Warren E. Buffett, 2015

Teaching Note

Synopsis and Objectives

**Suggested complementary case about investment managers and superior performance:** “Larry Puglia and the T. Rowe Price Blue Chip Growth Fund” (UVA-F-1772).[[1]](#footnote-1)

Set in August 2015, this case invites students to assess Berkshire Hathaway’s bid for Precision Castparts Corporation (PCP). The task for students is to perform a simple valuation of PCP and to consider the reasonableness of Berkshire Hathaway’s offer. Student analysis readily extends to the investment philosophy and the remarkable record of Berkshire Hathaway’s chair and CEO, Warren E. Buffett.

The case affords an introduction to a finance course or a module on capital markets. The analytical tasks are straightforward and intended to provide a springboard into discussion of the main tenets of modern finance. Thus the case would be useful for:

* Setting themes at the beginning of a finance course, including risk and return, economic reality (not accounting reality), the time value of money, and the benefits of alignment of agents and owners.
* Linking valuation to the behavior of investors in the capital market.
* Modeling good practice in management and investment using Buffett as an example by returning to the image of him repeatedly during a finance course to ask students what Buffett would likely do in a situation.
* Characterizing intrinsic value as equaling the present value of future equity cash flows.
* Exercising simple equity-valuation skills by focusing on Buffett’s investment philosophy, basic principles of value creation, and multiples-valuation information provided in the case.
* Exercising more advanced equity-valuation skills by estimating capital costs, a terminal value, and the discounted cash flow value from information in the case and teaching note. Used in this fashion, the case could be positioned later in the course as a basic introduction to methods of valuing a firm. This could be accomplished by distributing this note along with focused assignment questions (discussed below).

Suggested Questions for Advance Assignment

Where this case is to be used in an introductory class, the instructor could assign these questions for advance preparation by the students:

1. Who is Warren E. Buffett? How would you describe the business of Berkshire Hathaway?
2. How well has Berkshire Hathaway performed? Over the long term? Recently?
3. What is your assessment of Berkshire Hathaway’s investments in Buffett’s largest equity positions shown in case Exhibit 5? Has he been uniformly successful in making major investments?
4. Prepare to describe the elements of Buffett’s investment philosophy. How might this philosophy differ from that of other investment styles, such as a very active day trader, a chart watcher, or someone who passively invests in index funds?
5. From Buffett’s perspective, what is intrinsic value? Why is it accorded such importance? How is it estimated? What are the alternatives to intrinsic value? Why does Buffett reject them?
6. Critically assess Buffett’s investment philosophy. Be prepared to identify points where you agree and disagree with him.
7. What is the possible meaning of the changes in stock price for Berkshire Hathaway on the day of the acquisition announcement? Specifically, what does the $4 billion loss in Berkshire Hathaway’s market value of equity imply about the intrinsic value of Precision Castparts (PCP)?
8. Should Berkshire Hathaway’s shareholders endorse the acquisition of PCP?

If the instructor chooses to engage the students in a valuation exercise regarding PCP, the following questions could be distributed in advance along with the supplemental information given in **Exhibit TN1.** Also, spreadsheet models for the student (UVA-F-1769X) and instructor (UVA-F-1769TNX) support the DCF valuation work.

1. Based on the multiples for comparable companies, what is the range of possible values for PCP? What questions might you have about this range?
2. Please forecast and discount the free cash flows to estimate the value of PCP. To do this, you should estimate PCP’s weighted-average cost of capital (WACC).
3. Assess the bid for PCP. How does it compare with the firm’s intrinsic value?

Suggested Supplemental Readings

As the case indicates, there is a growing library of books and articles about Buffett and his investment style. The instructor may choose to assign readings from one or more of the publications listed in Exhibit TN2. Alternatively, it may be appropriate simply to share the list of books with students to illustrate the breadth of scholarship and reportage about the Sage of Omaha, Warren Buffett.

Suggested Teaching Plan

The following questions could be used to motivate an 85-minute discussion of the case:

1. Who is Warren Buffett, and why should anyone pay attention to him? How successful has he been?

The objective of this opening is to tackle at the outset Buffett’s massive reputation as a successful investor over the long term. Students should cite Berkshire’s stock performance over the long run as well as its experiences buying equity positions in some of the notable deals listed in case Exhibit 5.

1. What is the business of Berkshire Hathaway? How would you describe the company’s strategy?

Case Exhibit 4 offers evidence to suggest that Berkshire Hathaway is a conglomerate, as measured by revenues and earnings before interest and taxes (EBIT). Measured on assets, however, the company appears to be concentrated in insurance, which was its core operation for many years. Also, case Exhibit 8 presents the acquisition criteria of the company and suggests almost no strategic focus for acquisitions, consistent with a strategy of unrelated diversification. Another way to describe Berkshire Hathaway would be as an investment company or mutual fund with an emphasis on private equities and total ownership. Finally, Buffett seeks to buy companies with strong brands and positions in stable markets—the gist of the criticism by the Economist magazine is that Buffett likes to invest in safe oligopolies. In all of these views, Buffett is the epitome of “patient money,” the opposite of the impatient trading-oriented investor such as an arbitrageur or hedge-fund investor.

1. Here are the major elements of Buffett’s philosophy. What do those elements mean? Do you agree with them?

On a side board, list the major topic headings given in the case. The aim here should be to discuss the intuition behind each point: why Buffett holds those views and what they imply for his work. If the students already have been exposed to the major underpinnings of modern finance, this segment of the discussion would take the form of a quick review. For novices, this segment would warrant slower development.

1. *What, exactly, does it mean to “create value”?*

Case Exhibits 6 and 7 provide a numerical example of value creation and destruction. The instructor could invite students to explain what is going on within the exhibits. In essence, value is created where the return on equity exceeds the cost of equity; and value is destroyed where the return on equity is less than the cost of equity.

1. What does the stock market seem to be saying about Berkshire Hathaway’s acquisition of PCP?

This offers the opportunity to develop the notion that stock prices are the present value of expected cash flows. Moreover, it deals with the immediate opening problem of the case: the market’s response to the PCP announcement: the loss of 1.1% in Berkshire Hathaway’s market value ($4.05 billion) would suggest that investors believe Buffett overpaid for PCP. This compares to an increase in the S&P 500 Index of 0.2% the same day. Is a market-adjusted loss of −1.3% (=+0.2% −1.1%) meaningful? Students may question the efficiency of the market and one’s ability to attach any interpretation to changes in share prices. The equity markets are not always perfectly efficient. But early in a finance course, it is useful to introduce the ability to interpret price changes as a vote by investors.

1. Let’s return to the basic issue. Is the PCP acquisition a good or bad deal? Why? Well, maybe Buffett is overpaying—does he have a record of overpaying in the past?

This question returns the discussion to the opening and aims to rationalize some of the contradictions that will have emerged during class. The main contradiction is the full price and the negative market reaction to the announcement. As a value investor, Buffett would probably say that he sees something that others do not—the positive market reaction is just the market revising its expectations about the future profitability of PCP.

This case might also be used later in a finance course, if the instructor seeks to extend the discussion into a DCF valuation exercise. In that case, it would be useful to condense the discussion of questions 1 to 4 (above) and essentially start with a focus on the market reaction to the announced acquisition of PCP (question 5). Then one could turn the discussion to focus on valuation by multiples and DCF. Finally, the instructor could close with a vote by students.

1. Based on your own analysis, what do you think PCP was worth on its own before its acquisition by Berkshire Hathaway?

This question explores the valuation of PCP by multiples and DCF.

1. Take a vote on whether the shareholders should endorse the acquisition. For those who believe that PCP will be a good purchase, what justifies their belief? For those who voted no, why did they oppose it?

Hearing from both sides will serve as a summary of the major themes in the case and will invite a discussion about the sustainability of Buffett’s record.

The instructor could close with a discussion of the core tenets of finance and then discuss how the class will return to those themes repeatedly during the course. The instructor could also augment the discussion of tenets with more reading of material about Buffett. Finally, students could be updated on Berkshire Hathaway’s performance since the date of the case. See the firm’s website for updated reports as well as a compilation of Buffett’s letters to shareholders.[[2]](#footnote-2) And of course, the Internet hosts a wealth of commentary on Berkshire Hathaway and Buffett to which the instructor could refer the interested student. Generally, it makes sense to withhold the supplemental resources in the interest of helping the student focus on the essential learning objectives of this case.

Case Analysis

Buffett’s record

The case affords three opportunities to analyze Berkshire Hathaway’s historical record.

**Discussion question 1**

Berkshire Hathaway’s historical wealth creation: The case offers a range of evidence about shareholder wealth creation at Berkshire Hathaway. The case gives a rate of 22.8% compound annual growth in stock prices from 1974 to 2015. In comparison, wealth creation for large firms averaged 8.50 per year over the same period. Case Exhibit3 helps students visualize the supernormal performance of Berkshire Hathaway. Novices to finance should be encouraged to consider how difficult it is to beat the market by such a wide margin over an extended period. Yet the table at the bottom of case Exhibit 3 tells a more sobering story: the company’s ability to beat the market in recent years has diminished. Such is the problem facing all high-performing firms: one cannot grow much faster than the business economy without ultimately owning the entire economy. In addition, the supply of high-performing assets is limited, which challenges the sustainability of any strategy to outperform the market.

Berkshire *Hathaway*’s experience with equity investments: The data in case Exhibit5 afford a very rough assessment of Berkshire Hathaway’s major equity investments. With a class of novices, the instructor could motivate them to observe that all but one of those issues have market values considerably higher than their costs. Unfortunately, the company does not publish information regarding the length of holding period on each issue, so it is impossible to compute an internal rate of return on each one or on the portfolio. But as **Exhibit TN3** shows, just three of the 15 companies listed in case Exhibit 5 account for 69% of the entire gain in the portfolio—the companies are American Express, Coca-Cola, and Wells Fargo. Was Buffett smart or lucky in picking these three blockbuster investments? Of course, absent information on the length of holding period or risk, it is impossible to determine whether Buffett has truly created “alpha” returns on these lucky three or on the entire portfolio. The instructor can help students develop an added insight from case Exhibit 5: companies that Buffett likes tend to have significant or dominant market power in their respective industries. Such power derives from strong brand names (Coca-Cola, Procter & Gamble, American Express, Wal-Mart), patent and trademark protection (Davita, Sanofi, and the strong-brand companies), industry oligopolies (as suggested by the *Economist*) and/or regulated barriers to entry (U.S. Bancorp, Wells Fargo, Goldman Sachs)—this is not to diminish any benefit of good management in those companies, but merely to suggest that expected high returns and low risk may be associated with market power.

Buffett’s investment philosophy

**Discussion question 3**

Buffett’s investment philosophy reads mostly like a summary of the theory of modern finance. As the subheadings in the case indicate, the elements of the philosophy are as follows:

1. Economic reality, not accounting reality

2. Account for the cost of the lost opportunity

3. Focus on the time value of money

4. Focus on wealth creation

5. Invest on the basis of information and analysis

6. The alignment of agents and owners is beneficial to firm value

Buffett strongly disagrees, however, with three other elements of modern finance:

1. Use of risk-adjusted discount rates: The method he uses seems rather similar to the certainty-equivalent approach to valuation (i.e., discount certain cash flows at a risk-free rate). Although it seems doubtful that the cash flows he discounts are truly certain, the very fact that he matches riskless cash flows with a risk-free discount rate implies an approach consistent with the risk-and-return logic of the capital asset pricing model (CAPM).

1. Benefits of portfolio diversification: Although Buffett disavows portfolio diversification, the breadth of Berkshire Hathaway’s holdings probably approaches efficient diversification. Case Exhibit 2 gives a breakdown of Berkshire Hathaway’s diverse business segments (also described in the case); case Exhibit 3 gives a listing of Berkshire Hathaway’s 10 major investees. From the list, students could be asked whether the portfolio looks diversified—this should stimulate a discussion of what diversification means to them and what it might mean in finance theory.

The case does not provide the data with which to complete an analysis based on market values and asset allocations, but by just looking, one might identify possible industry concentrations in Berkshire Hathaway’s holdings. Those concentrations do not seem to account for the bulk of Berkshire Hathaway’s market value. The firm’s portfolio consists of an assortment of odd manufacturing and service businesses suggested in the case, plus some major equity holdings (case Exhibit 3) that are not easily classified in the concentration groups. The mass of research on portfolio diversification suggests that it does not require very many different equities to achieve the risk-reduction benefits of diversification. Despite his public disagreement with the concept of diversification, Buffett seems to practice it.

1. Capital-market efficiency: Buffett’s emphasis on the value of information asymmetries seems to confirm some appreciation for efficiency in security prices. From his public statements as reported in the case, Buffett’s disagreement with efficiency focuses on two aspects:

* The concept of passive portfolio management (i.e., indexing)
* The implication that quoted prices equal intrinsic values

The theory of efficiency does not absolutely preclude benefits of active management or the possibility that prices may not equal intrinsic values. But it does suggest that without an information advantage or some unusual skill, it would be very difficult to earn supernormal returns consistently over time. It is in this context that Buffett appears to be a major anomaly. The supernormal returns of Berkshire Hathaway suggest that it is possible to beat the market by a wide margin. Buffett’s investment style is still consistent with efficiency in some important ways:

* Discipline and rationality: If one is trying to beat the market, it makes no sense to invest in shares that are fairly priced. Buffett’s quotations in the case and his acquisition philosophy in case Exhibit 8 suggest that he is looking for the market’s pricing anomalies. Looking for the anomalies (the rationality part) and waiting to find them (the discipline part) are not inconsistent with a market that generally prices securities efficiently. Indeed, one could argue that the activities of investors such as Buffett help to create the efficiency that he denies.
* Information: By virtue of Berkshire Hathaway’s large stockholdings in selected firms, Buffett holds directorships and enjoys an informational advantage unavailable to outside investors. Information advantages are valuable in a world of only semi-strong efficient markets.

Investor reaction to the PCP announcement

The investor reaction suggests that the deal will destroy value for Berkshire Hathaway. The $4 billion decrease in Berkshire Hathaway’s market value indicates an expected loss to Berkshire from the acquisition. Whether this is a fair estimate of PCP’s intrinsic value depends on students’ own valuation of PCP. But central to Buffett’s philosophy is that the financial value of an asset is equal to its DCFs. Thus a decline in Berkshire Hathaway’s stock price would suggest that the price paid for PCP exceeds the present value of future flows.

**Discussion question 5**

Valuation of PCP

Is Buffet’s bid of $37.2 billion for PCP likely to result in creation of value for Berkshire Hathaway? The case affords opportunities for estimating the value of PCP using two classic methods, multiples and net present value (NPV).

**Discussion question 7**

*Valuation by multiples*:Case Exhibit 10 provides financial data for the comparable firms, and case Exhibit 11 presents implied valuations for PCP using averages and medians of those firms’ multiples. Table 1 presents a summary of the range of valuations provided in the case:

Table 1. Summary of PCP valuation estimates (dollars in millions).



Source: Created by author.

At these multiples, it appears that Buffett’s enterprise bid of $37.2 billion for PCP is justified by the mean EBIT multiple, but not the multiple of revenues or earnings before interest, tax, depreciation, and amortization (EBITDA). Focusing only on the value of PCP’s equity, Buffett’s bid is justified neither by the mean multiple of earnings per share (EPS) nor the multiple of book value.

*Net present value estimate of enterprise value.* **Exhibit** **TN4** gives an estimate of the cost of capital for valuing PCP. An appropriate discount rate may be derived using the CAPM. Footnote 15 in the case explains that the yield on the 30-year U.S. Treasury bond was 2.89% and that Berkshire Hathaway’s beta was 0.90, and the case states that the long-run market return was 9.9%. So Berkshire Hathaway’s cost of equity may be estimated as 9.20%. Case footnote 15 also gives the current yield on AA-rated corporate debt, about 3.95%. Assuming that Buffett applies Berkshire Hathaway’s capital weights to PCP, the weights for estimating the WACC can be estimated from case Exhibit 9. **Exhibit TN4** estimates WACC to be 8.1%, or 8.052% more precisely—a student may point out that the case states that Berkshire Hathaway’s cost of capital is “about 8%” and ask which is the correct figure to use. While careful calculation is to be applauded, the question presents a teachable moment about what constitutes useful precision. The precise estimate is virtually on the cusp between 8% and 8.1%. Buffett himself has little patience for the CAPM or WACC and would probably be comfortable with “about 8%.” Most importantly, the multiples valuation and a sensitivity analysis of the DCF reveal sizable ranges in PCP’s estimated value. In that context, it seems unlikely that any final judgment about the value creation or destruction in the PCP acquisition will hinge on 10 basis points of WACC.

Alternatively, students might calculate the WACC and cost of equity for PCP, using PCP’s cost of equity. **Exhibit TN3** presents the same calculation and reveals a cost of equity of 5.55% and WACC of 5.1%.

**Exhibit TN4** presents a forecast of free cash flows. These assume the profit margins for PCP prevailing at 2015 and a growth rate of 2.5%, given in case footnote 15. In addition, students must draw on the supplemental information about depreciation and amortization, capital expenditures, and working capital growth, as given in the supplement of **Exhibit TN1**. The terminal value is estimated using the perpetual growth model.

At Berkshire Hathaway’s WACC (8.0%) the NPV is −$11.1 billion. But at PCP’s WACC, the NPV is +$15.9 billion. Best practice would be to accept the estimate of enterprise value based on PCP’s WACC because the cost of equity presumably reflects the risks unique to PCP—to use Berkshire Hathaway’s WACC would be to assume that PCP’s risk is equivalent to Berkshire Hathaway’s, which seems unlikely. But one might question whether PCP’s beta is an accurate measure of PCP’s risk: note the generally declining and volatile stock price of PCP displayed in case Exhibit 1—the correlation with the market would likely be quite low, which probably explains the low equity beta for PCP, 0.38 (case footnote 15). Neither the case nor public data shed much light on expectations for PCP’s volatility of cash flows. Buffett loves stable cash flows and seems likely to demand them from PCP’s management. On the other hand, in the long run, it seems likely that the beta for a large manufacturing firm would regress toward the mean beta for the market.

On a DCF basis, it appears that using an 8% WACC, Berkshire Hathaway has overpaid—this is a conclusion consistent with the valuation by multiples. But under the assumption of a cheaper WACC (5.1%), PCP looks like a bonanza.

**Discussion**: Berkshire Hathaway’s share price fell upon the announcement of the PCP acquisition, a loss of $4.05 billion, less than the negative NPV estimated here. Can Buffett, this icon of finance and investing, have committed such a massive blunder? Perhaps in his struggle to grow Berkshire Hathaway and to deploy its sizable cash balance, Buffett has lost his self-discipline. Research suggests that corporate acquisitions of large size tend to be associated with value destruction.

Alternatively, perhaps the estimates are overly pessimistic. The instructor could ask students what might be missing. Higher margins and faster growth would seem to be logical candidates, though little in the record of Berkshire Hathaway suggests that an acquisition by Buffett brings outsized improvement in performance. Perhaps Buffett knows something that is not reflected in the public valuation of PCP. The hallmark of the value investor (Buffett) is to dig into the fundamental facts about a company, to reach judgment independent from the prevailing market price. For instance, an introductory accounting course at business schools teaches the wide range of discretion in reporting financial results for a company. Perhaps by digging through the financial data, Buffett has discovered much larger cash flows that appear to be reported by PCP.

The objective of any discussion of the valuation of PCP is not to reach a consensus view. Rather, given that this case is often used in the introductory segment of a finance course, the conundrum about Buffett’s bid should be used by the instructor to highlight foundational concepts, to be explored throughout the course, such as:

* Cash flow is king (or queen).
* Price does not equal value. Markets are not always and everywhere efficient.
* Value is in the eye of the beholder. (Buffett is a particularly successful beholder.)
* Success entails the creation of value (among other things).

Was there perhaps something in Buffett’s record as an investor that led to the market’s response?

Conclusion

The final issue raised by the case has to do with the sustainability of Buffett’s record. The bid for PCP seems unreasonable relative to current comparable valuations. For the acquisition to be a success in the sense of matching historical returns at Berkshire Hathaway, Buffett’s expectations for PCP must be radically different from current, implied, and expected values for peer firms. With an investment of this size, a mistake will have lasting adverse consequences for Berkshire Hathaway and Buffett. Even if Buffett’s bet on PCP in 2015 is correct, the need to deploy larger amounts of money will invite mistakes—as Buffet said, “A fat wallet is the enemy of superior investment results.”[[3]](#footnote-3) With more than $67 billion in cash and cash equivalents, Buffett would have been mindful of this admonition.

As described here, the case gives the novice a broad introduction to the valuation of, and investment in, equities. The elements of this introduction include the following:

* Ex post analysis of investment returns (Berkshire Hathaway, and its biggest equity positions) and comparison of those returns with a benchmark, such as the S&P 500 Index or the Ibbotson total return figures
* Peer-multiples-valuation analysis of PCP
* Discussion of the meaning of share-price movements following the announcement of the PCP acquisition
* Review of the major tenets of finance in the context of Buffett’s investment philosophy

Exhibit TN1

Warren E. Buffett, 2015

Supplemental Historical Financial Results for Precision Castparts



Data source: SEC filings by Precision Castparts.

Exhibit TN2

Warren E. Buffett, 2015

List of Suggested Readings

Buffett, Mary, and David Clark. *The New Buffettology: The Proven Techniques for Investing Successfully in Changing Markets That Have Made Warren Buffett the World’s Most Famous Investor*. New York: Simon & Schuster, 2002.

Cunningham, Lawrence A. *How to Think Like Benjamin Graham and Invest Like Warren Buffett*. New York: McGraw-Hill, 2002.

———. *The Essays of Warren Buffett: Lessons for Corporate America*. 1st rev. ed. New York: Cunningham Group, 2001.

Hagstrom, Robert G. *The Warren Buffett Way*. 2nd ed. New York: John Wiley & Sons, 2004.

Heller, Robert. *Business Masterminds: Warren Buffett*. Dorling Kindersley Publishing, 2000.

Kilpatrick, Andrew. *Of Permanent Value: The Story of Warren Buffett*. New York: Andy Kilpatrick Publishing Empire, 2004.

———. *Warren Buffett*: *The Good Guy of Wall Street*. reprint ed. New York: Plume, 1995.

Lowe, Janet. *Warren Buffett Speaks: Wit and Wisdom from the World’s Greatest Investor*. 2nd ed. New York: John Wiley & Sons, 1997.

Lowenstein, Roger. *Buffett*: *The Making of an American Capitalist*. Main Street Books, 1996.

Morio, Ayano. *Warren Buffett: An Illustrated Biography of the World’s Most Successful Investor*. New York: John Wiley & Sons, 2004.

O’Loughlin, James. *The Real Warren Buffett: Managing Capital, Leading People*. London: Nicholas Brealey Publishing, 2003.

Reynolds, Simon. *Thoughts of Chairman Buffett: Thirty Years of Unconventional Wisdom from the Sage of Omaha.* New York: Collins, 1998.

Schroeder, Alice. *The Snowball: Warren Buffett and the Business of Life.* New York: Bantam, 2008.

Steele, Jay. *Warren Buffett: Master of the Market*. New York: Harper Paperbacks, 1999.

Train, John. *The Midas Touch: The Strategies That Have Made Warren Buffett America’s Preeminent Investor.* Reprint ed. New York: HarperCollins, 1988.

Source: Created by author.

Exhibit TN3

Warren E. Buffett, 2015

Breakdown of Equity Portfolio Gain by Investment

(dollar values in millions)



Data source: Case exhibit 5.

Exhibit TN4

Warren E. Buffett, 2015

Estimate of Weighted-Average Cost of Capital



Source: Authors’ analysis.

Exhibit TN5

Warren E. Buffett, 2015

Example of Completed IRR Analysis for Berkshire Hathaway’s Investment in PCP

(dollars in millions except per-share figures)



Note the following adjustments made to Income Statement to identify “recurring income”:[[4]](#footnote-4)[[5]](#footnote-5)

1. Excluded restructuring charges.

2. Excluded equity in unconsolidated investments.

3. Excluded NCI (<1% ownership).

4. Fiscal year ends March 31, 2015.

Source: Author analysis.

1. Kenneth M. Eades and Dorothy Kelly, “Larry Puglia and the T. Rowe Price Blue Chip Growth Fund,” UVA-F-1772 (Charlottesville, VA: Darden Business Publishing, 2017). [↑](#footnote-ref-1)
2. <http://www.berkshirehathaway.com> (accessed Dec. 12, 2016). [↑](#footnote-ref-2)
3. Garth Alexander, “Buffett Spends $2bn on Return to His Roots,” *Times* (London), August 17, 1995. [↑](#footnote-ref-3)
4. Includes depreciation and amortization expenses of $214.9, $293.0, and $325.0 for years 2013, 2014, and 2015, respectively. [↑](#footnote-ref-4)
5. Terminal value = free cash flow \* (1 + *g*)/(WACC − *g*); assumes terminal growth rate of 2.5% and WACC is estimated as appropriate. [↑](#footnote-ref-5)