



A PRACTICAL GUIDE TO VALUATION

A comprehensive look at valuation metrics

In today's dynamic market, understanding the nuances of valuation techniques is ESSENTIAL for INFORMED DECISION-MAKING. Valuation entails establishing the theoretical value of a company, investment, or asset. Whether an investor, analyst, or business professional, this article offers VALUABLE INSIGHTS into the ART AND SCIENCE of determining a valuation.

IN BRIEF:

- “Valuation considers both internal (i.e. company specific) factors and external (i.e. business cycle, macro) factors, so to achieve high valuations companies need to ‘line the ducks up’ on the timing of both positive internal and external factors.”
Andrew Mackson, Partner, InteleK.
- Investors commonly use three techniques to determine the fair value of an asset: discounted cash flow (DCF), public peer comparables, and precedent transactions.
- There are three approaches to valuation; being the income approach, market approach, and asset/cost approach, each utilising different methods to assess economic benefits, growth profile, and associated risks.
- The Business Cycle can impact valuations and the assumptions of different valuation methods or metrics including multiples.

¹A valuation can be defined as the process of determining the economic value of a business or project. During the valuation process, depending on the use or purpose of the valuation, all areas of a business are analysed to determine its entire value and or the value of its specific departments, units, assets and or liabilities.

Valuation is a financial assessment process used to determine the economic value of an asset, business, or investment. It plays a pivotal role in various industries, aiding investors, companies, and analysts in making informed decisions.

The process involves defining the relevant ‘standard or basis of value’ for the valuation such as fair market value, fair value, intrinsic value, investment value and then estimate the relevant value by utilising the three approaches to valuation including income, market and asset/cost approaches.

There are many methods within the three approaches, to assess the economic benefits, growth profile and associated risk of the asset being valued.

UNDERSTANDING VALUATION

A use case for understanding valuation is the value of a security. Valuation serves as a valuable tool in establishing the security's value, which under fair

¹Chen, J. (2019). How the Valuation Process Works. <https://www.investopedia.com/terms/v/valuation.asp>

value is essentially the price at which a willing buyer and seller agree to transact on the open market.

When securities are actively traded on exchanges, their market value is influenced by a number of external factors including the market sentiment, investor sentiment, the macroeconomic circumstances or trends, where the industry sits in the business cycle, as well as relative value against comparable businesses.

In contrast, intrinsic value (often being the standard of value used by investors) delves into the perceived worth of a security based on factors like future earnings or other company attributes unrelated to its current market price.

This is precisely where the importance of valuation becomes evident. Analysts conduct valuations to assess whether a company or asset is deemed overvalued or undervalued by the broader market.

A report by Morgan Stanley states that ² Valuation is tricky early in a company’s life cycle. Start-ups, with their vast range of potential outcomes, prove intricate for discounted cash flow models due to the uncertainty. As companies grow and mature, the difficulty decreases, given the narrowing dispersion of growth rates in sales and profits.

However, Aswath Damodaran, an established finance professor and valuation expert, contends that a discounted cash flow model can be applied to start-ups. He outlines a multi-step process for this purpose.

Damodaran’s approach involves forecasting revenues, evaluating profitability, assessing risk, and considering base rates. Forecasting a range of potential revenues hinges on a comprehensive evaluation of the total

addressable market (TAM). TAM estimation involves a bottom-up calculation of market size, application of a diffusion model, and referencing past results from comparable businesses.

The fundamental unit of analysis sheds light on a company’s revenue generation. For instance, in a subscription-based business, the basic unit is customer lifetime value, accounting for the cash flow a customer generates during their active period minus the acquisition cost. This step considers potential benefits from operating leverage and economies of scale.

Goldman Sachs also states that “Investors commonly use three techniques to determine the fair value of an asset: discounted cash flow (DCF), public peer comparables, and precedent transactions.” ³

Risk assessment encompasses estimating the opportunity cost of capital and its evolution over time. As a company progresses through its life cycle, the risk and expected return of its stock generally decrease.

Base rates, derived from an appropriate reference class of companies, prove valuable for predicting survival and growth. This tool, often overlooked, holds significant power in forecasting outcomes in particular when scenario analysis is used.

EQUITY VALUATION METHODS

INCOME APPROACH

Present value models form part of the income approach to valuation and aim to determine the value of a security by calculating the present worth

EXHIBIT 1: VALUATION METHODS

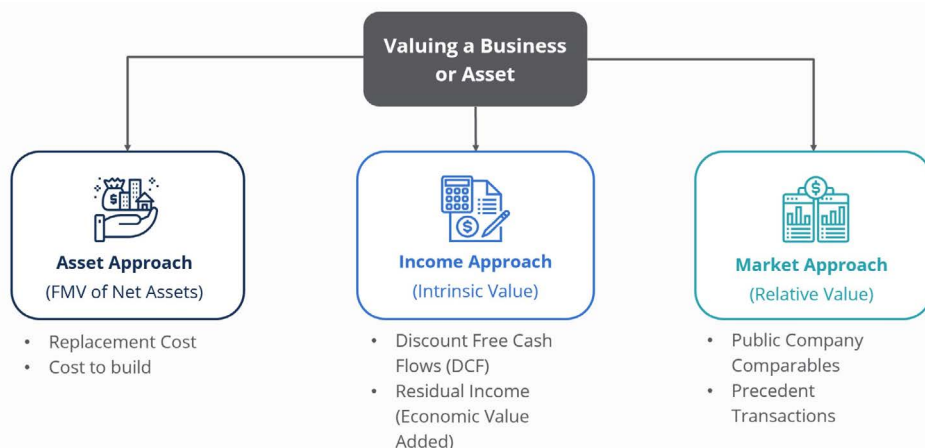


EXHIBIT 1 - Valuation, <https://corporatefinanceinstitute.com/resources/valuation/valuation/>

²Mauboussin, M.J. and Callahan, D. (2021). Everything Is a DCF Model A Mantra for Valuing Cash-Generating Assets https://www.morganstanley.com/im/publication/insights/articles/article_everythingisadcfmodel_us.pdf.

³Unpacking Private Equity Valuations and Returns, <https://www.gsam.com/content/gsam/us/en/individual/market-insights/gsam-insights/perspectives/2023/private-equity-valuations-returns.html>

of anticipated future benefits associated with the security. In the context of present value models, these benefits are commonly defined either as the anticipated cash to be distributed to shareholders, as seen in dividend discount models, or as the free cash flows available for distribution to the providers of capital after covering capital expenditure and working capital requirements.

A wide spectrum of models falls under this category, varying from relatively straightforward to highly intricate.

⁴Present value models constitute a valuation approach designed to ascertain the value of an asset. The methodology involves calculating the current value of expected future benefits associated with the security. These benefits are typically delineated in two ways within the context of present value models.

DISCOUNTED CASH FLOW MODEL (DCF)

“Discounted Cash Flow (DCF) analysis is a fundamental financial valuation method used to estimate the intrinsic value of an investment by calculating the present value of its expected future cash flows.”⁵

The DCF process involves several key steps;

Forecasting cash flows

Analysts project the future cash flows expected to be generated by the investment over a specified period. These cash flows typically include operating cash flows, capital expenditures, and terminal value.

Determining the discount rate

A discount rate, often referred to as the required rate of return or cost of capital, is applied to discount the projected cash flows back to their present value. The discount rate reflects the risk associated with the investment and accounts for the time value of money.

Calculating present value

The projected cash flows are discounted back to their present value using the chosen discount rate. The sum of these discounted cash flows represents the intrinsic value of the investment.

Terminal value calculation

In many cases, DCF analysis includes a terminal value component, representing the value of the investment at the end of the forecast period. This terminal value is also discounted back to its present value.

Final valuation

The present value of the projected cash flows and terminal value are aggregated to determine the total intrinsic value of the investment.

USES OF DCF IN THE INDUSTRY

Valuation of Companies

DCF analysis is extensively utilised in valuing companies, both publicly traded and privately held. It provides a comprehensive assessment of a company’s future cash flow potential, aiding investors, analysts, and companies in determining fair market value.

Investment Decision-Making

Investors use DCF analysis to evaluate the attractiveness of potential investments. By comparing the calculated intrinsic value with the current market price, investors can assess whether an investment opportunity offers a sufficient margin of safety.

Capital Budgeting

DCF analysis guides capital budgeting decisions by helping companies assess the financial viability of long-term projects. It assists in evaluating the expected returns on investment and determining whether projects meet the company’s hurdle rate.

Mergers and Acquisitions (M&A)

In M&A transactions, DCF analysis is employed to determine the fair value of target companies. It aids in negotiations and provides insights into the potential synergies and financial implications of the transaction.

“3 MOST COMMON TECHNIQUES TO DETERMINE AN ASSET’S VALUE; DCF, PUBLIC PEER COMPARABLES & PRECEDENT TRANSACTIONS.”

*Goldman Sachs*³

LIMITATIONS OF DCF

Sensitivity to assumptions

DCF analysis is highly sensitive to the assumptions made regarding future cash flows, discount rates, and terminal values. Small changes in these assumptions can significantly impact the calculated intrinsic value.

Forecasting challenges

Forecasting future cash flows with precision can be challenging, especially for companies with volatile or uncertain revenue streams. Inaccurate projections can lead to unreliable valuations. The greater the timeframe (i.e. year number), the higher the discount

³ Unpacking Private Equity Valuations and Returns, <https://www.gsam.com/content/gsam/us/en/individual/market-insights/gsam-insights/perspectives/2023/private-equity-valuations-returns.html>

⁴ Fernando, J. (2022). How to Calculate Present Value, and Why Investors Need to Know It. <https://www.investopedia.com/terms/p/presentvalue.asp>

⁵ Fernando, J. (2023, November 6). Discounted cash flow (DCF). Investopedia. <https://www.investopedia.com/terms/d/DCF.asp>

factor and therefore the larger the downward adjustment on the present value in later years.

Discount rate selection

Determining the appropriate discount rate requires careful consideration and is subject to interpretation. The choice of discount rate can vary depending on factors such as the risk profile of the investment and prevailing market conditions.

Terminal value assumptions

Estimating terminal value often involves making assumptions about the perpetual growth rate or exit multiple, which can introduce uncertainty and affect the reliability of the valuation.

For illustration of a DCF model used to evaluate the intrinsic value of a hypothetical company, VRC Corporation. A simplified version of the model;

Assumptions

Forecast period: 5 years
 Terminal growth rate: 3%
 Discount rate (Cost of Equity): 10%

Steps involved;

Revenue projection

Assume ABC Corporation’s revenue is expected to grow steadily over the forecast period.

Projected revenues for each year are as follows;

Year 1: \$1,000,000
 Year 2: \$1,200,000
 Year 3: \$1,400,000
 Year 4: \$1,600,000
 Year 5: \$1,800,000

Operating expenses and taxes

Estimate operating expenses and taxes based on historical data and industry benchmarks. Assume operating expenses and taxes are 60% of revenue each year.

Free cash flow calculation

Calculate free cash flow (FCF) for each year using the formula

$$FCF = \text{Revenue} - \text{Operating expenses} - \text{taxes}$$

Year 1: $\$1,000,000 - (\$1,000,000 * 0.60) = \$400,000$
 Year 2: $\$1,200,000 - (\$1,200,000 * 0.60) = \$480,000$
 Year 3: $\$1,400,000 - (\$1,400,000 * 0.60) = \$560,000$
 Year 4: $\$1,600,000 - (\$1,600,000 * 0.60) = \$640,000$
 Year 5: $\$1,800,000 - (\$1,800,000 * 0.60) = \$720,000$

Terminal value calculation

Estimate the terminal value at the end of the forecast period using the perpetuity growth method.

$$\text{Terminal value} = \text{Year 5 FCF} * (1 + \text{Terminal growth rate}) / (\text{Discount rate} - \text{Terminal growth rate})$$

$$\text{Terminal value} = \$720,000 * (1 + 0.03) / (0.10 - 0.03) = \$9,600,000$$

Discounting cash flows

Discount each year’s free cash flows and the terminal value back to their present value using the discount rate.

$$\text{Present value} = \text{Future cash flow} / (1 + \text{Discount rate}) ^ \text{Number of years}$$

Present value of year 1 FCF: $\$400,000 / (1 + 0.10) ^ 1 = \$363,636$
 Present value of year 2 FCF: $\$480,000 / (1 + 0.10) ^ 2 = \$396,694$
 Present value of year 3 FCF: $\$560,000 / (1 + 0.10) ^ 3 = \$426,878$
 Present value of year 4 FCF: $\$640,000 / (1 + 0.10) ^ 4 = \$453,512$
 Present value of year 5 FCF: $\$720,000 / (1 + 0.10) ^ 5 = \$475,523$

$$\text{Present value of terminal value: } \$9,600,000 / (1 + 0.10) ^ 5 = \$6,191,780$$

Total intrinsic value

Sum the present values of the cash flows and terminal value to determine the total intrinsic value of VRC Corporation.

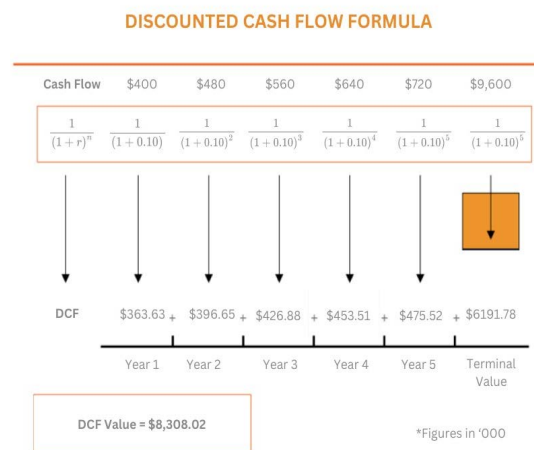


EXHIBIT 2: DCF FORMULA

Total intrinsic value = Present value of cash flows + Present value of terminal value

$$\text{Total intrinsic value} = \$363,636 + \$396,694 + \$426,878 + \$453,512 + \$475,523 + \$6,191,780 = \$8,308,023$$

Therefore, based on this DCF model, the total intrinsic value of VRC Corporation is approximately \$8,308,023. This value represents the present worth of the company’s expected future cash flows,

EXHIBIT 2 - Valuing a Business using a Dividend Discount Model, Source – (6)(Botha, 2022)

© Wall Street Prep. (n.d.). Dividend Discount Model (DDM): Formula and Two-Stage Example. <https://www.wallstreetprep.com/knowledge/dividend-discount-model/>

discounted at the appropriate rate.

DIVIDEND DISCOUNT MODEL (DDM)

⁶ “The Dividend Discount Model states that the value of a company is a function of the sum of all the expected dividends, with each payment discounted to the present date” states Wall Street Prep. These are typically only used in the valuation of public companies where dividends are consistently paid from profitable businesses, different to many smaller and or privately held businesses.

The DDM is a technique utilised for assessing the inherent value of a stock. It operates on the principle that the stock’s worth corresponds to the present value (PV) of anticipated dividends from the underlying issuer.

By considering the existing stock price, determining an appropriate discount rate (i.e., the required rate of return) based on the company’s risk-return characteristics, and factoring in the anticipated value of the next year’s dividend, the PV of all forthcoming dividends signifies the implied intrinsic value.

Within the DDM, the per-share value of a company is the aggregate of the present values of all expected dividends slated for distribution to shareholders. For computing the DDM of a small-cap hypothetical company called VRC Ltd., let’s assume that;

- The company pays a constant annual dividend of \$2.
- The investor’s required rate of return is 8%.
- Dividends are growing at a rate of 2% annually.

Steps Involved are as follows;

Identify relevant information

Gather information on the company’s dividend payments. For simplicity, we have assumed the company pays an annual dividend of \$2 per share, investors required rate of return is 8% and dividends are expected to grow at 2% annually.

Apply the Gordon Growth Model

$$GGM = \frac{Do(1 + g)}{ke - g}$$

Dividend Per Share (Next Period) = Current Dividend * (1 + Growth rate)
 \$2.04 = \$2 * (1 + 0.02)

Required rate of return = 8%
 Dividend growth rate = 2%
 Intrinsic stock price = \$2.04 / (0.08 – 0.02) = \$2.04 / 0.06 = \$34

According to this model, an investor who requires an 8% return on their investment and anticipates dividends of \$2 per share with a 2% growth would consider the stock to be fairly valued at \$34 per share.

FREE CASH FLOW TO EQUITY MODELS (FCFE)

FCFE can be defined as ⁷ “The amount of cash a business generates that is available to be potentially distributed to shareholders”.

Alternatively, the benefits can be conceptualised as the cash flows available for distribution to shareholders after fulfilling capital expenditure and working capital requirements. Free Cash Flow to Equity Models evaluate the present value of these future cash flows, providing a broader perspective on a company’s financial health.

Present value models encompass a diverse spectrum of valuation methodologies, ranging from relatively straightforward to highly intricate approaches. The versatility of these models allows financial analysts to choose the most suitable method based on the specific characteristics and circumstances of the security or company being evaluated.

“THE DDM OPERATES ON THE PRINCIPLE THAT THE STOCK’S WORTH IS THE PRESENT VALUE OF FUTURE DIVIDENDS”

For illustration, let’s assume that VRC Ltd. has following items;

Particulars

Net Income	\$50M
Depreciation	\$10M
Amortization	\$5M
Decrease in working capital	\$2M
Capital expenditures	\$15M
Net borrowing	\$8M
Non-operating items	\$3M

Steps Involved;

Start with Net income

Net income can be found on the income statement. Net income represents the profit after deducting all expenses and taxes.
 Net income = \$50 million

Adjust for non-cash expenses

Add back non-cash expenses like depreciation and amortisation. These expenses don’t impact cash

⁷ Corporate Finance Institute. (n.d.). Free Cash Flow to Equity (FCFE) <https://corporatefinanceinstitute.com/resources/valuation/free-cash-flow-to-equity-fcfe/>

flow, so they are added back to get a more accurate picture of cash generation.

Adjusted Net Income = Net income + depreciation + amortization

\$65 million = \$50 million + \$10 million + \$5 million

Consider changes in working capital

Changes in working capital (current assets - current liabilities) can affect cash flow. If working capital increases, it uses cash; if it decreases, it provides cash. Adjust for changes in working capital.

Free Cash Flow = Adjusted net income – Change in working capital

\$67 million = \$65 million – (\$2 million)

Account for capital expenditures (CapEx)

Deduct capital expenditures from the result to consider the company's investments in property, plant, and equipment. Capital expenditures represent cash outflows for long-term assets.

FCFE = Adjusted net income – Change in working capital – capital expenditures

\$52 million = \$65 million – (\$2 million) – \$15 million

Add net borrowing

Consider the net borrowing during the period. If the company borrowed more than it repaid, it increases cash available to equity holders; if it repaid more than it borrowed, it reduces the cash available.

FCFE = adjusted net income – change in working capital – capital expenditures + net borrowing

\$60 million = \$52 million – (\$2 million) - \$15 million + \$8 million

Adjust for non-operating items

If there are non-operating items affecting cash flow (e.g., gains or losses from the sale of assets), adjust for them.

Final FCFE= FCFE + non-Operating Items

\$63 million = \$60 million + \$3 million

In this simplified example, the Free Cash Flow to Equity (FCFE) for the company is \$63 million. This represents the cash available to be distributed to the equity shareholders after considering various adjustments.

DISCOUNT RATE OR WEIGHTED AVERAGE COST OF CAPITAL (WACC)

The cost of capital is a crucial input in any valuation

since the valuation process is pricing risk and its relationship with the expected return. The discount rate is the expected return appropriate for the expected level of risk. When estimating discount rates, we define risk as the degree of uncertainty as to the realisation of the expected future returns. The essence of risk is the likelihood that observed returns will not match the returns that were expected at the start of an investment.

WACC represents the market-capitalisation-weighted cost of capital for both equity holders (both common and preferred) and debt holders. The basic formula for computing the after-tax WACC is as follows:

$$WACC=(k_e \times W_e) + [k_d (1-t) \times W_d]$$

Where:

WACC = weighted average cost of capital
 k_e = company's cost of common equity capital
 k_d = company's cost of debt capital
 W_e = percentage of equity capital in the capital structure
 W_d = percentage of debt capital in the capital structure
 t = company's effective income tax rate

DISCOUNT RATE USES

Income Approach

The calculation of the WACC is one of the most crucial components when applying a DDM, FCFE or capitalisation of economic income method within the income approach as it will be the discount rate used to bring future expected earnings measures to the present value.

Key for Company Decision Making

The WACC is commonly used in corporate finance when deciding whether to launch a project or not. A company will calculate the expected internal rate of return of a project and compare it to its WACC. If the Internal rate of return (IRR) of a project is lower than the WACC the project will usually not be undertaken as it is below the Company's required rate of return by investors hence it will not create value.

LIMITATIONS OF PRESENT VALUE MODELS

Assumption sensitivity

Present value models heavily rely on various assumptions, such as the discount rate, growth rates, and future cash flow predictions. Small changes in these assumptions can significantly impact the calculated value.

Predictive challenges

Forecasting future cash flows, especially over extended periods, is inherently uncertain. Unforeseen changes in market conditions, industry trends, or company-

specific factors can lead to inaccuracies in valuation.

Market volatility

Present value models may struggle to account for sudden market fluctuations and dynamic economic conditions, including monetary policy, interest rates or investor sentiment can affect the reliability of discount rates used in these models.

For example, interest rate hikes (or cuts) impact risk-free rates and the cost of debt, hence the WACC can significantly vary.

Capital Structure

The WACC assumes that a company will maintain a specific capital structure which can be unrealistic in a dynamic market. Additionally, there is no accurate way to estimate a company’s optimal capital structure.

The Income Approach is highly sensitive to WACC assumptions

When applying the method within the income approach small movements of the WACC can mean significant changes in the resulting value of the method, in particular to any ‘terminal value’ calculations at the end of an explicit forecast period.

There are different ways to calculate the different components of the WACC such as normalised risk-free rates offered by different institutions, different ways to calculate equity risk premiums, etc. Consequently, it increases the model risk of a valuation.

USES OF PRESENT VALUE MODELS IN THE FINANCE INDUSTRY

Stock valuation

Present value models are extensively employed to assess the value of stocks by estimating the present worth of anticipated future cash flows or dividends.

Investment decision-making

Investors utilise these models to make informed investment decisions by comparing the intrinsic value of a security with its market price. Discrepancies between intrinsic value and market price may present investment opportunities.

Company valuation

In the context of mergers and acquisitions or corporate finance, present value models assist in valuing companies. This aids and can be a tool used in negotiations to determine a price for transactions.

Capital budgeting

Present value models are integral to capital budgeting decisions, helping companies evaluate the financial viability of long-term projects by comparing the present value of expected cash flows with

the initial investment.

Risk assessment

Analysts use present value models to assess the risk associated with an investment. By incorporating discount rates that reflect the risk profile, these models provide insights into the risk-return trade-off.

MARKET APPROACH

COMPARABLE COMPANY ANALYSIS (CCA)

CCA is also known by other names such as the guideline public company method, forms part of the market approach and is a valuation method that revolves around the comparative evaluation of a target company’s financial metrics against those of similar publicly traded companies.

The underlying principle is based on the assumption that companies operating in the same industry, sharing comparable characteristics, should exhibit similar valuations in the market.

⁸CCA begins by forming a group of peers, comprising companies of comparable size within the same industry or geographic region. This allows investors to make relative comparisons between a specific company and its competitors.

The insights gained from this comparison are utilised to ascertain the value of a company and compute various ratios for comparing it with others in its peer group.

Selection of comparable companies

Analysts begin by identifying a set of comparable companies, often within the same industry or sector.

These companies should share similarities with the target company in terms of profitability (a large driver of cash flow), growth, risk and overall operating and financial characteristics.

Multiplier models form part of the market approach to valuation and are prominent tools in financial valuation, particularly relying on either share price multiples or enterprise value multiples.

In the case of share price multiples, the intrinsic value of a common share is determined by applying a multiple to a fundamental variable, such as revenues, earnings, cash flows, or book value.

$$\text{Valuation Multiple} = \frac{\text{Value Measure}}{\text{Value Driver}}$$

⁸ Chen, J. (2020). Comparable Company Analysis, <https://www.investopedia.com/terms/c/comparable-company-analysis-cca.asp#:~:text=Comparable%20company%20analysis%20is%20the>

EXAMPLES OF SHARE PRICE MULTIPLES

Price-to-Earnings (P/E) Ratio Calculated as the share price divided by earnings per share (EPS), this widely-used multiple assesses how much investors are willing to pay for each unit of earnings.

Price-to-Sales (P/S) Ratio Calculated as the share price divided by sales per share, this multiple gauges the market’s valuation of a company relative to its revenue.

EXPRESSION OF FUNDAMENTAL VARIABLES

The chosen fundamental variable, whether it’s revenues, earnings, or others, can be expressed either on a forward basis (e.g., forecasted EPS for the next year) or a trailing basis (e.g., EPS for the past year). The key is to maintain consistency across the companies being analysed.

Continuing with our hypothetical company VRC Ltd., we can compute the P/E ratio.

Obtain the necessary financial information, specifically the earnings per share (EPS)

As stated above that our VRC Ltd. has net income of \$50 million and has shares outstanding at 5 million, with the following information, we can compute the EPS.

$$EPS = \frac{\text{Net Income}}{\text{No. of Shares Outstanding}}$$

$$EPS = \$50 \text{ million} / 5 \text{ million} = \$10 \text{ per share.}$$

The P/E ratio is computed by dividing the stock price by the earnings per share. Using the values from our example, where stock price was \$34, and EPS is \$10.

$$P/E \text{ Ratio} = \frac{\text{Market Share Price}}{\text{Earnings Per Share (EPS)}}$$

Interpret the P/E ratio

A P/E ratio of 3.4x indicates that investors are willing to pay 3.4 times the earnings per share for Company VRC’s stock. This ratio is often used for relative valuation, comparing it with industry averages or the P/E ratios of similar companies.

Consider industry comparisons

To assess the valuation further, compare the P/E ratio with the industry average or similar companies.

If the industry average P/E ratio is 5x, for instance, it might suggest that the stock trading on 3.4x is relatively undervalued compared to its peers.

USES OF SHARE PRICE MULTIPLES IN THE FINANCE INDUSTRY

Relative valuation

Share price multiples allow for a quick and straightforward relative valuation of a company against its peers in the industry. This aids investors in making informed decisions by comparing the company’s valuation metrics with similar players.

Market sentiment analysis

Multiples reflect market sentiment and investors’ perception of a company’s future prospects. A high P/E ratio, for example, may indicate positive expectations for future earnings growth.

Quick assessment

Multiples provide a rapid and intuitive way to gauge a company’s valuation, making them particularly useful in scenarios where a quick assessment is needed.

“COMPARATIVE ANALYSIS COMPARES A COMPANY’S FINANCIAL METRICS AGAINST THOSE OF SIMILAR COMPANIES.”

LIMITATIONS OF SHARE PRICE MULTIPLES

Sensitivity to earnings

Share price multiples are highly sensitive to earnings fluctuations. Changes in a company’s earnings can significantly impact its valuation, leading to potential volatility.

Industry variances

Different industries may have distinct norms regarding acceptable multiples. Comparing multiples across industries without considering these variations can be misleading.

Neglect of company-specific factors

Share price multiples may overlook company-specific factors that contribute to its unique valuation, such as technological innovation, market dominance, or regulatory advantages.

No consideration of capital structure

Certain multiples don’t consider a company’s capital structure. Firms with different debt-equity profiles might not be accurately compared using these multiples.

Forward-looking assumptions

When using forward-looking multiples, the accuracy of forecasts becomes critical. Inaccurate predictions can lead to misjudgements in the valuation process.

ASSET (COST) APPROACH

Asset based valuation models (asset/cost approach to valuation) delve into determining the value of a company's common shares through a straightforward process. This typically involves subtracting the estimated value of liabilities from the estimated value of the company's assets to identify equity value.

At a more granular level, this requires valuing the individual assets and liabilities, often resulting in adjustments to their book value or carrying values which often do not equal their market values.

While there may be some discretion in choosing the specific assets and liabilities for the valuation, the asset-based approach can be the most straightforward approach compared to the conventional income and market approaches.

Suppose that our hypothetical company VRC Ltd. has a following items on balance sheet;

Total Assets - \$120 million
Total Liabilities - \$42 million

Equity/Net Asset Value = Total Value of Assets - Total Value of Liabilities

NAV = \$120 million - \$42 million = \$78 Million

Identifying intrinsic value

The focus of asset-based valuation is on tangible assets such as property, equipment, inventory, and intangible assets captured on the balance sheet like patents or trademarks. By subtracting the total estimated value of liabilities from the assets, the model seeks to establish the intrinsic value attributed to equity.

A weakness to the asset approach is often there are many intangible assets not captured on a balance sheet so the challenge is to properly identify and estimate the fair value of intangible assets due to their unique nature.

Adjustments to book value

⁹The book value, representing the historical cost of assets and liabilities adjusted for factors such as depreciation/amortisation may not reflect the current market conditions and thus market values. Asset-based valuation adjusts these values to better align with the prevailing market realities, ensuring a more accurate representation of the company's financial health.

Tangible and intangible assets

Tangible assets like property and equipment are valued based on market conditions, replacement costs, or appraisals. Intangible assets, which may not have a readily apparent market value, require a

more nuanced approach, often involving qualitative assessments or specialist valuations.

Liabilities and preferred shares

The subtraction of liabilities, preferred shares, options, warrants etc. if or when on a company's balance sheet is crucial as it reflects the claims of other stakeholders on the company's assets. This subtraction helps isolate the residual value available to common shareholders.

LIMITATIONS

Intangible asset challenge

Valuing intangible assets, such as intellectual property or brand value, can be challenging as their worth might not be easily quantifiable or have readily available market comparables.

Dynamic market conditions

Asset values may fluctuate due to changes in market conditions, impacting the accuracy of the valuation. Rapid market changes can render historical cost information less relevant.

Limited future performance insight

While asset-based valuation provides a snapshot of a company's current value, it may not offer insights into future performance or the potential earnings capacity of the company.

USES IN THE FINANCE INDUSTRY

Bankruptcy proceedings

Asset-based valuation is often used in bankruptcy cases to determine the liquidation value of a company's assets, aiding in the equitable distribution of proceeds to creditors.

Real estate investments

Investors in real estate or property-intensive industries may employ asset-based valuation to assess the value of properties and make informed investment decisions.

Insurance and collateral assessment

Insurers and financial institutions may use asset-based valuation to evaluate the worth of assets pledged as collateral, helping determine insurance coverage or loan terms.

Historical cost analysis

Asset-based valuation provides a historical cost perspective, which can be valuable for companies with long-lived assets, helping stakeholders understand the evolution of asset values over time.

Key financial metrics

Relevant financial metrics, such as revenue, earnings, growth rates, and profitability ratios, are meticulously collected for both the target company and its

⁹ Deloitte (2017), Reading between the lines, https://www2.deloitte.com/content/dam/Deloitte/xc/Documents/About-Deloitte/mepovdocuments/mepovissue22/reading-between-the-lines_mepov22.pdf.

identified comparable peers. These metrics serve as the foundation for the comparative analysis.

Normalisation and adjustments

To ensure a fair comparison, adjustments are made to account for any discernible differences between the target company and its peers. Any factors impacting sustainable profitability, growth or risk such as size, geographic location, and one-time events affecting financial performance are considered and may require adjusting.

Valuation multiples

¹⁰Valuation multiples, such as the Price-to-Earnings (P/E) ratio or Enterprise Value-to-EBITDA (EV/EBITDA), are calculated for both the target company and its comparable peers. These multiples represent how the market values the companies relative to their financial metrics.

Application to the target company

The calculated valuation multiples from the comparable companies are then applied to the corresponding financial metrics of the target company. This process helps estimate the value of the target based on the observed valuation patterns within the industry.

Sensitivity analysis

Analysts often conduct sensitivity analyses to assess the impact of variations in key assumptions. This provides a range of potential valuations, acknowledging the inherent uncertainties in the valuation process.

USES OF CCA IN FINANCE

Industry benchmarking

CCA allows for a direct comparison of the target company with its industry peers, providing a benchmark for assessing its relative performance and positioning.

Market realism

By relying on market-driven metrics, CCA incorporates the collective wisdom of investors, reflecting real-world market conditions and investor sentiment.

LIMITATIONS OF CCA

Limited customisation

CCA may not capture unique aspects of the target

company that distinguish it from its peers. Unique business models or strategic advantages may not be fully considered.

Market fluctuations

Valuation multiples in the market can be subject to short-term fluctuations, impacting the accuracy of the analysis, especially in volatile market conditions.

Incomplete information

The method heavily relies on the availability of accurate and relevant financial information for comparable companies, albeit this is materially better when comparing the publicly traded companies than for privately held companies where incomplete or outdated data can compromise the reliability of the analysis.

A related issue for the CCA/GPC method is accounting techniques that can be manipulated by management to show favourable conditions like using

different methods to account for inventory balances, depreciation methods etc. that can impact reported earnings and affect multiples.

Diverse operating environments

Companies within the same industry may operate in diverse environments, making direct comparisons challenging. Variations in regulatory landscapes, geographic locations, or economic conditions can affect the accuracy of the analysis.

“TO ACHIEVE
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Andrew Mackson, Partner, InteleK

BUSINESS CYCLE

Different stages of the business cycle can impact valuations and the assumptions of different valuation methods or metrics such as multiples. Business cycles will lead to monetary policies, M&A activity, or valuations that will impact different key components of business valuation.

“Valuation considers both internal (i.e. company specific) factors and external (i.e. business cycle, macro) factors, so to achieve high valuations companies need to ‘line the ducks up’ on the timing of both positive internal and external factors.” states Andrew Mackson, Partner of leading valuation advisory firm, InteleK.

ECONOMIC EXPANSIONS AND CONTRACTIONS

When the economy is expanding with increasing

¹⁰ Chen, J. (2020). Comparable Company Analysis (CCA) <https://www.investopedia.com/terms/c/comparable-company-analysis-cca.asp#:~:text=Comparable%20company%20analysis%20is%20the>.

demand, M&A valuation and per share values increase as the market participants have more confidence that future values will be at least as good as they are today.

CHANGES IN DISCOUNT RATES

In an expansion phase, lending can be higher due to lower interest rates leading to more money flowing to the economy. As lending terms are looser, the cost of debt and risk-free rates lower, driving down the cost of capital and hence increasing valuations.

Conversely, in contraction times, the perceived risk is higher which can lead to investors requiring a higher rate of return to compensate for the risk perceived driving valuations lower.

DIFFERENT SECTORS ARE IMPACTED DIFFERENTLY

Different sectors are more susceptible to business cycles. For example, demand for luxury products can diminish leading to lower revenues and profitability. This impacts price multiples of an industry used for the market approach.

For example, in recent years the tech sector has a mix of not being impacted and being impacted by business cycles. In the 2nd quarter of 2020, many tech companies exhibited a significant increase in value despite the high perceived risk due to the pandemic.

The increase of value was mainly driven by different factors such as expected increased demand for tech services due to remote working and innovation in the sector.

However, in 2022, the sector cooled off which can be mainly attributed to increases in interest rates, high inflation, and more perceived risk due to a potential

economic recession. This all led to lower venture capital investment in tech companies in general and lower valuations due to higher perceived risks.

DOES JURISDICTION AFFECT YOUR VALUATION?

Public companies are generally well diversified geographically hence jurisdictions have a significantly lower impact on those companies than those who aren't diversified.

“From a taxation standpoint, companies who are subject to taxation in a relatively high tax jurisdiction, all else equal, this negatively impacts their valuations given lower post-tax available free cash flows meaning a lower valuation under the income approach.” states Mackson, “For this reason, many companies are established in countries or states with relatively lower corporate income taxes.”

ARE YOU ABLE TO GET A MORE FAVOURABLE WACC IN OTHER COUNTRIES?

The WACC and multiples are highly sensitive to the industry being analysed and perceived risks for the company to produce the expected cash flows.

The WACC and multiples may or may not capture different qualitative factors of different countries such as political landscape, the lack of sufficient available and accurate information to properly estimate the components of the WACC, lack of proper accounting practices for reported financial information, etc.

Mackson mentions; “In general, in the US, all else equal, multiple for ‘like for like’ privately held businesses are higher than in Australia. While at a

EXHIBIT 3: STAGES OF A BUSINESS CYCLE

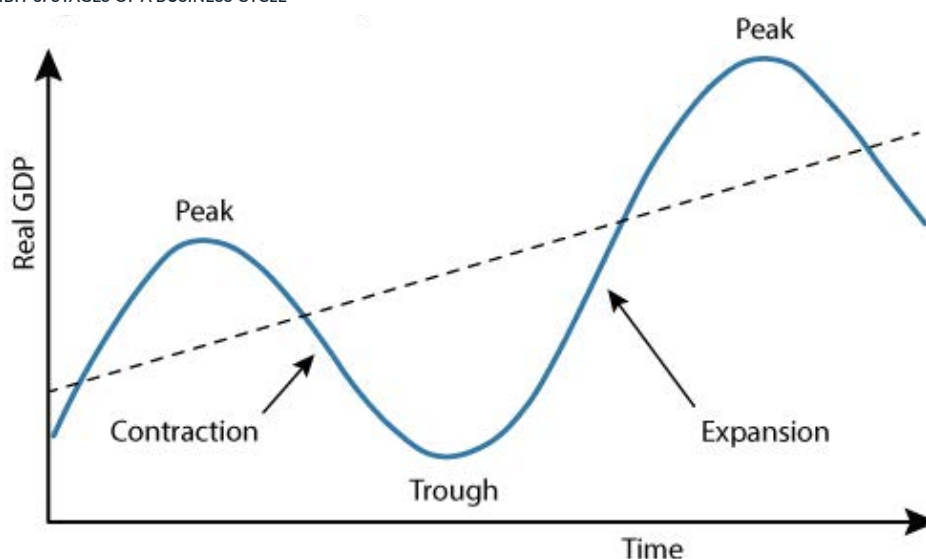


EXHIBIT 3 All About the Business Cycle: Where Do Recessions Come From? <https://research.stlouisfed.org/publications/page1-econ/2023/03/01/all-about-the-business-cycle-where-do-recessions-come-from>

public company level, material differences in the taxation of dividend/distributions means that US companies pay out less distributions than their

Australia counterparts, meaning that their share market 'unadjusted' for their lower distributions can appear to have higher 'multiples of dividends' if purely analysing this metric and ignoring things like revenue multiple or EPS."

While an investor might get more favourable WACC or multiples overseas or other countries, it's important to consider the factors that drive those favourable rates or multiples.

It is important to remember that higher required rates of returns are driven by higher perceived risk. For example, bigger, more mature, and stable companies will have lower WACC as the perceived risks of such companies are lower compared to much younger and highly volatile companies.

This is the same for different countries and is the investor's aversion to risk that will ultimately consider whether they can take the risk for the higher expected returns.

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