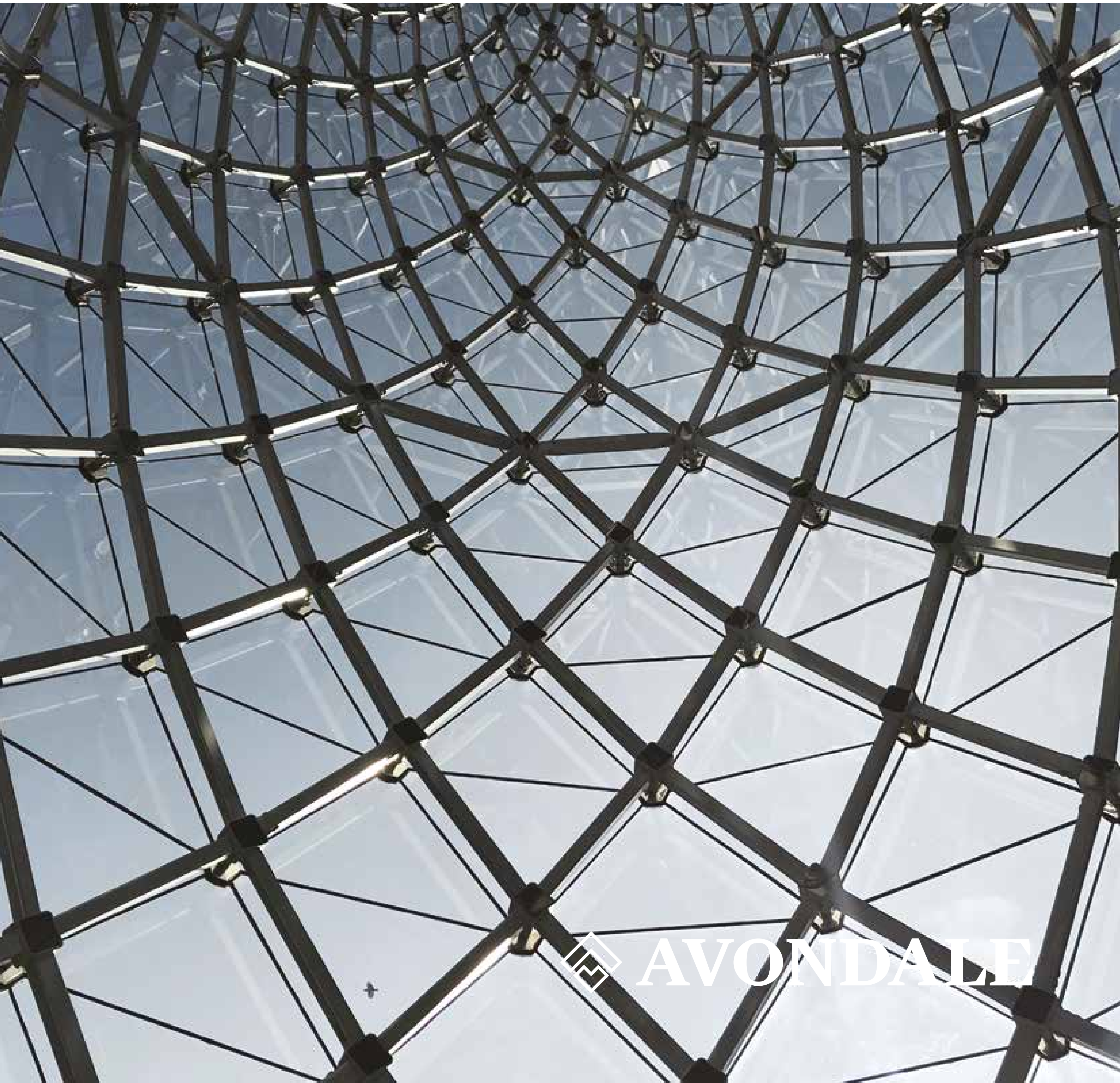
Business Sales | Acquisitions | Corporate Finance | Strategy

Guide 1

Valuation Methods and Multiple Arbitrage



AVONDALE

Guide 1
Valuation Methods and Multiple Arbitrage

Avondale is a leading mergers and acquisitions strategy consultancy providing transaction advice, strategy and funding to the best entrepreneurs and organisations. Founded in 1991 the firm has offices in the UK and Central Europe.

Our success and that of our clients is founded on a bespoke, in-depth approach that delivers you creative, intelligent solutions and outstanding results. This guide is one of a series we have produced to assist you in strategic planning and transactions. The guide should be read in conjunction with specialist advice. The expertise and guidance will help you ensure you are fully prepared to reap maximum benefit.

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INTRODUCTION

In an ever-evolving corporate landscape business leaders must recognise the importance of focusing business strategy on creating valuable companies as well as on maintaining day to day functions and profits. Valuations are centred around balanced risk and longevity of cash flow, present value of money and the likely yield we can generate from its effective use. Successful leaders will recognise the pros and cons of various valuation methodologies and the reasoning behind each as well as the role of multiple arbitrage in uplifting transaction value.

Being able to maximise business value is something that is becoming more and more important in today's shifting economic landscape. With the economic uncertainty surrounding the West over Brexit and other such economic concerns its key that business leaders can feel they not only have a business that generates profit and runs successfully but also one that carries value and most importantly holds this value. Generating sustainable business value is key in today's economic climate because it optimises the options open to business leaders through Mergers & Acquisitions which is becoming a key component in creating competitive advantage during times of economic slowdown. With organic growth becoming more difficult to achieve M&A becomes much more attractive for leaders looking to grow while also creating new opportunities for those who are looking to sell.

When M&A takes the centre stage then so does value growth and its important that leaders are able to identify which method of valuation is right and optimal for their business. There are three main widely used valuation methods that will be discussed in this guide. The price earnings comparable method which considers the ratio of earnings to the price paid and assumes a comparable ratio for similar companies where we also know the price paid or the perceived value. Net asset value takes a company's assets and liabilities on a balance sheet as the key informant of value. Discounted cash flow involves forecasting out cash flows while also taking into account of the costs of inflation and interest. It's also key to identify what impacts our perceptions of value and whether we think something is valued appropriately or not with particular regards to how brands can create or reduce value.

Another important aspect of value that the guide will cover is the importance of continuing to add value post-acquisition and in particular the idea of multiple arbitrage. Multiple arbitrage is the idea that value can be added post-acquisition by making certain shifts to a company's scale or position without changing its internal operations.

THE VALUATION CONTEXT

When something is purchased, a price must be agreed upon. This may be achieved by valuation, negotiation, opinion, assessment of the strategy benefits or, more likely, a balance of all elements. As John Ruskin, the Victorian art critic wrote; "It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money - that's all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do". Ruskin adds "The common law of business balance prohibits paying a little and getting a lot - it can't be done."

There is also a well-known trading adage which states if you bought something you have paid too much and if you have sold something, you have not been paid enough. It is these types of conflicting sentiments which make us seek defined financial methodologies. When investing in private companies, it is critical to understand that valuations are not an exact science.

"The common law of business balance prohibits paying a little and getting a lot - it can't be done."

Analysts may have fixed views on the mathematical equations which could overlook the strategic benefits of a sale to either the seller or purchaser. For example, will the analytics take account of the opportunity value to a seller of the capital secured from a sale? Will the calculation assess the strategic benefit perhaps to a trade buyer acquiring a business with Intellectual Property underutilised and not yet reflected in profits? It is unlikely. Most valuation calculations fit firmly around the profit yield and the perceived risk of the venture. This means that they are only ever part of the equation; part of the decision-making process which will also take account of the strategic play and the parties' overall motivations.

Understanding the context of private company valuations is necessary for good business management. The questions: 'what are we worth today?' and 'how can we make the business more valuable?' are essential to strategic leadership. Further, if our journey is to expand through mergers and acquisitions or ultimately secure a sale, private company valuations are central. Indeed, as organic growth becomes harder in more competitive landscapes, mergers and acquisitions become centre stage to build growth.

Valuation theory has historically measured critical assets such as land, labour and machinery and their return on investment to assess value. However, purely using an asset centric approach is flawed, in a knowledge economy where ideas and agility are primary assets to achieve growth, profit and return. Analysis is also needed to assess the growth prospects and the intangibles, such as Intellectual Property, brand positioning and know-how. Valuations now go far beyond the assets and the numbers.

STRATEGIC VALUE

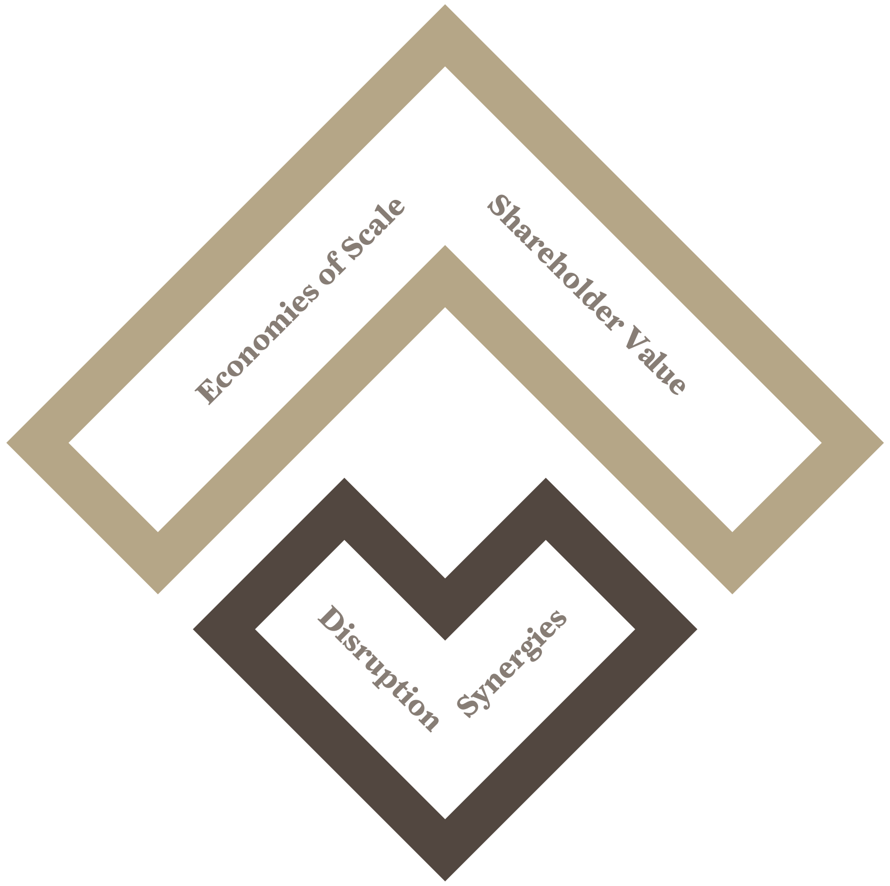
In business valuations, it is a common yet mistaken statement that 'You can't pay for potential'. A buyer will argue that it has not yet been achieved, so it cannot be valued.

The questions: 'what are we worth today?' and 'how can we make the business more valuable?' are essential to strategic leadership.

A seller will argue that the growth prospects will enhance yield. To settle the debate, potential is always paid for. Whilst we may use historic profits to analyse yield, historic earnings have also been spent, therefore it is always the potential profits which are being purchased, and therefore paid for. In fact, the best deal structures take account of future trading and welcome a valuation in part based upon potential. As leaders, we should be looking for the deals that offer far more than their own isolated potential. In addition to the financial objective, what other strategic opportunities does the acquisition present?

The right strategic acquisitions can help create competitive advantage, increasing business breadth or depth through market share, new territories, products or skills capability. The right acquisitions can enhance the overall shareholder value of the buyer, reduce its risk and reposition the business ahead of competitors in changing markets. Some strategic transactions may also occur to

THE FOUR CORNERS OF MERGERS AND ACQUISITIONS

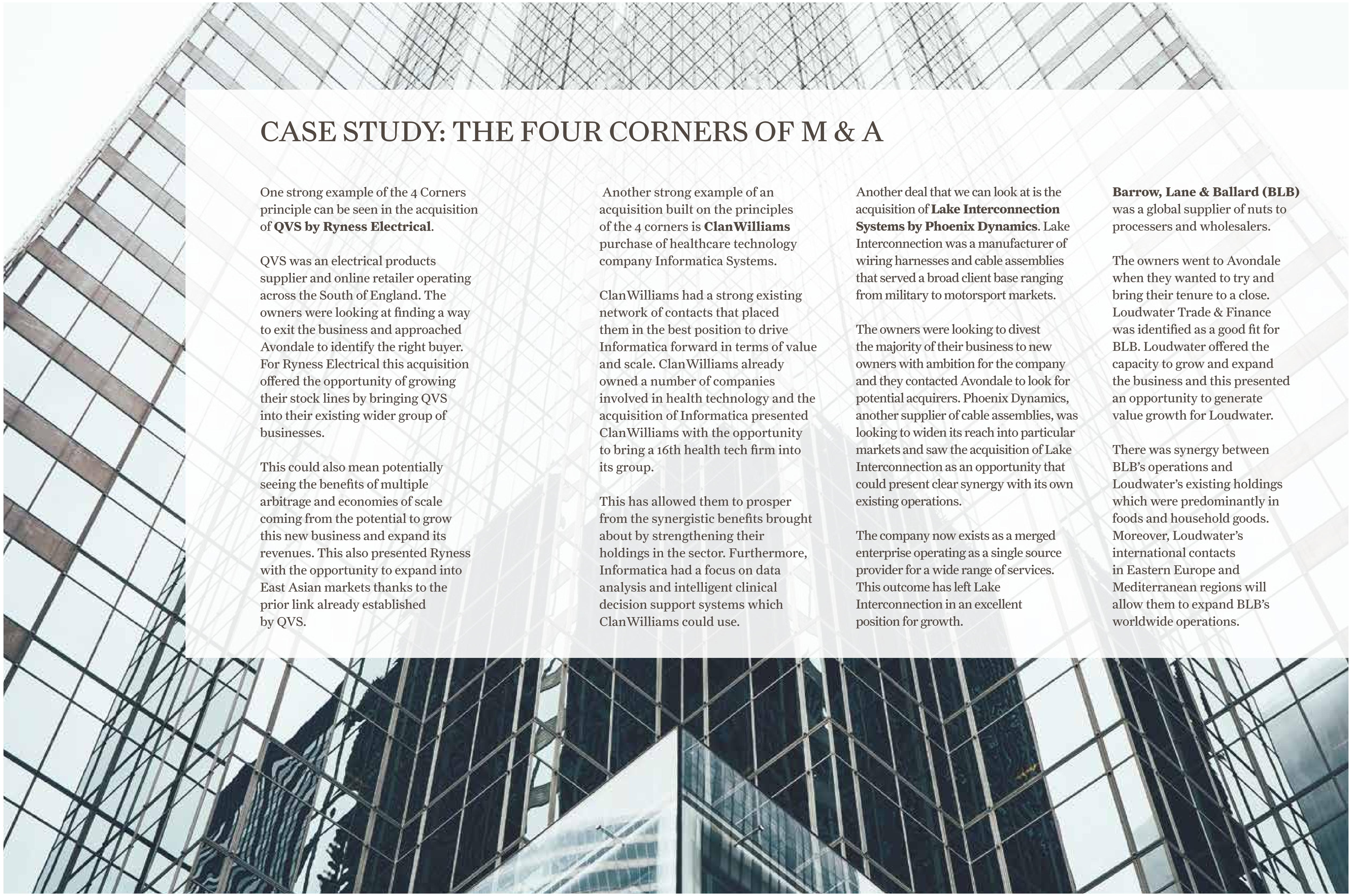


defend a position being threatened by a young agile player. We summarise this below in what we call the 'four corners' of strategic mergers and acquisitions. These are motivators and the best acquisitions by business leaders will have a blend of:

- Economies of Scale - long term, usually scale led cost savings.
- Shareholder Value growth in both buyer and seller - multiple arbitrage (see below).
- Synergy - the ability to cross sell.
- Positive Disruption - creating an 'ahead of competitors' offering leading to customers disrupting their existing buying patterns. This may include buying Intellectual Property or a team know-how.

We therefore see that valuation methods which only assess the target acquired company in isolation and only its historic yield as a methodology can be flawed. To do this ignores the potential to create overall world-class companies. The model 'may' also assess the combined ventures and overall strategic play.

Unfortunately, many leaders leave valuation methodologies to their finance analysts to look at in isolation of all other external factors. A more beneficial approach would be for the financial analysts and strategists to collaborate on their approach to identify a true reflection on valuation.



CASE STUDY: THE FOUR CORNERS OF M & A

One strong example of the 4 Corners principle can be seen in the acquisition of **QVS by Ryness Electrical**.

QVS was an electrical products supplier and online retailer operating across the South of England. The owners were looking at finding a way to exit the business and approached Avondale to identify the right buyer. For Ryness Electrical this acquisition offered the opportunity of growing their stock lines by bringing QVS into their existing wider group of businesses.

This could also mean potentially seeing the benefits of multiple arbitrage and economies of scale coming from the potential to grow this new business and expand its revenues. This also presented Ryness with the opportunity to expand into East Asian markets thanks to the prior link already established by QVS.

Another strong example of an acquisition built on the principles of the 4 corners is **ClanWilliams** purchase of healthcare technology company Informatica Systems.

ClanWilliams had a strong existing network of contacts that placed them in the best position to drive Informatica forward in terms of value and scale. ClanWilliams already owned a number of companies involved in health technology and the acquisition of Informatica presented ClanWilliams with the opportunity to bring a 16th health tech firm into its group.

This has allowed them to prosper from the synergistic benefits brought about by strengthening their holdings in the sector. Furthermore, Informatica had a focus on data analysis and intelligent clinical decision support systems which ClanWilliams could use.

Another deal that we can look at is the acquisition of **Lake Interconnection Systems by Phoenix Dynamics**. Lake Interconnection was a manufacturer of wiring harnesses and cable assemblies that served a broad client base ranging from military to motorsport markets.

The owners were looking to divest the majority of their business to new owners with ambition for the company and they contacted Avondale to look for potential acquirers. Phoenix Dynamics, another supplier of cable assemblies, was looking to widen its reach into particular markets and saw the acquisition of Lake Interconnection as an opportunity that could present clear synergy with its own existing operations.

The company now exists as a merged enterprise operating as a single source provider for a wide range of services. This outcome has left Lake Interconnection in an excellent position for growth.

Barrow, Lane & Ballard (BLB) was a global supplier of nuts to processers and wholesalers.

The owners went to Avondale when they wanted to try and bring their tenure to a close. Loudwater Trade & Finance was identified as a good fit for BLB. Loudwater offered the capacity to grow and expand the business and this presented an opportunity to generate value growth for Loudwater.

There was synergy between BLB's operations and Loudwater's existing holdings which were predominantly in foods and household goods. Moreover, Loudwater's international contacts in Eastern Europe and Mediterranean regions will allow them to expand BLB's worldwide operations.

PRIVATE COMPANY VERSUS PUBLIC COMPANY VALUATIONS

Valuation methods all use risk and the likely income yield or earnings. In private company investment valuations are 'opaque and illiquid'; by opaque we mean they are rarely published or listed and thus hard to research, and illiquid in that rarely do they trade or change hands. Unless you founded the company, inherited it, work there, or they are marketed in a process, you usually can't buy the shares in private companies. Even the process employed to sell the shares can affect value. If competition is secured in the process the value can increase as buyers vie in an auction for the asset which is usually strategically worth more to one than the other.

Public company valuations are naturally opposite to this, they trade or sell daily and on each trade the company value is listed on a public market such as the NASDAQ or FTSE so we as the 'public' can see the value. We can see:

- The overall market capitalisation or value of the company by multiplying the number of shares by the last share price achieved;
- A company's price/earnings (P/E) ratio by dividing the current market price of a share by the earnings achieved per share (EPS);
- EPS is usually provided on finance websites. To calculate EPS yourself, however, the formula is generally: net income - dividends over the last 12 months.

A fundament of private company valuations is that we compare one company's shares to previous sales carried out to guide us on possible value. Clearly as public shares are liquid and constantly traded they give us a comparison. If for example a sectors P/E is high, investors view the sector positively, perhaps based on risk or growth potential. Be firmly warned however, that private companies will nearly always trade at a significantly lower price earnings multiple. This is

because public companies:

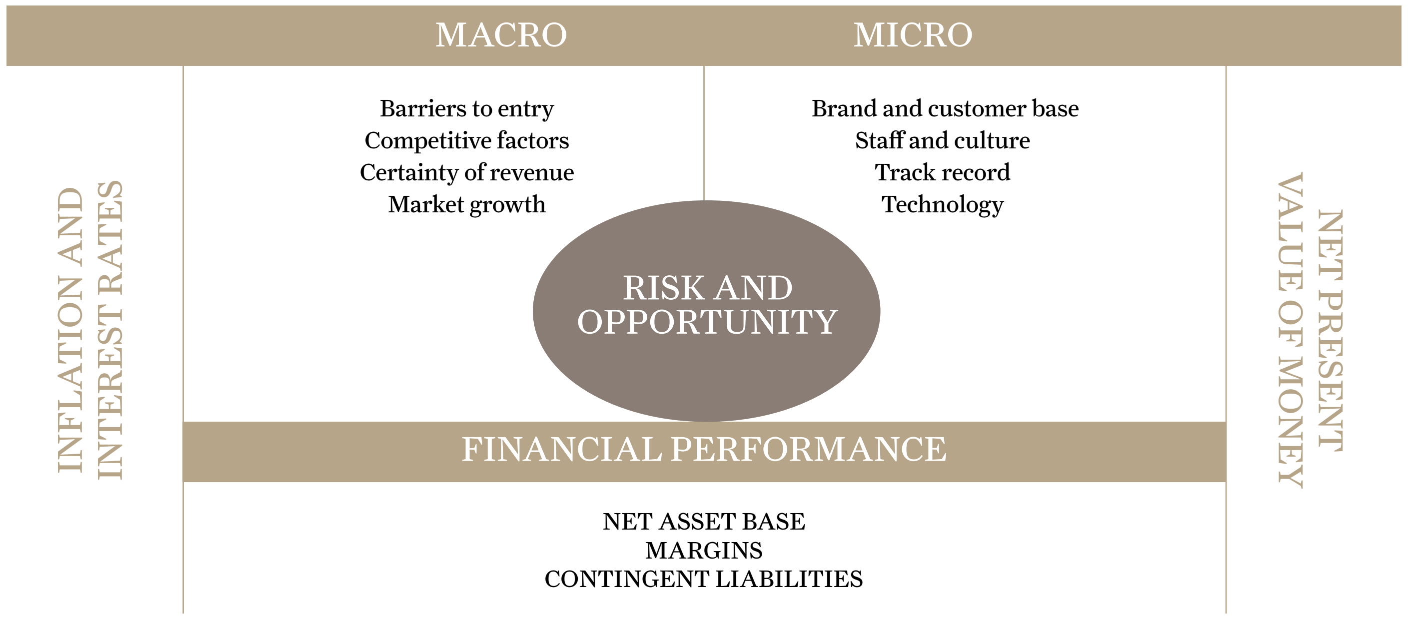
- Are open to a wider pool "market ready" buyers and so the cost of both entry and sale are low with the result immediate;
- Are regulated and therefore earnings are far more transparent than private;
- Tend to be far larger and therefore there is perceived increased sustainability and lower risk.

Public company valuations can act as a guide on how sectors are perceived by buyers, after all that is what a valuation is trying to assess. What would, should or could a buyer pay? Private company research is however more informative as the comparable is more appropriate. Knowing what sold to whom and at what price and deal structure is critical in private company valuations and therefore market-makers are often the best judges of likely value.

Valuations can be highly technical. There are a myriad of methods and sometimes complex accounting calculations. As already alluded to, the trade value of a business is what a willing buyer is prepared to pay and a willing seller is prepared to accept. The final value is only obtained by the final sale price, which is dictated by the buyer's perception of desirability, comparative investments, risk and the net assets of the business. However, there are widely accepted valuation techniques which buyers will utilise, and we can also use these to predict a value range.

All good methods will look at both macro and micro factors set against the financial foundations. The economic outlook; macro effects, will have an impact on perception of value in many cases. This is because valuations usually assume growth rates are sustainable or can even be accelerated in a bull market, but in difficult economic headwinds this may not be the case. A well-considered valuation will reflect this. The financial climate will also have a bearing on the available funding, with lending less available in slow growth markets. This lack of cash will impact both the valuation and the deal structures in private markets.

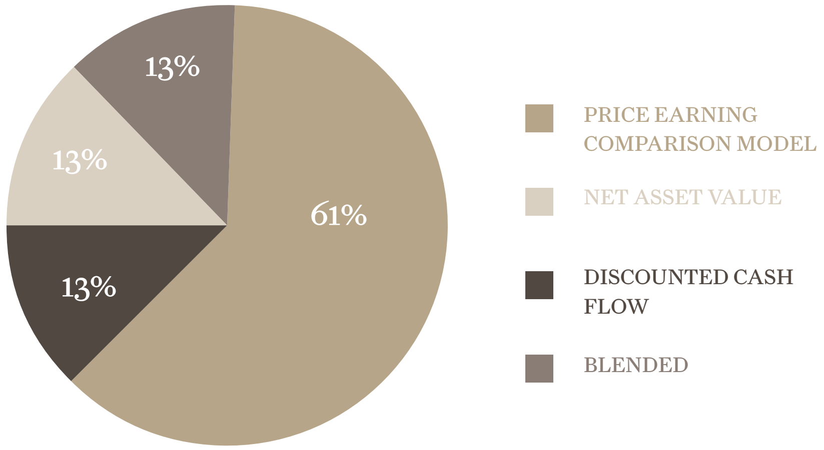
TABLE 1: THE ECONOMIC OUTLOOK ON VALUATIONS



1. PRICE EARNINGS COMPARABLE

The micro factors (such as brand, intellectual property and the management team) are effectively a buyer's internal weightings on the attractiveness of the business model, and hence the value to them. As we examine in the previous chapter shareholder value we can use the micro factors to create business strategies that make our companies more attractive.

TABLE 2: TYPES OF VALUATION - % USE



Against this weightings backdrop, there are typically three valuation methods used widely in the market place today. Some purchasers will consider a blend of some or all of these methods, creating a fourth option. These are:

- Price Earnings Comparable – This considers the ratio of earnings to the price paid, and assumes a similar ratio is appropriate for similar companies where we can see the price paid.
- Net Asset Value – This only takes the balance sheet of the business into account, being its sum of fixed assets, debtors and creditors at a point in time.

Discounted Cash flow - This involves forecasting out cash flow, whilst taking account of the value of money against inflation and interest cost.

This is by far the most common benchmark valuation method used today in private companies. Today a high proportion of company value is largely intangible and therefore we are not valuing fixed assets, rather our perception of the intangibles, the ultimate of these being goodwill. The thinking behind this is that the profits a company generates are a true reflection of its goodwill, hence the valuation calculation is a price to earnings multiple of these profits.

This price earnings (P/E) methodology is derived from listed companies where there is a defined share price and unquestionable earnings per share. The P/E ratio being the share price divided by the earnings per share, which calculates the price multiple. The terminology "multiple" is generally accepted for private company valuations. However, how do we extrapolate this for use in a private company, where the dividend yield is generally at the shareholders discretion, and the share value is the very thing we are trying to establish? Calculating the appropriate multiple requires analysis of comparable deals and assessment of the price paid to the earnings received in those comparable company sales.

When we look at comparative deals on the open market, we search for prices of companies that have been acquired that are like the business we are seeking to value. This requires either a market maker's historic knowledge or detailed research to identify targets with similar characteristics, such as size and operations. If we can obtain many examples, we can start to see trends and start understanding an industry 'norm'. Private company P/E multiples are typically calculated pe-tax and range from 3-10 times 'normalised profits'. As a rule of thumb, the bigger the profits, the higher the multiple applied. This is because higher profits attract buyers with

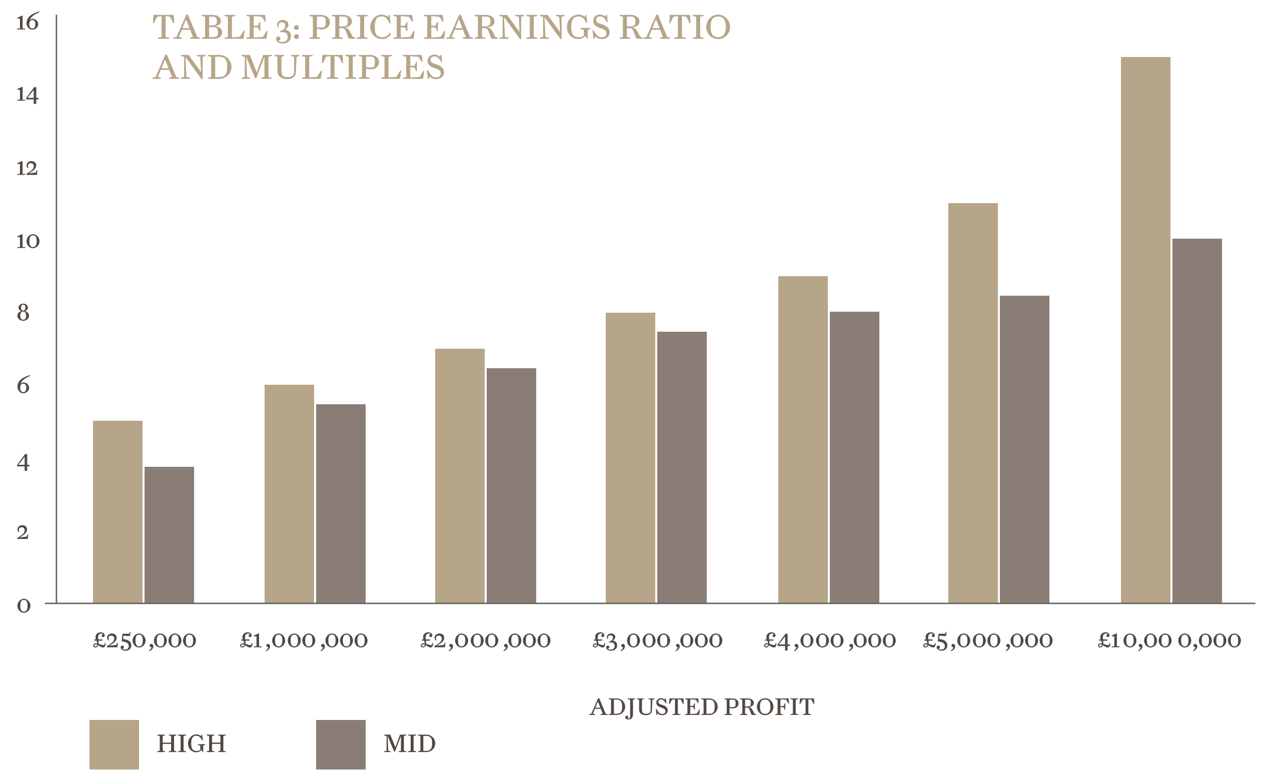
The accounting definition of goodwill is the difference between the price paid and the net asset value of the business.

deeper pockets who may themselves be trading on higher multiples (see multiple arbitrage below), and additionally, higher profits tend to indicate more sustainable companies with better infrastructure. In addition to size, multiples range significantly from sector to sector

'Multiples are significantly influenced by the strengths and weaknesses in a business. The main drivers being recurring revenue and sustainability". The idea of multiple weighting is quite simply that via research of comparables we secure our industry norm. This is then either enhanced or reduced depending on our perceived attractiveness of the company we are valuing.

So for example an emerging mid-market business with contracted recurring revenue streams, low scale up costs, intellectual property and strong prospects will move to the higher end of the valuation scale. A sanity check to the P/E multiple is to also to consider the yield. If a multiple of 10 is used, the return on investment (ROI) is just 10%. At present, commercial property and stock markets are yielding an ROI of between 5% and 10%, both of which are significantly lower risk investments than a private company, hence there must be highly compelling reasons for a P/E multiple of 10.

A word of warning however, P/E multiples can be misused or misplaced.



The misplacement is to not realize there are ranges within the industry 'norms', even companies in the same sector may have wholly different characteristics, and taking an industry 'norm' overlooks the fact that the same sector does not at all define the same quality. Growth rates, track record, systems and business models will all impact the multiple. It may also be that the profit achieved within the business is generated from different service, and thus have differing risk profiles. Because of this, some analysts will split multiples against the different income streams to secure a more accurate valuation.

In addition to multiples ranging significantly from sector to sector, and even within sector, they are also influenced heavily by the size of profits. As a rule of thumb, the bigger the profits, the higher the multiple applied. This is because bigger profits attract buyers with deeper pockets who may themselves be trading on higher multiples, and additionally, higher profits tend to indicate more sustainable companies with better infrastructure (see multiple arbitrage below).

So, we have considered our P/E multiple based on comparable, research and overall return on investment, however what is the earnings/profit figure to apply this P/E multiple to? Many private companies minimize profits to mitigate tax and many also further re-invest to drive growth. Hence, in private company valuations the earnings are usually adjusted. Profits are adjusted to exclude one-off exceptional costs or income, and any additional costs or gains that the company may make after being sold or invested in. This final profit figure is generally called 'normalised profit'.

We must also debate whether we are using historic profits, which have been spent, forecasts, which may be a better guide, or is a blended approach of past, current and forecast more realistic?

EARNINGS, ADJUSTING AND NORMALISING

As tax is so variable, depending on country and entity, it is generally accepted that private companies use pre-tax profits as their earnings, prior to any dividends or tax. As discussed, we need to calculate the "normalized" profit earnings a buyer may enjoy, as it is these earnings the multiple will be applied to.

We have provided some of the more typical earnings adjustments below, which may increase or decrease the normalized profits:

- Interest/factoring– costs specific to the owner's financial position.
- Shareholders costs - Are all the owners needed in the business and what are their commercial salaries? Are these under or over the market rate on a commercial basis?
- Owners' perks beyond a commercial basis.
- Extraordinary expenses or reinvestments - Genuine one-off costs incurred by a business for example, an upgrade to the IT systems.
- One off sales and extraordinary contracts
- Property – If the business is trading from a freehold property owned by the shareholders, a commercial rent may not be payable. However, if a leasehold sale is sought an allowance for a true commercial rent will be required.

More subjective but still a reality, it is possible to negotiate some economies of scale as adjustments to earnings. For example, if the buyer is intending to absorb the business into their existing premises, there will be significant cost savings. Can we factor that 'future' cost reduction into calculating the normalized profits? Other examples would be staff rationalization, better combined buying power etc.

The above describes an adjusted EBIT (earnings before interest and tax) consideration, however it is more common within some sectors, particularly low fixed asset base companies, to utilize EBITDA (earnings before interest, tax, depreciation and amortization).

In their adjustments, the valuer or buyer is seeking to assure themselves that the profit is accurate and sustainable and that the company will generate the same earnings or more after shares have been purchased.

We have agreed the methodology for arriving at the true sustainable profit to use, however we must then decide which earnings period this should be applied to.

Earnings period might be:

- The last three years' average (a very static valuation method);
- The last year end;
- The last twelve months' trading;
- The current run rate (the expected profit extrapolated from current trading patterns)
- Next year's trading but with a deal structure 'true up'; that is in one year's time the payment will be adjusted against the final ' true' position (see the section on deal structures).

The answer will depend upon the specific trading conditions at the time and will also be subject to agreement with the buyer. A fast growth business would be better served by using projections, whereas the valuation of a steady company would be similar across all earnings periods.

As with calculating the adjustments, the key is to understand the business, the model, the market and comparable sales that have occurred.

Multiples must be based on comparatives, not hope and a good double check is what is the Return on Investment. Private Companies are high risk 'active investments'.

BALANCE SHEETS AND THE P/E MULTIPLE

The P/E comparable methodology places a value on the business. This is equally applicable be it a limited company, a sole trader, a partnership or an LLP. What does differ however is the treatment of the assets and liabilities. With a limited company sale, the balance sheet is the property of the company, and if the shares are transferring so is the balance sheet. However, in the instance of the sole trader, partnership and LLP, the assets and liabilities are the property/responsibility of the partners, and as such there is far more flexibility in agreeing what is being sold and what the seller will retain. For instance, you may want to keep the name of the business, and any contracts, however leave the liabilities with the seller. There is then a negotiation around which assets (tangible and intangible) are captured within the P/E multiple valuation, and which should fall outside this.

It is possible for a company to choose to sell its assets, however, this means tax is charged to the company. Additionally, due to the tax breaks available on the sale of shares, most transactions are share sales. At the time of writing, in the USA it is possible that the entire price paid for a business may be tax-free if you are able to write the price off using your lifetime capital gains' exemption. In the UK, using Entrepreneurs' Relief, capital gains tax is at just 10% of the sale, up to £10 million, if you hold 5% of the shares and are an executive.

Most businesses with strong goodwill are limited companies and tax dictates a sale of the shares. This means the valuation needs to account for the balance sheet and in particular its debt to cash position. It would be unwise to sell shares with a large cash pile unless this were reflected in the price and as a contra unwise to buy shares at a comparable multiple when a business is saddled with debt. The valuation also needs to adjust if for example stock or depreciation write down policies are inadequate. This is known as a Debt Free Cash Free valuation, although bizarrely is neither of those things:
Debt free – the company will still be sold including all trade debt. The debt here refers to 'external' debt, and includes items such as leases, HP, bank loans, director's loans and corporation tax
Cash Free – the cash referred to is retained profit. Any buyer will expect normalised levels of working capital to remain.

In considering the valuation, and inclusion of the balance sheet, the depreciation write down policies are evaluated to ensure stock and plant are accurately valued.

The best method to adjust to allow for the Balance Sheet is:
Value =Adjusted Earnings x Comparable Multiple + Debt/Cash Free + Adjustment of stock/Fixed Assets

In this equation "debt free cash free" includes leases, hire purchase, bank debt, directors loans and Corporation tax, with cash being cash. There will be a caveat that debt/free cash free is subject to normalised working capital. This may be measured by ensuring debtor/creditors remain at their average over the last few months. The fixed assets and stock will be assessed to examine their likely value if we were selling them on the open market. The balance sheet will reflect accounting policies to write down which may not be open market value.

In most transactions the Balance Sheet is pegged at a level, so everyone knows what they are buying and selling. This may take a few months after a sale to finalise as it is unlikely that a Balance Sheet will be fully known at completion with the ebbs and flows of

cash, debtors and creditors. Usually there will be a 'true-up' at the final completion accounts comparing the price estimated at completion and what against the completion accounts was actually paid. Alternatively, a 'locked box' mechanism may be used where the price is fixed at a date close to pre-completion and the seller then covenants to run the business in an ordinary way between the 'locked box' date and completion. This means that the risk of what happens to debt and cash in the interim period lies with the buyer, the advantage being that everyone knows the final price at completion of a sale.

Multiples are selected by comparison to other deals, they may be weighted positively or negatively depending on the sector. The bigger the profits, the bigger the multiple. Additionally, the more sustainable the profits, the higher the multiple, particularly in fast growth sectors. Sophisticated analysts will further breakdown earning streams to create more accurate blended multiples.

Private company multiples are typically calculated pre-tax and businesses with less than £5 million earnings have valuation multiples of between 3 and 10. The current profits and forecasts

TABLE 4: FORMULA - COMPARISON MULTIPLE OF EARNINGS

COMPARISON AND MULTIPLE RESEARCH	X EARNINGS ANALYSIS AFTER NORMALISING	+/- DEBT/CASH FREE FIXED ASSETS/STOCK	ADJUSTMENT FORECAST VALUATION
Research in size, industry, operation, a "peer group" of companies that share the similar characteristics and collect the multiples of these companies and calculate the industry average.	Earnings before Interest, Depreciation and Amortisation (EBITDA) is typically used although in capital intensive businesses, depreciation may not be adjusted. Further earnings are usually adjusted for owner's costs and extraordinary spends or sales. The period will be a year but will last years be used, forecasts or an average of years.	Most valuations are of shares and this means the whole business is sold with fixed assets, stock, debtors, creditors and cash. An evaluation should be made of each of these items. Are the assets realisable at book value? Is the stock realisable and what are the right down policies? What is the debt versus cash? Is there free surplus cash in retained profits? Are there Freeholds and do these need to be revalued?	The Formula will give us a forecast value to trade against or to plan with. A check is made on the risks. Would we pay the sum versus other yields we may get? How does it compare to other Private Companies or asset classes such as managed returns or property? Any full valuation assumes a majority (51%) interest. Below 50% have less rights and values may be discounted (see below).

TABLE 5: MULTIPLE WEIGHTING APPROACH

DECLINING MARKET | AD HOC REVENUE | OWNER DEPENDENT | TEAM DRIVEN | CONTRACTED REVENUE | GROWTH MARKET

NEGATIVE WEIGHTING
Weak brand, poor systems, high cost to expand, low barriers to entry
HIGH RISK

WEIGHTING

POSITIVE WEIGHTING
Strong brand, great systems, fast to expand, high barrier to entry, Intellectual Property
LOW RISK

are often a better measure than the past earnings as this has been spent and in a fast-changing world the past may not be a guide to the future. Multiples are significantly influenced by the negatives and positives or strengths and weaknesses in a business. The main drivers being recurring revenue and sustainability. The idea of multiple weighting (see Table above) is quite simply that via research of comparable we secure our multiple. This is then either enhanced or reduced depending on our perceived attractiveness of the company we are valuing.

PRICE EARNINGS SUMMARY

The method is summed around the multiple applied against known values paid per share. The formula is:

$$\text{PRICE EARNINGS (THE MULTIPLE)} = \frac{\text{MARKET VALUE PER SHARE}}{\text{EARNINGS PER SHARE}}$$

In recent years the Price Earnings method (P/E), using normalised earnings before interest, depreciation, amortisation (EBITDA), due to its simplicity has gained momentum in the business valuation community. However, business leaders should still remember it has its pitfalls. Debt must be analysed alongside it as well as the reliability of net assets. The "Debt Free Cash Free" calculation enhances the formula. Further depreciation is added back but with no assessment of the age of assets. Surely new assets have a better lifecycle than old? Interest and depreciation are real and often substantial costs, and they do have a bearing on earnings. Warren Buffett, the American business magnate, has referred to EBITDA valuations as "fraudulent" and "useful to the tooth fairy". Harsh, but a reminder that like all methods, no single approach suffices!

2. ASSET VALUATION METHOD

This method is not applied very often on its own as it ignores elements such as intellectual property and the ever-intangible goodwill that earnings reflect. It is useful for companies with lots of physical assets, but because it does not include intangibles it may not work so well with companies whose value is defined more by their intellectual property or brand, such as a software company or a world leader like Amazon.

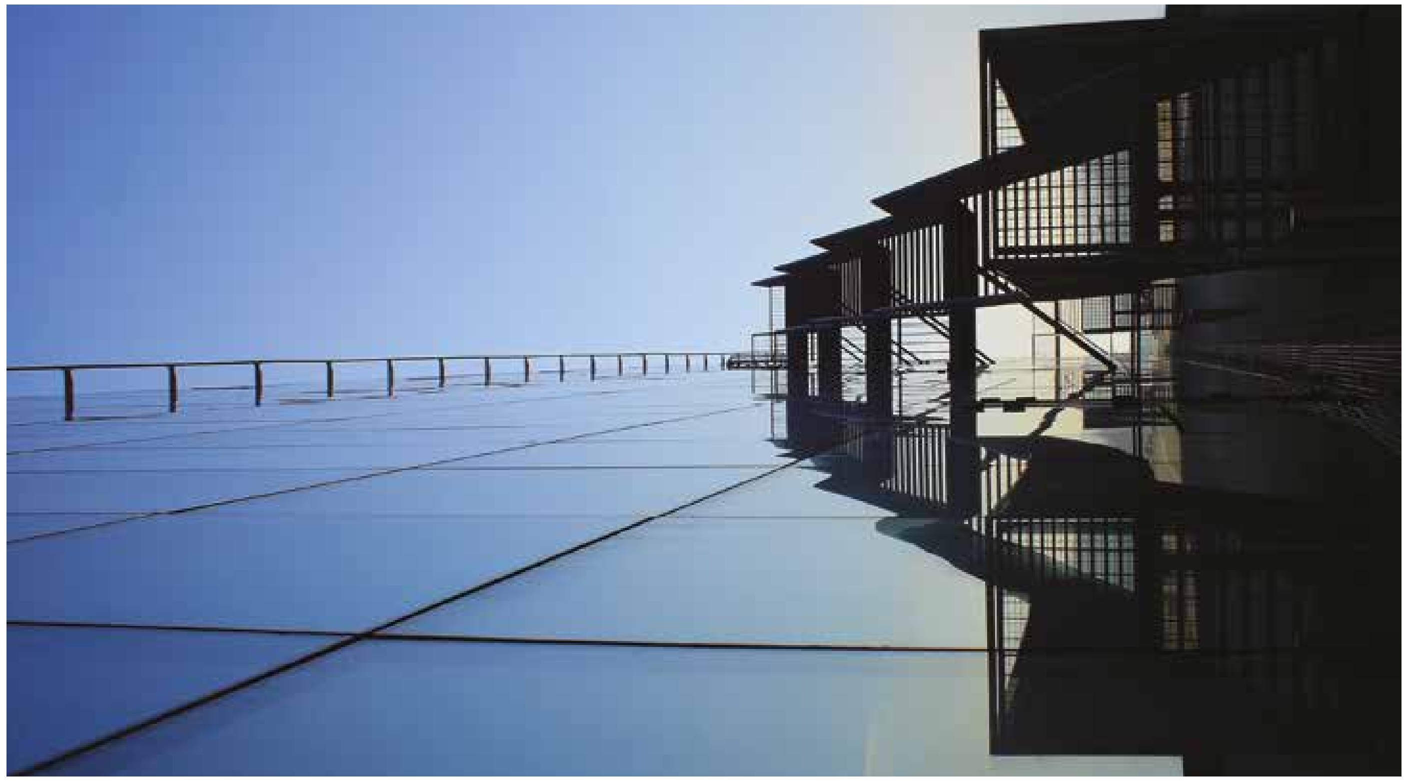
The net asset value is the total market value of all the assets the company holds, such as equipment, machinery, computers, debtors and properties; subtracting the value of any liabilities, such as debts, leases, finance, tax, creditors or Directors loans. The company's year-end accounts will show the net-asset value of the business. Effectively, it is what the shareholders would own if the company were wound up and its creditors repaid. Applying the net asset valuation method is appropriate if the company has many assets and yet its long-term revenue generating capabilities are limited.
It can also be useful in analysing the risk of a share purchase when using other valuation methods.

The accounting definition of goodwill is the difference between the price paid and the net asset value of the business.

The accounting definition of goodwill is the difference between the price paid and the net asset value and thus in theory the goodwill is the acquirers 'risk' money. Goodwill is intangible, and it is the positive sum of customers' appetite and how we translate this in to a return, but what happens if we lose that positive sum? Invariably we must liquidate and in theory we will achieve the net asset value. However in a liquidation we rely upon what we can collect and re-sell in the real world not the book value. Imagine a motor dealership with extensive furnishings and fittings on the books following a refurbishment. How much would they be worth on the open market outside the dealership? They would in fact be liable due to the cost of removal. Or how about the staff redundancy liabilities? Many companies will fail to achieve their net asset value on a liquidation and therefore the 'risk' money is the difference between the price paid and the liquidation value.

Should the accounting definition of goodwill be the difference between the price paid and the true liquidation value of the business after assets are sold and contingent liabilities? This concept is even more deeply translated in Value Investing; this is the process of buying something for less than it's intrinsically worth. The world leading proponent of investing in this way, Warren Buffett, at the time of writing the world's third wealthiest man, valued at US$90 billion. This tells us that understanding company valuation methods can be a highly successful skill.

The asset method is summed up in the companies' Balance Sheet.
The formula is:
Assets - Liabilities = Net Asset Value



3. DISCOUNTED CASH FLOW (DCF) METHOD

This method estimates future cash flow to create a value. Inflation is netted off. Many analysts and business buyers will use a discount rate of 15-25% to consider changes in inflation. This method works well for those with highly stable recurring revenue streams, for example, software businesses. Theoretically, the DCF method is highly specific to a business's success, particularly focusing on the life cycle of the asset and probable future cash flows and expectations rather than historical results. The model also allows the business value to run operating strategies or contingent events into the valuation, and therefore it can create excellent insight, yet, like the comparable multiple valuation, such expectations, lifecycles and strategies are subjective and thus an art. There are downloadable DCF spreadsheet templates on the internet so whilst we establish the formula here we have not attempted to be definitive by example of the calculations.

The formula is:
Calculating DCF involves the following steps.

FCF: Estimate the weighted average cost of capital (WACC): The WACC is the discount rate for the future cash flows. A typical discount for an existing company might be between 15-25% annually. A start up might use 30%.

N: Project a reasonable number of Future Cash Flows (FCF): This is a prediction of future cash flows over a number (N) of periods from short too long; say perhaps 4 to 8 years.

TV: Assess the Terminal Value (TV): The Terminal Value is what we project the firm to be worth at the predicted end (N) of the forecast earnings period. In reality, there may be ongoing revenues so DCF valuation models can also be applied in perpetuity. A valuation model is now created. The formula usually is applied in an excel model.

Value of Asset=

$$\frac{E(CF_1)}{(1+r)} + \frac{E(CF_2)}{(1+r)_2} + \frac{E(CF_3)}{(1+r)} + \frac{E(CF_n)}{(1+r)}$$

Valuations require us to understand cash flow from seasonality, investment requirements to sustainability. This means we need to understand the working capital required to trade as well as the capital expenditure in fixed assets such as land or equipment. These all tie capital up and therefore have a cost which the DCF model show. The DCF model includes more of these elements than our other methods. Strip out the jargon and the maths becomes easy. However whilst the sophisticated prefer DCF valuation to Price Earnings Comparable they are fallible. There are so many variable inputs which could provide almost any answer to suit the circumstances of the valuation. Remembering that a valuation is only ever the guide. It is the price paid that is the value.

TABLE 6: DISCOUNTED CASH FLOW CALCULATION

VALUE OF GROWTH
How quickly will earnings grow from the existing assets (positive) or how much will the company need to reinvest to achieve that growth (negative)? The net effect will show the true value of that growth.

THE DCF FORMULA EACH YEAR

Value of Asset – $\frac{E(CF_1)}{(1+r)} + \frac{E(CF_2)}{(1+r)_2} + \frac{E(CF_3)}{(1+r)} + \frac{E(CF_n)}{(1+r)_n}$

CASH FLOWS FROM EXISTING ASSETS
The earnings will reflect the ability of the existing assets to make a return.

COST OF CAPITAL
Is interest taxed? deductible? It depends on which Country the company is based in.

The DCF method requires significant experience of financial modelling.

BRAND VALUATIONS

The world is increasingly moving into intangibles. There is as much 'value' in ideas and concepts as much as assets and earnings. Some businesses create a stronger recognition, reputation or loyalty in their customers than their competitors. This may be summed as a positive brand. The analyst should apply a weighting to a positive brand as opposed to a negative one, but with what weighting? and how do we determine what is positive or negative?

The word 'brand' comes from the identifying mark that was burned onto livestock so technically the term could just cover company logos. However, in business it is accepted that the definition is wider in that busy consumers in a crowded and complex marketplace recognise a company or product's image positively for its certain benefits and clear value proposition. This in turn leads to engagement and thus positively influences the purchasing decision. There are many developed methods to value brand, which have been thoroughly researched and analysed. These methods are rarely applied in private companies, being mainly applicable to larger corporates. Nonetheless, it is still fundamental we understand these approaches to valuation as a sophisticated investor.

An argument must certainly be made, that two businesses within the same sector and product category, which also have a similar yield. The one with the more recognized positive brand must have the greater goodwill, sustainability and thus value. This can be checked by the level of growth being achieved and a customer survey. Is the brand in the upper quartile for customers? Is the business invited in by customers 'pull and influence' or does it constantly have to shout, 'push and persuade'? Organisations spend large amounts of money to establish a brand creating both emotional ties with customers and functional benefits such as the ease to launch new products or significantly scale up the venture. the sophisticated business valuer will attribute value to this.

Since 2005, under the International Financial Reporting Standards it is stated that brands and other acquired intangible assets can be reported on the Balance Sheet. Brand Valuations are a recognised professional skill with its own set of methods. These methods include:

Cost Approach: In this method we measure a brand's value against the cost required to create the brand, to which marketing investment may form a guide. The idea is that any buyer of the brand would not pay more than the cost of investment required to build the brand from start. Not all marketing cost will have been invested prudently, so an estimate is taken using these costs as a guide.

Royalty Relief: In this approach we assess the cost required if we were to licence the brand from a third party by analysis of comparable brands and any licensing they may carry out. The method is widely used because licensing arrangements are easy to research and therefore commercially known.

Price Premium: This approach assesses the price premium a product or brand commands over similar unbranded generic products and then the lifecycle of this extra premium, usually using a Discount Cash Flow method. Some analysts will also look at the volume of extra sales that the brand is creating over competitors. Taken together, all the Brand valuation

TABLE 7: BRAND VALUATION METHODS

Brand Valuation Methodologies

Multiple Weighting (positive or negative) — Checked by approaches below

- Cost Approach (The cost of replicating the brand)
- Royalty Relief (How much would it cost to licence the brand?)
- Price Premium (What price over competitors is charged?)

methods provide a useful insight when combined with intelligent and effective research to aid the analyst in their assessment of the overall earnings potential of a private company and thus its value. The creators of a brand are of course biased, and it is only an unbiased and researched review that can attach any value to brand.

In general, Private Company Valuation methods lack sophistication with an emphasis on the financials. An assessment of the soft elements of a business can also gain traction in assessing both over and undervalued assets. As most valuations are financially analysed, the calculations are led by finance teams who can potentially ignore the 'softer' elements of a business such as its people, culture and brand yet in a world of intangibles these are probably by far the higher value assets. If we examine the world today the most valuable companies by rank as we write are: We have to look down the list to 6th place to find the first non-technology led business brand, Coca Cola, valued at US$57.1 bn. It is also interesting to see how close the value is to the overall annual revenue. Source: Forbes.

GLOBAL VALUATIONS 2019

Company	Value	Revenue	Sector
Apple	US$182.2 bn	US$228.6 bn	Technology
Google	US$132.1 bn	US$97.2 bn	Technology
Microsoft	US$104.9 bn	US$494.8 bn	Technology

INTELLECTUAL PROPERTY

Like brand analysts, we also need to assess whether a company has Intellectual Property that it does or can capitalise upon. Clearly a company that has just for example worked out how Cold Fusion works is more valuable than one that hasn't, so long as the idea has been legally protected.

Intellectual Property may apply where trademarks exist, patents and copywrites to take account of ownership. The brand methods may be applied to valuing Intellectual Property as may our weighting of a multiple. The discounted cash flow method of valuing is particularly effective as here we can forecast out likely income from the Intellectual Property.

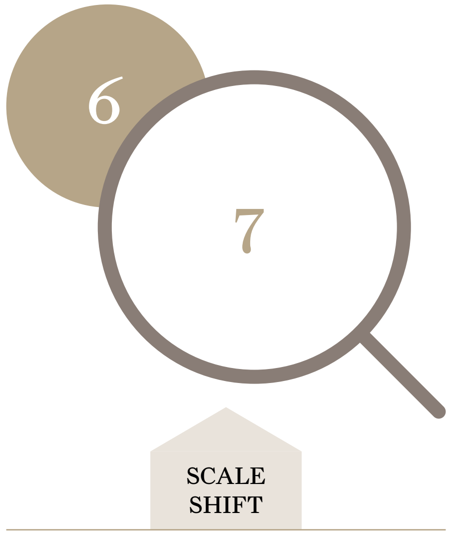
MULTIPLE ARBITRAGE

We have seen in valuations that it is very difficult to truly assess value, current or future. As investors we are always advised "price paid for shares can go up as well as down". This is the reason why most buyers of companies will normally have a plan beyond the business to increase value to the business post any acquisition. Many will do this through being operationally efficient, considering economies of scale and synergies. but seasoned strategic buyers will seek multiple arbitrage. Arbitrage, is a Latin word, meaning 'to give judgement'. The judgement is to purchase at one price and sell at another with a margin, without having made any changes. We judge that the placement of shares in one place and moved to another will magnify their value.

The most common arbitrage is where a larger company trading at a higher multiple of profits acquires a smaller company, hence paying a lower profit multiple. As we have discussed, due to their increased trading and often higher profits, larger companies nearly always trade at greater multiples of earnings than smaller ones. The 'bolt on' acquisition alone moves the target company from the lower multiple to the higher multiple enjoyed by the purchaser. For example, a quoted company buys at 7 times multiple of EBITDA, however immediately post transaction that new subsidiary will be trading at the quoted P/E multiple of say 14 times EBITDA – doubling the 'paper' value instantaneously.
Arbitrage does not have to be a large company game however. It is also a favourite trick of many private equity buyers or financial buyers. Often the idea is that you line up two or three companies and bolt them together in the same sector. There may of course be the bonus of economies of scale but for some, value simply increases by the combined entity or sum of the parts being greater. Again, since the acquirer did nothing to change the operational workings of the acquired business other than create a 'scale shift', this is multiple arbitrage.

A less obvious strategy, which is also highly effective, is the re-positioning of a business to create a shift in multiple. Whilst its operations may not have changed extensively, one may gain extra value by a perceived move to a higher value, more sustainable, sector that is considered more positive than the previous one. As an example of this; a marketing research business may move towards publishing which, due to recurring subscriptions, tends to trade at higher multiples. The sector perception shift uplifts the multiple and therefore again we have arbitrage. If we followed this through, a marketing business may move towards big data positioning, again a higher multiple, as big data is today, very much perceived to be on market trend. Some highly strategic buyers may run a combination of the 'reposition shift' and the 'scale shift', this strategy could be even more effective in the magnification or arbitrage. We may gain economies of scale from combining a cleaning business, a security business and maintenance company by creating the opportunity to cross sell services which will naturally provide an uplift in profits add to this a new contract and we also have a profit shift. We have moved from solely cleaning to full services and facilities management which in turn should shift the multiple. Shares and company profits can go up as well as down. Arbitrage can be a method to offset any potential decline. As we have examined, most buyers of shares are looking for shareholder value gains as much as they are profits. In our life journey few people buy a house just to live in it, many extend and develop to gain value, especially in expensive areas and this approach is just as applicable to businesses. Understanding the arbitrage concept can also be used at the negotiating table, to the extent that understanding the buyers motivations and valuation drivers, may be a highly effective way to secure enhanced market value and 'elevate' the deal today.

TABLE 8: MULITPLE MAGNIFICATION THROUGH ARBITRAGE



Existing company A: EBITDA £1.2m trading @ P/E of 6

Purchase Company B: 6 x EBITDA of £1 million = £6 million

Bolt companies together at combined EBITDA £2.2m

Exit: 7 x EBITDA at £2.2 million = £15.4 million.

Arbitrage: £2.2 million

ARBITRAGE STRATEGIES

SECTOR SHIFT	SCALE SHIFT
PROFIT SHIFT	EXISTING COMPANY ADD ON

VALUING MINORITY SHAREHOLDINGS

Private companies trade in illiquid markets in that there are less obvious buyers for shares. This can restrict value, particularly where minority shareholdings are held, as it is hard to create a market beyond the other shareholders. This is principally because a 51% shareholding creates control in dividends, voting rights and special resolutions, such as share dilution. It may also be that minority shares have legal 'drag and tag rights' allowing controlling shareholders to enforce a sale on minority shareholders. This can further prejudice their valuation like for like to a controlling interest. If you are a minority, a good shareholders' agreement can offset this discount, particularly with prior agreement that shares will be valued pro-rata to a controlling interest on any overall sale.

As a further complication, different proportions of minority shares provide different rights/protections. For Instance, a 49% shareholding gives stronger shareholder rights than say 10%, depending on which country you trade in and therefore, minority shareholder discounts may be ratcheted. The smaller the shareholding the bigger the discount that may be applied versus the controlling interest valuation. As ever in valuations, we then move into the subjective, in that whilst there may be some standard discounts applied, these are frequently ignored during the transfer of private company shareholdings. However, disagreements can occur with more integral shareholders typical having more sway – a 10% shareholder who is the key salesman, will have more leverage than say, the more easily replaceable Finance Director. The minority shareholding discount applied will also take account of dividend history and overall shareholdings. After various disputes on minorities in the past, some courts have used the following guide but as a steer, however, it depends on the

MINORITY SHAREHOLDING DISCOUNT

Over 50% interest	Discount of 5% to 10%
50% interest	Discount of 15% to 25%
26% to 49% interest	Discount of 30% to 40%
10% to 25% interest	Discount of 45% to 50%

understandings between the parties and the negotiation leverage in live sales.

VALUATION CHECKS

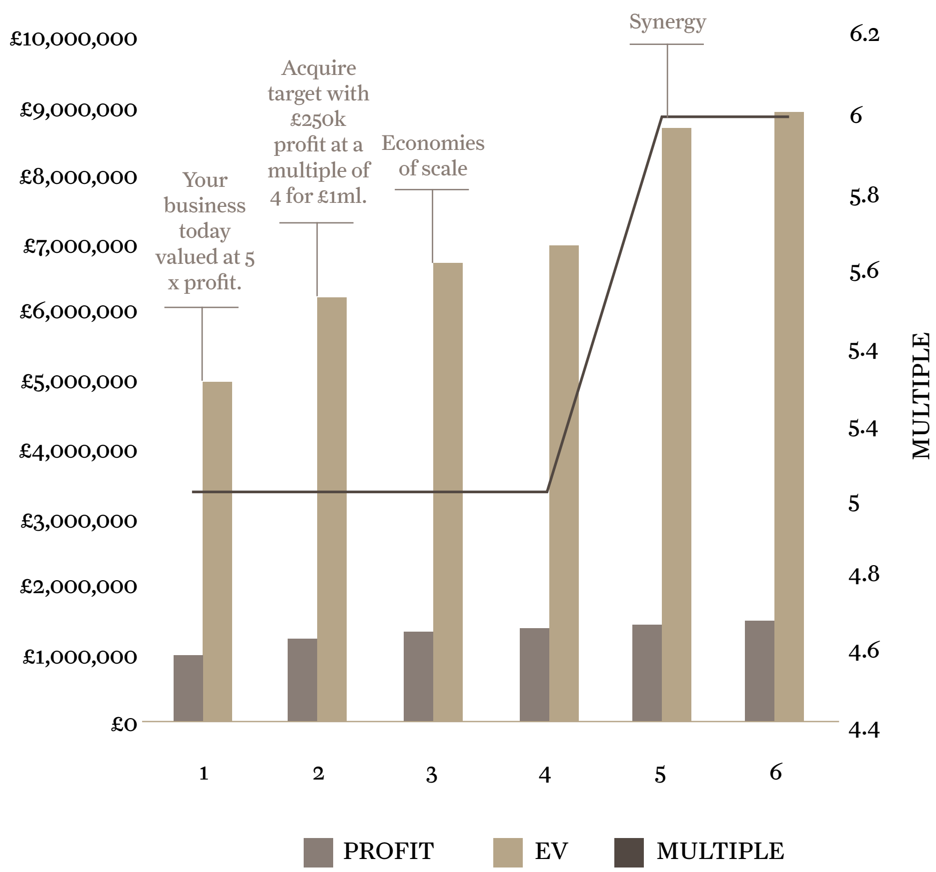
Be wary of generalisation in valuations. Even looking at multiple comparables, every company is different and frequently the deal structure can be utilised help hedge risk and may retrospectively increase or decrease the multiple. Some good valuation checks might include:

1. Are the assumptions used in your model correct? Are the adjustments to earnings truly realisable and sustainable?
2. Consider funding/refinancing requirements.
3. Make appropriate adjustments to the multiple.
4. Should we weight the multiple positively or negatively.
5. Apply discounts for lack of barriers to entry and enhancements for barriers such as brand market domination or Intellectual Property;
6. Are assets, stock and property realisable at book value? What is their liquidation value.?
7. Is the cash or cash equivalents included in the 'debt free/cash free' calculation part of working capital?
8. What is the current market doing? Comparable's may be discounted against changes to the economy. Are interest rates higher or lower? This will impact on overall yield.
9. Put yourself in the other parties' shoes – if you are a seller, would you buy at that value, and vice versa?

Whilst we may now understand the valuation methodologies and have some checks in place, we must also keep valuations firmly in perspective. Each and every method has precepts and judgements, with many elements of a valuation being subjective; the true asset value, the earnings period, the risk etc Also, please be aware that most analysts can manipulate the numbers to justify a pre-determined position, and you can become overwhelmed by calculations and spreadsheets that are never alone going to alter the final position. A clever model does not dictate value, a balanced check

TABLE 9: MULTIPLE ARBITRAGE EXAMPLE

The below chart shows another example of Multiple arbitrage in play to help an existing company enhance its overall value.



and informed view does.
Valuation models don't make money they just aid decision making. Deals make money and we can see this from Warren Buffett's value investing methodologies to Google's creation of the world's second most valuable company via nearly 200 acquisitions. Conversely, we can see how the financial models failed when the Royal Bank of Scotland's paid EUR 71 billion for ABN Amro during a competitive bid in 2007. Did vanity outweigh sanity? as the almighty crash in 2008 virtually destroyed the business. It is clearly possible for even the most educated and professional to judge valuation positions badly.

Formal valuations will have a statement of standard as well as methodology. The standard of value is the conditions under which the business will be valued. Standards might include:

- The reason for the valuation. Is it to forecast open market value, or for internal purposes?
- The level of checking carried out against information. Has due diligence been undertaken?
- The assumed longevity of the business as a going concern against any competitive or internal threats.
- The valuation of all the necessary assets and the valuation assumes an informed willing buyer and a willing seller.

The biggest factor that will affect the value of a business and the ultimate valuation measure is, of course, how much a buyer is prepared to pay. The process employed, and the approach taken to finding the right strategic buyer and positioning the shares in the right way will make a real difference to the valuation, as will the sale preparation. A well-run growth business with the right team, track record, reporting and sector opportunity will always outperform a business that has plateaued or declined, even if on the face of it they are the same profit yield and in the same sector. Many advisers will suggest that marketing private company shares on an 'offers' basis will allow a competitive buyer market to drive values beyond comparable. This is the case with rare and highly desirable assets but not with unexceptional/ also-ran businesses.

Caution should therefore be taken when high valuations are given by advisers who facilitate share sales- revert back to the last point on the valuation checklist "would you pay that price if you were in the buyer's shoes?". Unrealistic value expectations can be market disruptive in that they reduce the liquidity of the private market, in turn precluding transactions that would create better businesses, and leaving owners at the helm who should no longer be steering that ship.

AVONDALE

CONCLUSION

The valuation of businesses and shares is not an exact science. The basic concept of valuation is that it is the right to receive future income, yet we must define the likely sustainability of those earnings both against risk and the overall lifecycle of a business model. Today we live in a pace of accelerated change on business models, with cycles falling from 20 years in the mid-20th century, to every 10 years today. This modern condition is led by accelerated technology changes and knowledge share. Such change makes forecasting earnings cycles even more difficult and all valuations need to accept that the fate of a company depends not just on earnings' success but its ability to evolve the business model.

The aim for any valuation is to come up with a fair and well thought out conclusion; reasonable and objective and a balanced view of optimism and pessimism to avoid compromise later down the road. Valuing a business is as much about balance as the formulas and is more about listening than talking.

Private company valuation is built against comparisons, assumptions and estimates and therefore it is as much an art as a science. The analyser may be better at the formula, the researcher or market maker better at comparisons, and the strategist better at understanding the business model. If we buy and sell well we will get better value, but we must define buying and selling well. Valuations are not abstract; the value is to someone for a purpose at a time and a place.

Its hence key that we recognise the importance of accurate and well considered valuations in todays testing and uncertain climate. Value building will become increasingly more important in the future and any successful business leaders will use the information and advice in this guide to ensure they are maximising the value of their business and guarantee that the value they are creating is sustainable and long lasting. The valuation context may also help in driving value in any mergers and acquisitions.

LEADER QUESTIONS

1. **How do you define value; buying cheap may not be value?**
2. **What can you do to look beyond the numbers?**
3. **What are the forecasts, these are more important than the past?**
4. **What are the risks? What is the return on investment.**

VALUATION CASE STUDY- GOOGLE AND ANDROID MERGER

Whilst valuation methods vary in the end the question in valuations is did someone upon reflection pay too much? The Nokia Microsoft deal is often cited as the most expensive failed valuation. To look at a 'good value' deal we can also look at tech companies. Search engine giant Google acquired the widely unheard-of Android, a software developer, for an estimated $50mn in 2005 which contributed to a total spend of $130mn on acquisitions by Google that year.

Google has a policy of acquiring small tech start-ups in the hope that they can grow into industry giants as is the case with many of the other technology titans. Often these acquisitions don't pay off but when they do Google reap the benefits in revenue and market growth and any winners that Google grow to become fruitful companies usually more than make up for any losers who fall by the wayside. Its notable that Googles most successful acquisitions have been in industries and areas where Google itself has no particular expertise but where there is still a strong fit with Google's core values and competencies, Android is a prime example of this.

In the years after the acquisition, the talented team at Android set to work on developing an operating system for mobile phones which was first launched to the public in 2008. Since the launch of the initial system, Android and Google have overcome strong competition from other operating systems from the likes of Nokia and Blackberry to become the world's leading mobile operating system with an approximate 80% share of the market rivalled only by Apple's iOS platform; the two companies account for a combined market share of approximately 99%.

The success of Android has propelled Google to the forefront of global business helping it become one of the most successful and influential companies worldwide. Google's acquisition of Android is now seen undoubtedly as Google's best ever acquisition from the hundreds they have made throughout their 20 year history and it is debated as perhaps the most successful acquisition ever made in the technology industry.

Valuation methods are a mathematical formula however in review, what value did the deal ultimately bring? Googles purchase of Android gave it global competitive Advantage.

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