CASE NO. 20-1252

IN THE

United States Court of Appeals for the Fourth Circuit

EUGENE SCALIA,
Secretary of Labor,
United States Department of Labor
Plaintiff – Appellee

v.

ADAM VINOSKEY and THE ADAM VINOSKEY TRUST
Defendants - Appellants

ON APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF VIRGINIA AT LYNCHBURG

BRIEF OF *AMICUS CURIAE* AMERICAN SOCIETY OF APPRAISERS IN SUPPORT OF DEFENDANTS-APPELLANTS FOR REVERSAL

Lynn E. Calkins
Holland & Knight LLP
800 17th Street, N.W., Suite 1100
Washington, D.C. 20006
Phone: (202) 955-3000
Fax: (202) 955-5564
lynn.calkins@hklaw.com

Louis L. Joseph
Chelsea A. McCarthy
William F. Farley
Holland & Knight LLP
150 N. Riverside Plaza, Suite 2700
Chicago, Illinois 60606
Phone: (312) 263-3600
Fax: (312) 578-6666

Attorneys for *Amicus Curiae* American Society of Appraisers

UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

DISCLOSURE STATEMENT

- In civil, agency, bankruptcy, and mandamus cases, a disclosure statement must be filed by **all** parties, with the following exceptions: (1) the United States is not required to file a disclosure statement; (2) an indigent party is not required to file a disclosure statement; and (3) a state or local government is not required to file a disclosure statement in pro se cases. (All parties to the action in the district court are considered parties to a mandamus case.)
- In criminal and post-conviction cases, a corporate defendant must file a disclosure statement.
- In criminal cases, the United States must file a disclosure statement if there was an organizational victim of the alleged criminal activity. (See question 7.)
- Any corporate amicus curiae must file a disclosure statement.
- Counsel has a continuing duty to update the disclosure statement.

No. 20-1252 Caption: Scalia v. Vinoskey, *et al.*

Pursuant to FRAP 26.1 and Local Rule 26.1,

American Society of Appraisers
(name of party/amicus)

who is Amicus, makes the following disclosure:
(appellant/appellee/petitioner/respondent/amicus/intervenor)

1. Is party/amicus a publicly held corporation or other publicly held entity? ☐YES ☑NO

2. Does party/amicus have any parent corporations? ☐YES ☑NO
If yes, identify all parent corporations, including all generations of parent corporations: N/A

3. Is 10% or more of the stock of a party/amicus owned by a publicly held corporation or other publicly held entity? ☐YES ☑NO
If yes, identify all such owners: N/A

4. Is there any other publicly held corporation or other publicly held entity that has a direct financial interest in the outcome of the litigation? ☐YES ☑NO
If yes, identify entity and nature of interest: N/A

5. Is party a trade association? (amici curiae do not complete this question) ☐YES ☐NO
If yes, identify any publicly held member whose stock or equity value could be affected substantially by the outcome of the proceeding or whose claims the trade association is pursuing in a representative capacity, or state that there is no such member:

6. Does this case arise out of a bankruptcy proceeding? ☐YES ☑NO
If yes, the debtor, the trustee, or the appellant (if neither the debtor nor the trustee is a party) must list (1) the members of any creditors' committee, (2) each debtor (if not in the caption),

and (3) if a debtor is a corporation, the parent corporation and any publicly held corporation that owns 10% or more of the stock of the debtor.

7. Is this a criminal case in which there was an organizational victim? ☐YES ☑NO
If yes, the United States, absent good cause shown, must list (1) each organizational victim of the criminal activity and (2) if an organizational victim is a corporation, the parent corporation and any publicly held corporation that owns 10% or more of the stock of victim, to the extent that information can be obtained through due diligence.

Signature: /s/ Lynn E. Calkins Date: 10/2/2020

Counsel for: American Society of Appraisers

TABLE OF CONTENTS

Page

TABLE OF AUTHORITIES

Page(s)

Cases

Statutes

Other Authorities

STATEMENT OF THE IDENTITY AND INTEREST OF THE AMICUS CURIAE[1,2]

The American Society of Appraisers ("ASA") is the largest multi-disciplinary organization devoted to the appraisal and valuation profession. The ASA is a non-profit, professional organization that teaches, tests, and credentials highly-qualified appraisers of businesses and assets.

The ASA's mission is to foster public trust of members and the appraisal profession through the highest levels of ethical and professional standards. The ASA fosters professional excellence through education, accreditation, publication, and other services with an emphasis on professional ethics to protect the public. The ASA is a founding member of The Appraisal Foundation, authorized by Congress as the organization responsible for setting The Uniform Standards of Professional Appraisal Practice for the valuation profession. The ASA's world-renowned education programs are taught by leading appraisal experts. Additional information about the ASA is available at http://www.appraisers.org.

The District Court's decision makes several statements that are directly contrary

[1] Pursuant to Fed. R. App. P. 29(a)(4)(E), no party's counsel authored this brief in whole or in part; no party or party's counsel contributed money that was intended to fund the preparation and submission of this brief; and no person—other than the amicus curiae, its members, or its counsel— contributed money that was intended to fund the preparation and submission of this brief.

[2] Pursuant to Fed. R. App. P. 29(a)(2), all parties have consented to the filing of this brief.

to well-established appraisal and valuation principles relating to valuing privately held businesses. Members of the ASA are experts on standards of value and generally accepted valuation principles, and members of the ASA regularly advise ESOP trustees on the fair market value of employer stock for purposes of ESOP transactions, annual ESOP valuations, and other ERISA matters involving fair market value appraisals. Thus, the ASA and its members have a significant interest in ensuring that the misstatements in the District Court's decision are corrected so they are not repeated in other court cases or otherwise cited as precedent.

ARGUMENT

I. Introduction

The District Court's decision makes several statements that are incongruent with fundamental business valuation principles that guide methodologies regularly used and professed by ASA members and which are not subject to reasonable dispute.

Although the District Court cites to underlying trial testimony as the basis for certain statements, a number of those statements are broader than the record cited and are neither factual recitations nor opinions specific to the experts' testimony. The principles addressed herein are significantly more nuanced than the statements issued by the District Court in the decision.

There are at least two problems with the broad based statements made in the District Court decision, necessitating the filing of this brief. First, the misstatements of the well-established business valuation principles could be taken out of context in future cases by subsequent citations to the same, rendering many problematic decisions for years to come. Second, the misunderstanding of these fundamental business valuation principles appears to have influenced the District Court's opinion in terms of how it assessed the underlying expert opinions. As a result, ASA offers this friend-of-the-court brief to correct those recitations so proper statements can be included in the appellate decision of this Court.

II. The Discounted Cash Flow Method Is Not Superior To The Capitalization of Cash Flow Method Nor Is It More Widely Used.

On pages 17 and 57 of the District Court's decision, the Court concludes that the Discounted Cash Flow ("DCF") Method is "a more widely-used methodology for evaluating the fair market value of closely-held stock" and is "a more commonly used and reliable method for evaluating the fair market value of closely-held stock." *Pizzella v. Vinoskey, et al.*, Case No. 6:16-cv-00062 (W.D. Va.), Memorandum Opinion (Dkt. 219) ("Op."), at 17, 57. Both such conclusions regarding the DCF method are wholly inaccurate.

A. What is the Discounted Cash Flow Method?

As the District Court's decision recognized, the DCF method and Capitalization of Cash Flow ("CCF") method are both valuation methods under one of the three main business valuation approaches—the income approach—to determining the fair market value of closely-held stock.[3] Op. at 13, 15. The DCF and CCF methods are the two primary and generally accepted methods utilized by appraisers under the income approach and are both based on consideration of the company's expected cash flow.

The DCF estimates the value of a company by projecting earnings and cash flow over a certain number (i.e. a "multi-period") of future years. Shannon P. Pratt & Alina V. Niculita, *Valuing A Business: The Analysis & Appraisal of Closely Held Companies* 516–17

[3] Fair market value is a standard that requires the appraiser to assume, among other things, a hypothetical buyer and hypothetical seller, in the general market, who both seek to maximize their returns. *Valuing A Business*, at 41–42.

(5th ed. 2008) ("*Valuing a Business*"). As each future year's cash flow is anticipated to be variable, it is projected for a number of discrete years and then a multiplier is ultimately used to place a "terminal value" on all the cash flows in the subsequent years beyond the discrete projection period. *Id.* at 516 (DCF "estimates the value of a company by projecting the cash flows that the Company is expected to produce and discounting those cash flows back to the valuation date using a discount rate that reflects the related risk and the time value of money."); *see also* Jay E. Fishman et al., *PPC's Guide to Business Valuations* ¶¶ 502.1–502.3 (27th ed. 2017) ("*PPC Guide*") (DCF "utilizes discrete forecasts (or projections) of the variable being discounted for each year until the company reaches a 'steady state,' at which time a 'normalized' forecast is used for what is called the "terminal year.").

In comparison, the CCF method estimates the value of a company using a projection of earnings and cash flow for a single year. This method is often used when the future growth rates are not expected to vary. *PPC Guide*, at ¶¶ 500.8, 504.1. As a result, one can skip the discrete years where growth is volatile and essentially move directly to the terminal value. *Valuing a Business*, at 219 ("If no variability is expected, then there is no point in forecasting interim years' cash flow, as there are no variable interim years. In effect, the terminal year, next year, is the only year from which value is ever calculated, and growth is built into the rate of return instead of the cash flow."). The CCF model is "a short-form derivative of the discounted cash flow method." *PPC Guide*, at ¶ 500.3.

In both models, the appraiser is seeking a point where the subject company reaches a state of normalized and stable operations. The DCF method forecasts volatile inputs (e.g., expected future variations in revenues, salary, rent, or capital expenditures) for a discrete number of years, and then once the subject company's earnings and cash flows reach a normalized level, the appraiser will estimate the terminal value by using the normalized level of cash flows at the end of the discrete projection period. The CCF method simply starts with that normalized level of cash flows in a single period (as opposed to first forecasting a discrete forecast period). *Valuing a Business*, at 219. For example, application of the DCF method might feature discrete annual forecasts of cash flows based on varying assumptions for each of the five years immediately following the valuation date, with normalized cash flows based on constant assumptions assumed for all ensuing periods. In contract, application of the CCF method would assume normalized cash flows for all periods following the valuation date (with constant assumptions from period to period).

If the appraiser expects the company's free cash flow to vary inconsistently over the next several years, then the multi-period DCF may be a better method. *Valuing a Business*, at 219. In contrast, if the appraiser expects that the company's free cash flow will increase at a stable average rate of growth, then the single period CCF may be a better method. Shannon P. Pratt & Roger J. Grabowski, *Cost of Capital: Applications and Examples* 40 (5th ed. 2014). Indeed:

> The capitalized economic income method is essentially an abridged version of the discounted economic income method. The primary difference is in the treatment of future changes in the expected economic income. In the discounted economic income method, future changes in economic income are specifically reflected in the discrete income projections in the numerator of the arithmetic equation. In the capitalized economic income method, future changes in economic income are combined into a single growth rate. This single growth rate is subtracted from the present value discount rate in the denominator of the arithmetic equation.

Valuing a Business, at 256–57. The two models are very similar to one another with the CCF simply being an "abridged version" of DCF. *Id.*

The analyst considers a few key factors in deciding whether to rely on the DCF or the CCF. Ultimately, this is a judgment call by the appraiser, but an analysis of the historical period as well as the likelihood of changes in any key assumption are the key factors to making the judgment, which is squarely in the purview of the appraiser. Some key factors an appraiser may consider in determining the appropriateness of the DCF or CCF model include:

- Revenue and profitability expectations;
- Cost of sales and inventory;
- Other costs and operating expenses;
- Property and equipment expenditures and related depreciation;
- Debt and equity; and
- Income taxes

PPC Guide, at ¶¶ 502.16–502.32 (providing the key assumptions that must be identified in preparing a financial forecast for a company when using the DCF method, and explaining that "[t]he consultant must exercise a great deal of judgment in deciding how

each of these factors is likely to impact the future cash flow or earnings of the company being valued.") And, as valuations cannot be viewed in hindsight, it must be left to the appraiser to determine which key assumptions are critical to a particular situation at the given point in time at which the company is being assessed. *Id.*

B. The Discounted Cash Flow Method Is Not A More Reliable Method Than The Capitalized Cash Flow Method.

The key for assessing the extent to which an application of the DCF or CCF method results in a sound determination of fair market value in a particular instance is not which model was used by the appraiser but rather what assumptions were utilized under either method. *Valuing a Business*, at 244. If consistent assumptions are used for both the CCF and the DCF, then the methods will produce consistent value results and neither model is better than the other. *Valuing a Business*, at 245 ("with the same set of assumptions, the discounted economic income method and the capitalized economic income method using the Gordon growth model with a 5 percent growth rate will produce an identical valuation indication."); *PPC Guide*, at ¶ 500.9 ("Since the capitalized cash flow method is a short form of the discounted cash flow method, the methods can be used interchangeably.").

Although there are certainly circumstances where the DCF method may be more appropriate than the CCF method, such as with companies with more volatile performance in the earliest projected years, the blanket statement made by the District Court that DCF is a more "reliable method" for valuing closely-held stock is incorrect.

An appraiser can reliably value closely-held stock without using the DCF model, when presented with facts that support the use of the CCF method.

C. The Discounted Cash Flow Method Is Not More Commonly Used.

In addition to one valuation method not being *per se* superior than the other method, contrary to the statement of the District Court, there is no empirical data to support that the DCF is more widely used than the CCF to value closely-held stock.

For numerous closely-held businesses, CCF will be the more logical approach to determine fair market value and is often the first—and only—method considered by an appraiser when determining fair market value. It is well established that "[t]he capitalized economic income method is used as frequently as the discounted economic income method, and probably even more frequently in the valuation of smaller businesses." *Valuing a Business*, at 239.

Thus, the determining factor of whether to use the DCF or CCF method is not whether the stock is closely-held, but rather based on the expected volatility of the cash flow of the individual company based on the fact specific situation of that company. *Id.* at 244; *PPC Guide*, at ¶ 500.9.

As a result, the District Court's statement to the contrary would undercut many appraisals which are properly based on the CCF method for determining the fair market value of the company. It is incumbent on the appraiser to assess the very specific fact pattern relating to the company being assessed to determine which method is more appropriate to reasonably determine the fair market value of the company.

III. The Discounted Cash Flow Method Is Not Inherently Done on a Controlling-Interest Basis.

The District Court also overgeneralized the DCF method when stating: "Since DCF is, by default, calculated on a controlling-interest basis, additional discounts may be necessary to account for the actual degree of control a buyer is acquiring." Op. at 15. The Court's premise that the DCF method automatically results in a controlling interest value is incorrect.

Valuation principles do not hold that the DCF method automatically produces a control-basis value indication. Instead, one must consider the inputs to the DCF model to determine whether the output returns a control value or a minority value. It is well established that, "[w]hether the income approach utilized is the discounted cash flow or capitalization of cash flow or earnings, the income approach can produce either a control value or a minority value." Shannon P. Pratt, *Business Valuation Discounts and Premiums* 26 (2d ed. 2009) (*"BV Discounts"*).

To determine if a DCF analysis will result in a control or minority value, it is necessary to understand the assumptions used in the method. *Id.* Generally, if the projected cash flows reflect the perspective of a control investor, or otherwise reflect changes that only a control owner would (or could) make (*e.g.*, changed capital structure, reduced owner's compensation, and so on), then the valuation method would be expected to produce a control value. *BV Discounts*, at 26–27. If the economic income

projections do not reflect a control owner's expectations, however then the model would be expected to produce a minority value. *Id.* at 26.

Further, the value differential between a minority value and a control value is not necessarily meaningful in every case. The Appraisal Foundation, *Valuations in Financial Reporting Valuation Advisory 3: The Measurement and Application of Market Participant Acquisition Premiums* 11 (Sept. 6, 2017). Specifically, "[i]f every facet of the company is being so well optimized that a control owner could not improve on it, then there is little or no difference between a control value and a minority value." *Valuing a Business*, at 228; *BV Discounts*, at 26 ("Most analysts agree that the extent to which the income approach produces a control or minority value lies primarily in the level of the cash flows or earnings being discounted or capitalized.").

The District Court's statement that the DCF method will always result in a control value is contrary to generally accepted valuation theory and ignores the nuances of the DCF method. Instead of a blanket conclusion, an analysis of the assumptions considered in any DCF calculation (in an effort to determine fair market value of a particular interest) is necessary to determine whether the indication of value does indeed result in a controlling interest value or not. *BV Discounts*, at 26. Based on those underlying assumptions by the appraiser, it may be that, in one case, the DCF method *does* return a controlling-interest valuation but that, in another case, the DCF method *does not*. The answer to this question is not automatic, but rather depends on the valuation inputs used in the analysis.

This blanket assertion—that the DCF method is "by default" a controlling-interest method and must be discounted when the interest at issue carries something less than "total and unfettered" control—creates a risk that the decision will be improperly used to criticize DCF analyses at issue in other cases. Given the frequency in which this method is used to value closely-held business interests, the seriousness of this concern cannot be overstated.

IV. Valuation Principles Dictate that an ESOP Need Not Acquire Total and Unfettered Control for the Valuation to Reflect Some Level of Control Rights.

In several portions of its decision, the District Court notes that, for an appraisal of a 100% ESOP-owned company to be done on a controlling-interest basis, an ESOP must gain "total and unfettered" control of the Company. Specifically, the Court states that "many of the discretionary choices Napier made reflected his view that the ESOP would gain total control over Sentry as a result of the 2010 Transaction." Op. at 17-18. The Court then concludes that, "the Sentry ESOP did not stand to gain total control over Sentry after the 2010 Transaction, and that Brian Napier's assumption that the ESOP would gain total control simply by purchasing 100 of Sentry's stock was unreasonable." Op. at 20; *see also id.* at 53.[4]

[4] However, the portion of the record the District Court cites in finding that Napier considered the ESOP would gain "total and unfettered" control on pages 17 and 18 of the Opinion is just the statement that Napier's valuation was done on a controlling interest—as opposed to a minority interest—basis. Op. at 17–18 (citing JX 85 at 1809 (Napier's valuation stating that it was on a "controlling interest" basis) and Tr. 2 33:19-25 (Q [by counsel for DOL]: "…Just starting on the first page, this is the first appraisal

These statements incorrectly consider the issue of control as black or white—that there is either "full and unfettered control," or there is none. Under generally accepted valuation principles, however, "[c]ontrol or minority is not a black and white concept with a bright dividing line. Control, or lack of it, covers a broad spectrum." *Valuing a Business*, at 385-86. "The matter of a controlling ownership position versus a noncontrolling ownership position is not an either/or proposition." *Id.* at 399.

Instead, according to well established valuation principles, if a buyer of a block of stock obtains certain prerogatives of control beyond those of a true minority shareholder, then some measure of control adjustment is appropriate. *PPC Guide*, at ¶ 803.6.

Thus, in contrast to the District Court's analysis, an ownership interest constituting 100% of the outstanding shares of a company's stock, even if such control was not "total and unfettered," warrants a consideration of various control principles. *Valuing a Business*, at 385–86 (listing elements of control to be considered and noting that 100% ownership is the ultimate in estimating a control premiums.)

With respect to ESOPs specifically, by law, an ESOP owning 100% of a non-public company's shares necessarily means that it has the ultimate authority to approve or block any corporate merger or consolidation, recapitalization, reclassification,

---

of Sentry Equipment that you did on a controlling-interest basis; is that right? A [Napier]: Yes.").

liquidation, dissolution, or the sale of substantially all assets of the business.[5] 26 U.S.C. § 409(e)(3) (specifying that one of the requirements for a tax qualified employee stock ownership plan for a non-public company is that participants have the right to direct the exercise of voting rights under securities allocated to their accounts "with respect to the approval or disapproval of any corporate merger or consolidation, recapitalization, reclassification, liquidation, dissolution, sale of substantially all assets of a trade or business, or such similar transaction as the Secretary may prescribe in regulations"). Additionally, an ESOP trustee, even where it is otherwise a directed trustee for voting the company's stock, has the obligation to reject a direction on shareholder actions when it is not in the best interests of the ESOP. *See, e.g.,* 29 U.S.C. § 1103(a)(1) ("[T]he trustee or trustees shall have exclusive authority and discretion to manage and control assets of the plan, except to the extent that—the plan expressly provides that the trustee or trustees are subject to the direction of a named fiduciary who is not a trustee, in which case the trustee shall be subject to proper directions of such fiduciary which are made in accordance with the terms of the plan and which are not contrary to this chapter . . . ."); *FirsTier Bank N.A. v. Zeller*, 16 F.3d 907, 911 (8th Cir. 1994) ("Thus, an ERISA trustee who deals with plan assets in accordance with

[5] As the ASA addressed in a previous amicus brief filed with this Court, the notion that a court should be concerned with an ESOP transaction that does not transfer unfettered control is misplaced and is not supported in the Congressional history relating to ESOPs. *Lee v. Argent Trust Co.*, No. 19-2485 (4th Cir.), Dkt. 44, at 21–24.

proper directions of another fiduciary is not relieved of its fiduciary duties to conform to the prudent man standard of care, *see* 29 U.S.C. § 1104(a); to attempt to remedy known breaches of duty by other fiduciaries, *see* 29 U.S.C. § 1105(a); and to avoid prohibited transactions, *see* 29 U.S.C. § 1106.").

And, the ability to take the actions identified in 26 U.S.C. § 409(e)(3) are recognized as elements of control. *Brundle v. Wilmington Tr., N.A.*, 919 F.3d 763, 777 (4th Cir. 2019) (defining "control" as interests that include the right to rearrange the corporation's capital structure and decide whether to liquidate, merge, or sell assets).

Despite acknowledging this when it concluded that the Sentry ESOP gained some elements of control when it purchased 100% of the outstanding shares of stock (Op. at 90), the District Court considered Napier's valuation as fundamentally flawed and assumed "total and unfettered control" simply because the valuation stated that it was on a controlling-interest basis (Op. at 17-18).

In light of the elements of control acquired by the ESOP recognized by the Court, the Court's criticism of Napier's statement that the valuation was done on a "controlling interest" basis is misplaced. Because this logic creates the risk that, in other cases, a court or litigant may assert that simply because a valuation states that it was done on a "controlling interest" basis the appraiser must have assumed the interest being appraised had "total and unfettered" control of the subject company, this error needs to be corrected.

V. Proper Valuation Techniques For A Damages Calculation Requires One To Consider Any Loan Forgiveness Obtained by the ESOP.

Under the District Court's order, the ESOP will still own all of the shares but will also have a $6,502,500 cash recovery, $6.5 million more than it would have had if there had been no violation. This is neither a result that ERISA contemplated nor equity would countenance.

The notion that, if the transaction was completed at a purchase price of $14,203,500, the ESOP would have had $6,502,500 in additional cash because the employer would have contributed that incremental amount is inaccurate factually and certainly from a valuation perspective. First, contributions to the ESOP beyond those required to repay the ESOP loan are entirely discretionary, and, when valuing a company, there is no fundamental basis to assume that the company would have made such contributions (which would be highly unusual in the first place for leveraged ESOP companies). More important, however, is that had such contributions been made, they would not have represented any increase in economic value to the ESOP. At the time of those hypothetical contributions, the ESOP owned 100% of the company.

In other words, the ESOP already owned those funds. Moving $6.5 million from the company to the ESOP reduces the value of the company by $6.5 million. Further, these hypothetical contributions, while changing the location of the assets, do not increase the net value of the ESOP's holdings at all. The ESOP is not $6.5 million

more valuable with the hypothetical contributions, it is at best a wash (and probably a net loss, as it would generally be assumed that the company can invest its cash at a higher rate of return than can the ESOP).

In addition, although the District Court followed legal precedent when it refused to offset damages due to Vinoskey's $4.6 million loan forgiveness (Op. at 98), application of that precedent here is inconsistent with well-established principles related to the calculation of economic damages and should be revisited.

Generally accepted principles employ specific methods for measuring economic damages in post-transaction disputes. In situations analogous to the Vinoskey loan forgiveness, generally accepted principles of determining economic damages call for a "dollar-for-dollar" mitigation of any alleged gross damages. The dollar-for-dollar measurement is "often associated with issues that have a one-time, nonrecurring impact on the business, such as obligations or liabilities relating to environmental issues or lawsuits." *The Comprehensive Guide to Economic Damages* 930 (Nancy Fannon & Jonathan Dunitz eds, 5th ed., 2018).

The following example demonstrates the application of the dollar-for-dollar measurement:

> A manufacturing company purchased a competitor's subsidiary for $750 million. The target company had annual EBITDA of $150 million, resulting in a transaction multiple of five times EBITDA. Six months after close, the buyer paid $10 million related to environmental remediation costs. This contingent liability was not recorded on the financial statements or disclosed to the buyer prior to closing and was known to the seller.

> The buyer did not contemplate these costs in its valuation; however, this is nonrecurring and will not impact future earnings. In addition, the inclusion of this cost does not impact the buyer's valuation model; therefore, an appropriate measure of damages is likely dollar for dollar to reflect the benefit to the seller related to the misrepresentation or failure to disclose the contingent liability. This results in a reduction of the purchase price by $10 million, to $740 million.

(*Id.*)

Here, Vinoskey's $4.6 million loan forgiveness is akin to the unknown post-transaction liability in the example above. The loan forgiveness was a one-time nonrecurring event reducing the debt owed by the ESOP—the very debt that was created by the initial transaction price (value) to begin with. Accordingly, to the extent any damages are awarded, the $4.6 million loan forgiveness needs to be accounted for under the generally-accepted dollar-for-dollar economic damages measurement. The effect of applying this measurement would be to reduce the damages award by $4.6 million, which would reflect the dollar-for-dollar benefit actually received by the ESOP from the loan forgiveness.

Considering the company's opportunity cost is not accurate here because the analysis that, if the ESOP has more cash, it would make other "more fruitful" investments is not sound. Op. at 98. ESOPs are designed to invest primarily in company stock or other "qualifying employer securities." 26 U.S.C. § 4975(e)(7)(A). [6]

[6] ASA acknowledges that generally ESOPs that invest more than 50% of their assets in company stock or other qualified employer securities will be considered to have invested "primarily" in such securities. Dep't of Labor Advisory Opinion 1983-6A (Jan. 24, 1983). However, in ASA's experience, ESOPs invest the vast majority of its assets

If the ESOP did in fact overpay, the transaction at the time would simply have resulted in the ESOP note obligation being less, not in the ESOP having more cash to invest elsewhere.

As a result, from a valuation standpoint, the forgiveness of a company's debt obligations increases the value of the company stock because the company is less encumbered by debt, thereby increasing the equity value. Richard Brealey et al., *Principles of Corporate Finance* 450 (11th ed. 2014) (holding a firm's assets constant, "a dollar more of debt means a dollar less of equity value"). One should look at the value of the stock immediately after the transaction with and without forgiveness of note. Forgiveness of debt immediately increases equity value. *Id.*

Thus, by ignoring the forgiveness of debt, the District Court did not properly consider the immediate economic effect on equity and accretive value to the participants, and it would be more accurate from a valuation perspective if the District Court's judgment awarding $6,502,500.00 in damages was reduced by Vinoskey's $4.6 million loan forgiveness.

(often 100%) back into company stock, except when doing so would not be prudent or for the exclusive benefit of plan participants or beneficiaries.

VI. Conclusion

The ASA asks that this Court correct the aforementioned misstatements made by the District Court of these well-established principles in order to avoid those inaccurate reiterations from being cited in subsequent decisions.

Dated: October 2, 2020

Respectfully submitted,

HOLLAND & KNIGHT, LLP

/s/ Lynn E. Calkins
Lynn E. Calkins
800 17th Street, N.W., Suite 1100
Washington, D.C. 20006
Phone: (202) 457-7041
Fax: (202) 955-5564
lynn.calkins@hklaw.com

Louis L. Joseph
Chelsea A. McCarthy
William F. Farley
150 N. Riverside Plaza, Suite 2700
Chicago, Illinois 60606
Phone: (312) 263-3600
Fax: (312) 578-6666

Attorneys for *Amicus Curiae*
American Society of Appraisers

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(g), I certify the following:

This brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B) and Fourth Circuit Rule 32(b), because this brief contains 4,785 words as determined by the Microsoft Word word-processing system used to prepare the brief, excluding the parts of the brief exempted by Fed. R. App. P. 32(f).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed R. App. P. 32(a)(6) because it has been prepared in a proportionally spaced typeface using Microsoft Word word-processing system in a 14-point Garamond font.

/s/ Lynn E. Calkins
Lynn E. Calkins

CERTIFICATE OF SERVICE

I certify that, on October 2, 2020, I electronically filed the foregoing *Amicus Curiae* Brief of the American Society of Appraisers with the Clerk of this Court using the Court's CM/ECF system, which will send a notice of such filing to the registered ECF users.

/s/ Lynn E. Calkins
Lynn E. Calkins

ADDENDUM

FIFTH EDITION

VALUING A BUSINESS

The Analysis and Appraisal of Closely Held Companies

SHANNON P. PRATT
with Alina V. Niculita

Valuing a Business

The Analysis and Appraisal of Closely Held Companies

Fifth Edition

Shannon P. Pratt, CFA, FASA, MCBA, MCBC, CM & AA
Chairman and CEO
Shannon Pratt Valuations, Inc.

Alina V. Niculita, CFA, MBA
President and COO
Shannon Pratt Valuations, Inc.

New York • Chicago • San Francisco • Lisbon • London
Madrid • Mexico City • Milan • New Delhi • San Juan
Seoul • Singapore • Sydney • Toronto

0-07-150935-6

The material in this eBook also appears in the print version of this title: 0-07-144180-8.

DOI: 10.1036/0071441808

determines the applicable standard of value—that is, the definition of value being sought—and almost always influences it. Standards of value are discussed in the next section, and an exhibit following that section illustrates the matching of certain valuation purposes with applicable standards of value.

Standards of Value

The word *value* means different things to different people. Even to the same person, value means different things in different contexts, as we discussed in the previous section.

Without carefully defining the term *value*, the conclusions reached in the valuation report have no meaning.

Is the objective of the valuation to estimate fair market value, market value, fair value, true value, investment value, intrinsic value, fundamental value, insurance value, book value, use value, collateral value, ad valorem value, or some other value?

Clients rarely give it much thought. Many don't have enough technical background in business valuation to raise the right questions. One of the professional appraiser's most important tasks is to work carefully and thoroughly with the client and/or attorney to arrive at a definition of value that is appropriate to the specific purpose of the valuation engagement.

In this book, a *standard of value* is a definition of the type of value being sought. A *premise of value* is an assumption as to the set of actual or hypothetical transactional circumstances applicable to the subject valuation (e.g., going-concern or liquidation).

For many situations, the standard of value is legally mandated, whether by law or by binding legal documents or contracts. In other cases, it is a function of the wishes of the parties involved. The standard of value usually reflects an assumption as to who will be the buyer and who will be the seller in the hypothetical or actual sales transaction regarding the subject assets, properties, or business interests. It defines or specifies the parties to the actual or hypothetical transaction. In other words, the standard of value addresses the questions: "value to whom?" and "under what circumstances?" The standard of value, either directly by statute or (more often) as interpreted in case law, often addresses what valuation methods are appropriate and what factors should or should not be considered.

Fair Market Value

In the United States, the most widely recognized and accepted standard of value related to business valuations is *fair market value*. With regard to business valuations, it is the standard that applies to virtually all federal and state tax matters, such as estate taxes, gift taxes, inheritance taxes, income taxes, and ad valorem taxes. It is also the legal standard of value in many other—though not all—valuation situations.

Fair market value is defined by the ASA as "the amount at which property would change hands between a willing seller and a willing buyer when neither is

acting under compulsion and when both have reasonable knowledge of the relevant facts."[6] This definition comports to that found in the Internal Revenue Code and Revenue Ruling 59-60.

In most interpretations of fair market value, the willing buyer and willing seller are hypothetical persons dealing at arm's length, rather than any particular buyer or seller. In other words, a price would not be considered representative of fair market value if influenced by special motivations not characteristic of a typical buyer or seller.

There is also general agreement that the definition implies that the parties have the ability as well as the willingness to buy or to sell. The *market* in this definition can be thought of as all the potential buyers and sellers of like businesses or practices.

The concept of fair market value also assumes prevalent economic and market conditions at the date of the particular valuation. You have probably heard someone say, "I couldn't get anywhere near the value of my house if I put it on the market today," or, "The value of XYZ Company stock is really much more (or less) than the price it's selling for on the New York Stock Exchange today." The standard of value that those people have in mind is some standard *other than* fair market value, since the concept of fair market value means the price at which a transaction could be expected to take place under *conditions existing at the valuation date*.

The terms *market value* and *cash value* are frequently used interchangeably with the term *fair market value*. The use of these essentially synonymous standard of value terms is often influenced by the type of asset, property, or business interest subject to valuation.

In the United States, the most widely recognized and accepted standard of value related to real estate appraisals is *market value*. The Appraisal Foundation defines *market value* as follows:

> MARKET VALUE: Market value is the major focus of most real property appraisal assignments. Both economic and legal definitions of market value have been developed and refined. A current economic definition agreed upon by agencies that regulate federal financial institutions in the United States of America is:
>
> > The most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:
> >
> > **1.** buyer and seller are typically motivated;
> > **2.** both parties are well informed or well advised, and acting in what they consider their best interests;
> > **3.** a reasonable time is allowed for exposure in the open market;
> > **4.** payment is made in terms of cash in United States dollars or in terms of financial arrangements comparable thereto; and

[6] American Society of Appraisers, Business Valuation Standards—Definitions.

If a controlling ownership interest is to be valued and the standard of value is fair market value, an argument can be made that an industry-average capital structure should be used. This is because a control buyer would have the power to change the capital structure and the industry average could represent the most likely result. However, in such a case, it would be important to understand how the industry-average capital structure is derived and whether or not it is reasonable to expect the subject company to achieve it, given (1) the current conditions of the company itself and (2) the current financial market conditions. Alternatively, it may be appropriate to consider a capital structure that the company could achieve under an asset-based loan scenario. By availing itself of extra funding, the company could take advantage of growth opportunities that the current ownership is simply not taking advantage of. If a controlling ownership interest is to be valued under the standard of investment value, then the buyer's or owner's capital structure could be used.

Specific Projection Period plus a Terminal Value

So far, we have presented the basic discounted economic income model, in which specific projections of economic income are made over the life of the investment. However, as a practical matter, there are very few investments for which reliable projections can be made over the entire life of the investment. Variations of the model reflect this limitation.

The most common multistage variation of the discounted economic income model is a two-stage model that projects economic income for a finite number of periods, usually one business cycle of somewhere between 3 and 10 years, and then assumes a *terminal value* at the end of the discrete projection period. Note that the only reason one would use a discounted cash flow method as opposed to a capitalized cash flow model is that the subject company predicts a period of variability in its earnings stream for some period of time into the future. The appropriate length of the forecast period should be until that variability stops; at the point in time that the company expects normalized or level growth, the terminal value is calculated. If no variability is expected, then there is no point in forecasting interim years' cash flow, as there are no variable interim years. In effect, the terminal year, next year, is the only year from which value is ever calculated, and growth is built into the rate of return instead of the cash flow. However, it is important to note that the capitalization model implies a steady rate of growth in perpetuity.

This terminal value is sometimes also called the *residual value*, the *reversionary value*, or the *future value*. The formula for this model can be generalized as follows:

Formula 9–12

$$PV = \frac{E_1}{(1+k)} + \frac{E_2}{(1+k)^2} + \ldots + \frac{E_n}{(1+k)^n} + \frac{FV}{(1+k)^n}$$

where:

$E_1 \ldots E_n =$ Expected amounts of economic income (often net cash flow) in each of periods E_1 through E_n

k = Discount rate
n = Number of periods in the discrete projection period
FV = Future value or terminal value (the prospective value as of the end of the discrete projection period)

The immediately obvious characteristic of this formula is that it depends partly on a projection of the value of the subject company several periods in the future to estimate the value of the subject company today! It is not uncommon for the present value of the terminal value in this formulation to account for more than half of the total present value. Therefore, the matter of how the terminal value is estimated is an important part of the estimate of present value.

If one assumes that the business will continue indefinitely as a viable going concern after the number of years for which discrete projections were made, two procedures are commonly used to estimate the terminal value:

1. Capitalization of ongoing economic income
2. An estimated market multiple of the economic income projected for the last year of the discrete projection period

The capitalization method is the procedure favored by most business appraisers. It is discussed in some detail in the next chapter.

Many investment bankers are prone to use the market multiple method. If one is discounting returns to equity, this method involves a multiple of some measure of income available to equity, most typically a P/E multiple. If one is discounting returns available to overall capital, this method involves a multiple of some measure of income available to overall capital, most typically EBIT or EBITDA. From this result, debt must be subtracted.

The market multiple method introduces into the income approach the added dimension of projecting a market multiple as of the end of the projection period. As noted earlier, the terminal value often accounts for half or more of the value indicated by the DCF method. The market multiple brings a major element of the market approach into the income approach. Many valuation analysts prefer to keep the income approach and the market approach as distinct from each other as possible. Many believe that using the Gordon growth model capitalization procedure described in the next chapter does a better job of keeping the indications of value derived from the income approach and the market approach as independent of each other as possible.[41]

Under certain circumstances, the terminal value may be based on the premise that the company will be liquidated at the end of the discrete projection period. In this case, the terminal value requires an estimate of the liquidation value of the subject company assets as of that future date.

The "Midyear Discounting Convention"

In the formulas presented up to this point, we have implied (by using whole integer exponents) that the cash flows (or other economic income) are expected to be received at the *end* of each period. This may be a reasonable approximation if a

[41] Whether one is using a market multiple or the Gordon growth model to estimate the terminal value, the resulting implied growth rate and market multiple, respectively, should be checked for reasonableness.

Does the Discounted Economic Income Model Produce a Control or a Minority Value?

As noted earlier in the chapter, the discounted economic income model can produce either a control value or a minority value, depending on the model inputs involving the valuation variables. Generally, if the inputs in the valuation model reflect changes that only a control owner would (or could) make (e.g., changed capital structure, reduced owner's compensation, and so on), then the model would be expected to produce a control value.

If the economic income projections merely reflect the continuation of present policies, then the model would be expected to produce a minority value. If every facet of the company is being so well optimized that a control owner could not improve on it, then there is little or no difference between a control value and a minority value. Further discussion of this notion will be found in Chapters 15 and 16 on control premiums and discounts for lack of control.

The argument is often made that, because discount rates typically are developed based on minority trades in publicly traded stocks, the discount rate is a minority interest discount rate, and therefore the value indicated by a discounted economic income model must be a minority value. There are at least two problems with this argument. First, *most, if not all, of the difference between a control value and a minority value in a discounted economic income model results from differences in the projected economic income (the numerator), not from differences in the discount rate*. Second, while the cost of equity capital is estimated from trades of minority ownership interests, the capital structure (i.e., the percentage of debt versus the percentage of equity) of the subject company is clearly influenced by the controlling stockholder. And, the capital structure mix is at least as important as the cost of equity capital in the estimation of a company's overall WACC—that is, the discount rate associated with net cash flow. In other words, the cost of equity capital may be the same, or nearly the same, whether a control or a minority interest is being calculated. However, the controlling owner (and, generally, not the minority owner) influences the projection of economic income (the numerator in the model) and the capital structure component of the WACC (the denominator in the model).

What Standard of Value Does a Discounted Economic Income Model Produce?

As with the control/minority ownership issue, the answer to this question depends to some extent on the individual valuation variable inputs that go into the model.

If the analyst is valuing a company on a stand-alone basis, the use of that company's own economic income projections and a market-derived cost of capital as the discount rate would be expected to estimate the *fair market value* of the subject business enterprise. If, on the other hand, a particular acquirer with a lower cost of capital would discount an economic income projection at that acquirer's lower cost of capital, then the result would be *investment value*, the value of the subject enterprise to that individual acquirer and only to that acquirer. Similarly, if a potential acquirer were to include synergistic benefits or other enhancements in the economic income projections, then the result would be *investment value* rather than *fair market value*.

There are two variations of the capitalized future economic income method that are widely used in business valuation today:

1. The perpetual economic income stream model
2. The constant growth model (with a variation commonly referred to as the *Gordon growth model*)[1]

This chapter transitions the reader from the discounted future economic income method of valuation to the capitalized future economic income method, and presents the mechanics, applications, and caveats in utilizing the various versions of the capitalized income method that are used in practice.

Essential Difference between the Discounting Model and the Capitalization Model

A *discount rate* converts *all* of the expected future returns on investment (however defined) to an indicated present value.

In contrast to the more comprehensive method of discounting *all* of the expected returns, a *capitalization rate* converts *only a single expected economic return number* to an indicated present value.

Discount rate	A rate of return used to convert a monetary sum, payable or receivable in the future, into a present value
Capitalization rate	Any divisor (usually expressed as a percentage) that is used to convert anticipated economic benefits of a single period into value[2]
Capitalization of economic income method	A method within the income approach whereby economic benefits for a representative single period are converted to value through division by a capitalization rate[3]
Capitalization	A conversion of a single period of economic benefits into value[4]

In property appraisal terminology, the similar method is called *direct capitalization*, the basic subject matter of this chapter. It is distinguished from what property appraisers call *yield capitalization*, which is comparable to the business appraiser's *discounted economic income*, the subject of the previous chapter.

The capitalized economic income method means the application of one divisor (or multiple) to one economic income measure. The result is an indication of value derived from that single division or multiplication.

For example, let's assume that the next year's net cash flow is expected to be $200,000,000 and the appropriate direct capitalization rate is 25 percent. In this case, the indicated value of the business is $800,000,000:

$$\frac{\$200,000,000}{0.25} = \$800,000,000$$

[1] There can be other variations, such as capitalizing an income stream with a finite life. One who understands the details of the last chapter and this chapter should be able to construct capitalization rates for such variations.
[2] American Society of Appraisers, Business Valuation Standards, Definitions (Herndon, VA: American Society of Appraisers, 2005).
[3] Ibid.
[4] Ibid.

Note from the definition above that the method is based on anticipation. Like the discounted economic income method, it is a method to convert *anticipated* income to a present value.

The capitalized economic income method is used as frequently as the discounted economic income method, and probably even more frequently in the valuation of smaller businesses. So why does this text put the discounted economic income method first? Because, *the capitalized economic income method is simply an abridged version of the discounted economic income method*. The discounted economic income method is presented first because the valuation theory that is applied in the discounted economic income method is more comprehensive. And once the analyst has a grasp of the discounted economic income method, the valuation theory that is applied in the capitalized income method can be grasped more easily.

The Perpetual Economic Income Stream Model

Consider the case of a preferred stock that has no maturity and no call provision (i.e., no expected redemption), paying a fixed dividend in perpetuity. The basic discounted economic income formula would value this preferred stock as follows:

Formula 10–1

$$PV = \sum_{i=1}^{n} \frac{E_i}{(1 + k_p)^i}$$

where:

PV	=	Present value
$\sum$	=	Sum of
n	=	The last period for which economic income is expected; n may equal infinity (i.e., ∞) if the economic income is expected to continue in perpetuity
E_i	=	The expected amount of economic income in each ith period in the future
k_p	=	Rate of return on preferred stock
i	=	The period (usually stated as a number of years) in the future in which the prospective economic income is expected to be received

It can be shown mathematically that when the expected economic income is a constant amount in perpetuity, the above formula can be simplified to:

Formula 10–2

$$PV = \frac{E}{k}$$

where:

E	=	An expected amount of economic income in every period ahead in perpetuity
k	=	Discount rate (cost of capital for that level of economic income)

In this leveraged investment a one percentage point change in the growth rate resulted in a 25 percent increase in the indicated value of invested capital and a 50 percent increase in the indicated value of equity!

This example actually overstates the effect of higher growth relative to a more detailed analysis. As mentioned in Chapter 9, higher growth would require higher investment in fixed assets and working capital. Thus, the numerator (net cash flows) of the capitalization formula would logically get smaller with a higher expected growth assumption. Under certain industry conditions, the higher growth might add nothing to value if the required extra annual investments were sufficiently large.

Obviously, the closer the growth rate to the discount rate, the greater the sensitivity. When the projected growth rate reaches or exceeds the discount rate in the perpetual growth model, mathematically, the capitalization rate is zero or negative. This relationship leads to the generally unreasonable conclusion that the company is infinitely valuable.

Because such large impacts may result from relatively small changes in input variables, it is often enlightening to perform some sensitivity analysis in conjunction with a discounted or capitalized economic income method. This could take the form of a sensitivity table showing the impact of a range of discount rates, terminal value multiples, growth rates, and cash flow projections.

When to Use the Discounting versus the Capitalization Method

The obvious implication of all this, when one stops to think about it simplistically, is that *the difference between the discounting model and the capitalization model is how one treats anticipated changes in future income over time*:

1. In discounting, *changes over time in the expected economic income are treated specifically in the terms of the numerator of the present value equation*.
2. In capitalizing, *changes over time in the expected economic income are treated as a single average percentage change, and that annualized percentage is subtracted (assuming it is positive) from the cost of capital in the denominator*.

The important conceptual underpinning of the capitalized economic income valuation model is that there is either a constant annual income stream in perpetuity or a constant annualized rate of growth (or decline) in the economic income variable being capitalized in perpetuity. Obviously, this constant growth rate projection is rarely met in the real world.

Unlike the discounted economic income model, the capitalization model does not take into consideration the timing of future changes in expected economic income. The greater the differences in the anticipated changes over time, especially in the early years, the more the analyst is encouraged to apply the discounted economic income method rather than the capitalized income method.

This leads to some generalizations about the relative attractiveness of the two basic income approach valuation methods:

1. *Stable or evenly growing economic income flow*. If the economic income flow is either stable or growing (or declining) at a fairly even rate, the capitalized

economic income method should conclude as accurate a value indication as the discounted economic income method.

2. *Predictable but uneven changes*. If there are reasons to believe that changes will be significant but predictable, even though uneven, the discounted economic income model should produce a more accurate valuation.
3. *Short- or intermediate-term supergrowth*. If growth is expected to be quite high in the immediate future, the discounted economic income model should produce a more accurate valuation. One of the most common mistakes in the application of this method is to use a 10 percent growth for the first few years (even though it may not be sustainable over the long term) and then subtract that 10 percent from the present value discount rate. This mistake will result in a low capitalization rate and in an overvaluation of the subject company.
4. *Changes that are erratic and unpredictable as to timing*. If the company's economic income is unstable and also more or less random as to timing, the company's risk increases, and thus the present value discount rate increases. However, the discounted economic income method may not be able to produce any more accurate a value indication than the direct capitalization method.

Equivalence of the Discounting and Capitalization Methods

Exhibit 10–1 shows that, with the same set of assumptions, the discounted economic income method and the capitalized economic income method using the Gordon growth model with a 5 percent growth rate will produce an identical valuation indication. Therefore, an analyst using the capitalized economic income method should understand its parent method (the discounted economic income method) and think through, as a form of mental verification of reasonableness, "If I carried out the full discounting procedure, would I get approximately the same answer?" If not, the valuation variables used in the capitalization method should be reexamined, or perhaps the capitalization method should only be used for a terminal value in conjunction with the discounting method.

Implementing the Capitalized Economic Income Method

As we have seen, like the discounted economic income method, the essence of the capitalized income method is twofold:

1. *Projecting an anticipated economic income stream*. As opposed to projecting the amount and timing of each individual economic income flow the business is expected to produce for its owner, the direct capitalization method requires projecting a single, sustainable amount of future economic income (the *numerator* in the arithmetic formula).
2. *Capitalizing the expected economic income amount to produce a present value*. This second step involves dividing the expected economic income by a rate that reflects the risk (degree of certainty or uncertainty) of receiving that expected amount on a regular basis. In other words, the starting point is the *present value discount rate*, as discussed in the previous chapter. However, the numerator

In the market approach, multiples of income variables are derived from direct observation of the multiples in the market, as we will see in the next chapter.

Economic Income Variables Used in the Income Approach versus the Market Approach

In the income approach, the economic income variable generally preferred is net cash flow, either to equity or to overall invested capital, as defined in the previous chapter. This is partly because net cash flow is the discretionary amount that owners can take out of the business on an ongoing, sustainable basis without disrupting continuing operations, the variable on which many investors and corporate finance people will ultimately focus. It is also partly because net cash flow is the income variable that most analysts consider most appropriate to match with Ibbotson Associates equity risk premium data, which uses stock market returns over government security returns. The only other income variable widely used in the income approach is net income, as discussed in the previous chapter.

As will be seen in the next chapter, the market approach uses all kinds of economic income variables *except* expected net cash flow. Remember, in the income approach, the amounts of capital expenditures and changes in net working capital used to derive net cash flow are "amounts necessary to support projected business operations." In the market approach, it is difficult to determine for any given company whether or not amounts of capital expenditures and/or changes in net working capital meet that criterion. Therefore, while other cash flow–related measures of economic income (e.g., EDITDA) are used, net cash flow is not often used in the market approach. Some analysts believe that the inverse of a P/E multiple, E/P, is equal to a cap rate. This is true; however, it results in an earnings cap rate, not a cash flow cap rate as derived by the traditional build-up or CAPM.

By observing these differences, and by using the perpetual income or the Gordon growth model rather than a market multiple for the terminal value, the income and market approaches are quite discrete from each other and, if there are good data for both, can provide good checks against one another.

Summary

There are three principal variables in the direct capitalization of economic income method:

1. The projected base-level economic income flow
2. The present value discount rate (i.e., the cost of capital)
3. The expected long-term growth rate that modifies the present value discount rate to derive the direct capitalization rate

The capitalized economic income method is essentially an abridged version of the discounted economic income method. The primary difference is in the treatment of future changes in the expected economic income. In the discounted economic income method, future changes in economic income are specifically reflected in the discrete income projections in the numerator of the arithmetic equation.

In the capitalized economic income method, future changes in economic income are combined into a single growth rate. This single growth rate is subtracted from the present value discount rate in the denominator of the arithmetic equation.

The economic income flow to be capitalized can be either the amount available to equity or the amount available to all invested capital (usually defined to include owners' equity plus long-term interest-bearing debt, although other definitions are sometimes used).

The economic income flow that is projected is usually net cash flow (at least that is the preference of a consensus of valuation professionals), although other definitions of economic income are sometimes used.

Like the discounted economic income method, the capitalized economic income method is a forward-looking exercise. Using some average of actual past economic income is only appropriate if that average does, in fact, represent the expected level of sustainable economic income in the future.

The projected base-level sustainable economic income flow is divided by a direct capitalization rate, which is typically calculated as the present value discount rate less an expected long-term growth rate in the economic income being capitalized. This expected long-term growth rate is projected to be constant in perpetuity.

The development of the present value discount rate is the same as for the discounted economic income method, as discussed in Chapter 9. If either a build-up procedure or the CAPM procedure is used to develop the discount rate, that rate includes expected inflation. Therefore, the growth rate used should also reflect inflation—to the extent that it impacts the economic income variable being capitalized.

The results are extremely sensitive to changes in the growth rate factor, especially when valuing invested capital. This is because the analysis of invested capital starts with a lower present value discount rate than for equity only.

It is essential that the direct capitalization rate be developed so that it is appropriate for the definition of the economic income flow being capitalized. One of the most common errors in implementing the capitalized economic income method is using a direct capitalization rate that is not appropriate for the particular definition of economic income that is being capitalized.

The capitalized economic income method is also an excellent method for developing the terminal value in the discounted economic income method.

Bibliography

Adhikari, Mike. "WACC As Used in Capitalization Formula Cases Overvaluation." *Shannon Pratt's Business Valuation Update*, October 2003.

Agiato, Joseph A., and Thomas L. Johnston. "The Relationship between the Earnings Yield and the Cash Flow Yield." *CPA Expert*, Winter 1996, pp. 6–9.

Alerding, James R. "Income Approach versus Asset Approach." *BV Q&A Newsletter*, August 2005.

Bakken, John E. "Capitalization of Earnings—an Income Approach." Chapter 17 in *Handbook of Business Valuation,* 2nd ed., Thomas L. West and Jeffrey D. Jones, eds. New York: John Wiley & Sons, 1999, pp. 192–200.

Collins, Michelle, and Julie King. "Valuation Formulas: The Income Method." *CanadaOne*, http://www.canadaone.com.

empirical evidence that is available is from the public market. Of the several hundred public companies that are taken over each year, most (about 85 percent) are at prices that represent a premium over the previous public trading price.

However, it is difficult, if not impossible, to sort out how much of this premium is for elements of control, and how much is for synergies between the seller and the buyer. Therefore, the levels of value chart (Exhibit 15–1) is schematic. That is, although it contains dollar values and percentages, they are only illustrative of how to apply the concepts.

Elements of Control

Control shares are normally more valuable than minority shares because they contain a bundle of rights that minority shares do not enjoy. The following is a partial list of some of the rights that go with control shares that minority shares do not have:

1. Appoint or change operational management.
2. Appoint or change members of the board of directors.
3. Determine management compensation and perquisites.
4. Set operational and strategic policy and change the course of the business.
5. Acquire, lease, or liquidate business assets, including plant, property, and equipment.
6. Select suppliers, vendors, and subcontractors with whom to do business and award contracts.
7. Negotiate and consummate mergers and acquisitions.
8. Liquidate, dissolve, sell out, or recapitalize the company.
9. Sell or acquire Treasury shares.
10. Register the company's equity securities for an initial or secondary public offering.
11. Register the company's debt securities for an initial or secondary public offering.
12. Declare and pay cash and/or stock dividends.
13. Change the articles of incorporation or bylaws.
14. Set one's own compensation (and perquisites) and the compensation (and perquisites) of related-party employees.
15. Select joint venturers and enter into joint venture and partnership agreements.
16. Decide what products and/or services to offer and how to price those products/services.
17. Decide what markets and locations to serve, to enter into, and to discontinue serving.
18. Decide which customer categories to market to and which not to market to.
19. Enter into inbound and outbound license or sharing agreements regarding intellectual properties.
20. Block any or all of the above actions.

Control or Lack of Control Covers a Spectrum

Control or minority is not a black and white concept with a bright dividing line. Control, or lack of it, covers a broad spectrum. Therefore, in some instances,

it is more appropriate to use the phrase "discount for lack of control" rather than "minority discount." Even some blocks of control shares may lack absolute control, and even some minority shares may enjoy some elements of control.

The following is a partial listing of possible scenarios:

100 percent control. From the standpoint of estimating a control premium, this purely 100 percent scenario is the ultimate.

More than a majority or supermajority, but less than 100 percent. Most acquirers prefer to get 100 percent of the stock. One or a few minority stockholders could be a nuisance.

More than 50 percent but less than a supermajority, where state statutes or articles of incorporation require a supermajority. About half the states have statutes that require a supermajority (usually two-thirds) to effect certain corporate actions, such as a merger or liquidation. Some companies' articles of incorporation also require a supermajority for certain corporate actions.

50 percent. This is neither control nor minority. It is not enough to take actions, but is enough to block actions. In many cases, this leads to deadlock.

Less than 50 percent but "effective control." Where one stockholder has close to 50 percent and the balance of the shares are widely distributed, the plurality owner usually has effective control over operations.

Minority shares that control by a voting block. Some companies have both voting and nonvoting classes of shares. When a holder has a majority of the voting shares, no matter how small the block, that holder has control. Empirical evidence is presented later in the chapter regarding the value of that control.

How the Standard of Value Affects the Control Premium

The applicable standard of value can often determine, or at least impact, whether a control premium is applicable.

Fair Market Value

If starting with a control value, one would not normally add a control premium, because that would be redundant, that is, double counting the value of control.

If starting with a marketable minority interest value, one needs to make a choice. Publicly traded shares are, by definition, minority interests. However, according to the Nath hypothesis, they represent control values.[1] Otherwise, he says, there would be more takeovers in the public markets.

But there are some takeovers in the public markets, about 85% of which are at premiums to the previous public trading price. Empirical evidence on this is presented in a later section of this chapter.

Can evidence from the takeovers be used to estimate a control premium when reaching an opinion as to fair market value for control shares? Exhibit 15–1 shows a line above the control value line representing acquisition or synergistic value. Exhibit 15–2 is a schematic in which Chris Mercer raises the question, "which value is fair market value for 100 percent?"

[1] Eric W. Nath, "Control Premiums and Minority Interest Discounts in Private Companies." *Business Valuation Review*, September 1994, pp. 107–12.

to reduce the discount for lack of control. In most cases, this would only be grounds for a slight reduction in the discount.

Swing vote: If a minority block can be combined with another block to create a controlling interest (say the stock was distributed 40, 40, and 20 percent, or even 49, 49, and 2 percent), the small minority block obviously has some elements of control. If starting with a controlling interest value, this could be grounds for a substantial reduction in the minority interest discount, unless there was reason to believe the two larger block holders would vote in unison. If starting with a minority value, this could be reason to add a partial control premium.

Takeover, or "coattail" protection: Some companies' articles of incorporation have provisions that if majority shares are sold in a change of control transaction, the minority shareholders must be offered the same price. Empirical evidence of how this effectively reduces the control premium (thus reducing the lack of control discount) was presented in the previous chapter.

Factors That Influence the Lack of Control Discount

The matter of a controlling ownership position versus a noncontrolling ownership position is not an either/or proposition. Relevant state statutes, the subject company's articles of incorporation and bylaws, and the way the overall ownership of the subject company is distributed have an important bearing on the relative rights of the noncontrolling and of the controlling stockholders.

Effect of State Statutes

Statutes affecting the relative rights of controlling versus noncontrolling stockholders vary from state to state.

Supermajority Vote Requirements. In some states, a simple majority vote can approve major actions, such as a merger, sale of all of the assets, or liquidation of the company. Other states require a two-thirds—or even greater—majority vote in order to approve such corporate actions. In these instances a stockholder with just over a one-third ownership interest in the company (or, in a few states, even less) has the power to block such actions. This is true even if there is a stockholder with a clear majority (i.e., over 50 percent) ownership position. In that case, the "majority" stockholder may enjoy relative—but not absolute—control of the business.

State Dissolution Statutes. Under the statutes of a majority of the states, noncontrolling stockholders enjoy certain legal rights under some circumstances that noncontrolling stockholders in some other states generally do not enjoy. For example, under certain circumstances, usually if the noncontrolling stockholders can show that there is a deadlock or that they are somehow oppressed, noncontrolling stockholders can bring suit to dissolve the corporation. If the suit is successful, and if the controlling stockholders wish to avoid dissolution, the remedy is to pay the noncontrolling stockholders the "fair value" for their stock. For this reason, the variations in state law concerning legal rights; attributable to various equity ownership percentage interests have an important bearing on the valuation of a noncontrolling ownership interest.

	LTM EBITDA Return on Revenues	MVIC/LTM Revenues
Cagle's	22.8	0.81
Pilgrim's Pride	16.8	0.78
Sanderson Farms	12.0	0.53
Seaboard	(4.4)	0.37
Tyson Foods	5.2	0.35
Warm Chicken Company	7.5	NM

Applying the selected pricing multiple of 0.23 to Warm Chicken's LTM revenues of $754,600,000 results in a market value of invested capital of $173,560,000.

A similar pattern exists when looking at the five-year average for both the guideline companies and Warm Chicken. Based on the foregoing, it is our opinion that an MVIC/five-year average revenue multiple of 0.19 is appropriate for Warm Chicken.

Applying the selected pricing multiple of 0.19 to Warm Chicken's five-year average revenues of $635,212,000 results in a market value of invested capital of $120,690,000.

Summary of Indicated Values. The indicated values for the guideline publicly traded company method are summarized in Exhibit 21–10.

As presented in Exhibit 21–10, this method resulted in a range of indicated values—from a low of $120,690,000 to a high of $223,756,000. Since we are estimating an indication of value of the Company on a going-concern basis, we placed primary emphasis on the Company's earnings capacity. We also gave equal weighting to the LTM period and the five-year average. As a result, this method resulted in an indicated MVIC of approximately $159,000,000.

The Discounted Cash Flow Method

Overview. The second method that we relied on was the discounted cash flow (DCF) method of the income approach. This method is intuitively appealing since it reflects the tradeoff between risk and expected return that is critical to the investment process. Generally, common stocks are purchased in light of anticipated stock price appreciation, which, in turn, is strongly influenced by expectations about a company's cash flow capacity.

The discounted cash flow method estimates value on the basis of future return flows over an investment horizon using empirical market data, macroeconomic and industry evidence, and the underlying fundamental trends for the subject company. The DCF method then applies a present value discount rate, known as the required rate of return on investment, to the projected future cash flows, which results in an estimation of the net present value of a series of cash flows. Exhibit 21–11 presents the pro forma consolidated income statements that are the basic for the valuation by the DCF method.

We conducted the DCF method on an after-tax, invested capital basis, and we selected net cash flow as the measure of economic income. We used an invested capital method to eliminate the impact of the Company's leverage on the value of the Company's common stock.

The DCF method estimates the value of a company by projecting the cash flows that the Company is expected to produce and discounting those cash flows back to the valuation date using a discount rate that reflects the related risk and the time value of money. This method requires an in-depth analysis of the Company's revenues, fixed and variable expenses, and capital structure.

The DCF method can result in an indication of value on either a controlling ownership interest or a noncontrolling ownership interest basis, depending on (1) the nature of the cash flows, and (2) the discount rate that have been incorporated in the analysis. In this case, we did not incorporate any adjustments to the Company's results of operations or to its capital structure that would be considered of a controlling ownership interest nature. Therefore, our DCF analysis results in an indication of value on a noncontrolling ownership interest basis.

Valuation Calculations. The variables and calculations essential to our analysis using the DCF method are outlined below.

Present Value Discount Rate. In a rational investment environment, an investor faces various alternatives for investing current funds, all of which may earn future returns to compensate for: (1) the time the invested funds are committed, (2) the expected rate of inflation or loss of purchasing power experienced over the investment time horizon, and (3) the relative uncertainty of the future returns. The expected return on investment is therefore a function of the investment risk inherent in the future returns.

We estimated the appropriate present value discount rate for Warm Chicken's projected cash flows by analyzing the Company's weighted average cost of capital (WACC). The WACC incorporates the present cost of the Company's debt capital and equity capital as determined from market-derived empirical evidence. These capital costs, expressed as required rates of return, are then weighted according to the Company's capital structure (calculated on an estimated market value basis).

We estimated the cost of Warm Chicken's debt capital by analyzing the current rates on its various debt issues. Since corporate interest expense is tax deductible, we estimated the Company's after-tax cost of debt to be approximately 4.80 percent (0.08 × [1 - 0.40]), using management's projected income tax rate of 40.0 percent.

We estimated the cost of Warm Chicken's equity capital using the capital asset pricing model (CAPM) which incorporates certain market rates of return and risk premiums, including: (1) a risk-free rate, (2) a long-term equity risk premium, (3) an industry beta, (4) a size premium, and (5) a company-specific risk premium. Each of these factors is discussed below.

Since our DCF analysis is based upon a long-term investment horizon, the appropriate risk-free rate is represented by a long-term government security. The most appropriate proxy for this rate is the yield to maturity of long-term (20-year) U.S. Treasury bonds. These bonds yielded approximately 4.9 percent as of the valuation date.

Historical equity risk premiums are quantified annually by Ibbotson Associates[3]. Ibbotson calculates the long-term equity risk premium as the total annual rates of return from common stocks less the long-term rates of return on 20-year U.S. Treasury bonds. According to the Ibbotson data, the arithmetic mean risk premium for the period 1926 to 2004 was approximately 7.2 percent. Chapter 9, "Income Approach: Discounted Future Economic Income Method," discusses alternative sources for the equity risk premium and also presents research that shows that the historical ERP may overstate the forward looking ERP.

Beta is a measure of the systematic risk inherent in a company's investment returns. We calculated betas for the five guideline publicly traded companies used in our guideline publicly traded company analysis. We unlevered and relevered the guideline companies' betas—as well as the selected beta for Warm Chicken—in order to eliminate any significant differences in capital structure. We used this beta

[3] *Stocks, Bonds, Bills, and Inflation, 2004 Yearbook* (Chicago: Ibbotson Associates, 2004).

VAL 2/17

THOMSON REUTERS
CHECKPOINT™

PPC'S GUIDE TO

BUSINESS VALUATIONS

VOLUME 1

Authors:
Jay E. Fishman, FASA
Shannon P. Pratt, DBA, FASA, CFA, MCBA, CM&AA, MCBC
James R. Hitchner, CPA/ABV, ASA
J. Clifford Griffith, MPA, CPA

Contributing Authors:
Stanton L. Meltzer, CPA
Eric G. Lipnicky, CPA

Twenty-seventh Edition (February 2017)
Carrollton, TX 75011-5008
(800) 431-9025
tax.thomsonreuters.com

THOMSON REUTERS™

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a competent professional person should be sought.—*From a Declaration of Principles jointly adopted by a Committee of the American Bar Association and a Committee of Publishers and Associations.*

The following are registered trademarks filed with the United States Patent and Trademark Office:

Checkpoint® Tools
PPC's *Practice Aids*™
PPC's *Workpapers*™
PPC's *Engagement Letter Generator*®
PPC's *Interactive Disclosure Libraries*™
PPC's *SMART Practice Aids*®
Engagement CS™

ISSN 1058-4897

ISBN 978-0-7646-7802-7
ISBN 978-0-7646-7803-5

PRINTED IN THE UNITED STATES OF AMERICA

CHAPTER 5

CAPITALIZED AND DISCOUNTED CASH FLOW METHODS

500 INTRODUCTION

Basic Principle

500.1 In Chapter 2, the authors introduced a basic valuation principle that will be discussed in more detail in this chapter. That principle is, "the value of an ownership interest in a company is equal to the present worth of the future benefits of ownership." While few would argue with the logic of this principle, many consultants will find that this is a challenging one to apply because the level of risks associated with the future benefits of owning a company may not be easy to identify and quantify. All valuation methods estimate the present worth of future benefits of ownership—some more directly than others. The most well-known valuation methods that directly use this principle are:

a. Discounted cash flow method (DCF).

b. Capitalized cash flow method (CCF).

500.2 Note that previous editions of this *Guide* referred to these methods as the discounted future returns method and the capitalized returns method, respectively. The discounted cash flow method and the capitalized cash flow method are the two most prominent methods under the income approach. As discussed in Chapter 2 the income approach is a way of determining value at a point in time by converting anticipated economic benefits into a present single amount.

500.3 Valuation consultants would usually not use both the discounted cash flow method and the capitalized cash flow method because, as will be explained later in the chapter, within the income approach, the capitalized cash flow method is merely a short-form derivative of the discounted cash flow method. In fact, as will be discussed later in his chapter, the terminal value in the discounted cash flow method is usually some form of the capitalized cash flow method.

Precondition for Using the Discounted Cash Flow Or the Capitalized Cash Flow Methods

500.4 Before beginning this discussion, note that important conditions should be present when any of these methods are used. There should be some measure of historical and/or expected future income from which to estimate future cash flows. In some instances, especially early stage companies, there may be no historical or present income from which to estimate future benefits to capitalize or discount. In those instances, other methods like the guideline public company method (using revenues, assets, expenses, or other measures) may have to be used. If the company is mature and has not produced income over a period of time, then it is possible that the net asset value method or the liquidation method discussed in Chapter 7 may be appropriate.

500.5 Note that the previous paragraph said "measure of historical and/or expected future income from which to estimate *future* cash flows." Remember, valuation is *forward-looking* as Rev. Rul. 59-60 proclaims, "valuation is a prophecy as to the future." No rational buyer would purchase a company on the basis of past results unless those results are indicative of what may be expected in the future. However, some valuation consultants compute an average or weighted average of past years' results and capitalize that number without explaining why the results are appropriate to consider. Thus, the authors emphasize that when capitalizing past results, it is essential for the valuation consultant to provide an explanation of why they are representative of future expectations.

Important Characteristics of the Valuation Methods Discussed in This Chapter

500.6 Certain characteristics should be understood about a value determined by either the discounted cash flow or the capitalized cash flow methods. These characteristics are discussed in detail in section 510, but they can be summarized as follows:

a. The value may represent either a control or a minority interest value depending on the nature of the cash flow (or earnings) adjustments made or not made to the benefit stream. As such, control (or lack of control) is embodied in the cash flows.

b. The value usually represents an *as if freely traded* or readily marketable value if the discount or capitalization rate is developed using data derived from the public stock markets and does not reflect any discount for lack of marketability. Since many engagements undertaken by the valuation consultant relate to ownership interests in closely held entities, the value determined by the discounted cash flow and the capitalized cash flow methods, especially for minority interests, may require adjustment for marketability conditions. Such adjustments are discussed in more detail in Chapter 8, which should be read in conjunction with this chapter.

c. The methods discussed in this chapter commonly are used to determine the value of a company's stockholders' equity. This type of value can be referred to as an equity value. In some valuation engagements, however, the goal may be to determine the value of a company's total invested capital (both interest bearing debt and equity). This latter goal may be appropriate when a potential buyer plans to purchase assets instead of stock, when a recapitalization is contemplated, and in various other situations. The selection of a direct to equity versus an invested capital method is also a matter of preference of the consultant. How to adjust the methods in this chapter so that they may be used to determine the value of a company's total invested capital is discussed at section 509.

Overview of the Discounted Cash Flow Method

500.7 In this method, the consultant discounts future cash flows or, if appropriate, earnings from forecasted operations (including the terminal value of the company in the last year of the forecast) back to the present value. (See the paragraphs beginning at 502.9 for the definition of a forecast and how it differs from a financial projection.) The result represents the estimated value of an ownership interest in the company. The specific steps are listed in section 502.

Overview of the Capitalized Cash Flow Method

500.8 In this method, the consultant capitalizes a single number representing net cash flow or earnings which the consultant has reason to believe is representative of the company's future. It may be the actual number considered to be representative of future expectations, or it may be a number from which the consultant expects an average compound annual level of growth or decline. The result represents an estimated value of an ownership interest in the company. The specific steps are listed in section 504.

Which Method Is More Appropriate?

500.9 Since the capitalized cash flow method is a short form of the discounted cash flow method, the methods can be used interchangeably. However, there are instances where one method would be preferable to the other method. A discounted cash flow method tends to be more appropriate when cash flows are

expected to exhibit a substantially different pattern than exhibited in historical or current operations. (*Substantially different* means materially greater or less than a normal stabilized growth rate or profit margin.) On the other hand, a capitalized cash flow method tends to be more appropriate when the company's current operations and historical returns have stabilized and are expected to be indicative of its future operations and expected cash flows (assuming stability in operations with expected returns to grow at a long-term normal growth rate or long-term rate of decline). Thus, the capitalized cash flow method is to be used when the company's expected growth is at a steady rate or, as discussed in paragraph 500.11, when reliable forecasts are not available or cannot be prepared.

How the Material in This Chapter Is Organized

500.10 Section 501 discusses what economic income variable to use in the income approach. Section 502 explains the discounted future returns method. This method is introduced first because it is the most theoretically sound method according to most corporate finance texts. For example, Allen, Brealey, and Myers said:

> "When you discount [a] project's expected cash flow at its opportunity cost of capital, the resulting present value is the amount investors would be willing to pay for the project."[1]

Frank Reilly states:

> "The value of an asset is the present value of its expected returns. Specifically, you expect an asset to provide a stream of returns during the period of time you own it. To convert this estimated stream of returns to a value for the security, you must discount this stream at your required rate of return. This process of valuation requires estimates of (1) the stream of expected returns and (2) the required rate of return on the investment."[2]

500.11 The main issue in the discounted future returns method is that it requires discrete forecasts into the future, which may be unavailable, unreliable, or impractical to use. However, the consultant should be aware that the capitalized cash flow method is in essence a forecast as well because it assumes the benefits will grow at a stabilized rate in the future. The difference is that the presentation of the capitalized cash flow method appears less cumbersome. Regardless of the method used, the results should be consistent with what could reasonably be produced by some form of the discounted cash flow method.

500.12 The next four sections (503, 504, 505, and 506) explain how to estimate discount rates and capitalization rates (cap rates), which are not the same but are interrelated. (The cap rate equals the discount rate less the average sustainable long-term estimated growth rate in the variable being capitalized.) Section 504 explains the capitalized cash flow method, section 505 explains the capital asset pricing model (CAPM) for estimating discount and capitalization rates, and section 506 explains the build-up model.

500.13 Section 507 addresses how the Duff & Phelps Risk Premium Report data may be used; section 508 discusses how to convert a net cash flow discount or capitalization rate into a rate that can be applied to some other variable; section 509 describes how to compute the weighted average cost of capital and the types of engagements where using that amount would be appropriate; and finally section 510 discusses briefly the levels of value produced by the income approach, e.g., control, minority marketable, minority nonmarketable, etc.

---

1 Franklin Allen, Richard A. Brealey, and Stewart C. Myers, *Principles of Corporate Finance*, 8th ed. (Boston: Irwin McGraw-Hill, 2006), 20.

2 Frank K. Reilly, *Investment Analysis and Portfolio Management*, 7th ed. (Mason, OH: South-Western, 2003), p. 374.

501 DETERMINING WHICH VARIABLE TO DISCOUNT OR CAPITALIZE

501.1 The most common variables to either discount or capitalize are net cash flow or net income. Most valuation consultants prefer to discount net cash flow. There are three basic reasons for this preference:

a. *Conceptual:* Net cash flow represents the benefit that is available to the owner; that is, the owner can choose to distribute it without limiting the future operations of the company or to fund additional or other future expansions or pay down additional debt not included in the forecast. However, this may create, at least temporarily, a cash surplus if this excess cash is not distributed to the owner.

b. *Empirical:* Most empirical data used to estimate discount and cap rates applies to net cash flow.

c. *Differentiation Among Approaches:* Net cash flow is normally used only in the income approach while other income variables are commonly used in the market approach. The analyst wants to make the approaches as independent of each other as possible. This allows a higher degree of checks and balances.

502 THE DISCOUNTED CASH FLOW METHOD

502.1 The discounted cash flow method, sometimes known as the discounted future returns method, utilizes discrete forecasts (or projections) of the variable being discounted for each year until the company reaches a "steady state," at which time a "normalized" forecast is used for what is called the "terminal year."

502.2 The terminal value is then calculated and reduced to present value. In combination, the discrete forecast and terminal value encompass the economic life of the enterprise. Except for special circumstances, discrete forecasts can be unreliable if made for an inordinate number of years because it is more difficult to accurately predict what will happen in four years as opposed to next year. Recognizing this fact, the consultant needs to consider only those forecasts that contain as many years as reasonably reliable, but also necessary to reach the steady state.

502.3 Each year's expected return is discounted to a present value, and the terminal value is also discounted to a present value. The sum of these present values is the value of the operating portion of the business. (The value of nonoperating assets is discussed in section 504.)

502.4 The formula for this theory is:

$$PV = \sum \frac{FV}{(1 + k)^n}$$

where:

PV	=	Present value of a future benefit stream
FV	=	Expected benefit during a future period
k	=	Discount rate
n	=	Number of periods (years) for which the FV should be discounted

502.5 This formula can be expanded to:

$$PV = \frac{FV_1}{1 + k} + \frac{FV_2}{(1 + k)^2} + \ldots + \frac{FV_n}{(1 + k)^n} + \frac{T}{(1 + k)^n}$$

Where:

All symbols are the same as in paragraph 502.4

T = Terminal value

Substituting numbers in the formula, with four years of discrete forecasts plus a terminal value, is illustrated in Exhibit 5-6.

Conditions Appropriate for the Discounted Cash Flow Method

502.6 A discounted cash flow method should be used whenever future operations can be reasonably estimated and they are expected to differ from current operations as a result of factors other than normal growth. For example, a company that manufactures a new product that has not reached a stabilized sales level may currently have significant excess production capacity, resulting in high unit costs and other inefficiencies. As future sales growth allows the company to utilize more of this excess capacity, the company is expected to become more profitable due to reduced unit cost and greater efficiencies. Once full production capacity is reached, the unit cost of the product will have reached a stabilized level, and future operations should be expected to grow at a normal rate. A discounted cash flow method may also be appropriate when a company in a cyclical industry reaches the high-point or low-point in its cycle. In this case, future operations may be projected until the industry reaches the mid-point of its cycle. At this point, revenues and profit margins should approximate average results for a full cycle, and this period should grow at a stable rate. This period represents a normalized terminal year.

Conditions That May Make a Discounted Cash Flow Method Inappropriate

502.7 In theory, a discounted cash flow method is one of the best methods of valuing a company. It may not be accepted by some courts, however, because of its reliance on forecasted future events. The values derived by this method is only as reliable as the forecasts of future cash flows (or earnings). Sometimes future events are too difficult to predict to make them usable. Understanding that no forecast is certain to occur, this method may be an issue in either of the following situations:

a. The valuation will be used by a judicial or regulatory body that will not accept a value based on a discounted cash flow method.

b. Insufficient data exists to make a timely, reliable forecast of net cash flow or earnings for a reasonable period into the future.

When these issues do not exist, a discounted cash flow method can be useful in many circumstances. Even when one or both of the above situations do apply, the consultant may still want to use a discounted cash flow method as a reasonableness or sanity check. That is, using rough forecast estimates, the consultant may still find a discounted cash flow method to be a useful and revealing tool.

Steps That Should be Completed under a Discounted Cash Flow Method

502.8 The steps that should be completed whenever a discounted cash flow method is used are summarized in Exhibit 5-1 and discussed in the following paragraphs.

Exhibit 5-1

Discounted Cash Flow Methods

	The Steps	Explanation
Step 1	Obtain (or prepare) a financial forecast for each future year of operations up to and including the terminal year of operations. The terminal year does not mean the last year, but instead, the next full year after the company's operations are forecasted to show stable growth.	Beginning at paragraph 502.9
Step 2	If necessary, adjust the financial forecast obtained in Step 1 for any GAAP differences or normalization adjustments. If normalization adjustments are necessary to remove the impact of nonoperating or excess assets, consider the value of those assets separately in Step 9. Determine if the forecast reflects the impact of any asset shortages. If asset shortages are identified, the forecast may be amended to reflect the impact of the shortages, or the value of such shortages may be considered in Step 9. (Step 2 may not be necessary if GAAP adjustments and normalization adjustments are considered when preparing the financial forecast in Step 1.)	Beginning at paragraph 502.51
Step 3	If necessary, recompute (or compute) state and federal income taxes for each year of normalized forecasted income determined in Step 2. The resulting figure for each year will be forecasted net earnings. (Step 3 may not be necessary if there are no adjustments in Step 2 and state and federal taxes are considered when preparing the forecast in Step 1.)	paragraph 502.54
Step 4	If net cash flow is the benefit stream to be discounted, make additional adjustments to the forecasted net earnings amounts in Step 3 to arrive at forecasted net cash flow for each year.	Beginning at paragraph 502.55
Step 5	Estimate the discount rate for the specific benefit stream to be discounted. In most instances, the benefit stream is net cash flow (Step 4 above); however, in some circumstances, the measurement might be net earnings (Step 3).	paragraph 502.60
Step 6	Estimate the operating value of the company during the terminal year.	Beginning at paragraph 502.61
Step 7	Estimate the current operating value of the company by discounting back all future operations (benefit stream) (including the terminal value of the company in Step 6) to present value at the discount rate determined in Step 5.	Beginning at paragraph 502.67
Step 8	Perform "sanity checks" to determine the reasonableness of the value.	paragraph 502.85
Step 9	If adjustments to the financial statements in Step 2 for nonoperating or excess assets were required, determine the value of those assets as of the valuation date and add that value to the operating value determined in Step 7. If asset shortages were identified in Step 2, determine if the operating value estimate should be reduced to reflect the value of such shortages. If the forecast prepared in Step 1 and adjusted in Step 2 was adjusted to reflect asset shortages, it is not necessary to further reduce the value estimate.	paragraph 502.86
Step 10	Determine if the value in Step 9 should be adjusted for a marketability discount, a control premium, or a lack of control/minority interest discount. (Most valuation consultants believe that most, if not all, control adjustments are reflected in the cash flows. In addition, there is a lack of reliable empirical data to determine a control premium or a lack of control/minority discount.)	paragraph 502.87

this occurs, every effort should be made to reconcile the differences in assumptions. If all efforts fail, at least four solutions are possible:

a. Use management's forecasts and label them as "Management's Pro Forma Forecasts." The fact that they are management's pro forma forecasts should be explained prominently in the text. The consultant should state disagreement with the forecasts and that the results of using the forecasts are not reliable.

b. Use the consultant's forecast, with an explanation about management's disagreements with the forecasts. Differences in the forecasts should be explained.

c. If appropriate, use two or more scenarios for the forecasts, resulting in a range of estimated values. Differences in the forecasts should be explained.

d. Use management's forecasts and adjust the discount rate. This is usually accomplished through the specific company risk adjustment (see section 503 on discount and capitalization rates). The reasons for adjusting the discount rate should be explained.

e. In some situations, the consultant may consider resigning from the engagement.

502.16 **Key Factors and Assumptions Must Be Identified.** Key factors and assumptions are those significant matters upon which an entity's future results are expected to depend. They are the primary building blocks upon which the entire forecast is built, and they should be carefully identified. While key factors vary by company and industry, they often include assumptions about the the following critical factors:

a. Revenue and receivables.

b. Cost of sales and inventory.

c. Other costs.

d. Property and equipment and related depreciation.

e. Debt and equity.

f. Income taxes.

The consultant must exercise a great deal of judgment in deciding how each of these factors is likely to impact the future cash flow or earnings of the company being valued.

502.17 **Assumptions about Revenue and Receivables.** Although revenue is one of the most important factors in a financial forecast, it is also one of the most difficult factors to determine. The financial forecast starts with revenue. Revenue and its growth should be assessed with consideration of the following:

a. Inflationary (price) growth.

b. Industry-wide growth of demand for products/services (industry volume growth).

c. Specific company growth of demand for products/services (company volume growth).

One way to evaluate the reasonableness of revenue and receivables forecasts is to request, when practical, a marketing study from the company being valued. This study can be especially helpful when the valuation consultant prepares the forecast, but it can also be beneficial when the forecast is obtained from the company.

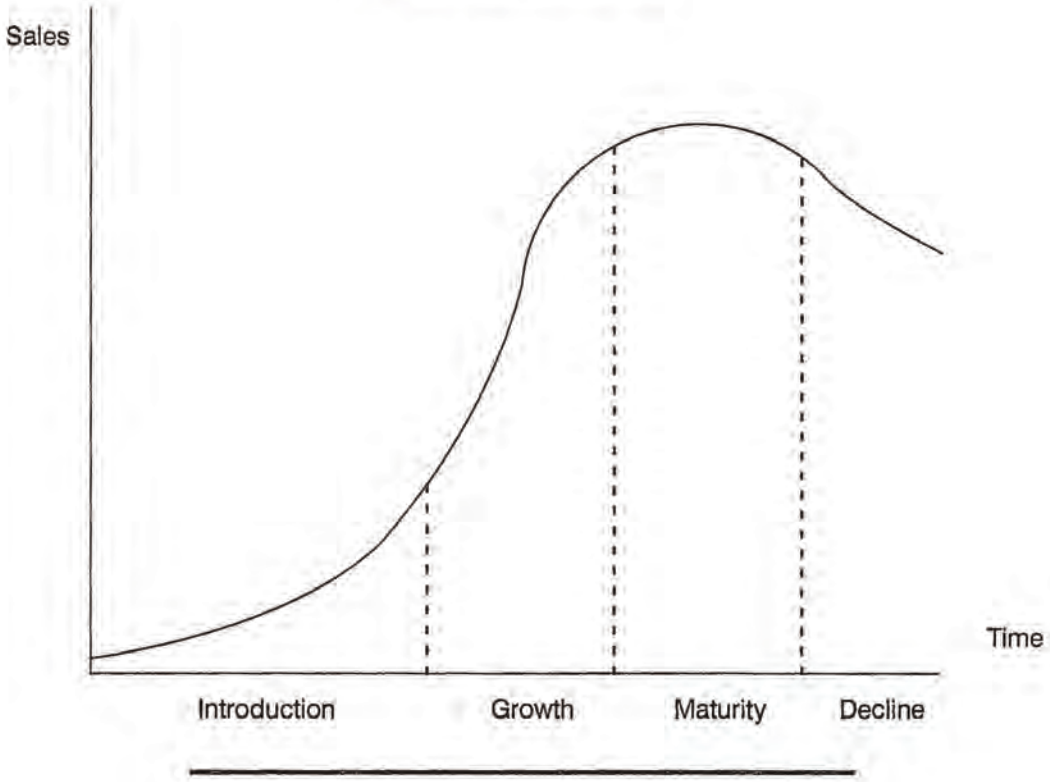
502.18 **Forecasting the Effects of Inflation.** Inflation should be considered in preparing any forecast of future operations. General rates of inflation are widely published. There are also many forecasts of specific rates of inflation for both revenues and key costs in some industries.

502.19 Obviously, inflation should be considered in forecasting both revenues and expenses. However, the consultant should avoid merely increasing all revenue and expense categories by the same expected inflation rate unless that is considered appropriate. The *product life cycle* (as discussed beginning in paragraph 502.20) should be considered in forecasting future sales prices. The expected inflation rate should be applied to revenues only when the product is not expected to move from one phase of its life cycle to another. Product costs and other expenses may actually decline as a percentage of revenue as a company grows due to the company's ability to take advantage of quantity discounts or realize other efficiencies.

502.20 **Forecasting Growth of Product Sales Levels.** Products normally go through a life cycle that includes four distinct phases: introduction, growth, maturity, and decline. In preparing a forecast of future operations, it is important for the consultant to understand in which phase the company's products are located. (Although this discussion applies to products and product life cycles, the same general concept is applicable to services and service life cycles.) A typical product life cycle is illustrated by the graph in Exhibit 5-2:

Exhibit 5-2

Typical Product Life Cycle



502.21 Each phase of the typical product life cycle is described as follows:

a. *Introduction.* When a new product is introduced, demand for it is usually low, and a company must spend significant amounts of advertising and other promotional expenses to create a market. Since the product is new, there may be little or no competition during this phase, and supply generally exceeds demand.

b. *Growth.* As the product becomes more popular, demand far exceeds supply and prices are usually very high during this phase. In fact, the prices are usually based more on what the consumers will pay than on what the product actually costs the company. Promotional expenditures may decline

during this period since the company can sell all of the products that it can provide with only minimal levels of advertising. Attracted by the high profits of the product(s) and the unsatisfied demand, competitors enter the market.

c. *Maturity.* Eventually, the market includes several competitors providing similar products and supply catches up with demand. When this happens, product prices usually fall to a more competitive level and more money is spent on promotional expenses. The production process is usually more efficient during this phase than it was during the growth phase, and product costs are therefore lower. Competition is based primarily on price and perceived differences in product quality and features. Prices are generally stable throughout this phase, and may go up only at an inflationary rate.

d. *Decline.* Most products eventually become outdated, resulting in a decline in sales volume. Eight-track players, for example, were replaced by cassette players, which were largely replaced by compact disc equipment, which are now being replaced by mp3 players and "cloud" services. Many products disappear from the market entirely, while others stay around for years at reduced sales levels and prices.

502.22 Many examples can be used to illustrate the four phases of a product life cycle. Hand-held calculators and ball-point pens, for example, both originally sold for over $100 when they were first introduced. Now, they sell for a small percentage of their original prices and are often given away in promotional campaigns. Products with very short life cycles are often referred to as fads, but some products have life cycles that last for years. Valuations consultants should carefully assess a company's pricing and cost structure based on the existing and projected phase of the company's products or services in the life cycle.

502.23 **Forecasting a Specific Company's Revenue Growth.** The product life cycle previously discussed may be thought of as defining the four phases of a product's growth. Within each industry, however, there are often many companies competing for a share of the market. It is possible for a specific company to increase sales in a declining market by capturing a higher percentage of the market. It is also possible for a specific company to lose market share, resulting in declining sales, even if the overall market is expanding. A valuation consultant should therefore assess a company's ability to maintain, increase, or decrease market share in the future. Some of the factors to be considered in this analysis include the following:

a. The company's current market share.

b. The company's trend in market share. (Is it increasing, decreasing, or stable?)

c. The company's business plan (if it exists). This should address how the company proposes to keep or increase market share through such means as improvements in service, reduced prices, increased promotional expenditures, and product improvements supported by increased R&D expenditures.

502.24 **Revenue Factors for Certain Industries.** When preparing the revenue component of the forecast, it is helpful to identify key variables to assist in the mathematical formulation of the numbers and to test their reasonableness. The following test of key revenue factors by industry are often used by consultants to assist in preparing the forecast:

- Professional service businesses, such as engineering and law firms—chargeable hours and average billable rates.
- Nursing homes and hospitals—beds available, occupancy rates, outpatient case volume, census mix, and average charge per patient (less expected discounts).
- Homebuilders—number of homes closed and average closing prices.
- Apartment lessors—units available, expected occupancy rates, and average rent per unit.

- Restaurants—tables turned per day (or shift) and average charge per table.
- Commercial real estate lessors—net rentable area and average annual rent per square foot.
- Manufacturers—units shipped and average selling prices.
- Retail stores—floor space and sales per square foot.
- Agricultural producers—acres planted, yield per acre, and selling price.
- Associations—number of members, annual dues and sales of ancillary products.

If a business has several major product or service lines or several locations, it may be necessary to develop assumptions by product or service line or location.

502.25 **Accounts Receivable.** The assumptions about accounts receivable are closely related to the revenue assumptions. Relying on historical accounts receivable turnover and bad debt history may be appropriate for the forecast period. However, if new products or services are to be introduced during the forecast period, the historical assumptions about turnover and bad debts may change.

502.26 **Assumptions about Cost of Sales and Inventory.** The starting point for the forecast of cost of sales is normally the detailed chart of accounts of the expense codes making up the company's cost of sales. These codes should also include overhead (indirect) costs that are a part of cost of sales. Added to this list should be any new types of categories of costs that are expected to be incurred in the future to support new products. Each component of cost of sales should then be categorized as being a variable cost (varying as revenues increase) or fixed (stable or increasing, but not at a rate necessarily proportional to revenue growth). Depending on its nature (fixed or variable), the consultant can identify how key factors such as inflation, scarcity of natural resources, sources of supply, and production volumes may affect the forecast for that cost. The valuation consultant will often find that this level of detail is either not available or is prohibitive to obtain and analyze. This usually should not prohibit the consultant from using a discounted cash flow method. This type of valuation method can add important information not evident in a capitalized cash flow method even when some of the forecast assumptions are estimated based on the best information available rather than being calculated precisely from detailed information.

502.27 When identifying key factors, characteristics such as historical inventory levels, turnover statistics, and obsolescence problems should also be considered. The starting point for these characteristics is the historical trends experienced by the company, which may need to be adjusted for changing growth assumptions and economic assumptions in the forecast.

502.28 **Assumptions about Other Costs.** Other costs normally include selling, general, and administrative expenses. Like cost of sales, each component of other costs should be identified, and key assumptions should be developed about how each cost changes with revenue growth or some other variable. As discussed in paragraph 502.26, the consultant should not abandon a discounted cash flow method just because the detailed cost information is not available.

502.29 **Assumptions about Property and Equipment and Related Depreciation.** In forecasting future earnings, depreciation expense should be provided for both property and equipment assets that existed at the valuation date and for assets that are expected to be purchased during the forecast period (including both replacement assets and assets needed to support expected growth). For example, assume that a company has existing depreciable assets with an original cost of $100,000 and a 10-year productive life. Using a straight-line depreciation method, the company should record annual depreciation expense on existing assets of $10,000. If the company estimates that additional assets will be needed to support capacity growth, a deduction must be made from gross cash flow to reflect these purchases, and they should be depreciated accordingly. For the purposes of calculating a reasonable estimate of taxes for the subject entity, depreciation is often estimated based on tax methods of depreciation. Using tax methods of depreciation is also helpful when determining the relationship of depreciation and capital expenditures in the determination of cash flow. The use of book depreciation requires an analysis of deferred taxes which would also affect cash flow.

502.30 **Assumptions about Debt and Equity.** A common error made by many consultants in applying a discounted cash flow method is to assume that extra cash generated during the forecast period will be used to pay down existing debt levels to zero. This is usually an unrealistic assumption because companies that are currently leveraged tend to stay leveraged in the future. In fact, a more valid assumption may be that the company will maintain a constant debt-to-equity ratio from year to year. If a company's equity increases from earnings during the forecast period, the debt level will also increase if the debt-to-equity ratio remains constant.

502.31 The consultant should therefore not automatically assume that extra cash generated from operations will be used to retire existing debt during future periods. Instead, an increase or decrease in a company's debt balance should be determined based on an assumed future debt-to-equity ratio. The company may assume a constant debt-to-equity ratio from year to year, or it may assume that the ratio will increase or decrease in future periods. Some of the factors that should be considered in forecasting a company's future debt balance include the following:

a. As a company grows in size, banks may become increasingly reluctant to increase the company's debt level. A company's debt balance may therefore increase at a slower rate than its other operations.

b. A company's existing debt agreements may have restrictive covenants that will affect its ability to borrow additional amounts in the future. The effect of such covenants on the company's ability to borrow additional amounts in the future should be assessed.

c. A company's existing debt balance as of the valuation date may be less than its optimum borrowing capacity. In other words, the company may have significant unpledged assets that can be used as collateral for additional borrowings. (VAL-PA-12.2 may be used to estimate a company's optimum borrowing capacity.) This will usually indicate that a constant (or even increasing) debt-to-equity ratio can easily be maintained. Such companies are usually less risky than more highly leveraged companies, and this condition should be reflected in determining the appropriate discount rate as discussed in section 503.

It is important to note that when a company is growing and maintaining a constant debt-to-equity ratio, debt balance increases become a source of funds and result in an increase in net cash flow each year.

502.32 **Assumptions about Income Taxes.** The following factors should be considered in computing (or recomputing) the tax provision for each year of the forecast:

a. The company's expected federal and state tax rates should be used. Exhibit 5-12 summarizes the federal income tax rates since 1993. If new tax legislation has been passed as of the valuation date and will be in effect during future periods, the consultant should use the new rates for the appropriate future years. Otherwise, the consultant should primarily use the current rates for all future years. If new tax legislation has been proposed but not yet passed as of the valuation date, the valuation consultant should consider advising the client or its legal counsel of the conflict in rates and the potential effects on the company's value of the various rate choices. The definition of value and the purpose of the valuation may affect the choice under such conditions of uncertainty.

b. The consultant may sometimes be requested to use the tax rates of a known purchaser, especially when providing an opinion of investment value. When such rates are used for each year of a forecast, the consultant should ensure that the special rate assumptions are disclosed in the valuation report.

c. A federal and state income tax provision should usually be computed for each future year regardless of whether the company being valued is a tax-paying entity. That means that income taxes may need to be provided during each year of a forecast for an S corporation, partnership, or sole proprietorship. As further discussed beginning in paragraph 504.10, there has been disagreement in the valuation profession about how such nontaxable entities should be tax-affected. That discussion provides a number of alternative techniques that can be used.

503.8 The capitalization rate is used in the capitalized cash flow method as discussed in section 504.

Relationship Between Discount Rate and Capitalization Rate

503.9 As noted earlier, the capitalization rate is a derivative of the discount rate. Therefore, within the income approach, to develop a capitalization rate, the consultant must first develop a discount rate.

503.10 Mathematically, the capitalization rate equals the discount rate minus the long-term sustainable growth rate. The determination of the average expected compound growth rate (g) may involve a great deal of judgment. The expected rate should be based on the company's past performance, projected future operations, and other factors. Some of the factors that should be considered include the following:

a. The growth rate that should be used is the company's expected average long-term compound growth rate. Since it is a long-term average, a specific year's growth rate is often not used since it could be either above or below the long-term average rate.

b. The expected average growth rate should include both price increases (relating to inflation) and volume growth. The volume growth should include industry growth as well as differences between the company being valued and the industry as a whole.

c. Because this growth rate goes into perpetuity, the consultant must be careful not to use a growth rate that will result in the company achieving an unrealistic market share. For this reason, the long-term average growth rate is often close to the real growth rate in the industry plus inflation. When inflation is relatively low (as it was when this *Guide* was printed), double digit perpetual growth rates are rare. However, if an unusually high growth rate is expected, the circumstances that warrant such rates should be carefully considered, and the consultant should consider using the discounted cash flow methods (see section 502).

503.11 The only time that discount rate equals the cap rate is when the cash flow or earnings will be at a constant level or amount in perpetuity. However, it is highly unlikely that the discount rate will equal the cap rate into perpetuity. In those instances when growth exceeds the discount rate (which would yield a negative cap rate), the discounted future benefits method should be used until the company's operations reach a stabilized level.

503.12 If the company is growing, the cap rate will be less than the discount rate. If the discount rate is 20% and the estimated long-term growth rate is 5%, the cap rate will be:

$$20\% - 5\% = 15\%$$

If the company is declining, the cap rate will be higher than the discount rate. If the discount rate is 20% and long-term rate of decline is 3%, the cap rate will be:

$$20\% - (-3\%) = 23\%$$

503.13 The capitalization rate may be applied to a "normalized" return for the latest 12 months which is expected to be representative of the future return in perpetuity. Or the "normalized" return may be expected to grow or decline at a more or less consistent rate in perpetuity. In the latter case, the Gordon Growth Model, as explained beginning in paragraph 502.65 can be used in the capitalization method.

504 THE CAPITALIZED CASH FLOW METHOD

504.1 As noted in paragraph 500.8, the capitalized returns method is frequently used to value a business when current earnings or cash flows from operations approximate those expected to be realized in the future, assuming a normal growth rate. In this method, normalized, current (anticipated next year) earnings or cash flows from operations are divided by a capitalization rate to determine an estimate of value. This process is easy to understand and calculate, but certain issues must be addressed when this method is applied. Those issues are discussed in this section.

VAL 2/17

THOMSON REUTERS
CHECKPOINT™

PPC'S GUIDE TO

BUSINESS VALUATIONS

VOLUME 2

Authors:
Jay E. Fishman, FASA
Shannon P. Pratt, DBA, CFA, FASA, MCBA, CM&AA, MCBC
James R. Hitchner, CPA/ABV, ASA
J. Clifford Griffith, MPA, CPA

Contributing Authors:
Stanton L. Meltzer, CPA
Eric G. Lipnicky, CPA

Twenty-seventh Edition (February 2017)
Carrollton, TX 75011-5008
(800) 431-9025
tax.thomsonreuters.com

THOMSON REUTERS™

ISSN 1058-4897

ISBN 978-0-7646-7802-7
ISBN 978-0-7646-7804-3

PRINTED IN THE UNITED STATES OF AMERICA

worth $15,000. This is a dangerous misconception that can lead a valuation consultant to significantly overvalue a minority ownership interest in a company. A business valuation consultant must recognize that a controlling shareholder enjoys many benefits that may not be enjoyed by owners of a minority interest. Minority interests are therefore usually worth less, often considerably less, than a proportionate share of the value of the total entity.

803.5 **Comparison of Control Premium to Minority Interest Discount.** As further discussed in Chapter 2, one of the most important considerations that must be addressed during the planning phase of a valuation engagement is the ownership interest that the consultant is to value. The consultant must determine whether the client needs a control value or a minority interest value. Once this is known, the consultant can often determine the appropriate value directly. In many cases, however, the consultant determines a minority interest value even though the engagement requires a control value, or vice-versa. To arrive at the appropriate value when this occurs, the consultant could either (a) adjust the benefit stream to reflect the level of value or (b) determine the control value of the business (perhaps by using a control premium) and apply a minority interest discount, if warranted. The first option is generally accepted, but requires various assumptions concerning control vs. minority benefit stream adjustments (or lack thereof). Alternatively, the second option is presented by valuation consultants who believe it is best to show the control value of the entire company to aid a reviewer or Trier of Fact in assessing the level of impact the changes in the benefit stream has on the minority interest as compared to the control value of the business. However, the appeal of the second option is often diminished by the lack of reliable minority or lack of control discount data. The consultant needs to exercise their judgment as to which technique to use. The International Glossary of Business Valuation Terms has defined these terms as follows:

a. *Minority Discount.* A discount for lack of control applicable to a minority interest.

b. *Control Premium.* An amount or percentage by which the pro rata value of a controlling interest exceeds the pro rata value of a non-controlling interest in a business enterprise, to reflect the power of control.

This relationship is also illustrated in Exhibit 8-6.

803.6 **Distinguishing between a Controlling and a Minority Interest.** Some users of financial statements are used to using quantitative guidelines to measure an ownership interest. For example, if you were to ask a group of business professionals how they would define a controlling interest and a minority interest in a company, most of them would probably respond that a controlling shareholder owns more than 50% of the company's stock and a minority shareholder owns less than 50%. This simplistic distinction, while understandable, is usually not acceptable for valuation purposes. The value of control depends on the degree to which the shareholder has the ability to exercise any or all of a variety of rights typically associated with control. Exhibit 8-7 presents a checklist of some of the more common benefits of control.

Exhibit 8-7

Common Prerogatives of Control

1. Appoint or change operational management.
2. Appoint or change members of the board of directors.
3. Determine management compensation and perquisites.
4. Set operational and strategic policy and change the course of the business.
5. Acquire, lease, or liquidate business assets, including plant, property, and equipment.
6. Select suppliers, vendors, and subcontractors with whom to do business and award contracts.
7. Negotiate and consummate mergers and acquisitions.
8. Liquidate, dissolve, sell out, or recapitalize the company.
9. Sell or acquire treasury shares.

Cost of Capital

Applications and Examples

Fifth Edition

SHANNON P. PRATT
ROGER J. GRABOWSKI

WILEY

Cover image: <INSERT NAME>

Cover design: <INSERT NAME>

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

Library of Congress Cataloging-in-Publication Data **:**

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

Substituting numbers from the preceding assumptions into Formula 4.4 gives us:

(Formula 4.5)

$$PV = \frac{\$100}{0.13 - 0.05}$$
$$= \frac{\$100}{0.08}$$
$$= \$1,250$$

In this example, the estimated value of the investment in the business is $1,250.

MAJOR DIFFERENCE BETWEEN DISCOUNTING AND CAPITALIZING

From the preceding discussion, we can now deduce a critical insight: The difference between discounting and capitalizing is in how we reflect changes over time in expected future cash flows.

In *discounting*: each future change in cash flow is estimated specifically and included in the numerator.

In *capitalizing*: estimates of rates of changes in future cash flows are averaged into one annually compounded growth rate, which is then subtracted from the discount rate in the denominator.

If we assume that there really will be a constant compounded growth rate in cash flow from the investment to perpetuity, then it is a mathematical truism that the discounting method and the capitalizing method will produce identical values. (See the section in this chapter entitled "Equivalency of Discounting and Capitalizing Models" for an illustration of how this equality works.)

CONSTANT GROWTH OR GORDON GROWTH MODEL

One frequently encountered minor modification to Formula 4.4 and 4.5 is to use as the "base period" the period just completed prior to the valuation date, instead of the next period's estimate. The assumption is that net cash flows will grow evenly into perpetuity from the period immediately preceding the valuation date. This constant growth capitalization formula, commonly known as the Gordon Growth Model,[1] as applied to the net cash flow is as follows:

[1]Named for Professor Myron Gordon. Myron J. Gordon and Eli Shapiro, "Capital Equipment Analysis: The Required Rate of Profit," *Management Science* 3 (October 1956): 102–110, reprinted in *Management of Corporate Capital* (Glencoe, IL: Free Press, 1959); Myron J. Gordon, *The Investment, Financing, and Valuation of the Corporation* (Homewood, IL: R.D. Irwin, 1962). This model is one of a general class of models referred to by some authors as the dividend discount model, indicating net cash flow to the investor.

Business Valuation Discounts and Premiums

Second Edition

SHANNON P. PRATT

John Wiley & Sons, Inc.

This book is printed on acid-free paper. ♾

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.
Published simultaneously in Canada.

Library of Congress Cataloging-in-Publication Data:
Pratt, Shannon P.
Business valuation discounts and premiums / Shannon P. Pratt. — 2nd ed.
p. cm.
Includes bibliographical references.
ISBN 978-0-470-37148-0 (cloth)
1. Business enterprises–Valuation. I. Title.
HG4028.V3P682 2009
658.15–dc22 2009005644

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

the bases they produce imply regarding the appropriateness of minority discounts or control premiums. In some cases the applicability of a premium or discount is fairly straightforward. In other cases, however, there is substantial controversy about the applicability of a minority discount or a control premium.

INCOME APPROACH AS VALUE BASIS

Whether the income approach utilized is the discounted cash flow or capitalization of cash flow or earnings, the income approach can produce either a control value or a minority value. Therefore, it is necessary to understand the assumptions used in the income approach implementation to determine whether a minority discount or a control premium is warranted.

Most analysts agree that the extent to which the income approach produces a control or minority value lies primarily in the level of the cash flows or earnings being discounted or capitalized. If the projected cash flows were those that a control owner would expect to receive, a control premium already would be reflected. However, if the projected cash flows used do *not* reflect a control owner's expectation, then a control premium may be warranted.

Some analysts believe that the income approach always produces a publicly traded minority basis of value because both the Capital Asset Pricing Model (CAPM) and the buildup model develop discount and capitalization rates from minority interest transaction data in the public markets. This is a very common and highly flawed conclusion. *There is little or no difference in the rate of return that most investors require for investing in a public, freely tradable minority interest versus a controlling interest*.

As explained in *Cost of Capital*,[4] almost all the difference in the control value versus the minority value in the income approach to valuation is found in the numerator—the expected economic income available to the investor—rather than in the denominator—the discount or capitalization rate.

As Roger Ibbotson has succinctly stated the case, "When you are purchasing a company you are acquiring the ability to potentially control future cash flows. To acquire this option to exercise control, you must pay a premium. Holding all else constant, it should not impact the discount rate."[5]

Generally speaking, investors will not accept a lower expected rate of return for purchase of a controlling interest than for purchase of a minority interest. In fact, there have been many instances in recent years when public minority shareholders appear to require a significantly lower rate of return than control buyers. Control buyers pay premiums because they expect to take action to increase cash flows, not because they are willing to accept a lower expected rate of return. Actions taken to increase cash flows could range anywhere from eliminating nonperforming relatives from the payroll to drastically increasing prices for products or services of both acquirer and target as a result of absorbing a direct competitor.[6]

In adjusting a minority value upward to estimate a control value, some analysts adjust cash flows upward to what a control owner would expect to realize rather than apply a percentage control premium to a minority value. The advantage of this procedure is that it uses case-specific information to quantify the incremental present value of the cash flows that a control owner could generate. Such adjustments could logically include, for example, elimination of excess compensation, elimination of sweetheart insider deals, liquidation or utilization of excess assets, and exercise of other prerogatives of control. If

cash flows are adjusted for potential synergistic benefits, the result would be investment value or acquisition value, rather than fair market value.

Another possible fundamental adjustment sometimes used in the income approach that is often controversial in disputes over minority versus control value is adjustment of the company's capital structure. The most common such adjustment is to introduce some amount of long-term debt to substitute for an all-equity capital structure, thus lowering the overall cost of capital and raising the present value of projected cash flows. Again, capital structure adjustments are a control prerogative. Also, adjustments in capital structure can result in changes in the cost of components (debt and equity).

Notwithstanding the above, financial buyers still sometimes pay control premiums even if they do not have any opportunities for synergistic benefits or other cash flow improvements, albeit typically much lower premiums than those paid by synergistic buyers. Buyers see certain prerogatives of control as having value. For example, one control prerogative that control owners can implement that minority owners cannot is to register a public offering. Other control prerogatives are to sell interests to employees or to others, to repurchase outstanding minority interests, or to recapitalize. Some will pay a premium simply to be able to call the shots. Some perceive financial or psychological advantages to the control of certain companies. In the discounted cash flow (DCF) method, this could account for a slightly lower discount rate on the part of some buyers.

MARKET APPROACH AS VALUE BASIS

There are two clearly distinct methods within the market approach:

1. The guideline merged and acquired company method
2. The guideline publicly traded company method

Guideline Merged and Acquired Company Method

The guideline merged and acquired company method usually is based on observing transfers of ownership of an entire company or a controlling interest in a company. These transactions may be of either public or private companies. In either case, a controlling interest was transferred, so usually no control premium is warranted, because it was clearly reflected in the transaction price.

If control transactions are used as a starting point for valuing something less than a controlling interest (for instance, less than absolute control, 50 percent interest, or minority interest), then usually some discount for lack of control is warranted (and often a discount for lack of marketability as well).

When using available empirical data, the analyst must determine whether the consideration paid was a price for the common equity or a deal price, that is, total consideration paid for the entire capital structure, including debt assumed and, possibly, preferred stock. If the consideration was a deal price, then the value of the debt and/or preferred stock must be subtracted before applying a discount for lack of control, because such a discount applies only to the common equity, not to the entire capital structure. However, the percentage control premium on equity has the potential to be greater in a highly leveraged company.

SEPTEMBER 6, 2017

VALUATIONS IN FINANCIAL REPORTING VALUATION ADVISORY 3: THE MEASUREMENT AND APPLICATION OF MARKET PARTICIPANT ACQUISITION PREMIUMS

THE APPRAISAL FOUNDATION
Authorized by Congress as the Source of Appraisal Standards and Appraiser Qualifications

THE APPRAISAL FOUNDATION
Authorized by Congress as the Source of Appraisal Standards and Appraiser Qualifications

VFR Valuation Advisory #3

The Measurement and Application of Market Participant Acquisition Premiums

This communication is for the purpose of issuing voluntary guidance on recognized valuation methods and techniques.

Date Issued: September 6, 2017

Application: Business Valuation, Intangible Assets

Background: In recent years there have been increased requirements in the identification and recognition of assets and liabilities measured at fair value in financial statements. These requirements, promulgated by the Financial Accounting Standards Board (FASB), include:

- Statement of Financial Accounting Standards No. 141(R), predecessor to Accounting Standards Codification (ASC) 805 *Business Combinations*; and
- FASB Statement No. 142, predecessor to ASC 350 *Intangibles - Goodwill and Other* (ASC 350) and Accounting Standards Update (ASU) 2011-08.

Moreover, there has been increased focus on fair value measurement since the FASB issued Statement No. 157 (predecessor to ASC 820 *Fair Value Measurement*) in 2006 and ASU 2011-04 in 2011.

Furthermore, the International Accounting Standards Board (IASB) has issued International Financial Reporting Standard (IFRS) 3 (revised) (IFRS 3R) *Business Combinations* (IFRS 3R) and *IFRS 13 Fair Value Measurement*, both of which are largely similar to the statements issued by the FASB.

Like ASC 350, International Accounting Standard 36 *Impairment of Assets* (IAS 36) includes the testing of goodwill for impairment. However, these standards are not converged, and the specific procedures of the goodwill impairment test are different. The measurements used to determine the recoverable amount, which is then compared to the carrying amount, differ; for example ASC 350 uses *Fair Value* whereas IAS 36 uses the lower of *Value in Use* or *Fair Value Less Costs of Disposal*. Further discussion of the differences between these accounting models is beyond the scope of this publication. Notwithstanding, concepts covered in this VFR Valuation

Advisory #3 may be applicable on a facts and circumstances basis when fair value is being determined in IAS 36.

During the creation of this document, members of the International Valuation Standards Council (IVSC) participated in certain discussions.

Because of the need for financial statements to be both reliable and relevant, valuation practices must provide reasonably consistent and supportable fair value conclusions. To this end, it is believed that guidance regarding best practices on certain specific valuation topics would be helpful. The topics are selected based on those in which the greatest diversity of practice has been observed. To date, The Appraisal Foundation has issued two Valuations in Financial Reporting (VFR) Advisories as follows: VFR Advisory #1, *The Identification of Contributory Assets and Calculation of Economic Rents* (May 31, 2010); and VFR Advisory #2, *The Valuation of Customer Related Assets* (June 15, 2016). In addition, guidance is currently under development on the topic of valuing contingent consideration.

This document presents helpful guidance for those that are preparing fair value measurements; however, this Advisory is not intended to be an authoritative valuation standard. The valuation of assets is a complicated exercise that requires significant judgment. The Working Group believes that consideration of the facts and circumstances related to the asset(s) that are being valued may sometimes support a departure from the recommendations in this Advisory. This Advisory seeks to present views on how to approach and apply certain aspects of the valuation process appropriate for measuring the fair value of controlling interests.

This VFR Advisory has been developed for measuring fair value for financial reporting and is not intended for other valuation contexts.

The Appraisal Foundation wishes to express its utmost gratitude to the Working Group on *The Measurement and Application of Market Participant Acquisition Premiums* for volunteering their time and expertise in contributing to this Advisory. Specifically, sincere thanks to the following individuals:

Working Group on

The Measurement and Application of Market Participant Acquisition Premiums

Manish Choudhary

Deloitte Financial Advisory Services LLP – New York, NY

Andrew S. Fargason

Stout – Atlanta, GA

Travis W. Harms

Mercer Capital – Memphis, TN

Dayton D. Nordin

Ernst & Young – Boston, MA

BJ Orzechowski

KPMG LLP – Philadelphia, PA

Carla G. Glass, Oversight and Facilitator for The Appraisal Foundation

Marcum LLP – New Haven, CT

Subject Matter Expert Group on Best Practices for Valuations in Financial Reporting

Jay E. Fishman, Co-Chair - Financial Research Associates

Carla G. Glass, Co-Chair - Marcum LLP

Anthony Aaron – University of Southern California

Paul Barnes - Duff & Phelps, LLC

John Glynn - PricewaterhouseCoopers LLP (Retired)

Matt Pinson - PricewaterhouseCoopers LLP

Contributors and Special Thanks

Chad Arcinue - Ernst & Young, New York, NY

The Appraisal Foundation Staff

David Bunton, President

John S. Brenan, Director of Appraisal Issues

Paula Douglas Seidel, Board and Communications Program Manager

The views set forth in this Advisory are the collective views of the members of this Working Group and do not necessarily reflect the views of any of the firms that the Working Group members are associated with.

This Advisory was approved for publication by the Board of Trustees of The Appraisal Foundation on September 6, 2017. The reader is informed that the Board of Trustees defers to the members of the Working Group for expertise concerning the technical content of the document.

The Appraisal Foundation served as a sponsor and facilitator of this Working Group. The Appraisal Foundation is the nation's foremost authority on the valuation profession. The organization sets the Congressionally authorized standards and qualifications for real estate appraisers, and provides voluntary guidance on recognized valuation methods and techniques for all valuation professionals. This work advances the profession by ensuring appraisals are independent, consistent, and objective. More information on The Appraisal Foundation is available at www.appraisalfoundation.org.

Illustrative Examples

Two examples serve to clarify the MPAP definition. First, consider a business enterprise that is not publicly traded. The company's founder owns 70 percent of the outstanding shares and continues to exercise control over the enterprise. The remaining 30 percent of the outstanding shares are held by a number of investors, none of whom own more than 5 percent. Despite the availability of numerous investment opportunities with indicated positive net present values, the founder demonstrates little interest in growth and is averse to the use of debt financing. The price per share paid by market participants for a controlling interest is likely to exceed that paid for a noncontrolling (albeit hypothetically marketable) interest reflecting current stewardship of the company. In other words, there is likely to be an MPAP. Its magnitude likely will be influenced by the perceived ability of market participants to exercise the prerogatives of control to increase the cash flows and/or reduce the discount rate applicable to the subject interest. Available strategies include making investments to spur revenue and earnings growth (thereby potentially increasing cash flow), and employing a more typical financing mix for the industry (thereby reducing the weighted average cost of capital). Some market participants may also expect cost savings from eliminating redundancies. For privately held companies without near term liquidity expectations—much more so than publicly traded companies—there might also be cost savings from adjusting compensation and other costs to market rates.[4]

Second, consider a business enterprise that is publicly traded. The business is generally believed to be well managed, reporting operating margins in line with industry peers. The company has created and marketed a unique technology and has generated significant historical revenue growth. In this case, opportunities to generate economic benefits by exercising the prerogatives of control are more limited. However, market participants may own complementary technologies that, if marketed alongside that of the subject entity, would increase revenue growth. Alternatively, market participants may have existing distribution networks capable of handling the subject entity's products that would enhance profit margins. Similar to the other example, market participants' perceptions of how prerogatives of control translate into value influence the investment decision.

In each case, the task of the valuation specialist is to identify and evaluate the feasibility of the available strategies from the perspective of market participants for the subject interest. The appropriate MPAP considers not only the magnitude of the available economic benefits, but also the degree to which such potential benefits will influence the price paid by market participants for the subject controlling interest in an orderly transaction at the measurement date. The Working Group is not stating that the economic benefits must be precisely quantified in each case. Rather, at a minimum, analysis should be performed to identify which form(s) of economic benefit market participants would reasonably expect to enjoy and some general magnitude of the effects of those benefits on value.

[4] Whether such cost savings would contribute to the MPAP depends on how the above-market compensation and other costs were treated in measuring the foundation value. There is diversity of opinion in the profession as to situations where such "normalizing" adjustments are appropriate. The resolution of that controversy is beyond the scope of this Valuation Advisory.

Volume One

Nancy J. Fannon | Jonathan M. Dunitz

The Comprehensive Guide to Economic Damages

Fifth Edition

BVR What It's Worth

FIFTH EDITION

The Comprehensive Guide to Economic Damages

VOLUME ONE

Nancy Fannon
and
Jonathan M. Dunitz
Editors

BVR
What It's Worth
111 SW Columbia Street, Suite 750, Portland, OR 97201
(503) 479-8200 • www.bvresources.com

BVR
What It's Worth

Publisher: Sarah Andersen

Managing Editor/Desktop Editor: Monique Nijhout-Rowe

Senior Copy Editor: David Solomon

Chair and CEO: David Foster

President: Lucretia Lyons

Chief Revenue Officer: Lisa McInturff

Customer Service Manager: Retta Dodge

PRINT ISBN: 978-1-62150-151-0

EPUB ISBN: 978-1-62150-152-7

Library of Congress Control Number: 2018952308

- *Punitive or exemplary damages* are intended to punish a wrongdoer and to deter similar conduct in the future. The conduct must be outrageous or egregious. Punitive or exemplary damages are very rarely awarded in M&A transactions.

- *Rescission* essentially voids the transaction and places the parties in the position they would have been if the transaction had not been consummated. If it is not practical to actually rescind or unwind the transaction, *rescissory damages* are intended to be the financial equivalent of rescission. This remedy may be appropriate in cases of misrepresentation, mistake, fraud, unconscionability, etc.

- *Contractual limitations on damages* as agreed upon by the parties must be clearly expressed in the PSA. Absent fraud, courts will generally respect the parties' allocation of risk with regard to damages. A contract may set forth terms that dictate the minimum and/or maximum amount of damages subject to indemnification. The parties may also agree to waive their right to certain types of damages, such as consequential or punitive damages.

3.3 Measuring Damages

Dollar-for-dollar damages are often associated with issues that have a one-time, nonrecurring impact on the business, such as obligations or liabilities relating to environmental issues or lawsuits. However, if such obligations or liabilities would reduce the projected earnings, it may impact the buyer's valuation model.

Benefit of the bargain damages (also known as *expectancy damages*) reflect the diminution in value resulting from the breach and are often measured by the difference between what a party expected to receive based on the contract and what it actually received.[24] Factors to consider when calculating such damages include:

- Whether the buyer received the value the seller represented;

- Whether the buyer knew of inaccuracies or breaches;

- What portion of the alleged diminution in value resulted from the breach as opposed to other causes; and

- Post-closing performance and the issues driving that performance.

3.3.1 Dollar-for-Dollar Example

A manufacturing company purchased a competitor's subsidiary for $750 million. The target company had annual EBITDA of $150 million, resulting in a transaction multiple of five times EBITDA. Six months after close, the buyer paid $10 million related to environmental remediation costs. This contingent liability was not recorded on the financial statements or disclosed to the buyer prior to closing and was known to the seller.

The buyer did not contemplate these costs in its valuation; however, this is nonrecurring and will not impact future earnings. In addition, the inclusion of this cost does not impact the buyer's valuation model; therefore, an appropriate measure of damages is likely dollar for dollar to reflect the benefit to the seller related to the misrepresentation or failure to disclose the contingent liability. This results in a reduction of the purchase price by $10 million, to $740 million.

3.3.2 Benefit of the Bargain Example

An automobile parts supplier purchased a privately held competitor from the owners for $500 million. The target had annual EBITDA of $100 million, resulting in a purchase price multiple of five times EBITDA. A significant customer did

24 *Litigation Services Handbook*, 4th edition, Sec. 18.7.

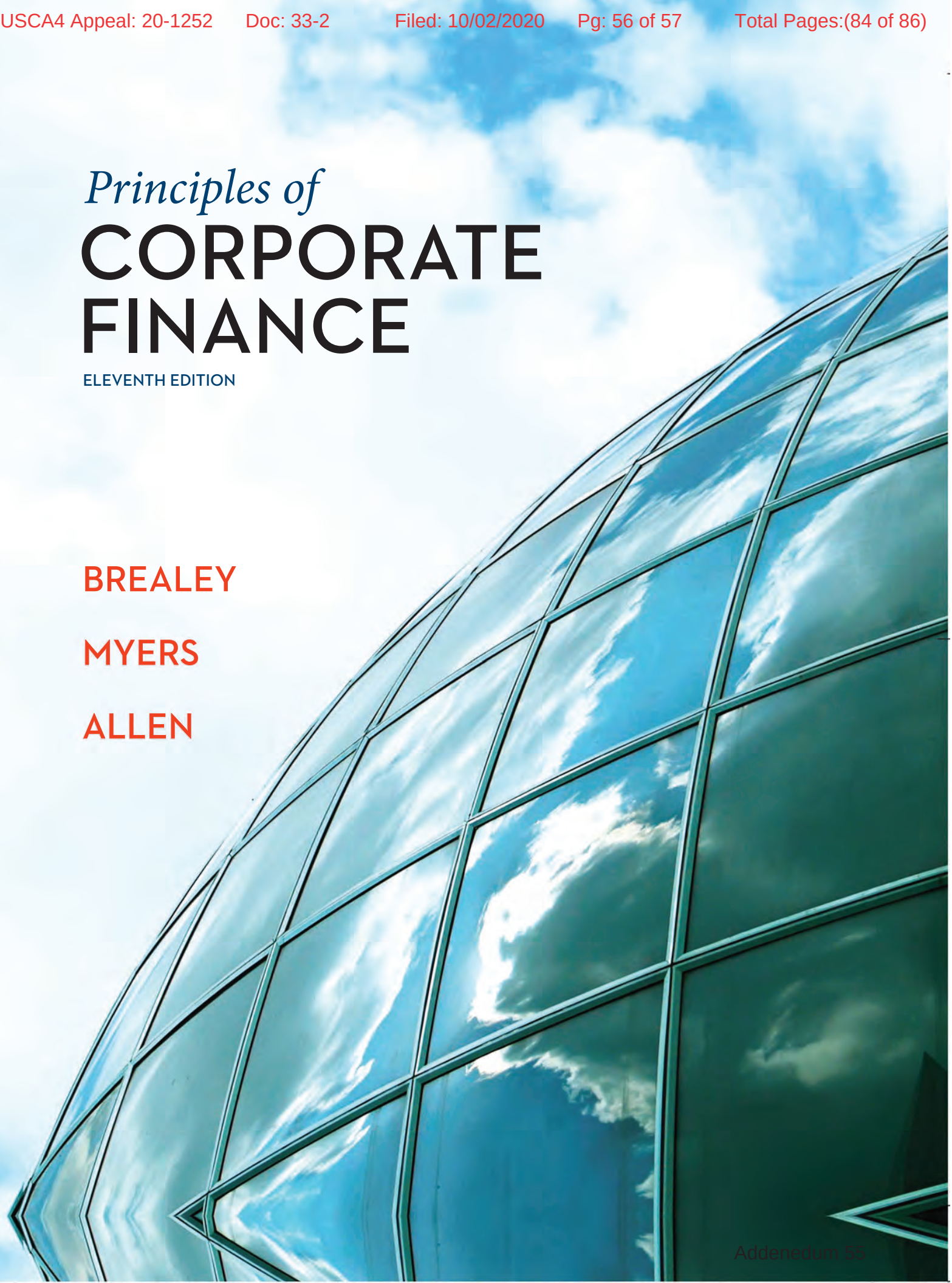
Principles of CORPORATE FINANCE

ELEVENTH EDITION

BREALEY

MYERS

ALLEN



$$\text{PV(tax shield)} = \frac{\text{corporate tax rate} \times \text{interest payment}}{\text{expected return on debt}}$$

$$= \frac{T_c r_D D}{r_D} = T_c D$$

Of course, PV(tax shield) is less if the firm does not plan to borrow a permanent fixed amount,[2] or if it may not have enough taxable income to use the interest tax shields.[3]

How Do Interest Tax Shields Contribute to the Value of Stockholders' Equity?

MM's proposition 1 amounts to saying that the value of a pie does not depend on how it is sliced. The pie is the firm's assets, and the slices are the debt and equity claims. If we hold the pie constant, then a dollar more of debt means a dollar less of equity value.

But there is really a third slice, the government's. Look at Table 18.3. It shows an expanded balance sheet with *pretax* asset value on the left and the value of the government's tax claim recognized as a liability on the right. MM would still say that the value of the pie—in this case *pretax* asset value—is not changed by slicing. But anything the firm can do to reduce the size of the government's slice obviously makes stockholders better off. One thing it can do is borrow money, which reduces its tax bill and, as we saw in Table 18.2, increases the cash flows to debt and equity investors. The *after-tax* value of the firm (the sum of its debt and equity values as shown in a normal market value balance sheet) goes up by PV(tax shield).

Recasting Johnson & Johnson's Capital Structure

Johnson & Johnson is a large, successful firm that uses relatively little long-term debt. Table 18.4a shows simplified book and market value balance sheets for Johnson & Johnson in October 2011.

Suppose that you were Johnson & Johnson's financial manager with complete responsibility for its capital structure. You decide to borrow an additional $10 billion on a permanent basis and use the proceeds to repurchase shares.

TABLE 18.3 Normal and expanded market value balance sheets. In a normal balance sheet, assets are valued after tax. In the expanded balance sheet, assets are valued pretax, and the value of the government's tax claim is recognized on the right-hand side. Interest tax shields are valuable because they reduce the government's claim.

Normal Balance Sheet (Market Values)	
Asset value (present value of after-tax cash flows)	Debt
	Equity
Total assets	Total value

Expanded Balance Sheet (Market Values)	
Pretax asset value (present value of pretax cash flows)	Debt
	Government's claim (present value of future taxes)
	Equity
Total pretax assets	Total pretax value

[2]In this example, we assume that the amount of debt is fixed and stable over time. The natural alternative assumption is a fixed *ratio* of debt to firm value. If the ratio is fixed, then the level of debt and the amount of interest tax shields will fluctuate as firm value fluctuates. In that case projected interest tax shields can't be discounted at the cost of debt. We cover this point in detail in the next chapter.

[3]If the income of L does not cover interest in some future year, the tax shield is not necessarily lost. L can carry back the loss and receive a tax refund up to the amount of taxes paid in the previous two years. If L has a string of losses, and thus no prior tax payments that can be refunded, then losses can be carried forward and used to shield income in later years.

UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

APPEARANCE OF COUNSEL FORM

BAR ADMISSION & ECF REGISTRATION: If you have not been admitted to practice before the Fourth Circuit, you must complete and return an Application for Admission before filing this form. If you were admitted to practice under a different name than you are now using, you must include your former name when completing this form so that we can locate you on the attorney roll. Electronic filing by counsel is required in all Fourth Circuit cases. If you have not registered as a Fourth Circuit ECF Filer, please complete the required steps at Register for eFiling.

THE CLERK WILL ENTER MY APPEARANCE IN APPEAL NO. 20-1252 as

☑ Retained ☐ Court-appointed(CJA) ☐ CJA associate ☐ Court-assigned(non-CJA) ☐ Federal Defender

☐ Pro Bono ☐ Government

COUNSEL FOR: American Society of Appraisers

_____ as the
(party name)

☐ appellant(s) ☐ appellee(s) ☐ petitioner(s) ☐ respondent(s) ☑ amicus curiae ☐ intervenor(s) ☐ movant(s)

/s/ Lynn E. Calkins
(signature)

Please compare your information below with your information on PACER. Any updates or changes must be made through PACER's Manage My Account.

Lynn E. Calkins
Name (printed or typed)

202-955-3000
Voice Phone

Holland & Knight LLP
Firm Name (if applicable)

202-955-5964
Fax Number

800 17th Street, NW, Suite 1100

Washington, DC 20006
Address

lynn.calkins@hklaw.com
E-mail address (print or type)

CERTIFICATE OF SERVICE *(required for parties served outside CM/ECF)*: I certify that this document was served on 10/2/2020 by ☐ personal delivery; ☐ mail; ☐ third-party commercial carrier; or ☐ email (with written consent) on the following persons at the addresses or email addresses shown:

All counsel served via the Court's ECF system.

/s/ Lynn E. Calkins
Signature

10/2/2020
Date