject company is \$1,485,915, per Line 9 of Table 3. In order to calculate the contributory value of the permanent period cash flows to the enterprise value, we subtract the value of the temporary period cash flows on Line 10 from the enterprise value on Line 12. Based on our analysis, the contributory values of the temporary and permanent periods to the enterprise value are 53.2% and 46.8%, respectively.

After calculating the temporary and permanent weights described above, the next step is to multiply the temporary and permanent SEAMs by these temporary and permanent contributory weights in order to quantify weighted SEAMs for non-service and service businesses. These calculations are conducted in Table 11 on Lines 13 through 15 for non-service businesses and Lines 16 through 18 for service businesses. The resulting weighted SEAMs are applied to the C corp equivalent equity value to quantify the PTE equity value for non-service and service businesses.



The following Table 12 provides a summary of our valuation analysis of C corps and PTEs under the 2017 tax law and 2018 tax law.

Table 12

	2017 C Corp	2018 Tax Law		2018 C Corp
		PTE Non-Service Business	PTE Service Business	
<u>Single Period Capitalization Method</u>				
(1) Enterprise Value	\$ 1,329,084	\$ 1,485,915	\$ 1,485,915	\$ 1,485,915
(2) Bonus Depreciation	NM	19,000	19,000	19,000
(3) Adjusted Enterprise Value	1,329,084	1,504,915	1,504,915	1,504,915
<u>Guideline Public Company Method</u>				
(4) Enterprise Value	1,329,084	1,504,915	1,504,915	1,504,915
(5) Bonus Depreciation	NM	NM	NM	NM
(6) Adjusted Enterprise Value	1,329,084	1,504,915	1,504,915	1,504,915
<u>Merger & Acquisition Method</u>				
(7) Enterprise Value	1,329,084	1,485,915	1,485,915	1,485,915
(8) Bonus Depreciation	NM	19,000	19,000	19,000
(9) Adjusted Enterprise Value	1,329,084	1,504,915	1,504,915	1,504,915
(10) Average Adjusted Enterprise Value	1,329,084	1,504,915	1,504,915	1,504,915
(11) Debt	(600,000)	(600,000)	(600,000)	(600,000)
(12) Equity Value (C Corp Basis)	729,084	904,915	904,915	\$ 904,915
(13) Weighted SEAM	1.1886	1.0920	0.9984	
(14) Equity Value (PTE Basis)	\$ 866,554	\$ 988,182	\$ 903,440	
(15) Increase in PTE Equity Value over 2017 Valuation		14.0%	4.3%	
(16) Increase in C Corp Equity Value over 2017 Valuation				24.1%

As demonstrated on Line 1 of Table 12, the 2018 enterprise value provided by the SPC method is \$1,485,915. This value needs to be adjusted for the value of bonus depreciation available under the Act. This adjustment is necessary because no specific adjustments for bonus depreciation were included in the projected cash flows used in the SPC method. In our view, it is preferable to quantify the value of bonus depreciation separately, as embedding it within the projected cash flows may require extending projections 10, 15, or more years, and may distort projected fixed asset turnover ratios that are often used to determine the reasonableness of projected capital expenditures and depreciation expense. By isolating the cash flow benefit of bonus depreciation, we avoid this complexity.

As demonstrated on Line 4 of Table 12, the 2018 enterprise value under the GPC method is \$1,504,915. For simplifying purposes, we have set the 2018 adjusted enterprise value provided by the GPC method equal to that provided by the SPC method. As discussed in a previous section of this article, it is our assumption that the GPC method conducted for a 2018 valuation date would



provide an indication of value that is consistent with the characteristics of the Act, including the bonus depreciation calculation.

As demonstrated on Line 9 of Table 12, the enterprise value provided by the M&A method is \$1,485,915. This value needs to be adjusted for bonus depreciation. This adjustment is necessary because the 2016 multiples used in this method do not reflect the incremental value attributable to bonus depreciation available under the Act. Consequently, we have added the value of bonus depreciation to the enterprise value provided by the M&A method. If the multiples used in this method were derived from 2018 corporate transactions, the adjustment for bonus depreciation may not be necessary.

On Line 10 of Table 12, we average the enterprise values provided by each of the valuation methods to conclude an average adjusted enterprise value of \$1,504,915. We then subtract debt from this enterprise value to quantify an equity value of \$904,915. This indication of value is on a C corp equivalent basis. If the objective of the analysis is to value PTE equity, the weighted SEAM must be applied to the C corp equity value to quantify a PTE equity value. This calculation is conducted on Line 13. The resulting conclusions of PTE equity values for the non-service and service businesses are \$988,182 and \$903,440, respectively. For comparison purposes, we have also included the C Corp and PTE equity values under 2017 tax laws.

Under the prior tax law, PTEs enjoyed a meaningful tax advantage over C corps (Table 9 demonstrates an 18.86% economic benefit advantage for PTEs under the prior tax law). Under the Act, the values of PTEs and C corps will tend to increase, but C corps increase in value more than PTEs, narrowing the equity value divide that existed under prior tax law. As demonstrated on Lines 15 and 16 of Table 12, the 2018 C corp equity value increased by 24.1% as a result of the Act, whereas the 2018 equity values of non-service and service PTEs increased by only 14.0% and 4.3%, respectively. This convergence of equity values is particularly true for service PTEs, which in the example shown in Table 12 are now valued essentially the same as C corp equity value (the weighted SEAM is 0.9984).

The temporary 20% QBI deduction allows non-service PTEs to maintain some of the PTE equity value advantage afforded under the prior tax law, but only about half of it (in the Table 12 example, the weighted SEAM for non-service PTEs is 1.0920 under the Act, down from 1.1886 under the prior tax law). As the remaining portion of the temporary period declines, the value of this economic benefit will also decline, eventually leaving non-service PTEs in much the same position as service PTEs.

Since the SEAMs are weighted based on the contributory value of the temporary and permanent periods, the weighted SEAMs will decline as the remaining period of the temporary period declines. After the expiration of the temporary period in 2025, the SEAMs for both non-service and service businesses will be identical. At that point, it is possible that PTE equity values may be less than C corp equivalent values.

Summary and Conclusion

As a result of the Act, there are now three distinct types of business entities from a tax perspective: (1) C corps, (2) PTE service businesses, and (3) PTE non-service businesses. The Act presents new challenges for valuing each type of business. Many of the tax law changes can be specifically



addressed in the subject company's financial adjustments or projections (regardless of entity type). However, we recommend that analysts separately quantify the value of bonus depreciation and add this amount to the concluded equity values in a manner consistent with the guidance discussed in this article (generally) and the [Thompson/Neuzil article](#) (specifically).

It appears that the values of most businesses have increased as a result of the beneficial tax attributes of the Act. C corps have experienced a greater percentage increase in value compared to PTEs. In fact, most of the value benefit of being a PTE has largely disappeared for service business. The tax-related value benefit of being a PTE is still material for non-service businesses, but this benefit will decline as the remaining portion of the temporary period (and thus the QBI deduction) diminishes over the next eight years.

If Congress decides to extend the sunset provision or make the QBI deduction permanent, non-service PTEs will continue to enjoy a level of economic benefit that is superior to C corps. However, there is little evidence at this point in time that Congress will take this action.