Second Full Book

M&A and Valuation by Kersten CF

Author: Joris Kersten, MSc

2024 - Uden/ The Netherlands

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Introduction Kersten Corporate Finance

Kersten Corporate Finance is an independent M&A consulting firm in The Netherlands.

Deal segment: Middle sized and SME companies. So companies with an Enterprise Value (EV) of in between 5 million euro and 100 million euro @ The Netherlands and Benelux.

Activities:

1. Selling companies;
2. Buying companies;
3. Business Valuation & Financial Modelling;
4. Financing of acquisitions with bank loans and/ or private equity firms;
5. Buy & Build strategies for strategic buyers and private equity;
6. Searching & selecting acquisition targets;
7. Finding multiples for precedent M&A transactions in a certain field.

Website M&A consulting: **www.kerstencf.nl**

Website M&A training: **www.joriskersten.nl**

M&A training:

Business Valuation & Deal Structuring – 5 day training – Once every year – Location: Hotel Amsterdam/ The Netherlands – Next one: 4th – 8th November 2024 @ Crowne Plaza Hotel, Amsterdam South (Zuidas);

In addition, Joris provides valuation training all over the globe on (bulge bracket) investment banks and universities in: New York, London, Hong Kong, Singapore, Dubai, Saudi Arabia, Kuwait, Mongolia, Surinam and Peru.

130 references on M&A training: **https://www.joriskersten.nl/nl/reviews**

You can book Joris for keynotes, training sessions & presentations on M&A and Valuation all over the globe.

joris@kerstencf.nl

+31 (0)6 8364 0527

Introduction Joris Kersten

J.J.P. (Joris) Kersten MSc BSc RAB (1980) is owner of "Kersten Corporate Finance" in The Netherlands, under which he works as an independent consultant in Mergers & Acquisitions (M&A's) of medium sized companies.

He performs deals with an enterprise value of in between 5 million and 100 million euros enterprise value (minimum EBITDA of 1 million euros).

Joris performs business valuations, prepares pitch books, searches and selects candidate buyers and/ or sellers, organises financing for takeovers and negotiates M&A transactions in a LOI and later in a share purchase agreement (in cooperation with (tax) lawyers).

Moreover, Joris is associated to 'AMT Training London' for which he provides training in Corporate Finance & Financial Modelling at leading ("bulge bracket") investment banks in New York, London and Hong Kong (e.g. Morgan Stanley New York, Morgan Stanley London, Nomura London, Barclays London, UBS London).

And Joris is associated to the 'Leoron Institute Dubai' for which he provides finance training at leading investment banks and institutions in the Arab States of the Gulf. This for example at Al Jazira Capital in Saudi Arabia and TAQA in Saudi Arabia.

In addition, Joris provides lecturing in Corporate Finance & Accounting at leading Universities like: Nyenrode University Breukelen, TIAS Business School Utrecht, the Maastricht School of Management (MSM) and the Luxembourg School of Business.

Moreover, he provides lecturing at partner Universities of MSM over the globe in: Peru, Surinam, Mongolia and Kuwait.

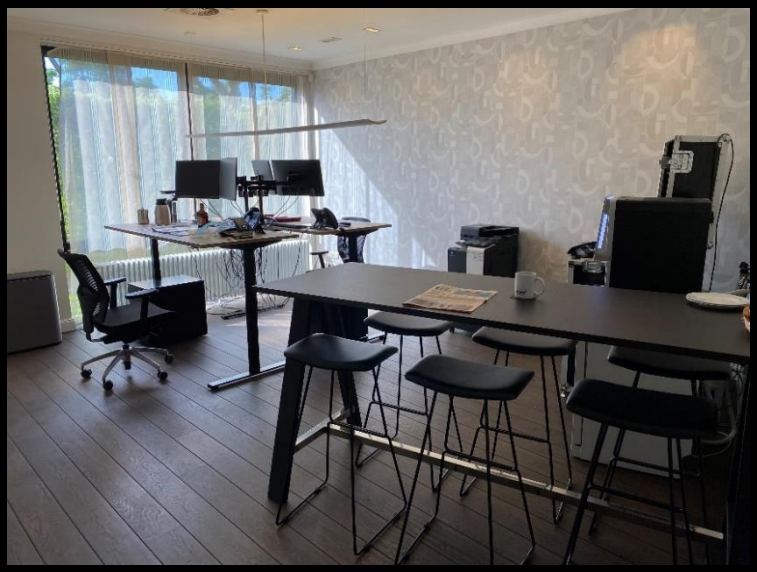
Joris graduated in MSc Strategic Management and BSc Business Studies, both from Tilburg University. In addition, he is (cum laude) graduated as "Registered Advisor Business Acquisitions" (RAB), a 1-year study in the legal and tax aspects of M&A's. And Joris obtained a degree in "didactic skills" (Basic Qualification Education) in order to lecture at Universities.

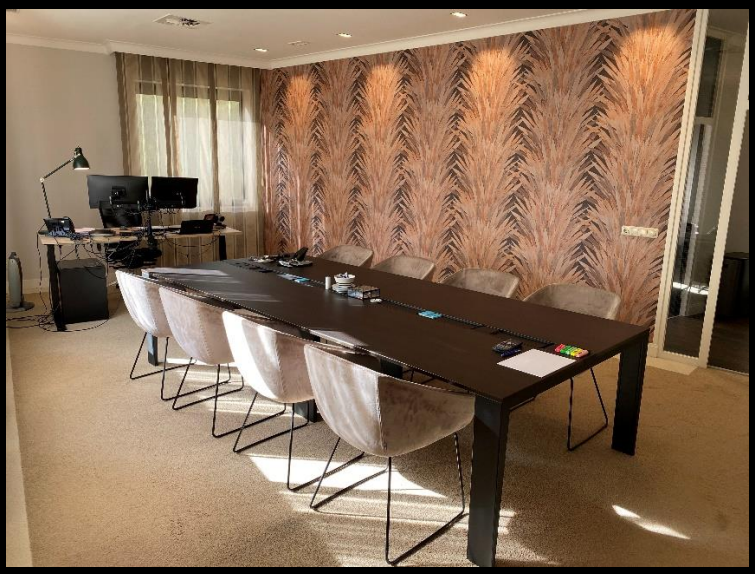
Currently Joris is following the "Executive Master of Business Valuation" to obtain his title as "Registered Valuator" (RV) given out by the "Netherlands Institute for Registered Valuators" (NIRV). This title will enable Joris to give out business valuation judgements in for example court cases.

Website M&A consulting + Valuations: **www.kerstencf.nl**

Website M&A training + Valuation training: **www.joriskersten.nl**

Kersten CF Office @ Uden/ Netherlands





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joris@kerstencf.nl

+31 (0)6 8364 0527

1. Return on Invested Capital (ROIC)

Analysing ROIC (return on invested capital)

Author: Joris Kersten MSc / Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory in The Netherlands + Business Valuations + Valuation training over the globe.

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Introduction

A company creates value when the present value of the cash flows, from the investment, is higher than the cost of the investment.

This happens when the return of the investment is higher than the cost of capital of the investment.

To study this in a little more detail, we need to know how to calculate a measure called ROIC (return on invested capital).

ROIC (return on invested capital)

ROIC is calculated by dividing NOPAT (net operating profit after tax) by IC (invested capital).

Let's first look at what NOPAT is, and means.

And then let's look at what IC entails.

NOPAT

NOPAT is the numerator in the ROIC calculation.

It is the cash earnings a company has when it does not have debt or excess cash.

So NOPAT is the same whether a company is financed with debt or equity.

So removing the concept "capital structure" in NOPAT enables it to compare NOPAT across different companies.

NOPAT starts with earnings before interest and taxes (EBIT).

You then add amortisation from acquired intangible assets.

And you add the embedded interest component of the operating lease expense. And you do this because this is not an operating item, but a financing item.

At last you subtract cash taxes, and this includes the tax provision, deferred taxes and the tax shield.

So summarized: NOPAT = EBITA -/- cash taxes.

A little more detail on NOPAT: Amortisation

Maybe it is strange to add back amortisation but not depreciation.

But the reason is that depreciation is an operating expense.

And amortisation of acquired intangibles just reflects "accounting".

When for example a company acquires a customer list, the list would be put on the balance sheet as an intangible asset and amortised over its useful life.

But the money spent to maintain and grow the list is an expense in the income statement.

So the company should not be panellised twice with both the expenses and amortization.

(more about intangible assets, and amortisation, later in this ROIC blog series, in upcoming weeks)

Embedded interest in lease

Adding back embedded interest from operating lease is a relatively new adjustment.

Most companies nowadays under US GAAP and IFRS must reflect operating lease on the balance sheet.

This was not the case in the old days.

(I am from The Netherlands, and under Dutch GAAP we still have operating lease not capitalised on the balance sheet)

Under US GAAP, the entire lease expense including embedded interest is still expensed.

And under IFRS the lease payments are allocated under depreciation and the interest expense.

So for companies under US GAAP you need to separate the lease payments into these two parts (deprecation & interest), and "embedded interest" needs to be adjusted in NOPAT.

Cash tax

The cash tax calculation has three components:

-Tax provision;

-Deferred taxes;

-Tax shield.

With the tax provision you start with what you see in the income statement.

But you need to adjust this number for "unusual items" like for example a restructuring charge.

And with companies that spend a lot on R&D, in the US this needs to be amortised, instead of being expensed straight away.

Then there are deferred taxes.

A company has 2 annual statements, one for tax purposes and one for financial reporting.

Typically straight line depreciation is used for financial reporting, and accelerated depreciation for tax purposes.

This creates timing differences, that results in a company's reported tax that is higher than the cash taxes.

(with accelerated depreciation you have less profit = less tax)

Eventually this tax needs to be paid, and this is captured as a deferred tax liability (DTL) on the balance sheet.

The increase in the DTL reduces cash taxes.

(so take the DTL increase from the reported tax, in order to arrive at cash tax)

At last, the tax shield is removed from NOPAT, because NOPAT is not influenced by capital structure.

And the tax shield comes from interest deductible for corporate tax.

So this increases cash taxes for leveraged companies, in order to be able to compare them well with other companies.

Concerning taxes, the quick and dirty way to deal with it is by taking EBITA * (1 -/- cash tax rate). And the cash tax rate is as a (very rough) rule of thumb 95% of reported tax.

Invested capital

IC (invested capital) is the denominator of ROIC, and this can be calculated in 2 ways.

You can look at net assets (operating approach), and you can look at how these assets are financed (financing approach).

IC – Operating approach

With this approach we start with net working capital; a measure of liquidity, and this is calculated as current assets minus NIBCL's (non interest bearing current liabilities).

Within the current assets accounts receivables and inventories are the largest components.

But you need to subtract excess cash and marketable securities from the current assets, since this is not "operating".

NIBCL's are basically all current liabilities that are not debt, and the main components are accounts payables and other current liabilities.

Then we add PP&E (property, plant & equipment).

(Concerning intangible assets, I will discuss this issue in great detail in this blog sequence on ROIC in the upcoming weeks)

Leases longer than a year also are shown on the balance sheet, and stand for the right to use the asset.

Accountants quantify this by estimating the present value of future lease payments.

Next we add intangible assets and goodwill from M&A transactions.

At last, all other long term (operating) assets need to be taken up.

So invested capital should reflect all the assets needed for a company to run its operating business.

NON operating assets like access cash, marketable securities, equity investments, non consolidated securities, finance subsidiaries, overfunded pension funds, tax loss carry forwards etc., should be taken care of in the "equity bridge of valuation" and NOT in IC !

IC – Financing approach

Within this perspective we start with all the sorts of interest bearing debt.

Operating lease obligations also need to be taken into account.

And we need to add shareholders equity, preferred stock and other equity linked securities.

At last, other long term liabilities like deferred tax, underfunded pension funds, unearned revenue etc. should also be taken up.

When both NOPAT and IC is calculated, we can calculate ROIC !

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

ROIC linked to growth !

Author: Joris Kersten MSc / Owner Kersten Corporate Finance

Kersten Corporate Finance: Buy side and sell side M&A in The Netherlands (deals: 5 – 100 million euro enterprise value) + Business Valuations + Corporate Finance training over the globe.

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Investments in growth

The value of a company can be calculated by projecting the free cash flows (FCF) and discounting it back to the present.

And FCF equals NOPAT -/- the investments for future growth.

Investments in future growth capture:

-Changes in net working capital;

-Capital expenditures net of depreciation;

-Other investments like acquisitions.

So investments in future growth are equivalent to the change in IC (invested capital).

Link to a DCF model

The observations above give us a nice link to a DCF model.

When you have estimated your initial IC, and your DCF model is estimating future NOPAT, and additional investments (capex net of depreciation + net working capital), than you can easily calculate ROIC in any future year.

This by taking future NOPAT and dividing it by future IC, both will be created by your DCF model.

For example, a company has a NOPAT of 100 USD, and IC of 500 USD, than ROIC is 20%.

With 10% NOPAT growth, your NOPAT in 2 years is 100 USD * 1,10 ^ 2 = 121 USD.

When you assume investments (capex net of depreciation + NWC) are 25 USD per year, than ROIC in 2 years is:

121 / (500 + 25 + 25) = 22%.

ROIC linked to valuation

ROIC is linked to valuation by "economic profit".

This is a measure of "residual income", and this means income after all costs have been taken into account, even including the cost of capital !!!

The cost of capital is the same as WACC (weighted average cost of capital).

Economic profit can be calculated in 2 ways (with similar outcomes):

-Economic profit = (ROIC -/- WACC) * invested capital;

-Economic profit = NOPAT -/- (invested capital * WACC).

ROIC linked to growth

ROIC is also linked to growth.

This because ROIC is the maximum supportable growth rate of a company WITHOUT external financing !

Let's take a look at this with a simple numerical example, but first let's look at a formula:

-Growth = ROIC * (1 -/- payout ratio).

The payout ratio is the part of NOPAT a company pays out to its shareholders in the form of dividends and share buybacks.

And of course, this leaves less money available to reinvest.

With 100 USD NOPAT, and IC of 500 USD, ROIC was 20%.

Without any payout, the 100 NOPAT makes again: 20% * 100 = 20 USD (additional NOPAT).

In total: 500 IC + 100 IC (from nopat) = 600 IC.

600 IC * 20% ROIC = 120 NOPAT (100 + 20).

And another year later:

720 IC (600 + 120) * 20% ROIC = 144 USD NOPAT (100 * 1,20 ^ 2)

Growth rates higher/ lower than ROIC

Companies with a growth rate lower than ROIC will be able to payout cash without compromising on growth.

For example, if the company of the example only grows with 10%, than it can pay out 50 USD of NOPAT.

100 NOPAT / 500 IC = 20% ROIC

When growth is 10%:

NOPAT * (1 + 10%) = 110 NOPAT

110 / 20 * 100 = 550 IC is needed.

So 50 can be paid out: 100 nopat + 500 IC -/- 50 pay out = 550 IC needed

On the other hand, companies with growth above ROIC need additional financing.

With a growth of 2 times ROIC, NOPAT grows with 40%.

100 nopat * (1 + 40%) = 140 nopat

140 / 20 * 100 = 700 IC needed.

700 IC needed -/- 500 IC -/- 100 NOPAT = 100 IC (additional capital needed)

But of course, a ROIC of 20% is likely above WACC, so getting 100 new IC most likely creates lots of value in this example !!

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Valuation: Issues with calculating ROIC

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A Advisory Netherlands (mid caps/ small caps) + Business Valuation (large caps/ mid caps/ small caps) + Valuation/ Financial Modelling training over the globe (New York, London, Middle East, Asia)

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Practical issues

When making ROIC calculations there are a few practical issues:

1. Excess cash & marketable securities;
2. Restructuring, write offs and litigation charges;
3. Minority interests;
4. Share buybacks.

Let's now discuss these issues.

Excess cash & marketable securities (1)

Companies hold cash for their operations, they simply need some liquidity in order to do business.

Young businesses need a little more cash for this, because for them access to capital can be more difficult.

A (very rough) rule of thumb is to take 2% of revenue as cash needed for the operations, and then the rest is excess cash.

With a M&A deal the exact number of excess cash is calculated with the DD (due diligence), based on an average level of net operating working capital.

For less predictable companies with larger growth prospects, a ratio of cash to revenue up to 5% can be more suitable to use.

Restructuring (2 A)

Companies take restructuring charges when they plan to change the organisation of their business.

For example to cut costs by reducing the work force or by closing facilities.

And these charges mostly require a cost upfront.

Workforce reduction costs show up in the income statement, and this reduces NOPAT. And additional capital expenditures come up as a liability, affecting invested capital.

An asset write off reduces invested capital, and an additional capital expenditure increases invested capital.

In this case, it would make sense to cut out the "accounting adjustments" for the restructuring, but to leave in the actual additional capital spending.

(so restructuring charges are seen as one offs, but be careful here, these charges need to be studied in detail first)

Further, most likely the restructuring comes along with cost savings, and these need to be taken up (when they make sense obviously) in future NOPAT calculations.

Write offs (2B)

A write off occurs when a company recognises that it overstated an asset's useful life.

Reasons could be failing to consider 1) technological obsolescence and 2) inflation.

Depreciation is often used as a proxy for maintenance capital spending.

And gaps between real maintenance CAPEX and accounting depreciation is a predictor of future asset write offs.

For companies that write off assets regularly, adding it back to invested capital is suitable.

And when occurrence is rare, then you can let it go without an adjustment to invested capital.

Concerning goodwill and intangible impairment charges, it should be added back to invested capital.

This since management should be held accountable for past capital allocations in the form of M&A.

Litigation (2C)

Concerning litigation, companies add the estimated liability on the balance sheet.

This provision reduces equity, and comes back as debt, so invested capital is not changed (total of equity + debt).

NOPAT can be affected do by damage of reputation, and this is a matter of professional judgement.

Minority interests (3)

If a company owns part of the firm you are analysing, you can deal with ROIC as usual. There only might be a few tax implications.

At last, with DCF valuation, you minus this minority interest by another firm (in market value), from the enterprise value.

When the company you are analysing has a minority stake in another business, then you can also normally calculate ROIC, apart from some potential tax issues.

Although be careful, when the proceeds from the minority stake are not in NOPAT, then take out the minority interest from invested capital, otherwise the calculation goes wrong.

With DCF valuation, you add the (market value) of the minority stake on top of enterprise value.

Share buybacks (4)

When excess cash is used to buyback shares, buybacks have NO impact on ROIC.

This because then neither NOPAT or invested capital is affected.

Funding a buyback with debt also does not influence NOPAT, and invested capital.

Buybacks can influence "return on equity", but this only happens through changes in the capital structure (leverage).

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Valuation: Intangible assets & ROIC

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory + Business Valuation + Valuation Training

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

Tangible versus intangible assets

Accountants record tangible investments on the balance sheet as assets.

And these assets are depreciated over their useful lives.

So these investments show up in the "invested capital" (IC) of a company.

And also depreciation is taken up in NOPAT.

On the other hand, accountants treat most intangible investments as expenses.

Take R&D as an example.

Accountants decided that companies should expense R&D because the benefits were uncertain.

And the link between R&D costs and sales was unclear.

And this logic applied to R&D was extended to:

-Advertising;

-Employee training;

-Creation of software.

Capitalising intangible assets

The above creates a situation where (on average) companies that are "tangible asset intensive" have high NOPAT and high invested capital.

And companies that are "intangible asset intensive" have low NOPAT and low invested capital. These companies are called "asset light companies".

But this does not enable us to compare company ROICs consistently !

So in order to do this you need to put the intangible assets on the balance sheet and amortise them over their useful lives.

And therefore you need to estimate the percentage of the various SG&A items (e.g. R&D, sales & marketing, general & administrative etc.) that should be considered an intangible investment.

This including their yearly amortisation !

By these adjustments, both NOPAT and invested capital, will be higher.

ROIC obviously is the ratio between the two.

And capitalising intangibles lowers ROIC for most profitable companies !

An important point to mention is that "free cash flow" will NOT change !

This because NOPAT and invested capital increase by the same amount.

So capitalising intangible investments does not change the value of the business.

But it does provide us with better insights into the company returns, and timing of the returns !

And it enables us to compare normal and asset light companies.

Source used: Morgan Stanley Investment Management: Counterpoint Global Insights/ Return on Invested Capital/ How to calculate ROIC and handle common issues. October 2022. M.J. Mauboussin, D. Callahan.

2. Cost of Capital (WACC)

Valuation: The cost of debt !

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A Advisory + Business Valuations + Valuation Training

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

Introduction

In this blog series I will talk about:

-The cost of debt;

-The cost of equity;

-Betas;

-WACC;

-Capital structure.

But let's first start with the cost of debt !

Effective after tax rate

The cost of debt is the effective after tax rate a company has to pay on its long term debt.

The yield to maturity on a company's long term option free bonds is a good estimate for the pre tax cost of debt.

And this for a company with securities rated as "investment grade".

This is debt with a relatively low risk of default and therefore receives a higher rating from the credit agencies:

-Baa or above from Moody's;

-BBB or above from S&P Global and Fitch.

Indirect approach

For companies with only short term or illiquid debt, you can take some steps to estimate the cost of debt indirectly.

Here fore determine the credit rating on the company's unsecured long term debt first.

Then look at the average yield to maturity on a portfolio of bonds with a similar credit rating.

Bond investors often express this as a spread over a treasury rate, usually the 10 year note.

And the treasury yield is a proxy for the so called risk free rate.

Some companies finance themselves mostly with short term debt.

The problem here is that short term debt rates do not reflect expectations about long term inflation.

And the time horizon for estimating the cost of capital should match the time horizon of the forecasted cash flows.

This is in practise seldom less than 10 years.

The long term debt rate is a better estimation of the interest costs, and long term rates also capture the costs of repeated (short term) borrowing.

So when a company majorly relies on short term debt, then use its credit rating to estimate the cost of long term debt.

Tax shield

Net operating profit after taxes (NOPAT) less investment needs is equal to "free cash flow".

But this does not reflect (financial) leverage !

Debt creates a valuable tax shield, because interest expense is generally tax deductible (at least to some extent).

To capture this you adjust the debt rate from a pre tax to a post tax number.

And you do this with the "marginal tax rate", and this is the tax rate a company pays on its last dollar of taxable income.

Yield to maturity

The book value of debt is mostly a good estimate for the market value of debt.

But make an adjustment when the debt is trading at a substantial premium or discount to par.

And the yield to maturity is a fair estimate for the pre tax cost of debt. This for companies with debt rated as investment grade.

And the yield is expressed as a spread over a risk free rate.

Components of a estimated return include:

-The real yield on the 10 year US treasury note;

-inflation expectations;

-For example the BBB credit spread.

And the nominal yield on the 10 year US treasury note equals: Real yield + inflation expectations.

High yield debt/ debt rated below investment grade

Yield to maturity overstates the pre tax cost of debt for companies issuing high yield debt, or below investment grade rated debt.

This since high yield bonds have a significant probability of default.

The base rate of default over 10 years is about 2% for an investment grade bond (BBB- or higher).

But 23% for a speculative grade bond (BB+ or lower).

So here the cost of debt is somewhere between the promised yield and the risk free rate.

Leases

Leases should also be considered as debt.

Nowadays the accounting principles mostly require to reflect leases longer than one year on the balance sheet.

With US GAAP the entire lease payment, including embedded interest, is reflected in the calculation of EBIT.

But with debt, the interest expense shows up below EBIT.

So a company that leases will have a lower EBIT than a company that finances the asset with debt, even though pre tax income will stay the same.

So this lease interest needs to be separately analysed !

At last, total net debt should includes:

-Leases;

-Unfunded retirement benefits;

-Minus excess cash.

And as a rule of thumb, you can treat cash & marketable securities above 2% to 5% of revenue as "excess cash".

Summarised, estimating the cost of debt is very do-able, but it will get more complex with debt rated below investment grade, and when a company has significant leases !

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

Valuation & the equity risk premium

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory + Business Valuations + Valuation Training

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

Cost of equity model

The cost of equity is the expected total return on a company's stock.

The cost of equity is higher than the cost of debt since equity is a junior claim on the value of the firm.

We can not observe the cost of equity directly, so we need an asset pricing model.

The best known model is the "capital asset pricing model" (CAPM).

Financial executives rely on CAPM, but in the investment community (quantitative funds) models with more variables are used.

Let's now look at CAPM since this is the model most practitioners use.

CAPM

The CAPM estimates the expected return of a security by multiplying the equity risk premium (ERP) with the security's Beta.

And the risk free rate (RFR) is added on top.

The ERP equals the difference between the expected return for the market and the RFR.

Think about it as a "credit spread".

The ERP is the same for all stocks in the CAPM because it captures what is known as "systematic risk".

This means risk that can not be diversified away.

And Beta measures how a company's risk contributes to the portfolio risk.

And this is "unsystematic risk" and can be reduced through portfolio diversification.

Risk free rate & equity risk premium

A proxy for the risk free rate is a yield on a long term default free government fixed income security.

The yield on the 10 year US treasury note is suitable for businesses in the US.

The ERP is the difference between the return on the equity market and the return of the risk free asset.

Surveys show that ERP estimates are in a range from 3% to 10%.

Other insights provide an estimate range from 0 to 7% with an average of about 4%.

(check the article I have used as a source for this blog for full details, find this source below, or above, this blog)

Equity risk premium estimates

There are 3 common approaches to estimate the ERP:

1. One can look at historical results and assume the future will be similar to the past;
2. One can survey investors about their expectations;
3. One can estimate a rate the market implies by reverse engineering assumptions.

Historical results are supported by lots of data but are heavily influenced by time period selection, and they include "survivorship bias", and they are different when using "arithmetic" or "geometric" averages.

Expectations by experts provide snapshots of attitudes at a specific moment.

And an ERP implied by the market uses current prices, but requires forecasts for drivers such as cash flow growth and return on capital.

Historical ERP

For valuation ERP's are needed that look forward, but it is still helpful to study the past for historical averages.

To study the past judgement is needed for:

1. Which RFR to use;
2. Time period to use;
3. Arithmetic or geometric returns.

Damodaran finds that the historical ERP falls in the range of 3 % to 12 % depending on how is measured.

For equity less bond returns in the US from 1928 – 2022 the arithmetic return was 6,6 % and the geometric return was 5,1 %.

ERP by market prices

One can also estimate the ERP by market prices.

The idea is that the key drivers of value, including earnings & dividends, follow long term trends that are predictable to some extent.

By estimating future cash flows, and knowing the current price, it is possible to solve for the "discount rate".

When looking at august 2008 to 2022, Damodaran used the 10 year treasury note as the risk free rate and estimated the ERP.

The average ERP over this period was 5,5% with a high of 7,7% and a low of 3,9%.

Expected return (RFR + ERP) ranged from 10,7% and 5,1% in this time period.

These numbers are not adjusted for inflation.

Damodaran on the ERP: Overall insights

Aswath Damodaran posts an updated estimate of the risk premium on his website every month.

He has annual estimates for the ERP from 1961.

The range goes from 2,1 % to 6,5 %.

These estimates are not adjusted for inflation.

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

Betas & Valuation

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory + Business Valuations + Valuation Training

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

Beta & popularity

CAPM (the capital asset pricing model) is very popular among practitioners.

But the concept of "Beta" has been challenged on both empirical & intellectual grounds.

The empirical problem is that beta does not predict expected returns the way it should.

Specifically, stocks with low betas generate higher returns than the model predicts.

And stocks with high betas deliver lower returns than the model predicts.

And the intellectual issue is that "volatility" is a poor way to measure risk.

Value investors generally define risk as potential permanent loss of capital.

And they argue that the volatility of asset prices does a poor job on capturing that risk.

The measure Beta

Beta measures the return of an individual security relative to the return on the market index.

It reflects the "financial elasticity".

You calculate a historical beta by doing a regression analysis with the market's total returns as the independent variable (X-axis).

And the asset's total returns as the dependent variable (Y-axis).

And now the slope of the best fit line is the beta.

The slope of the regression line is the rise (up or down) over the run (left to right).

And the beta is 1.0 for a security that goes up and down the same as the market.

The beta is 2.0 for a security that goes up and down at a percentage twice that of the market.

So this security is considered riskier than the market.

And the beta is 0.5 if the security goes up and down at a rate that is one half of the market's percentage.

So this security then is less risky than the market.

Measuring Beta

Similar to the ERP (equity risk premium), beta should be a measure that looks forward.

But this is unobservable.

Therefor we have to examine historical relationships and make some adjustments to remove some "noise".

In order to calculate beta a few judgements have to be made, like:

1. Which index to compare to;
2. How far back in history to go;
3. Measurement history (e.g. daily, weekly, monthly, quarterly or at a yearly basis).

The S&P 500 is a sensible index for investors in the United States.

And the benefit of going back further in time is that there is more data, and the regression result is more reliable.

The drawback is that the company may over time has changed its:

- Business model;
- Business mix,
- Level of financial leverage;
- Or the company simply may have matured.

A longer time period to measure beta is better for companies with stable business models and stable capital structures.

And you can consider a shorter time period if you notice that the beta changes materially during the period you measure.

At last, more frequent measures create more data.

But a good place to start with measuring beta is by monthly returns over 60 months (5 years).

Industry beta

You can improve beta by using an industry beta rather than the beta of an individual company.

The rationale is that "business risk" (the variability of the cash flows), is the same for all companies within an industry.

For an industry beta you need to take three steps:

1. Unlever the industry company betas;
2. Calculate the average unlevered beta for the industry;
3. Relever the beta for the specific company.

A company's beta combines business risk + financial risk.

We want to measure business risk first, so we need to remove the effect from "financial leverage" from the industry betas.

The formula is:

Beta unlevered = Beta levered / (1 + D / E * (1 -/- Tc))

Then calculate the average unlevered beta for the industry.

And the trick is here to define "the industry".

Ideally, it is a group of companies:

1. With similar business risk because they are exposed to the same markets;
2. That create comparable products;
3. That deal with similar customers.

And the average can be weighted by market capitalisation.

And taking the "median" helps to check for outliers that might distort the average.

Unlevering betas isolates the "business risk", but we still need to set back the "financial risk".

This is done by using the target company's "expected long term capital structure".

And the formula to relever beta is:

Beta levered = Beta unlevered * (1 + D / E * (1 -/- Tc))

And this levered beta can then be used for your specific target company.

At last, the motivation to calculate an industry beta is to come up with a (more) accurate and (more) stable estimate of a company's risk.

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

WACC & Capital Structure

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory + Business Valuations + Valuation Training

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

WACC

WACC (Weighted Average Cost of Capital) combines the opportunity cost of the sources of capital (debt & equity) based on target weights.

An average WACC for companies in the Russel 3000 from 1985 to 2022 was about 8 %.

(see the source I have used for this blog - Morgan Stanley - Counterpoint Global Insights)

WACC is used to discount the future free cash flows of a firm.

This is called free cash flow to firm, and outcome is the "Enterprise Value" (EV).

Please never forget that the weighting of debt and equity should be done based on market values !

And NOT on book values !

So you need to use a "target capital structure" here, based on market values !

The debt to total capital ratio for the Russell 3000 from 1985 to 2022 was on average 30 %.

So roughly 30 % market value of debt, and roughly 70 % market value of equity, on average.

The Russel 3000 shows a decline in debt levels from 2008 to about 18% debt to total capital in 2022.

Debt & equity are by far the largest sources of capital for US public companies.

And by the end of 2022, the total value of corporate debt (and leases) was roughly USD 10 Trillion.

And the market value of equity was roughly USD 40 Trillion.

(roughly 20 % debt / roughly 80 % equity at the end of 2022)

Debt to total capital ratio

In general, businesses with low "business risk" are good candidates to use debt.

Business risk reflects the volatility of operating profits and is measured with "unlevered beta".

The valuation expert; Aswath Damodaran, analyses the relationship between unlevered beta and the ratio of debt to total capital.

He does this for more than 90 industries.

And as the theory predicts, the outcomes are:

- Companies with low business risk (low unlevered beta) tend to have higher debt to total capital ratios than firms with high business risk (high unlevered beta).

This is consistent with so called "trade off theory".

This theory tells us that firms will use a significant level of debt, if possible, because debt is cheaper than equity.

And this lowers the WACC !

But of course, you can only use debt to a certain extent.

On debt you pay interest.

And think of interest as a fixed cost, it declines operating profit, and can result in losses, when there is too much debt (interest).

Low risk businesses can handle this (interest) cost better, as above research shows.

So they have an intention to use more cheap debt !

Capital structure

Concerning capital structure, you can finance a business internally through cash from operations.

And you can raise debt and/ or equity.

A company can rely on internal financing when its (NOPAT) growth rate is equal, or lower, than its return on invested capital (ROIC).

(see my previous blogs on ROIC to find out how this works mathematically, I have explained this extensively before)

Expert valuator Aswath Damodaran tested this.

The hypothesis was that (with holding growth constant):

- Businesses with high ROICs have lower debt to total capital ratios compared to businesses with low ROICs.

Reason would be that companies would use internal financing before debt financing, because it comes first in the "pecking order".

So this way of reasoning is called “pecking order theory”.

And research shows that this (basic pattern) holds true:

Many of the best businesses in the world (as measured by ROIC), have very conservative capital structures !

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights: Cost of Capital – A practical guide to measuring opportunity cost. 2023. M.J. Mauboussin & D. Callahan.

3. Business Valuation in practise

Maintenance vs. growth CAPEX for Valuation and M&A

Author: Joris Kersten, MSc

Kersten CF: M&A advisory and valuations at The Netherlands. Deal value: 5 to 100 million enterprise value, in all industries. www.kerstencf.nl

Training: Business Valuation & Deal Structuring (5 days). 4th – 8th November 2024 @ Amsterdam South. Training manual & registration form: www.joriskersten.nl – 130 recommendations: https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley, Investment Management, Counterpoint Global Insights. Underestimating the red queen: Measuring Growth and Maintenance investments. Michael J. Mauboussin & Dan Callahan, 2022.

Introduction

How do we know whether a company understates its capital spending?

A method to calculate this is by the "cumulative capacity cost".

This is a measure of maintenance spending and it is the sum of:

- Depreciation & Amortisation (D&A);
- Asset write downs;
- Loss on the sale of assets;
- Goodwill impairment;
- Intangible asset impairments.

And this over a period of 5 years.

Then the cumulative capacity cost is divided over the cumulative sales of the same period of 5 years.

And this ratio provides an estimate of the cost of assets required to generate 1 dollar worth of sales.

So multiplying this ratio by the current year sales gives a measure of maintenance capital expenditures (CAPEX).

It was found (please check source I have used) that for 1974 to 2016 maintenance capital exceed D&A by about 20% !

So this maintenance capital expenditure surpass means that less capital is going to growth capex than investors think !

This understatement of D&A is attributed to technological obsolescence.

Inflation also has the same effect.

And deflation has the opposite effect.

Growth vs. Maintenance spending

For the analysis above sorting growth vs maintenance spending is essential.

The approach above struggles with a few issues do.

For example, concerning M&A there was an evolution in accounting rules.

Prior to 2001 companies could either use the "purchase method" or "pooling of interest method" for M&A.

With purchase accounting any premium to book value was put on the balance sheet as goodwill and amortised over up to 40 years.

And with "pooling", two companies simply combined their balance sheets.

Since 2001 pooling was not possible anymore, and the "amortisation of goodwill" was replaced with a "goodwill impairment test".

As a result, amortisation as a percentage of D&A plummeted from 22 percent in 2001 to about 10% in 2002.

This is relevant, because it changes the calculation of the "cumulative capacity cost", as mentioned above.

So due to impairment of goodwill, instead of amortisation, the cumulative capacity cost goes down (assuming no impairment).

On the other hand, since 2007, more specificity about how to record intangible assets was provided by FASB (financial accounting standards board).

Intangible assets are amortised, and goodwill impaired.

And the result was a rise in intangible assets on the balance sheet, including amortisation of these "acquired intangibles" in the income statement.

And this was even reinforced by lots of M&A activity.

Further rise of intangibles

The formula for growth is the same for "tangible assets" as for "intangible assets".

So companies spend on intangible assets, and the money is allocated between "growth" and "maintenance" of these intangible assets.

Many people assume that R&D is all about growth, and has nothing to do with maintenance.

But careful analysis shows that a meaningful percentage of R&D spending, especially for large digital technology companies, is in fact necessary to just maintain the current operations.

So understanding this ratio (growth/ maintenance) for R&D, as well as for other categories of intangible investments, is absolutely essential for a company's prospects !

Intangibles

The analysis concerning the "cumulative capacity cost", as mentioned above, was done for "tangible assets".

But the task for intangible assets is much more complex !!

This because (organic) intangible investments, and maintenance spending, are expensed in the income statement.

Acquired intangible assets are recorded on the balance sheet after an M&A deal (purchase price allocation). But again, the ongoing spending to maintain the value of these (acquired) intangibles is expensed in the income statement.

So for example, a company puts an (acquired) customer list on the balance sheet and amortises it over its estimated useful life. But the costs to maintain and grow the list are expensed in the income statement under SG&A.

So that is why we use EBITA, instead of EBIT, to calculate NOPAT !

The appearance of the customer list on the balance sheet is a "one time event", as a result of an M&A deal.

And future spending on this will sit in the income statement.

Growth vs maintenance investments within intangibles

It is estimated (see source used for this blog) that for companies in the Russell 3000 1.8 trillion USD of total SG&A expense was in the form of "intangible asset investments".

Intangible assets are put on the balance sheet following an M&A deal. These intangible assets need to meet one of two criteria:

- The assets arise from contractual or legal rights;
- The assets can be separated from the company.

Acquired intangible assets have averaged about 1/3 of M&A deal value in recent years.

Assets that do not meet those criteria are recorded as goodwill, which is:

· Purchase price of the deal -/- fair value of tangible assets -/- fair value of intangible assets (net of liabilities).

As an investor must think about growth and maintenance CAPEX (tangible assets), they must do the same for:

· Investment SG&A expenses;

· Investment maintenance SG&A expenses.

Here for SG&A needs to be separated in two parts:

1. The sum of research & development (R&D) and advertising (intangible investments);

2. Main SG&A.

And Main SG&A needs to be further separated in:

· Maintenance Main SG&A;

· Investment Main SG&A.

Maintenance Main SG&A expenses support existing operations and are calculated by matching them with current revenues in the time period. Examples are: Office rent and distributions centres rent, delivery costs, sales commissions etc.

Left over is "Investment Main SG&A" and this is the source for future earnings.

"Maintenance Main SG&A" is what a company has to spend to stay in place. And Investment Main SG&A is what the company spends to pursue value creating growth.

Summarised:

· Intangible investments = The sum of R&D, advertising and Investment Main SG&A;

· Maintenance SG&A = Maintenance Main SG&A.

Investment SG&A vs. Maintenance SG&A

Investment SG&A and maintenance SG&A grew similarly up to about the year 2000.

But then the intangible investments started to grow faster !

After the financial crises of 2008-2009 they even started to grow faster.

Summarised

Understanding growth vs maintenance spending is essential for corporate finance professionals, and even more for executives and investors.

But only a few have a clear sense of these numbers !

This holds for "tangible assets", as the example on “cumulative capacity cost” above demonstrates.

But probably this holds even more for intangible assets such as R&D and certain aspects of SG&A.

This because generally these are expensed instead of capitalised.

The unravelling work here needs to be done by the corporate finance advisor, executive or CFO.

But probably many experts do not know their maintenance CAPEX number.

I personally advise you to keep track of the work of Michael J. Mauboussin since he is doing great work in unravelling "real NOPATs" and “invested capital” numbers. This by unravelling expenses that should be capitalised as intangibles.

And this is important since intangible assets keep rising and rising within companies !

Hope this was useful, see you next week again with a new blog,

Best Joris

Kersten Corporate Finance

Source used: Morgan Stanley, Investment Management, Counterpoint Global Insights. Underestimating the red queen: Measuring Growth and Maintenance investments. Michael J. Mauboussin & Dan Callahan, 2022.

Interest rates, WACC and Capital Allocation

Author: Joris Kersten, MSc

Kersten Corporate Finance: M&A advisory @ The Netherlands. www.kerstencf.nl

5 day Business Valuation training, 4th – 8th November 2024 Amsterdam. www.joriskersten.nl

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, Cost of Capital and Capital Allocation – Investment in the era of easy money. February 2024. Michael J. Mauboussin & Dan Callahan.

Introduction

From 2009 financial capital was cheap and abundant.

The FED and other central banks around the world reduced policy rates to essentially zero, until 2021.

We can examine two periods of equal duration:

- The phase of "easy money": 2009 – 2021;
- The 13 years preceding it: 1996 – 2008.

The average yield on the 10 year US treasury note was 2.3% from 2009 – 2021. Versus 5.0% from 1996 – 2008.

All else equal, declining interest rates are good for asset prices. Because future cashflows are worth more when discounted back at a lower rate.

The CAGR (compound annual growth rate) for the S&P 500 (index of the largest public companies in the US) was 16% when there was easy money (2009 – 2021).

And 4.8% CAGR the equal time before (1996 – 2008).

This in the form of "total shareholder return", both due to "earnings growth" and expansion in the P/E multiples (capital gain) as a logical outcome of lower interest.

The returns in the easy money era were exceptional, cause the CAGR for the S&P 500 was 9.6% from 1928 – 2023.

But lower interest rates, and ready access to capital, would suggest that companies invest more. And that they use more debt, and hold less cash.

More abundant investment opportunities would also imply restraint from returning cash to shareholders.

But that is really not what companies did ! Let's find out how this works !

WACC

It was estimated that the WACC for companies in the Russell 3000 dropped to 6.9% avg in the time of easy money (2009 – 2021).

This from 7.5% avg in the time before (1996 – 2008), based on annual averages.

Companies should ideally rank their investment opportunities and pursue those that pass the NPV test (net present value test).

Basically, taking up projects with a higher return than the WACC.

A lower WACC during 2009 – 2021 boosts the future cash flows, and therefore allows more investments to clear the "hurdle".

A logical consequence is an increase in investment opportunity.

But, the WACC is not what most companies use to discount cash flows.

About 80% of companies adopt a "hurdle rate" that is substantially higher than their WACC.

In the time of easy money, researchers estimate (see the source I used for this blog) that the average "hurdle rate" used was 16.8%.

This is more than double the average perceived WACC !!

Reason for this could be that:

- Executive are conservative;
- "Sticky hurdle rates" are not adjusted frequently;
- Serves are cushion for (too much) optimism.

ROIC and the ROIC/ WACC spread

Companies made a ROIC of 9.5% avg during 2009 – 2021 with a WACC of 6.9% avg.

And they made a ROIC of 9.2% avg during 1996 – 2008 with a WACC of 7.5% avg.

So they made a ROIC of about 50% – 60% of the hurdle rate they use.

So a lot of investments fail to earn the hurdle rate !

Still they manage to earn a positive ROIC/ WACC spread of 2.6% avg (2009 – 2021).

And a ROIC/ WACC spread of 1.7% avg (1996 – 2008).

CAPEX

Companies largely rely on the cash their companies make to fund their investments.

These investments can be internal, like CAPEX, working capital, R&D and intangible investments through selling, general and administrative expenses (SG&A) (basically NOT capitalising SG&A, intangible investments seen as expenses).

And these investments can be external, like M&As.

Investments, including CAPEX, M&A, R&D and non R&D SG&A, as a percentage of sales were:

- 24.5% avg during 2009 – 2021;
- 27.3% avg during 1996 – 2008.

This is counter intuitive to that lower interest rates lead to a higher investment activity.

These reflect total spending on these investments, but it is common to break up investments into "growth" & "maintenance" investments.

Proxies for maintenance investments include D&A (depreciation & amortization).

But the decline from "growth investments" from 12.7% to 9.5% was similar to the overall pattern mentioned above.

Partial conclusion:

Despite lower WACCs in 2009 – 2021, compared to 1996 – 2008, companies invested at a slower rate, and the ROIC/ WACC spread widened !

Aggregate IC (invested capital) grew at a 2.6% CAGR from 2009 - 2021, and 4.9% from 1996 – 2008.

Reasons for this could be:

- Decreased competition;
- Heightened governance.

Capital structure

Companies tend to settle their capital structure with less debt than (theoretically) ideal.

This because they are conservative.

The "debt to total capital ratio" for the Russell 3000, excluding financials and real estate, was in aggregate from 1996 – 2021:

- Average 21.6% from 2009 – 2021;
- Average 32.7% from 1996 – 2008.

Total capital is defined as the book value of debt + the market value of equity.

Also the "interest coverage ratio" (operating income over interest expense) went up from 5.5 times to 7.9 times.

This "de-leveraging" in a lower interest era is counterintuitive.

Also interest on excess cash is less, but also excess cash and marketable securities increased as a percentage of total assets.

This also is counterintuitive.

("excess" is seen as anything above 2% of sales)

Partial conclusion:

Companies place much higher emphasis on "financial flexibility" than on "interest rates" when deciding on their capital structure.

So they are conservative on both their capital structure, and level of excess cash.

The overall picture suggests that prevailing interest rates were not central to the choices executives made.

Share buybacks

The total shareholder yield; dividends + buybacks (net of equity issuance), divided by "market cap" rose to 3.8% on average from 2009 – 2021.

This from 2.6% on average from 1996 – 2008.

And buybacks were higher during 2009 - 2021.

Research shows that executives make financial decisions that stay away from ideal long term value creation for shareholders.

Instead they focus on maximising earning per share (EPS).

And the era of easy money (2009 – 2021) made buyback particularly effective for boosting EPS.

Another reason for it was offsetting the "dilution of EPS" from SBC (stock based compensation).

I hope this was helpful.

See you next week again with a new blog on Corporate Finance !

Best regards, Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, Cost of Capital and Capital Allocation – Investment in the era of easy money. February 2024. Michael J. Mauboussin & Dan Callahan.

The magic formula of valuation: The value driver formula !

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A Advisory (deals 5 to 100 million enterprise value) + Business Valuations + Valuation Training

Next training "Business Valuation & Deal Structuring" (5-day training) : 4th – 8th November 2024 @ Crown Plaza Hotel – Amsterdam South (Zuidas) – The Netherlands.

Source used - book: Valuation – Measuring and managing the value of companies. 2020 – 7th edition. Wiley/ McKinsey. Tim Koller, Marc Goedhart, David Wessels.

Introduction

The amount of value a company creates is governed ultimately by its:

- Return on invested capital (ROIC);
- Revenue growth;
- And ability to sustain both over time.

Keep in mind here that a company will create value ONLY if its ROIC is higher than its cost of capital.

In addition, ONLY if ROIC exceeds its cost of capital growth will increase company value.

When there is growth when "ROIC < cost of capital" then the company value is reduced !

In this blog we will find that:

- High ROIC companies typically create more value by focussing on growth, and,
- Lower ROIC companies create more value by focussing on increasing ROIC.

Relationship of growth, ROIC and cash flow

Growth, ROIC and cash flow are tied together mathematically by the following relationships:

Growth = ROIC * Investment rate

Cash flow = Earnings * (1 -/- investment rate)

Investment rate = growth / ROIC

So,

Cash flow = Earnings * (1 -/- growth / ROIC)

Generally a company's performance is described in terms of growth and ROIC.

Because you can analyse growth and ROIC across time and versus peers.

Let's now dive into the above relationships a little deeper !

The value driver formula

When you simplify some assumptions, like that:

- A company grows at a constant rate;
- A company maintains a constant ROIC.

Then you can reduce discounted cash flow valuation to a simple formula:

The "the value driver formula".

In this formula NOPAT (net operating profit after taxes) represents the net operating profit after tax.

G is the growth rate of a company.

And WACC (weighted average cost of capital) is the cost of capital.

The value driver formula goes as follows:

Value = NOPAT t=1 * (1 -/- g / ROIC) / (WACC -/- g)

By seeing this equation you can notice that value is driven by:

- Growth;
- ROIC;
- Cost of capital (WACC).

And please do not forget that improving ROIC, for any level of growth, always increases value !

This because it reduces the investment needed for growth.

Balancing ROIC and growth to create value

Value increases with improvements in ROIC.

This means that, ceteris paribus (all else equal), a higher ROIC is always good.

This because the company does not have to invest as much to achieve a given level of growth.

And this can NOT be said for growth !

When ROIC is lower that the company's cost of capital, then faster growth destroys value.

So when ROIC is lower than the cost of capital, growing faster means investing more at a value destroying return !

Sometimes the argument is heard that even low ROIC companies should strive for growth.

The logic then used is that if the company grows, ROIC will increase.

But this is only true for young (startup) companies.

For mature businesses a low ROIC simply means:

- A flawed business model;
- Operations in an unattractive industry.

Implications for practise

In general, companies already earning a high ROIC can generate more additional value by increase their rate of growth, than by increasing their ROIC further.

And low ROIC companies should better focus on increasing their ROIC first.

Until now we have assumed that all growth earns the same ROIC, and therefore generates the same value.

But this is not true, different types of growth earn different ROICs.

In other words, not all growth is "equally value creating".

For a typical consumer product company new products typically create most value for the shareholders, and acquisitions typically create the least value.

In between are:

- expanding an existing business,
- increasing market share in a growing market, and,
- competing for market share in a stable market.

At last, a company can increase ROIC by either improving profit margins (more NOPAT) or improving capital productivity (less invested capital).

Improving NOPAT has more effect on value than improving capital productivity (less invested capital).

Reason is that NOPAT improvements come back every year (in the free cash flow), while less assets only comes back once (in the free cash flow).

So less assets is a one time cash inflow, while increases in NOPAT come back every year.

The math of value creation

Invested capital represents the cumulative amount a business has invested in its core operations.

This is primarily PPE (property, plant and equipment) and working capital.

And "net investment" is the increase in invested capital from one year to another year.

Free cash flow (FCF) = NOPAT -/- net investment

ROIC = NOPAT / invested capital

The investment rate (IR) is calculated by:

IR = net investment / NOPAT

Growth (g) is the rate at which NOPAT grows each year.

Value = FCF t=1 / (WACC -/- g) (= value formula)

FCF = NOPAT -/- net investment

So:

FCF = NOPAT -/- (NOPAT * IR)

So:

FCF = NOPAT * (1 -/- IR)

G = ROIC * IR

So (solve for IR):

IR = g / ROIC

This implies that (build into definition of free cash flow):

FCF = NOPAT * (1 -/- g / ROIC)

And when you substitute this for free cash flow in the value formula, you get:

Value = NOPAT t=1 * (1 -/- g / ROIC) / (WACC -/- g)

Earning multiples and relation to growth & invested capital

It is possible to use the value driver formula to show that ROIC and growth also determine the multiples that are often used in valuation.

To see this divide both sides of the value driver formula by NOPAT, then you get:

Value / NOPAT t=1 = (1 -/- g / ROIC) / (WACC -/- g)

The new formula shows that "earnings multiples" are driven by both its growth and its ROIC !

I hope this blog was useful, see you next week again with a new blog on Corporate Finance (valuation + M&A) !

Best regards, Joris Kersten, Kersten Corporate Finance.

Source used - book: Valuation – Measuring and managing the value of companies. 2020 – 7th edition. Wiley/ McKinsey. Tim Koller, Marc Goedhart, David Wessels.

Financial Statement Adjustments for Valuation

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A Advisory (deals 5 million to 100 million enterprise value) + Business Valuations + Valuation Training

Source used - book: Valuation – Measuring and managing the value of companies. 2020 – 7th edition. Wiley/ McKinsey. Tim Koller, Marc Goedhart, David Wessels.

Introduction

In order to calculate ROIC (return on invested capital) and FCF (free cash flow) one needs to reorganise the financial statements.

This to calculate IC (invested capital) and NOPAT (net operating profit after tax).

And here ROIC = NOPAT / IC.

And FCF = NOPAT + non cash operating expenses -/- investments in IC.

When we go one step further we find that:

Operating assets (OA) = operating liabilities (OL) + debt (D) + equity (E).

Rearranged this means:

OA -/- OL = IC = D + E.

But there are also non operating assets (NOA) such as:

- Marketable securities;
- Prepaid pension assets;
- Non consolidated subsidiaries;
- Other long-term assets, etc.

And liabilities do not consist only out of operating liabilities and interest bearing debt.

But also out of debt equivalents (DE), such as unfunded retirement liabilities.

And equity equivalents (EE), like deferred taxes and income smoothing provisions.

So:

OA + NOA = OL + D + DE + E + EE.

Rearranged this means:

OA -/- OL + NOA = total funds invested = D + DE + E + EE.

For a company with debt equivalents and equity equivalents, IC no longer equals debt plus equity.

Since IC equals OA -/- OL.

Total funds invested equals IC + non operating assets.

And total funds equals D + DE + E + EE.

NOPAT & FCF

Interest is not subtracted from operating income, because interest is compensation for the company's debt investors.

So it is not an operating expense.

In other words, NOPAT is independent from capital structure !

Also with NOPAT exclude income generated from assets that were excluded from IC.

And also take out "one time items", like for example a major litigation, from NOPAT.

At last, interest and non operating items should be taken out of the taxes.

So take the hypothetical taxes from a pure operating company, with an all equity (no debt) capital structure.

And at last, FCF = NOPAT + non cash operating expenses -/- investments in IC.

IC

IC combines operating working capital (current operating assets -/- current operating liabilities), fixed assets (net property, plant and equipment (PPE)), and net other long-term operating assets (net of long term operating liabilities).

And when appropriate, intangible assets (goodwill, acquired intangibles, and capitalised software).

Operating working capital

Operating current assets include:

- Working cash balances;
- Trade accounts receivable;

- Inventory;
- Prepaid expenses, etc.

Specifically excess cash (cash greater than the operating needs of the business), and marketable securities are excluded.

Operating current liabilities include:

- Accounts payable to suppliers;
- Accrued salaries to employees;
- Prepayments of customers;
- Income tax to government, etc.

So if a liability is operating, rather than financial, it should be taken from operating assets in order to calculate IC.

Interest bearing liabilities are non operating and should not be netted against operating assets.

PPE

Some companies have significant investments in software they have developed for internal use.

Under certain restrictions these investments can be capitalized on the balance sheet.

Treat capitalised software no differently than PPE, and treat amortization as depreciation, and investments in capitalised software as CAPEX.

Only internally generated intangible assets, and not acquired intangibles, should be treated in this manner.

Acquired intangibles require special care and are discussed later.

Other operating assets, net of liabilities

A relatively large other long term assets account might include non operating items such as:

- Deferred tax assets;
- Prepaid pension assets;
- Non consolidated subsidiaries;
- Other equity investments, etc.

On the other hand, restricted cash can be treated as operating when cash must be set aside to secure third party guarantees.

Think of a distressed airliner that accepts credit card payments with payment insurance.

It maybe helps to not forget that operating assets mostly scale with revenues !

Long term liabilities might similarly include operating items, like for example a manufacturer that records long term customer advances within other liabilities.

But mostly these are non operating like:

- Unfunded pension liabilities;
- Unfunded postretirement medical costs;
- Restructuring reserves;
- Deferred taxes, etc.

Goodwill and acquired intangibles

ROIC with goodwill and acquired intangibles measures a company's ability to create value after paying acquisition premiums.

ROIC without goodwill and acquired intangibles measures the competitiveness of the underlying business.

To evaluate the effect of goodwill and acquired intangibles right, you need to make two adjustments.

First, subtract deferred tax liabilities related to the amortization of acquired intangibles.

When amortization is not tax deductible, accountants create a deferred tax liability (DTL) at the time of the acquisition. And this DTL is drawn down during the amortization period.

Reason is that reported taxes (in the commercial annual statements) are lower than actual taxes. (mostly amortization is not tax deductible)

Second, add back cumulative amortization and impairment.

And to maintain consistent, do not deduct impairments of goodwill, or amortization of intangibles from revenues to determine NOPAT.

This is the reason why NOPAT starts with EBITA (earning before interest tax and amortization) and not EBIT.

Computing total funds invested

IC includes the capital needed for the operations of a company.

But there are also non operating assets, like:

- Excess cash;
- Marketable securities;
- Receivables from financial subsidiaries;
- Non consolidated subsidiaries;
- Overfunded pension assets;
- Tax loss carry forwards, etc.

These assets need to be valued separately from the operations.

Excess cash and marketable securities

Excess cash is unnecessary for the core operations.

Companies with the smallest cash balances hold cash just below 2% of sales.

And you can use this as a first starting point !

So any cash above 2% from sales can be seen as a non operating asset, this as a first starting point.

Source used - book: Valuation – Measuring and managing the value of companies. 2020 – 7th edition. Wiley/ McKinsey. Tim Koller, Marc Goedhart, David Wessels.

The Total Shareholder Return (TSR)

Author: Joris Kersten, MSc

Kersten Corporate Finance: M&A Advisory + Valuations @ The Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring, 5 day training, yearly, next one: 4 – 8 November 2024 @ Amsterdam South (Zuidas). www.joriskersten.nl

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Total Shareholder Return: Linking the drivers of total returns to fundamentals. October 2023. Michael J. Mauboussin & Dan Callahan.

Introduction

Expectations about a company's future "free cash flow" should determine the value of its stock.

You can see the "total shareholder return" (TSR) over a period, as the change in the stock price + any cash the company paid to its equity holders.

TSR is the "capital accumulation" rate that investors earn when they reinvest all of their dividends into more shares.

So TSR = price appreciation of the stock + (1 + price appreciation) * dividend yield

So TSR is divided over:

- Price appreciation,
- Dividend, and the,
- Dividend reinvestment.

Price appreciation is again divided over:

- Earnings per share growth, and the,
- P/E multiple change.

And earnings per share growth is again divided over:

- Net income growth, and the,
- Change in net shares outstanding.

TSR for the S&P 500

The S&P 500 is an index that tracks the results of the shares of the 500 largest companies listed in the US.

For the period 2011 – 2021 the annual TSR was 16.6 % (see source I have used for this blog).

The following drivers contributed to the return:

· Net income growth: 6.7% + Reduction in shares outstanding: 0.7% = EPS growth of 7.4%.

· P/E multiples expansion: 6.9 %.

· Price appreciation = 7.4 % EPS growth + 6.9 % P/E multiple expansion = 14.3 %.

· The divided yield averaged 2 % and the dividend reinvestment 0.3 % (0.143 * 0.02).

· 14.3 % price appreciation + 2.3 % from dividend & dividend reinvestment = 16.6 % TSR.

So the contribution of each driver for the TSR is roughly:

· Earnings per share growth: 44 %;

· Multiple expansion: 42 %;

· Dividends & dividend reinvestment: 14 %.

Net income growth

Net income equals the EBIT (earning before interest and taxes) minus net interest and corporate tax.

A company's cost structure determines the "operating profit margin".

This is "operating profit" divided by "sales" (revenue).

The aggregate operating profit margin for companies in the S&P 500 is on average 14% during 2012 – 2022. (again, please see source I have used for this blog)

Here "operating leverage" is important.

Operating leverage is the "change in operating profit" as a function of "sales".

Companies with "high fixed cost structures" have a good "operating leverage".

This because the fixed costs are now divided over more sales, and this is a "leverage effect" in the operations.

The cost of debt

Interest shows up in the income statement.

Let's now take a look at the cost of debt for "BBB US corporate bonds" from 2008 – 2022.

BBB is the lowest rating that still qualifies as "investment grade".

The cost of debt (or expected return) starts with the yield on the 10-year US treasury note.

And then adds "inflation expectations" and the "credit spread".

The credit spread is the return bondholders demand over the treasury note to compensate for the risk.

S&P Global, one of the leading credit rating agencies, rates bonds globally.

About 75 % of the bonds are "investment grade" and "rating BBB" is the most common rating.

During 2012 – 2022 interest rates/ corporate bonds yields went down for the S&P 500.

In addition, many companies held cash, which resulted in interest income.

Moreover, the "debt to total capital ratio" went down.

So the "pre tax margin" (EBIT after net interest, but before taxes) went up for the aggregate of companies in the S&P 500 over the decade 2012 – 2022.

Corporate Taxes

From pre tax income the taxes are subtracted to get to net income.

Net income margins also increased due to a decreasing tax rate.

The decline in interest costs, and taxes, realised that companies in the S&P 500 grew their net income at a rate of 6.7 %.

But this in a time where their EBIT (operating profit) grew with only 5.6 %.

Interest, and tax, expenses went down from roughly 32% to 24% of EBIT.

This phenomenon is there since 1980 already, which has allowed "net income" to grow faster than "EBIT" over time.

Shares outstanding

Earnings per share is net income divided by shares outstanding.

Companies issue shares for:

- Mergers & Acquisitions (M&As) financed with equity;
- Stock based compensation (SBC);
- Equity offerings.

And companies retire shares through buybacks.

Since 2000 public companies in the US have issued less equity than they have retired.

From 2006 to 2022 equity financed M&A deals were the largest component of equity issuance.

This followed by SBC.

Then followed by "seasoned equity issuance" (SEOs), and this is just new shares that are issued.

This for example for CAPEX or R&D.

M&A and EPS

An M&A deal always adds to the buyer's EPS when its P/E is higher than that of the seller (target).

This is called "EPS accretion" !

So here the EPS rises, even when there are no financial benefits of putting the companies together !

Conversely, EPS always fall when the buyer's P/E is lower than that of the seller (target), in an all equity financed deal.

This because "you buy the earnings at a higher price", so with an all equity deal, you dilute !

But actually investors should NOT look at EPS accretion/ dilution, but instead focus on the real "economic characteristics" of a deal.

The simplest (good) way to look at the value creation potential of an M&A deal is:

- Estimating the present value of the synergies -/- the premium paid.

SBC (stock based compensation) & secondary offerings

SBC has risen from 0.2 % of sales in 2006 to 1.3 % of sales in 2022.

The percentage tends to be higher for smaller, and young companies, than for larger, and older companies.

M&A deals financed with equity, SBC, and seasoned equity offerings, all increase shares, and can cause "EPS dilution".

Share buybacks are a way to return capital to shareholders, and to reduce the number of shares.

But unlike dividends, which treat all shareholders equally, buybacks that occur at "any price other than the fair value", result in a "wealth transfer".

The decision to retire stock through buybacks, and issue stock through SBC, are often linked to each other.

This means that executives buy back shares to offset the dilution from SBC programs.

Overall, the shares outstanding for the participants of the S&P 500 shrank.

And this reaction contributed for 0.7 % to the TSR of 16.6 % during 2011 – 2021.

Value creation & EPS accretion/ dilution

Understanding equity issuance, or retirement of equity, can provide insights into the relation between "net income" and "EPS growth".

Technically, executives should invest only in opportunities where the "present value of the future cash flows" is expected to be higher than the cost.

So executives should maximise this "net present value".

However, in practise many executives focus on maximising EPS.

This also in relation to buying back stock, so they buy back stock in order to increase EPS.

But there is no evidence that increasing EPS through buybacks creates shareholder value !

On the other hand, the presumption that buybacks always increase EPS is wrong !

This because companies need to fund buybacks with debt or excess cash. So interest income will disappear, or new interest will appear.

Moreover, buybacks are also a function of the earnings yield (earnings / price).

When the earnings yield is higher than the (after tax rate) of interest, buybacks increase EPS.

So when the cost of debt is low, companies are more likely to issue debt for buybacks. Since then they increase EPS likely.

P/E multiple change

You can think of the value of a business as having two parts:

1. A steady state value, and,

2. The present value of growth opportunities (PVGO).

The steady state value assumes that a company can sustain it current earnings over time.

And the PVGO reflects whether future investments can earn a positive spread between ROIC (return on invested capital) and the WACC (weighted average cost of capital).

This since companies create value when ROIC > WACC.

As a rough estimate, about 2/3 of the stock market's price (S&P 500 from 1963 – 2023) is attributable to the steady state value.

And estimated about 1/3 is attributable to the PVGO. (Please see the source I have used for this blog)

The steady state P/E for the S&P 500 (1963 – 2023) fluctuated around 5.1 and 17.7 times.

And on average this is estimated 2/3 of the value, since estimated 1/3 comes from the PVGO.

This blog discussed TSR and its components:

· Price appreciation, Dividend, Dividend reinvestment, Earnings per share growth, P/E multiple change, Net income growth and Change in net shares outstanding.

I hope this blog gave you a better understanding of the concept TSR (total shareholder return).

See you next week again with a new blog !

Best Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Total Shareholder Return: Linking the drivers of total returns to fundamentals. October 2023. Michael J. Mauboussin & Dan Callahan.

4. EBITDA multiples in practise

A deep dive into EV/EBITDA and P/E multiples

Author: Joris Kersten, MSc

Owner Kersten CF: M&A advisory + Valuations at The Netherlands.
www.kerstencf.nl

Valuation training: 5 day valuation/ modelling training at Amsterdam (4th – 8th November 2024). www.joriskersten.nl

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, "Valuation Multiples: What they miss, Why they differ and the link to fundamentals", April 23rd 2024, Michael J. Mauboussin & Dan Callahan.

Introduction

The basis for value creation lies in the return on invested capital (ROIC), growth and risk.

Companies create value when their investments earn a return that is higher than the opportunity cost of capital (e.g. weighted average cost of capital (WACC)).

Higher growth generates higher value for firms that earn a return (ROIC) above the WACC!

So higher growth leads to a lower value when the "spread" is negative!

ROIC/ WACC spread = ROIC -/- WACC.

And growth has no impact on value for a company that earns (ROIC) the WACC.

With multiples, they provide NO direct impact into the magnitude of a firm's investments, or whether the assets make enough returns.

Multiples & Intangible assets

Another issue with multiples is that the major investments a company makes is on "intangible assets".

For example "customer acquisition costs" and "branding".

But companies often "expense" these investments in the income statement when they occur.

Accountants record these investments as "selling, general and administrative" (SG&A) expenses.

Or as "research & development" (R&D) expenses.

Both reduce the current earnings.

Matching principle

But in accounting there is the "matching principle".

This means that a company should match its expenses to revenues.

The three main expenses subtracted from revenue, to arrive at EBIT, are:

1. COGS (cost of goods sold);
2. SG&A;
3. R&D.

Within this perspective, research is done (see source used for this blog) among listed firms, listed from the 1960s to 2010s.

It was found (again, see source used for this blog) that COGS match revenues effectively for all companies.

But while SG&A matches revenues well for the cohort listed from 1960 – 1990, it practically "un-matched to revenues" for firms listed from 1990 – 2010.

The issue is "expensing investments", instead of "capitalising".

Multiples are supposed to reflect the magnitude, and return, of an investment.

But the shift to "intangible assets", and how companies record them in the financial statements ("expensing"), has made ROIC calculations problematic!!

The rise of intangible assets mean that:

- Earnings are understated (investments in P&L);
- Invested capital is understated (intangible assets not on balance sheet).

This weakens the signal that earnings & multiples provide, compared back to the old days when companies merely had capitalised tangible assets.

Partial conclusion:

Ideally accountants should match expenses to revenues well!

When this is not done for intangible assets, the CF analyst needs to clean NOPAT and invested capital.

In a later blog I will show how this is done.

P/E and EV/EBITDA multiples

P/E and EV/EBITDA multiples are the most popular multiples equity investors use.

But what do you do when two companies:

- have a similar P/E but a different EV/EBITDA multiple;
- have a dissimilar P/E but same EV/EBITDA multiple.

It is logical that the correlation between P/E and EV/EBITDA multiples is high.

But there are cases where two companies are close on one metric, and different on the other metric.

The P/E captures the relationship between the company's "equity market capitalization", and its earnings (or net income).

P and E are often expressed "per share".

The P/E is a "leveraged ratio" because it is measured after interest.

The EV/EBITDA multiple compares the firm's EV (enterprise value) to EBITDA.

EV = equity market cap + debt and other liabilities -/- cash.

And this multiple is "unlevered".

P/E is almost always higher than EV/EBITDA for a profitable company.

Reason is as follows:

- Imagine a company with no debt and no excess cash;
- Here P equals EV;
- And E will be lower than EBITDA;
- Because of tax, and non cash items are not added back;
- This results in higher P/E than EV/EBITDA.

This does not hold for a company with negative income.

Differences between P/E and EV/EBITDA

The differences between P/E and EV/EBITDA multiples come from:

1. The mix of tangible and intangible investments;
2. Differences in the capital structure;
3. Non operating expenses;
4. Tax rates.

First, as we have seen, COGS tend to match revenues for most companies.

COGS are the majority of total expenses for "tangible asset intensive companies".

But SG&A is much more prominent for "intangible asset intensive companies".

So actually, in order to get a consistent picture, intangible assets should be capitalised & amortised.

The result:

· Earnings and EBITDA will increase very little for "tangible asset intensive companies";

· Earnings and EBITDA will increase a lot for "intangible asset intensive companies".

So multiples have lost relevance because of the widening gap between earnings!

But it is good to note here that:

· Capitalisation of intangible investments does not affect "free cash flow".

Partial conclusion:

Keep using "free cash flows" for valuation alongside multiples. So do not forget DCF valuation + LBO analysis since they both use some sort of "free cash flow".

Capital structure

The second reason why P/E and EV/EBITDA multiples can differ is "capital structure".

The impact of changes in the capital structure on multiples is complex.

Imagine a company that is purely financed with equity and has no excess cash.

Now introduce debt.

The P of P/E will be unaffected since it reflects the value of equity only.

But E will go down because of interest.

So same P, and lower E, will increase the multiple, all else equal.

Concerning EV, adding debt increases EV, since it is equity + debt.

But is has no effect on EBITDA, since EBITDA lies above interest and taxes.

So here also EV/EBITDA will go up, all else equal.

Now our CF theory suggests that an optimal capital structure is reached, when the tax shield is maximised, taking the costs of financial distress into account.

And the pecking order theory of capital structure says on financing growth:

1. Start with cash generated internally;
2. Then go to debt;
3. And finally go to equity.

Companies with high ROIC often have sufficient cash flow from operations to finance their growth.

Companies with low ROIC often have insufficient cash flow to fund the business, and they need to use debt or equity.

As a result:

· Industries with high ROIC tend to have lower debt to capital ratios;

· Industries with low ROIC tend to have higher debt to capital ratios.

In addition:

· Companies with low ROIC tend to have D&A (depreciation & amortisation) that is a higher percentage of EBITDA, than companies with high ROIC.

This implies that the gap between P/E and EV/ EBITDA multiples is generally higher for low ROIC companies with lots of debt.

And this implies that the gap between P/E and EV/EBITDA multiples is generally lower for high ROIC companies with little debt.

Non operating expenses & tax rate

P/E and EV/EBITDA multiples can also differ as a result of non operating expenses from:

· Restructuring programs;

· Asset write offs;

· Reorganisations;

· Unrealised capital gains/ losses.

And at last, they can differ due to the tax rate.

EBITDA and the Depreciation Factor (DF)

When pricing equity with EV/EBITDA, you should know how much the D&A from EBITDA is.

D&A is an estimate for maintenance CAPEX.

So for two firms with the same EBITDA, the one with the higher EBIT will have more cash flow to distribute to the shareholders, and has a higher value.

The ratio of EBITDA over EBIT is called the EBITDA "depreciation factor" (DF).

For example, the EBITDA DF is as follows:

- Sector consumer discretionary = 1.3 (100% EBITDA/ 75% EBIT);
- Sector utilities = 1.8 (100% EBITDA/ 56% EBIT);
- Overall = 1.4 (100% EBITDA/ 70% EBIT).

And the amount of D&A is defined by:

- Capital intensity;
- Assumed asset lives;
- Level of acquisitiveness.

EBITDA DFs provide insight on the ROIC/ WACC spread:

- Companies with low EBITDA DFs commonly have positive ROIC/ WACC spreads (e.g. EBITDA DF under 2.0);
- Companies with high EBITDA DFs commonly have negative ROIC/ WACC spreads (e.g. EBITDA DF over 2.0).

This means that companies with low EBITDA DFs will have higher multiples, than companies with high EBITDA DFs, for a given rate of growth.

Amortisation

The amortisation of (acquired) intangibles has gone up from about 2% to 20% from D&A in the last 40 years.

Amortisation is (largely) the result of a company buying another company at a premium to the (tangible) book value.

This because the buyer revises the balance sheet from the seller, to reflect its tangible assets and intangible assets.

This is called purchase price allocation (PPA).

Intangible assets that arise from contractual rights, or other legal rights, that can be separated from a company must be amortised over its useful life.

This results in the amortisation of intangibles.

Then the rest of the "intangibles" that do not meet the right criteria are labelled as "goodwill" on the balance sheet.

Companies do NOT amortise goodwill, this must only be checked periodically to see whether the goodwill needs to be "impaired".

Amortisation from 2002

Since 2001 there is a change in accounting rules for business combinations.

Until 2001 companies could use one of two accounting methods:

- The pooling of interest method;
- The purchase method.

The pooling of interest method basically allowed companies to combine their balance sheets, so there was no need to record intangible assets.

The purchase method required companies to show the goodwill on the balance sheet, and to amortise it over a period up to 40 years.

But those options changed from 2002, and the FASB (financial accounting standards board) changed the rules so that the pooling of interest method could not be used anymore.

Also goodwill did not need to be amortised anymore.

From 2007 FASB introduced another change, which clarified what companies could see as "intangible assets" and what as "goodwill" (purchase price allocation).

As a result, intangible assets increased relatively to goodwill on balance sheets.

Conclusion

Summarised, it is great to look at multiples like P/E and EV/EBITDA.

But do not get lazy ! And keep focussing on the fundamentals as well !

The fundamentals are:

- Cleaned NOPAT;
- Cleaned invested capital;
- Cleaned ROIC;
- WACC/ risk;
- Growth;
- Free cash flow.

And realise that multiples (can) fail to consider:

- Investment needs;
- Correct matching of costs & revenues (expensing instead of capitalising intangibles);
- Gaps between P/E and EBITDA multiples.

Hope this was useful.

See you next week again with a new article,

Best regards, Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, "Valuation Multiples: What they miss, Why they differ and the link to fundamentals", April 23rd 2024, Michael J. Mauboussin & Dan Callahan.

EBITDA Multiples: How to avoid mistakes !

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory in The Netherlands, deals in all industries, 1m to 10m EBITDA, 5m to 100m enterprise value;

Valuation Training: 4th until 8th November 2024 @ Amsterdam South (Zuidas). Financial Modelling in Excel: DCF Valuation, LBO Modelling, M&A Modelling, EBITDA multiples, ROIC/ WACC, Adjusted net debt/ Equity Bridge/ Locked Box.

Source used: Bluemountain Investment Research, September 2018, Michael J. Mauboussin.

Introduction

Since the 1980s the investment community looks more and more at EBITDA.

(I was born in 1980, no sure whether that has something to do with this …)

EBITDA is a broad measure of cash flow, and indicates a capacity to invest and service debt.

EBITDA is also used a lot in DCF models, this in order to use an EBITDA multiple to calculate the terminal value. (instead of using "Gordon growth")

By the way, this is quite tricky, since a terminal value can take up to 70% of an enterprise value, as we know …

Enterprise value

With an EBITDA multiple we calculate enterprise value (EV).

This basically is the value of the core operations, excluding for example excess cash and non consolidated subsidiaries.

EV is also equal to:

- Short and long term debt, plus,
- Debt equivalents, less,
- Excess cash, less,
- Non operating assets, plus,
- Equity value.

All above in "market values" obviously.

EBITDA

EBITDA does not reflect interest, taxes or investments required to maintain the business, or to grow the business.

It also does not take growth of net working capital into account, CAPEX, and acquisitions. These are all investments.

And because EBITDA is not a GAAP measure, "adjusted EBITDA" is very popular.

Be careful here, some people just "adjust" (read: remove) all operating costs, LOL…

EBITDA limitations

EBITDA can be very helpful, and EV/ EBITDA multiples probably make better valuations than using operating profit.

BUT, you need to be very careful !

Since when you do not see depreciation, for example, as an expense, you are not very realistic about business.

Three pitfalls are:

1. EBITDA does not take investments into account;

2. EBITDA does not take business risk into account. Business risk = Operating leverage. In other words: Fixed costs can potentially be very dangerous when sales goes down (fixed costs stay, and they only "leverage" with high sales). You need to model (Eg DCF modelling, LBO modelling, M&A modelling) this business risk/ operating leverage, instead of just looking at EBITDA multiples;

3. Two companies with the same EBITDA and capital structure can have different "effective tax", this changes the EBITDA multiple, and should be modelled as well.

From theory to practise

The famous Modigliani & Miller tell us:

The value of the firm = The steady state value + future value creation.

Over the last 60 years roughly "two/ thirds" of the value of the S&P 500 price was attributable to the steady state value of the companies.

And the other "one/ third" to the future value creation of the companies.

Future value creation is dependable on 3 elements:

1. Finding projects with a positive spread between ROIC and WACC;

2. How much can you invest in the positive ROIC/ WACC spread projects;

3. How long can you find these positive ROIC/ WACC spread projects in a competitive world.

In case you are not familiar with ROIC (return on invested capital = NOPAT/ operating assets) > WACC = value creation. Than please check my former blogs !!

I have written a lot on ROIC/ WACC since it is one of the most important issues to understand when you work in M&A, valuations, and business in general !

The spread between ROIC & WACC

Investing in projects only creates value when the projects have a positive ROIC over WACC spread.

If the spread is zero (ROIC = WACC) than value creation is zero, and it can even become negative.

So concerning "Growth" (earnings growth = NOPAT growth) keep in mind:

1. Growth (of NOPAT) creates a lot of value, only when the spread is positive and large !
2. Growth (of NOPAT) has no effect when the spread is zero;
3. Growth (of NOPAT) destroys value when the spread is negative.

So with a WACC of 8%, and ROIC of 8%, then NOPAT growth of whatever percentage will keep your earnings multiple on for example 12,5 times.

But when your WACC is 8%, your ROIC 16%, then 4% NOPAT growth, or 10% NOPAT growth, can increase your earnings multiple from roughly 15 times to 22 times !

So focus on growing the ROIC/ WACC spread first, and only then NOPAT growth !

Cause with a negative spread, and growth, you earnings multiple will go down !

Summarised

When you work in M&A, you should not only look at EBITDA multiples.

You need to understand the core drivers of these multiples very well:

1. Incremental ROIC (return on invested capital);
2. WACC (weighted average cost of capital);
3. The ROIC/ WACC spread;
4. Expected NOPAT (net operating profit after tax);
5. Business risk ("Operating Leverage");
6. Capital structure;

7. Tax regime (effective tax rate);
8. Depreciation/ amortisation;
9. CAPEX & net working capital;
10. Terminal value (future growth after for example 5 years).

Using "free cash flows", instead of EBITDA, would be a good start !

This to build DCF models, LBO models and M&A models, on top of looking at EBITDA multiples !

I hope this blog was useful,

See you next time again,

Best regards, Joris

Source used: Bluemountain Investment Research, September 2018, Michael J. Mauboussin.

Article: Why is EBITDA so popular ???

Author: Joris Kersten MSc

Kersten Corporate Finance:

Joris Kersten (1980) buys and sells companies in The Netherlands with an enterprise value of in between 5 million and 100 million euro (SME market + mid market). Moreover he conducts lots of Business Valuations for all kinds of settings.

Introduction

Earnings before interest tax depreciation and amortisation (EBITDA) is used all over the globe for business valuation with for example M&As (Mergers & Acquisitions).

But why is EBITDA so popular ?

When we look at the profit & loss statement (P&L) of a company it all starts with revenue.

Revenue

Revenue is P * Q (price times quantity) of for example a product that you sell.

But we all know that there are costs involved: COGS (costs of goods sold) and OPEX (operating expenses).

And revenue minus COGS is the gross margin.

First, something funny happens with revenue, because so called "revenue recognition" applies.

This basically means that you can speak of revenue under certain circumstances, for example when you are sure the product is sold (even when the money is not paid yet).

So it is very important that you know for every company that you analyse when, and how, revenue is recognised.

This since this number comes up in the P&L (again, even when the money is not paid yet).

COGS

With product sales, at the moment when revenue is recognised, also the COGS need to be matched with the revenue recognised.

So when you can legally recognise the sales of 10 products (even when the money is not yet paid by the customer), you need to match the "buy in price" for the 10 products as well in the COGS (even when they are not paid yet to the supplier).

And what is left is called the gross margin !

And by the way, this matching of costs is called the "matching principle".

So be careful, it is possible that money is not yet paid by the customers, and it is possible that the company has not paid their suppliers either.

Gross margin

Another thing with gross margin is that depending on how cost price is set (variable costing or absorption costing), more or less costs can be taken up in the COGS, which will result in hard to compare gross margins of different companies.

Some take up additional costs in the COGS, and other companies take them in the SG&A (sales, general and administrative expenses).

So revenue misses the important involved costs (COGS + OPEX), and gross margins are difficult to compare because cost prices are calculated differently.

SG&A

Out of the SG&A we need to clean D&A (depreciation and amortisation).

Depreciation is writing down tangible assets and amortisation is writing down intangible assets.

We call these costs, but no cash outs, so we want to neglect them (for now), because D&A is a bookkeeping concept.

Gross profit minus (SG&A -/- D&A) = EBITDA.

At EBITDA basically the most important costs are taken in the form of COGS and OPEX (SG&A).

So EBITDA seen as a percentage of revenue really tells something about the operating efficiency of a company !

Again, be careful, the matching principle also applies for SG&A, so some costs are matched in the P&L (so also in EBITDA), but they might not be paid yet !

EBIT

We can still go further down to EBIT, and here we take the D&A from EBITDA.

But the problem with D&A is that it is still subjective, because it is set by the board (although signed off by the auditors).

And on top of that D&A is a cost but not a cash out (is has a little effect on corporate tax do).

So basically at EBIT we are down one step too far.

EBT

EBIT minus interest is EBT (earning before tax), but here interest comes into play.

And we do not like interest !

Because interest has to do with capital structure, and capital structure is a decision of the board, and it has not much to do with the operations.

Net income

Here it becomes even worse, because here also tax has been deducted.

But the amount of tax paid is also a decision of the board.

Companies have an "effective tax rate" (ETR) depending on how much tax optimalisation they are tolerating, again this has not much to do with operations.

EBITDA

So maybe you now start to understand that EBITDA is the "least bad" line in the P&L.

I consciously say "least bad", because EBITDA says nothing on:

-When customers pay, and when suppliers and stakeholders get paid (net working capital);

-How, and when, capital expenditures (CAPEX) are done;

-With how many assets this EBITDA is made;

-A normal level of corporate tax, and interest, that always needs to be paid.

5. Cleaning/ Adjusting the financial statements

EBITDA and intangibles: Improving financial statements

Author: Joris Kersten MSc

Kersten Corporate Finance: M&A Advisory Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring, 5 days, Amsterdam, 4th – 8th November 2024. www.joriskersten.nl

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, Intangibles and earnings: Improving the usefulness of financial statements. April 2022. Michael J. Mauboussin and Dan Callahan.

Introduction

In recent decades the ability to interpret financial statements has been complicated by the shift from tangible to intangible investments.

Tangibles investments are for example factories or trucks.

And intangible investments are non physical and include for example brand building or employee training.

Accountants primarily reflect intangible investments in the income statement.

And intangible investments are only recorded on the balance sheet, and amortised in the income statement, following an acquisition.

A sensible solution to this challenge would be to capitalise investments from the income statement.

And to amortise them over their useful lives.

But the question is what items from the income statement need to be capitalised?

And what is the useful live of these investments?

Overall it is estimated that capitalising these investments right, would raise earnings of the S&P 500 for about 12%. As a source, please consult the source I have used for this blog.

Accounting and valuation

Valuation techniques that are often used are P/E ratios (price vs. earnings) and EV/ EBITDA multiples (enterprise value over EBITDA).

When intangible investments are taken up in the SG&A expenses, instead of in CAPEX, this does not affect free cash flow.

Free cash flow is the yearly full cash out, so whether you have investments in the expenses, or in the CAPEX, free cash flow = free cash flow.

So with discounted cash flow valuation (DCF) there is no problem.

Only be careful with your terminal value, so keep using the "gordon growth" formula, and NO EBITDA exit multiple.

And then you are just fine.

Multiples on earnings

With multiples on earnings, this could potentially be dangerous.

Multiples, like EV/ EBITDA, are heavily used all over the globe.

When intangible investments are in the expenses, and not in CAPEX, your EBITDA is too low.

And this results in an artificial high EV/ EBITDA multiple.

The impact of intangibles on earnings

In order to clean the EBITDAs and profits correctly, we need to judge for every target what percentage of SG&A is an investment.

And what the appropriate asset life is.

By the way, for all the "comparable companies" and "precedent deals", for EV/ EBITDA multiples, technically you should do the same.

To be honest, I am not there yet, but I find this topic very interesting, so will write a lot more on this! (when time permits)

Concerning SG&A, it should be separated in two parts:

-Main SG&A = SG&A -/- R&D;

-R&D.

Research

Most researchers have historically seen all of R&D expenses as intangible investments.

Again, please see the article I have used as a source for this blog, for the research meant here.

Their analysis also finds that between 0 and 80% of "main SG&A" is an investment across the range of industries.

With an average of 54%.

And they estimate that a range of 7% to 98% of R&D expense is an investment.

With an average of 76%.

And concerning the asset life.

Tangible assets have an average life of around 10 years.

Concerning SG&A that is actually an intangible investment, we need an asset life for its amortisation.

The researchers found that useful lives for "Main SG&A investments" would be 0.25 to 5 years.

With an average of 3.3 years.

And they found that the useful lives for R&D investments range from 0.5 to 7 years.

With an average of 4.4 years.

Growth

Finally, we need to estimate growth in these type of SG&A investments.

Because ONLY when there is growth, it will have differences in the timing between the removed expenses, AND the added depreciation.

So growth opens the gap between the current investment expensed, and the amortization of past investments.

This was it for now, I hope this blog was helpful.

For me this is a very interesting topic, and a new and better way to clean EBITDA. And the EBITDAs of "comparable companies" and "precedent deals".

It definitely caught my attention, and I will write a lot more this (when time permits).

See you next week again, with a new blog, best regards Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights, Intangibles and earnings: Improving the usefulness of financial statements. April 2022. Michael J. Mauboussin and Dan Callahan.

Adjusted Return on Invested Capital (ROIC)

Author: Joris Kersten MSc

Kersten Corporate Finance: M&A advisory & Business Valuations @ The Netherlands. www.kerstencf.nl

+ Once a year I provide a 5 day valuation & deal structuring training. 4 – 8 November 2024 Amsterdam. www.joriskersten.nl

130 references on my training: https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley Investment Management, Counterpoint global insights. ROIC and intangible assets: A look at how adjustments for intangibles affect ROIC. November 2022. Michael J. Mauboussin & Dan Callahan.

Introduction

As an M&A analyst you need to understand how a business works, and what its prospects are, in order to understand potential future cash flows.

Core to that is an assessment on how much a company invests, and the return those investments likely earn.

This because companies create value when the return of their investments is higher than the "opportunity cost of capital" (WACC).

ROIC (return on invested capital) is a great way to measure whether a company's earnings are enough, relative to its invested capital.

ROIC measures NOPAT (net operating profit after tax), as a percentage of invested capital.

NOPAT is the firm's cash earnings (sort of), independent on how the company financed their operations.

And invested capital (IC) is an estimate of how much capital the company needs for a certain NOPAT.

And now here it comes:

-The spread between ROIC and the company's cost of capital (WACC) provides insight on whether a company is creating value;

-Value creation = (ROIC -/- WACC) > zero

Problem with ROIC

Intangible assets are generally NOT capitalised (expensed in income statement instead of put on the balance sheet).

This should be adjusted manually.

The adjustment takes part of SG&A expenses (selling, general & administrative), and reclassifies them as an investment.

Due to this adjustment:

-NOPAT goes up (costs are taken out of the income statement and are capitalised + amortisation is put back. Result is positive when growth is there);

-IC goes up (more assets are put on the balance sheet).

Please note, this reclassification does not affect DCF valuation, since free cash flow stays free cash flow.

Reason is that free cash flow contains both expenses and CAPEX.

BUT, the reclassification provides a more accurate view of profits and investments.

Adjusted ROIC

The median ROIC for the Russel 3000, excluding the financial sector and real estate sector, is during 1990 - 2021 8.84%.

And adjusted for intangible assets in SG&A expenses: 8.96%.

(see source I have used for this blog for the data)

So the adjustments do not move the median very much.

But, the buckets with the lowest ROICs, and the buckets with the highest ROICs, have fewer companies in them after the adjustments.

The low return bucket of the sample goes from 8% with the traditional calculation (no capitalisation of intangibles) to 4% after the adjustment.

And the high return bucket goes from 11% with the traditional calculation to 8% after the adjustment.

We are talking about a % of the sample companies here.

So this shows that the adjustments for intangibles push the outliers toward the average.

And this reduces the dispersion relative to the traditional calculation (no capitalisation of intangibles).

(see source used for this blog for the data)

Partial conclusion

For companies with high ROIC:

-The adjustment to NOPAT is less significant than that for invested capital. As a result, the adjusted ROIC is pulled down.

For companies with low ROIC:

-The adjustment to NOPAT has more impact than that for invested capital. This lifts the adjusted ROIC.

Aggregate ROIC

The aggregate ROIC, of the Russel 3000, 1990 – 2021, is total NOPAT divided by total average invested capital, for each year.

This excluding "financials" and real estate companies.

The average annual return is 9.4% (unadjusted), and 9.1% when adjusted for capitalising intangible assets.

Traditional ROICs are also less volatile (lower standard deviation) than adjusted ROICs.

Adjusting for intangible investments has a larger effect on some industries than others.

The mix between tangible investments, and intangible investments, determines the magnitude of the impact.

Capitalising intangible assets lifts the ROIC, and reduces the range of outcomes for industries that rely heavily on intangible investments.

And the impact is modest for industries that do not spend much on intangible assets.

For example, ROICs are higher after the adjustments for industries like: Biotechnology, internet software & services, and internet & catalog retail.

Other industries, like utilities, see very little change after the adjustments.

ROIC and competitive advantage

Decomposing ROIC can also provide insights on the source of competitive advantage.

A company with an attractive level of ROIC, earned by a high NOPAT margin, often does this by pricing its goods/ services at a premium.

This is a differentiation strategy.

And a firm that earns a high ROIC by having high "invested capital turnover" (sales / IC), can provide its offerings at a relatively low price. Since invested capital turnover is a measure of capital efficiency.

This is a cost leadership strategy.

Now let's go back to the overall conclusions.

Conclusions

-Median and aggregate ROICs for adjusted numbers (after capitalising intangibles) do not differ much from the traditional numbers (without capitalising intangibles);

-The big difference is that the numbers have less dispersion after the capitalisation of intangible assets;

-The adjustments for intangibles lowers the ROIC for high ROIC companies;

-The adjustments for intangibles raises the ROIC for low ROIC companies;

-Free cash flow stays free cash flow, since they contain both costs & CAPEX. (so keep using DCF & LBO models, AND be careful with multiples (EBITDA looks like NOPAT))

I find this topic very interesting, and I believe still a lot needs to be done in order to clean the numbers better!

The people who read my blogs know that I am a big fan of Michael J. Mauboussin & Dan Callahan.

They write about this topic (intangibles) a lot, and I strongly advise you to start reading their work (like the source I have used for this blog), when you work in M&A or Corporate Finance. Knowledge is power & better deals.

That's it for today, see you next week again with a new blog !

Best Joris

Source used: Morgan Stanley Investment Management, Counterpoint global insights. ROIC and intangible assets: A look at how adjustments for intangibles affect ROIC. November 2022. Michael J. Mauboussin & Dan Callahan.

Cleaning the Cash Flow Statement

Author: Joris Kersten MSc

Kersten Corporate Finance: M&A advisory + Business Valuations @ The Netherlands. www.kerstencf.nl

Vacancy @ Kersten CF: Sr. M&A Analyst/ (Sr.) M&A Consultant (3 – 7 years M&A experience/ fluent in Dutch). You need to be fluent in Dutch. DM me for more info (only when you are fluent in Dutch).

1 time a year I provide a 5 day Business Valuation training @ Amsterdam. Next one: 4th – 8th November 2024. www.joriskersten.nl

130 recommendations on training: https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Categorising for clarity: Cash flow statement adjustments to improve insights. October 2021. Michael J. Mauboussin & Dan Callahan.

Introduction

A statement of cash flows classifies cash inflows and cash outflows in 3 categories:

-Cash flow from operations;

-Cash flow from investing activities;

-Cash flow from financing activities.

The cash flow statement is a relatively new accounting statement and is required in its current form since 1988.

In order to be able to analyse the cash flow statement (CFS) better, it needs to be "cleaned" on 4 components:

-Stock based compensation (SBC);

-Leases;

-Intangible investments;

-Purchases & sales of marketable securities.

Stock based compensation

Using equity to pay employees is relatively new.

For a long time Stock Based Compensation (SBC) did not show up as an expense in the income statement.

Since 2006 expensing SBC is compulsory under U.S. GAAP (U.S. general accepted accounting principles).

But even as the issue of expensing SBC on the income statement was solved in 2006, accountants still add back SBC expenses in the cash flow statement from operations.

But SBC is a legitimate expense, that should not be reversed in the CFS !

Let's take a look at SBC in a little more detail.

Basically SBC can be seen as one number, reflecting 2 transactions:

-The company first sells shares (financing);

-And then uses the proceeds to pay employees (compensation for service).

So SBC sits correctly in the income statement (under US GAAP) since 2006.

But from the CFS, it manually needs to be removed from the cash flow from operations to the cash flow from financing activities.

Leases

A company that invests in a physical asset can generally buy it or lease it.

A lease is a contract by which the lessor agrees to let the lessee use the asset.

This for a specific period.

And in return for a periodic payment.

The assets that a company purchases show up in the cash flow statement from investing activities.

While assets that are leased are reflected in the cash flow from financing activities.

The adjustment here is to move the property and equipment acquired with leases from the cash flow statement from financing activities, into the cash flow statement from investing activities.

Intangible investments

The most significant adjustment deals with intangible investments.

Companies nowadays invest much more in intangible assets than in tangible assets.

Intangible assets include employee training, brand building, software code etc.

Tangible assets include factories, machines etc.

It is estimated that companies in the Russel 3000 made investments in intangible assets of 1.8 trillion USD in 2020. And 900 billion USD in tangible assets in 2020.

Accountants record most intangible investments in the income statement (expensing instead of capitalising).

The essential adjustment is to move them (intangible investments) to the cash flow statement from investment activities, this out of the cash flow statement from operating activities.

Because net income sits under the operating cash flow as the 1st line. And net income is influenced by "expensing".

The analytical challenge is to separate SG&A expenses into "investments", and what is needed to maintain the business.

The split between "investment SG&A" and "maintenance SG&A" is different based on the industry and the company.

Marketable securities

A final potential adjustment in the CFS is to consider marketable securities as part of cash & cash equivalents.

This affects the cash flow from investing activities since they are then taken out from here.

And the result is that the statement of cash flows will have larger beginning and ending sums.

Hope this was useful. See you next week again with a new blog !

Best Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Categorising for clarity: Cash flow statement adjustments to improve insights. October 2021. Michael J. Mauboussin & Dan Callahan.

6. M&A Dealmaking in practise

M&A deals and the Non Disclosure Agreement (NDA)

Author: Joris Kersten MSc

Kersten Corporate Finance: M&A Advisory @ The Netherlands. www.kerstencf.nl

Valuation training: Business Valuation & Deal Structuring – 5 day training – 4th until 8th November 2024 at Amsterdam South. www.joriskersten.nl

Source used: Make the deal – Negotiating Mergers & Acquisitions. Christopher S. Harrison. 2016. Bloomberg Press/ Wiley.

Introduction

In almost any M&A deal a buyer will require access to non public information of a target.

This is so called "due diligence" and this to figure out unexpected information regarding the target.

And its structure, liabilities and its prospects, and to conduct financial analysis.

To accommodate both the buyer and seller, the target normally provides diligence information.

And this on the condition that the buyer agrees not to disclose it to third parties.

And not to use it for any purpose other than to evaluate the M&A deal at hand.

Restriction on disclosure

Confidentiality agreements restrict the buyer from disclosing confidential information to third parties.

This is the core element of the contract.

Normally an exception allows confidential information to be disclosed to "representatives" of the buyer.

And these can include for example the bidder's internal personnel.

And external agents, such as: Corporate Finance (M&A) advisors, lawyers and accountants.

This leaves everybody else a third party.

Restrictions to use

The use of confidential information by the buyer is also restricted by confidentiality agreements.

Consider what a potential buyer can do with the target's information if there were no restriction on its use.

For example, the potential buyer could use it to compete with the target in the future.

However, enforcing a restriction to use can be challenging in practise.

Definition of confidential information

The use restrictions, and disclose restrictions, broadly apply to all the "confidential information".

These "confidential information terms" generally start with a broad definition.

Covering all information related to the target business provided by the seller to the buyer, whether or not it is confidential.

The definition generally covers oral as well as written disclosures.

"Generally known by the public"

Information that becomes generally known by the public is normally excluded from the definition of confidential information.

For example, the financial press or trade journals can report facts about the target's business.

Then there is no longer the justification for the seller to restrict the buyer from using that public information.

This since other competitors or third parties could use it as well.

Already in the buyer's possession or received from an appropriate third party

Information already in the buyer's possession, or which later received from an (appropriate) third party, is often excluded from the "definition of confidential information".

So if the bidder learns information about the target through legitimate means, outside of the diligence process, then that information often stays outside reach of the NDA (non disclosure agreement).

Independently developed by the buyer

Information that the buyer separately develops may also be excluded from the NDA.

For example, a buyer can learn about the business technique from a seller.

But the buyer's internal R&D team is busy independently developing a similar technique.

Then the fact that the buyer's team also learned from the seller will not stop the buyer from using its own internally developed version of that technique.

Of course, this is a potential risk for seller.

So what we see in practise is that the most sensitive information of the deal is often withhold to a (very) late stage of the deal.

And sometimes it is only disclosed after the closing.

Disclosures required by law

NDAs permit the buyer to make legally required disclosures.

Procedural rights protect the target from inappropriate decisions by the buyer about what is required to disclose.

So the seller should be noticed first on the potential required disclosures.

Return or destroy

After a deal has died, the potential buyer no longer needs the confidential information.

The target can require the potential buyer to return the information to the target.

Or to destroy all physical and electronic forms of the confidential information.

When "archived material" is excepted in the NDA, the target may wish to clarify that the retained records may be accessed only by IT personnel.

Expiration of the confidentially agreement

Most NDAs expire after 2 to 5 years.

And this means that the key restrictions on use, and disclosure, no longer apply after that time.

Source used: Make the deal – Negotiating Mergers & Acquisitions. Christopher S. Harrison. 2016. Bloomberg Press/ Wiley.

Key provisions of M&A deals

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

M&A Advisory + Valuations. www.kerstencf.nl

5-day training "Business Valuation & Deal Structuring" – 4th until 8th November 2024 @ Amsterdam. www.joriskersten.nl

Source used: Make the deal – Negotiating Mergers & Acquisitions. Christopher S. Harrison. 2016. Bloomberg Press/ Wiley.

Introduction

This blog is about the key provisions taken up in M&A transactions.

I will mention a few, and will then explain them in more detail.

"No poach" provisions

Through the diligence process the buyer will get to know the target's key employees.

They can identify the ones who have talent and significantly contribute to the business.

If the buyer does not get the deal it may be relatively easy for the buyer to poach core employees from the target.

This potentially for competing activities with the target.

To address this risk, target companies will often include a "non solicitation" or "no hire" provision in the non disclosure agreement (NDA), or later in the letter of intent (LOI).

A "no hire" provision prohibits the buyer from hiring the covered employees.

And a "non solicit" provision prohibits the buyer from soliciting them for employment.

Exclusivity agreements

Exclusivity agreements give the potential buyer time to finalize the deal.

And the target agrees not to negotiate with other potential buyers.

Buyers invest significant time and money into the due diligence.

This before they are in a position to negotiate, and sign, a share purchase agreement (SPA).

So a buyer may be reluctant to risk wasting time & money on a target who is negotiating with other parties as well.

But be careful here, because for the target exclusivity can potentially harm its ability to get the best price and conditions for the deal.

This because there is less competition in the M&A process due to exclusivity.

Exclusivity period

Exclusivity expires at the end of a short, and defined, period.

This is negotiated between buyer and seller.

The exclusivity period is designed to be long enough to complete the M&A process. And to negotiate the deal.

Without locking up the target for unnecessary time periods.

And the time period varies depending on the parties desire for speed, and the complexity of the due diligence (DD) and the M&A transaction documentation (like the SPA).

In this case, targets may use tight periods in order to put pressure on the buyer to keep working hard on the deal.

And to keep the focus on the deal since this is in practise often challenging (since also "normal" business continues).

Obligation to negotiate in good faith

Some exclusivity agreements obligate the parties to negotiate in good faith during the exclusivity period.

This when the parties have already reached a basic agreement about the (financial part) of the deal.

A buyer may want to have this provision taken up, because then the intention is there for getting the deal done.

And this should be done through a normal M&A process.

On the other hand, the seller could be reluctant for this provision.

Because when they do not continue with the deal, they could get a liability for the failure to keep negotiating.

No obligation to execute definitive documentation

Even when the target is obliged to negotiate in good faith, it is not obliged to take the final step.

This to actually sign the definitive transaction documentation.

So, an exclusivity agreement may require the parties to negotiate towards acceptable terms.

But it does not require the parties to actually agree on those terms!

Just to be sure, in most cases there is an additional provision confirming that the parties are not obliged to enter into definitive agreements.

Scope of damages

When it comes to exclusivity, it is hard to measure damages for breach of the contract.

So to some extent this limits the legal value of the contract.

Although it may still have real value, because the target will want to avoid any lawsuits, so they will do their best in the negotiations.

Term sheets

Letters of Intent (LOIs), memoranda of understanding (MOUs) and term sheets establish the key terms of M&A transactions.

They have a benefit of reducing legal costs at a point when it is not clear whether the parties will reach agreement on the fundamental terms of a deal.

I am from The Netherlands and involved in non public (private) M&A transactions.

Potential buyers will first receive an Information Memorandum (IM) with all the core info on the target and the deal process.

And before they get access to a full blown due diligence (DD) we often negotiate the deal on main points in a Letter of Intent (LOI).

This on for example enterprise value (EV), and on for example the definition of adjusted net debt (cash & debt free) and the further process and time line.

And when the LOI is signed, the DD can start, and at the same time (or just a little later) the SPA negotiations start.

Non binding

LOIs, MOUs and term sheets are typically intended to be non binding.

So when this is the case, it needs to be explicitly stated that the parties do not intent to be legally obligated to sign or close the transaction!

Absent clarity on this issue would potentially mean that this needs to be determined through litigation.

Nowadays in practise M&A lawyers will make it clear on the face of LOIs, MOUs and term sheets that these documents are non binding.

This in order to avoid discussion, and potential litigation.

Hope this was useful.

See you next week again with a new blog. The topic then will be:

-Representations in the share purchase agreement (SPA).

Regards Joris

Source used: Make the deal – Negotiating Mergers & Acquisitions. Christopher S. Harrison. 2016. Bloomberg Press/ Wiley.

M&A and the Letter of Intent (LOI)

Author: Joris Kersten, MSc

Kersten Corporate Finance: M&A advisory, and valuations, at The Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring (5-day training), 4th – 8th November 2024 @ Amsterdam. www.joriskersten.nl

Source used: Closing the deal, Jacob Orosz, Morgan & Westfield.

Introduction

The major characteristics of a Letter of Intent (LOI) in M&A are:

- The non binding character;
- It is a moral obligation;
- If offers (often) exclusivity for a buyer;
- Limited information is offered at this moment in time;
- Contingent on Due Diligence (DD).

Within an LOI there can be many undefined terms, like:

- Working capital in the purchase price;
- Exclusivity period;
- Holdback (to what extend, in relation to purchase price);
- Purchase price itself, including structure.

Concerning undefined terms, be careful here as a seller.

This since buyer will draft the final purchase agreement, so these undefined terms will be translated first into the advantage of the buyer.

A tip is here for the sellers to define as many terms as possible in the LOI.

Moreover, the exclusivity period should be kept as short as possible for a seller.

This since you loose negotiation power here.

Overall, for seller it works best to carefully negotiate the LOI with as many defined terms as possible.

And then later rush to close the transaction (when the LOI is signed).

But do NOT rush into an LOI.

Content of an LOI

Here are some examples:

- Purchase price and terms;
- Share deal vs. asset deal;
- Seller's role and compensation;
- Potential financing contingency;
- Due diligence process;
- Exclusivity;
- Deadlines for milestones;
- Holdback obligations of the purchase price;
- Allocation of the purchase price (accounting wise);
- Covenants (what to do, and not to do, during the time prior final closing and signing LOI).

Concerning the purchase price, it is important to mention whether the working capital is included or not.

In most share deals (I am from The Netherlands) working capital is concluded, but then for a "normal level" (e.g. last year's average).

A good definition can be taken up in the LOI, but most important components of working capital are account receivables, inventory and account payables.

Again, take some time to work out the exact definition of (net) working capital, and it's average level.

For the rest, the following components are often included in the purchase price (with both a share deal and asset deal):

- The operating assets needed for day to day business;
- Covenant not to compete;
- Name and website;
- Business and financial records;
- Trade secrets;
- Licences and permits;
- Assumption of product warranties.

Real estate and land is often dealt with separately.

Ideally the LOI should contain a list of milestones like:

- The proposed closing date;
- The expiration date of the due diligence;
- Deadline for submitting the commitment letter from the lender;
- Deadline for the first draft of the purchase agreement;
- A deadline for signing the purchase agreement.

Best practices for sellers

With an eye on the seller, take the following issues into account:

- Limit the exclusivity period;
- Include milestones and deadlines;
- End exclusivity when "re-trading" occurs.

Other components that can be take into account:

- Allocation of the purchase price (this can have tax effects);
- Legal form of the transaction (this will have a tax effect);
- Escrow (holdback of the purchase price);
- Representations & warranties (mentioned relatively "light" in the LOI);
- Conditions/ contingencies;
- Covenants;
- The Seller's role;
- Termination of an LOI (e.g. break up fee).

With my deals, in most cases, the M&A lawyer will be involved when the LOI negotiations start.

Here the M&A advisor (corporate finance) will take care of the overall, and economic, issues in the LOI.

And the M&A lawyer will look at the legal aspects, this is a joint effort.

At last, of course a tax lawyer, or sometimes the house accountant, will be consulted for the tax issues.

Hope this gave you a better understanding of LOIs in M&A. Best regards, Joris

Representations, warranties and indemnities in M&A

Author: Joris Kersten, MSc

M&A Advisory + Valuation @ The Netherlands. www.kerstencf.nl

Business Valuation & Deal Structuring Training (5 days). 4th – 8th November 2024 @ Amsterdam. www.joriskersten.nl

Source used: Closing the deal, Jacob Orosz, Morgan & Westfield.

Introduction

The most heavily negotiated components of an M&A deal are:

- Purchase price;
- Terms of the vendor loan;
- Post closing price adjustments (e.g. net working capital adjustments);
- Size and length of the escrow;
- Contingent payments, such as earnouts and escrows;
- Terms of employment/ consulting agreements post deal;
- Allocation of the purchase price (accounting wise, in relation to tax);
- Survival period, knowledge and materiality qualifiers of the "reps & warranties";
- Caps, baskets and survival period of the "indemnities";
- Conditions to closing like MAC (material adverse change).

"Reps and warranties" are promises and disclosures made by each party.

This serves as an "insurance" for each party if a representation later proves to be untrue.

If you aren't 100% sure regarding a representation, that representation should contain a knowledge qualifier ("to the best of seller's knowledge").

Exceptions to the reps & warranties should be taken up in the "disclosure schedule".

And reps & warranties should expire after a certain (negotiated) time period.

The amount of "indemnification" is limited by baskets/ minimums and caps/ maximums.

And the purchase agreement contains "contingencies" when it's signed before closing.

"Contingencies" are events that must occur before a closing can take place. Such as "financing" or "landlord approval".

Representations & warranties: A little more detail

Reps and warranties are legal promises made by both the seller and buyer.

Reps and warranties serve as the buyer's basis for future lawsuits under the "indemnification" clause.

A "representation" is technically a statement of a fact (e.g. corporation is duly authorised).

And a "warranty" is a promise that a fact will remain true (e.g. business has operated in compliance with law).

But in practise reps & warranties are grouped together in one (same) section of the purchase agreement.

Reps & warranties protect the buyer from material misrepresentations or fraud.

These protections include:

- Reps & warranties;
- Indemnification;
- Escrow and holdbacks.

The reps & warranties that are signed in the purchase agreement survive the closing when you sell your business.

Here you indemnify the buyer, and a breach of a representation would be subject to indemnification.

So you will remain liable for a significant period after the closing, if any of the reps or warranties are breached or found to be inaccurate.

Note, representations should primarily cover past events.

Scope of the reps & warranties

You can minimise the potential scope of the reps & warranties by:

- Hiring an experienced negotiator (M&A advisor) to undertake the negotiations;

- Line up as many buyers as you can, this will enhance your negotiation position;
- Undertake a vendor due diligence (DD by the seller itself, upfront) to address potential problems;
- Behave trustworthy at all times, from the beginning on.

And exposure on the reps & warranties can be reduced as follows:

- Insurance for reps & warranties;
- Knowledge qualifier use ("to best of knowledge");
- Materiality qualifiers (use baskets/ thresholds);
- Survival periods (time limitations);
- Indemnification caps (set limits);
- Shareholder liability (pro rata per shareholder).

Indemnification

The indemnification section in the purchase agreement requires parties to indemnify one another for breaches of representations, warranties, covenants and other types of claims that may arise post closing.

The value of the indemnification depends on the financial strength, and creditworthiness, of the party providing the indemnification.

In most deals a part of the purchase price is withheld by a third party in an escrow account.

This to fulfil any post closing indemnification obligations.

And this mitigates any impact from a not very creditworthy seller.

Concerning indemnification in the purchase agreement, this specific section addresses the following components:

- Parties (who exactly provides the indemnification);
- Scope (what specifically does the indemnification cover);
- Remedies (are other remedies available?);
- Survival period (time period for representations, warranties, covenants and other obligations to be in place);
- Limitations (limits such as baskets and caps on the indemnification obligations);

- Escrow (hold back of the purchase price);
- Right of offset (can the buyer offset against for example the vendor loan or earnout);
- Indemnification process (how is the claim handled operationally).

Hope this blog gave you more insight on the purchase agreement of M&A deals.

As a dealmaker I undertake the negotiations myself, but this in good cooperation with the M&A lawyer, Tax lawyer and accountant.

See you next week again with a new blog.

Best, Joris

Kersten Corporate Finance

Signing vs. Closing an M&A deal

Author: Joris Kersten, MSc

Kersten Corporate Finance: M&A advisory + Valuations @ The Netherlands. www.kerstencf.nl

Training Business Valuation & Deal Structuring (5 days). 4th – 8th November 2024 @ Amsterdam South. www.joriskersten.nl

Source used: Crushing it as a corporate buyer in the middle market. 2020. Kevin Tomossonie. Rock center financial partners NY.

Introduction

Once a buyer and seller have finished negotiating a deal, and the transaction documents are finished, they will each sign the purchase agreement.

But this does not mean that the deal is closed.

Closing is when the actual exchange of money takes place.

And the buyer assumes ownership of what they are buying.

These two events; signing & closing, can take place at the same time.

Or with some time in between.

Closing conditions

A closing condition is an event or requirement that needs to take place, before a deal can be closed.

For example, the buyer has found something extraordinary in the DD (due diligence = investigation of the books), and this needs to be fixed before the buyer is willing to close.

Or the deal may be large enough that some sort of government approval is needed.

Another example is that a third party approval is needed for certain contracts that are part of the deal.

Time between signing and closing

There is a risk when you are committed to buying a company, since things can happen outside of your control.

Because in between signing & closing a buyer does not control the company yet.

So whenever there is this gap, buyers need to undertake certain things, both operationally & legally, in order to protect themselves.

First, the company should be monitored carefully, this with an eye on the operating business and financially.

And from a legal point of view the buyer should get access to information on the operations & finance.

Moreover, the buyer needs to be legally protected from the fact that they do NOT control the company yet, in between signing and closing.

This is done by:

- Covenants;
- Representations & warranties (until signing + until closing);
- A Material Adverse Change (MAC) clause.

Covenants

Covenants are basically promises to do, or not to do, something.

So the buyer needs to negotiate covenants that will protect the buyer for the fact that the seller still legally owns the company, and seller operates the company until closing.

These covenants include things like:

- The seller needs to continue operating the business in a normal course;
- The seller will continue to maintain its insurance coverage;
- The seller won't make any significant changes to the business;
- The seller won't make any significant purchases over a certain amount;
- The seller won't sell any assets;
- The seller won't give employees a salary raise;
- The seller won't sign any material contracts without consent from the buyer;
- The buyers keep access to the target's books & records so that they can monitor the company and operations;
- Etc.

Reps & Warranties

Representations & warranties are basically just statements that are made in a purchase agreement.

For most part, these statements are made by the seller.

And they say things like:

- The seller has the right and authority to make the sale;
- There are no legal proceedings against the company;
- The financial statements of the company are complete and accurate;
- There are no undisclosed liabilities;
- Etc.

While these reps & warranties can NEVER replace the importance of buyer undertaking a good DD (due diligence), they do form the basis on what a buyer relies on in the purchase.

In the DD buyers will usually identify all sorts of potential risks and liabilities.

When they know them after the DD, then buyer can negotiate, and price, these issues into the deal.

But the things that were not identified; the unknown risks, will be covered by the reps & warranties of the seller.

But in deals where there is a delay in between signing the purchase agreement, and finally closing the deal, you need to be careful.

The buyer needs to make sure that the agreement is clear, so the seller's reps & warranties need to be true when the deal is signed. BUT they also need to be true later at the time of the final closing!

Material Adverse Change (MAC)

A MAC clause is a standard legal concept that is used in purchase agreements.

It can be used to set a "materiality threshold" for a seller's disclosure requirements.

This means that if something wasn't disclosed by a seller, which was not "material", than it is not the problem of the seller anymore after the deal is closed.

It can also be used for the time in between signing and closing the deal.

So it gives buyer the ability the back out of the deal, when something bad happens in the time between signing and closing.

A MAC clause is something a seller wants to limit as much as possible, since they can potentially end up with no deal due to this clause.

For example the M&A lawyers of the seller will try to exclude from the MAC clause things like: Changes in the economy, credit markets, political conditions, acts of war, and even general business conditions.

This clause is sometimes heavily negotiated, and then it can help buyers to just put on the table what it is they are afraid of.

Then this issue can be made a "condition to close", instead of putting it in a MAC formulation.

I hope this article improved your understanding of M&A.

See you next week again with a new article,

Best regards Joris

Kersten Corporate Finance

M&A and the Locked Box

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A advisory in The Netherlands, deals in all industries, 5m to 100m enterprise value transactions (EBITDA range 1m – 10m) + Business Valuations. Full info on: www.kerstencf.nl

Corporate Finance training: Business Valuation & Deal Structuring, 5 day training @ Amsterdam South (Zuidas): 4th until 8th November 2024. Financial modelling: DCF + LBOs (IRR + credit statistics) + M&A model (accretion/ dilution + credit statistics) + EBITDA multiples + ROIC/ WACC + cash & debt free (adjusted net debt) + equity bridge. Registration form & full training manual can be found on: www.joriskersten.nl

Source used: Book Bedrijfsovername, Van Buuren & Koster, Wolters Kluwer, Deventer 2023, Ch. 9 Locked Box Mechanisme, Mr. Gijs Linse.

Introduction

An enterprise value of a company is calculated without taking net debt and the level of net working capital into account.

In practise this is called "enterprise value - cash & debt free", which basically means that net debt is deducted from the enterprise value, including taking a normal level of net working capital into account.

Locked box

With a locked box mechanism buyer and seller agree that net debt and (a normal) working capital will be settled based on a balance sheet from BEFORE the date of the share purchase agreement.

So basically parties agree that when the closing takes place, parties have (economically) made the transaction already.

So for example the balance sheet date is 31st December, and from 1st January on, the company is (economically) from buyer.

Since January 1st is before the closing date (with a "locked box"), parties agree that no value can be subtracted from the effective date until closing date.

Otherwise this will be labelled as "leakage".

Completion accounts

Another way to conduct an M&A deal is to work with "completion accounts", and here the shares will be legally supplied to buyer first, and only then the final level of "net debt" & "normal net working capital" will be calculated, and settled.

The disadvantage here is that seller is not owner of the company anymore when net debt is calculated.

This disadvantage is not here with a "locked box", because at the moment of signing the share purchase agreement, the full purchase price of the shares is already agreed on.

This including the level of net debt (and a normal net working capital) since it is based on a prior balance sheet date (e.g. 31st December of the year before).

Locked box / completion accounts

When a company is doing well in the last months before the closing, this advantage will be for the buyer.

As a result, there will be more cash in the company, or otherwise a higher net working capital position, and the net debt settlement has taken place already.

This potentially is a disadvantage of a locked box for a seller.

With completion accounts the net debt position will be settled at the legal delivery date of the shares, so buyer then needs to pay for the better results (more cash and/ or more net working capital will be settled in the net debt calculation).

The Netherlands

I am from The Netherlands, and here we often (most of the time) work with a locked box in (private) sell side, and buy side, M&A transactions.

This since it is a relatively easy method, and it is relatively easy to compare bids based on an "enterprise value - cash & debt free" based on a locked box 31st December or for example 30th June.

Another reason why it is popular is that after the closing of the deal no more calculations need to be made, so no more potential arguments about net debt positions.

This because all of these net debt arguments have been settled already before the closing.

Effective date & leakage

When the balance sheet date is 31st December, then the effective date is January 1st, which means that the company then is "economically" from buyer.

And at this moment in time the company is not "legally" from buyer, so seller should not subtract value from the company (called "leakage").

E.g. dividends, M&A transaction costs, virtual data room costs, transaction bonusses etc.

Break fees for current financing agreements (due to change of control) are often debated in a sense of whether they are leakage or not.

Of course there can also be "permitted leakage", like high salaries of shareholders, and these are all defined in the share purchase agreement.

And this agreement is drafted, and checked, by M&A lawyers, so here corporate finance (M&A) consultants work closely with lawyers in order to draft the contracts.

Business operations from the effective date

With a locked box the company is economically from buyer from the effective date on.

In the meantime, until closing, the buyer does not want abnormal material transactions to take place.

Since with a locked box the price is settled already, so abnormal issues need to be settled again through the defined "warranties" in the share purchase agreement (not through net debt calculations anymore, because this is settled already).

So the buyer wants to have a lot of protection from abnormal operations with a locked box mechanism, from the effective date until closing.

Again, M&A lawyers define these "abnormalities" in the share purchase agreement, in good cooperation with the corporate finance (M&A) advisor.

Locked box compensation

The business results are from the "effective date" (economic ownership date) for the buyer of the company.

So the seller wants to be compensated for this in the form of for example interest.

This since basically the company is bought already (economically), without paying for it.

And this is generally called a "locked box compensation" for a seller.

Source used: Book Bedrijfsovername, Van Buuren & Koster, Wolters Kluwer, Deventer 2023, Ch. 9 Locked Box Mechanisme, Mr. Gijs Linse.

The Share Purchase Agreement (SPA) and closing M&As

Author: Joris Kersten, MSc

Kersten Corporate Finance: Selling & buying companies in The Netherlands (M&A).
www.kerstencf.nl

Valuation training: 4th – 8th November 2024, Valuation & deal structuring, at Amsterdam South. In addition I provide inhouse corporate finance training at leading organisations all over the globe, from New York to Hong Kong.
www.joriskersten.nl

Source used: Bedrijfsovername. Wolters Kluwer 2023. De Overnameovereenkomst. M. van Buuren & Y. van Benten.

Introduction

Within a share purchase agreement (SPA) the most common mechanisms to close a deal are:

1) "closing accounts", and,

2) a "locked box".

As a rough rule of thumb you could argue that the "closing accounts mechanism" is more friendly for the buy side.

And the "locked box mechanism" can be seen as more friendly for the sell side.

On the other hand, a "closing accounts mechanism" can be a suitable mechanism when the seller expects very good returns in the period before the "economic date" and "legal date" of the transaction.

Reason is that with closing accounts these good results will still be for the seller !

So for example for high growth companies, it can be beneficial to use closing accounts when selling.

On the other hand, a locked box mechanism is popular under both sellers and buyers, especially here in Europe.

Reason is that with a locked box you will be certain about the purchase price.

And chances on discussion about the purchase price will be minimised with this method (locked box).

Let's now take a deeper look at these 2 closing methods in the SPA.

Closing accounts mechanism

Over the globe, a closing accounts mechanism is still the standard in SPAs for M&As.

With this method an estimate will be made for the level of "net debt" at the closing moment of the deal.

These estimates of net debt are made on for example:

-A provisional acquisition balance sheet ("preliminary closing accounts"), or,

-Intermediate financial information ("management accounts").

At the closing of the deal a preliminary purchase price will be paid for the deal.

This based on an estimated "net debt".

Within a certain period after the closing, for example within three months, a final acquisition balance sheet will be constructed.

And this final acquisition balance sheet often needs to be checked off by an accountant.

Because this is often negotiated in the SPA between parties.

The final acquisition balance sheet will be compared to the preliminary balance sheet, with a focus on "net debt".

And the "delta" in "net debt" between the 2 balance sheets needs to be settled between the parties in the acquisition !

Buyer has the initiative to construct the final acquisition balance sheet.

So buyer can try to make purchase price corrections to their own advantage.

This can lead to disputes about the deal, and the purchase price corrections for "net debt".

The second closing mechanism; the locked box, gives parties less chance on disputes on "net debt", and will be discussed now.

Locked box mechanism

The locked box mechanism is popular in Europe.

The mechanism gives more certainty about the final purchase price including full agreement on "net debt".

With a locked box the final purchase price will be calculated based on the most recent reliable numbers available.

Think of the last audited annual report, from for example 31st December of the last book year.

The effective date of the deal (the "economic acquisition date") will then be for example January 1st.

This is one day after the "balance sheet date" of 31st December on which the full purchase price is calculated, including net debt.

At January 1st the company will then be sort of "saved" in a box for the buyer.

And this box can not be opened anymore (the locked box) !

So all in- and outflows from the box will be carefully monitored.

Locked box compensation for seller

The results of the company between the economic date (or effective date), and the closing (legal acquisition date), will be for the buyer.

So the purchase price is financially set based on for example last 31st December.

But it will be paid at the closing date (the legal acquisition date).

The seller is economically NOT owner of the company anymore from this effective date on.

So often seller gets a compensation for the time in between the economic date and legal date.

This since the company results are for the buyer from the economic date on, but the acquisition purchase price is only paid at the closing date (legal date).

So technically buyer "borrows" the purchase price from the economic date to legal date.

And within this perspective, compensation in the form of an interest rate makes sense !

Further conditions

With a locked box the seller can not subtract funds from the business after the economic date.

This although seller is still the "legal owner" at that point in time.

And we call this a ban on "leakage" for the seller, like for example:

-Dividends and paying out reserves;

-Unusual payments (e.g. bonusses) to parties related to the seller;

-Intercompany transactions not at "arms length" (market conditions);

-Transaction related costs like M&A advisor fees.

In general the ban is broader, so basically only actions can take place based on an "ordinary course of business".

On the other side, there is also "permitted leakage", like management fees to the seller, cause he/ she is still running the business.

This is all negotiated in the SPA between M&A lawyers in cooperation with M&A corporate finance advisors.

I hope this blog was useful,

See you next week again, best Joris

Source used: Bedrijfsovername. Wolters Kluwer 2023. De Overnameovereenkomst. M. van Buuren & Y. van Benten.

7. Financing Acquisitions & Private Equity in practise

Preference shares, returns and M&A

Author: Joris Kersten MSc, owner Kersten Corporate Finance

Kersten Corporate Finance: Selling & buying companies in The Netherlands (M&A). www.kerstencf.nl

Valuation training: 4th – 8th November 2024 – 5 day valuation training @ Amsterdam South. Financial modelling, DCF, LBO modelling, M&A modelling, multiples, ROIC/ WACC, equity bridge/ cash & debt free. www.joriskersten.nl

Source used: De rendementseis voor preferente aandelen bij bedrijfsopvolging. H. Meijer & C. Denneboom. Tijdschrift Familie Bedrijven. July 2014.

Introduction

The main issue for "business-like objectivity" of a financing structure is the level of paying back principal and the level of security for the financing.

Preference shares economically look like risky bonds. They can be seen as some sort of mezzanine financing in acquisitions.

Mezzanine financing lies concerning risk between bank debt and equity.

And mezzanine financing is subordinated to senior debt.

When for mezzanine financing a return of about 10% would be appropriate, then for preference shares ("prefs") a return of about 7,5% to 8% would be appropriate.

This depending on the Tc (corporate tax) level, because the dividends on prefs are not tax deductible.

Tax authorities

With the tax authorities in The Netherlands, it is often the discussion what the level of the returns on the prefs should be.

This return should be objective/ business like.

For this lets take a look at a very simple example.

A company makes the following returns:

-EBIT: 350,000;

-Tc: 70,000;

-Depreciation: 200,000;

-CAPEX: 200.000;

-Free cash flow: 280,000;

-EBITDA 550,000.

When we discount the FCF with 14% in perpetuity, the value of the company is 2 million.

By the way, the cost of equity is 16% with 2% perpetuity growth (0,16 -/- 0,02 = 0,14).

And let's consider a buyer finances this as follows:

-500,000 on the working capital;

-750,000 5 year middle long bank;

-600,000 mezzanine financing;

-150,000 equity.

= total sources of 2 million for 2 million uses.

The cost of debt (Cd) is 6%, and the cost of equity (unlevered) is 16%.

And to calculate the cost of equity levered, we need to know the returns on the mezzanine financing.

Returns on mezzanine financing

The returns on mezzanine financing must lie somewhere between the cost of debt and the cost of equity.

This basically is a subordinated form of financing with bankruptcy risk.

For the returns on this type of financing one could look at US junk bonds.

But this does not fully fit with the Dutch market (where I am from), since we have a less transparent bank based system.

When we see mezzanine financing as high risk, there is a maximum of 3,5% spread on top of the cost of debt.

So 6% + 3,5% = 9,5% for mezzanine financing.

With a responsible financing structure, a company buyer should be able to pay back the interest and principal.

9,5% for the mezzanine financing would then be appropriate.

By the way, "responsible" is calculated with so called ratios like for example:

-Debt service capacity, and,

-Interest coverage.

With better ratios, mezzanine financing returns should move to the cost of debt.

And with worse ratios, mezzanine financing returns should move to the cost of equity.

And when the company will likely default on the debt, then the "cost of equity levered" should be used. This is actually unlikely in practise.

Returns of full debt and equity

With a return of 9,5% on mezzanine, and 6% on debt, the average cost of debt can be calculated.

Let's assume this will be about 7% to 8%.

At this point, the return on equity is very high in the beginning !

This mainly is the result of the levered financing structure, and to a lesser extent due to the cost of mezzanine and general debt !

So when principal is paid back, you seen the returns on equity going down, due to less leverage in the capital structure.

Returns in practise

With 9,5% on mezzanine, the average cost of debt lies between 7% and 8%.

And this is all debt, so tax deductible (let's assume this for 100%).

With preference shares, this would result in about 6% returns, because the dividends on prefs are not tax deductible.

But 6% returns on prefs would NOT be seen as "business like objectivity" by the Dutch tax authorities.

They find these return percentages too low !

Funny thing is that mathematically these percentage are not low, in certain situations, when financing in the form of a "synthetic credit rating" is taken into account.

Like mentioned above.

But 6% is indeed low, when:

-No security is given on the form of financing;

-No form of paying back principal is agreed on.

So with prefs, on top of the calculations for the returns, do not forget to make the financing conditions "business like" as well, as much as you can.

And definitely create a "synthetic credit rating" in order to support your suggested prefs return.

Hope this was useful, see you next week again,

Best Joris

Source used: De rendementseis voor preferente aandelen bij bedrijfsopvolging. H. Meijer & C. Denneboom. Tijdschrift Familie Bedrijven. July 2014.

Business like/ objective M&A Transactions

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: Selling/ buying companies in The Netherlands (M&A). www.kerstencf.nl

Valuation training: 4th – 8th November 2024 @ Amsterdam South. Financial Modelling & Deal Structuring. www.joriskersten.nl

Source used: Onderbouwd waarderen is lucratief. C. Denneboom. Tijdschrift Familie Bedrijven. April 2022.

Introduction

Lets imagine a company is sold for 1 million.

And the total purchase price is 100% financed with a loan, by the seller, for 10 years with an interest of 6%.

Here basically the tax authorities in The Netherlands say the deal is NOT "business like" or "objective".

This because the buyer makes a crazy high return on equity.

The tax authorities could argue here that the interest and paying back of the principal of the 1 million should be discounted based on a "market interest rate".

And not on the suggested 6%.

The tax authorities can also argue that the appropriate market rate should be the "cost of equity unlevered".

This because the loan has the same characteristics as equity, because it functions as equity within the company.

When we discount all the interest, and paying back of the principal, against the cost of equity, let's assume that the present value of the loan would be 600k.

Then 1 million -/- 600k = 400k.

And this 400k would then be taxed, because buyer would have received this as un-legitimate, because it is not objective based on market conditions.

It basically is an equity stake received against too positive conditions.

The financing perspective

The above view of the tax authorities actually is not fully correct.

Some nuances need to be made.

Whether the transaction is business like/ objective should not be seen from the perspective of the buyer.

It should be seen from the perspective of the supplier of the loan.

And this on the basis of financing ratios like for example:

-DSCR (debt service capacity ratio).

With a business like/ objective financing structure, the 1 million would for example have been financed with:

-60% bank financing,

-20% vendor loan,

-20% equity by the buyer.

Let's assume that the bank financing, and vendor loan, still make 6% in the mix, and that the DSCR is all reasonable.

Then we can conclude that the only part of the deal that is not business like, is the missing equity part !

So we need to focus on the 20% that should have equity, this would be 200k (0,2 * 1 million).

Let's assume that when we discount the interest & principal on the 200k against the cost of equity, the present value would be around 100k.

Then not 400k is received un-legitimate on non business like grounds, but only 100k instead !!

(200k that should have been equity -/- the present value)

So only 100k should be additionally taxed, and not 400k.

And still it is very debatable whether to discount (the missing 200k equity) against the cost of equity, because it still is a loan from the seller in this example !

And this loan has another risk profile than equity, so using the cost of equity is also not fully correct, the discount rate should be a little lower.

So when looking at the "business like nature"/ objectively of a M&A transaction, then make your calculations based on an alternative "synthetic credit rating".

This way you can calculate what part of the deal might be classified as non "business like" for the tax authorities.

On top of that, take the financing conditions into account (e.g. security provided), also when they are not there.

Hope this was helpful, see you next week again,

Best Joris

Source used: Onderbouwd waarderen is lucratief. C. Denneboom. Tijdschrift Familie Bedrijven. April 2022.

How to finance an Acquisition ?

Author: Joris Kersten, MSc

Kersten Corporate Finance: Selling & buying companies in The Netherlands (M&A). www.kerstencf.nl

Valuation training: 4th – 8th November 2024 @ Amsterdam South: Financial modelling, valuation and deal structuring. On top of that I provide inhouse training at leading institutes over the globe: New York, London, Hong Kong, Dubai, Saudi Arabia, Kuwait, Surinam, Peru, Mongolia. www.joriskersten.nl

Source used: Overname financieringen een inleiding. Tijdschrift Familie Bedrijven. Dhr. M.H. Stuker. February 2013.

Introduction

When buying a company often a personal holding company is used.

The advantage is that when in the future the shares are sold, direct paying the tax authorities over the goodwill is not needed, and can be delayed.

Next to the personal holding generally another holding is set up to buy the shares.

This way a "fiscal unit" can be created with the "target company" in order to be able to deduct the interest expenses (to some extent) from the corporate tax.

Forms of financing

Generally the following methods are used for acquisition financing:

1. Bringing in personal money in the personal holding;
2. Vendor loan of the seller;
3. Dividends & financing from the target company;
4. Bank financing.

It is common to finance an acquisition for a part on the target company.

Excess cash of the target company can be used for this, and the assets of the company can be used as collateral for the financing.

This is needed, because with acquisition financing also a part needs to be financed in the buying holding without any collateral.

So the assets of the target should be used to a maximum extent as collateral for the financing !

The buying holding

As mentioned, in the buying holding there are generally no assets to back up the financing.

Of course there will be "a pledge on the shares", but this will not mean much in case of a bankruptcy.

So basically we speak of "blank financing" in the buying holding, so no collateral.

In order to cope with this, there are some characteristics on this form of financing:

1. Limited time period (e.g. 4-5 years);
2. High interest;
3. Covenants like non dividend payments, rules for paying back principal on vendor loans, personal guarantees etc.

Cash flows & other conditions

The acquisition financing needs to be serviced with interest and paying back principal.

Here you need to focus on cash flows, so also take CAPEX (growth & maintenance capex) into account, and well as working capital requirements !

Next to cash flow analyses for debt servicing, the following components are very important:

1. The buying entrepreneur/ party and his/ her/ their vision, experience, and personal financial commitment;
2. The company itself and the industry;
3. The valuation, enterprise value cash & debt free, and purchase price;
4. Financial ratios.

Concerning the quantitative aspects, the following components must be worked out carefully in order to successfully attract the acquisition financing:

1. Personal contribution/ solvency;
2. Collateral;
3. Cash flow analysis;
4. Ratios.

The so called "guarantee capital" within an acquisition should be sufficient.

This for example is the personal contribution of the buyer, vendor loans by the seller, and maybe a financial sponsor that brings in equity.

This all can be seen as "solvency".

As a very rough rule of thumb, this guarantee capital should be 20% to 50% of the purchase price.

Concerning collateral, the target company should be used to the maximum in order to use its assets, and excess cash, for the financing.

This in order to minimise the expensive blank financing in the purchasing holding.

Cash flow analysis also needs to be done carefully, and different scenarios need to be made !

Dot not forget to check and analyse "operating leverage", so fixed costs in relation to variable costs.

Operating leverage is very important to analyse, I can not stress that enough.

(fixed costs are great when all is going well, because they are relatively cheap, but they can kill you when the business is going down, because they can not get rid off easily)

At last your ratios need to be checked:

-Net debt over EBITDA,

-Debt service capacity, and,

-Interest coverage.

For example, you can finance 3,5 times EBITDA in a certain industry for an acquisition.

Your debt service capacity needs for example to be at least 1,2.

This means you have a 20% "cushion" (1,2 -/- 1 = 0,2) to service the debt.

And your "interest coverage" needs to be 3 for example, as a general rule of thumb for a banker.

I hope you found this article helpful.

See you next week again,

Best Joris

Source used: Overname financieringen een inleiding. Tijdschrift Familie Bedrijven. Dhr. M.H. Stuker. February 2013.

Private equity & Leveraged Buyouts (LBOs)

Author: Joris Kersten, MSc

Kersten Corporate Finance: Selling/ buying companies in The Netherlands (M&A). www.kerstencf.nl

Valuation training: 4th – 8th November 2024 @ Amsterdam – Valuation training: DCF modelling, LBO modelling, M&A modelling, EBITDA multiples, ROIC/ WACC, adjusted net debt. In addition, I provide inhouse training at leading institutions all over the globe from New York to Hong Kong. www.joriskersten.nl

Source used: Bedrijfsovername. Wolters Kluwer 2023. Overnames door private equity. A. van Holthe tot Echten & H. Kaemingk.

Introduction

Private equity is risky capital, supplied by professional investors, for a limited time period, to non listed (private) companies, with the goal to make a financial return.

Financial sponsors, the so called private equity firms, undertake Leveraged Buyouts (LBOs).

This basically is the acquisition of a target company by a set up legal buying vehicle.

And this buying vehicle is owned by the private equity investor and the managers of the target company.

The acquisition financing creates a "double leverage structure" and consists out of:

-Debt (money loans), supplied by banks and specialised debt funds;

-Equity, supplied by the private equity investors and the managers of the target.

Concerning the equity, this is often sub divided in:

-Common shares, held by all shareholders;

-Cumulative preference shares, held by the private equity investors.

The Leveraged Buyout

A Leveraged Buyout (LBO) consists out of three components:

1. The acquisition of the target by the buyer ("newco") with a sale & purchase agreement (SPA);

2. The financing of the buying holding with debt in a loan agreement or senior facilities agreement (SFA);

3. The financing of the buying holding with equity, by the private equity investors and managers of the target, with a shareholders agreement (SHA), and articles of association.

The amount that is financed with equity in an LBO is basically divided by the private equity investor and the managers of the target.

Again divided in 1) preference shares, and 2) common shares.

The reason for this is to create another form of leverage (double leverage), next to the leverage on the bank debt.

The returns on the preference shares are limited to for example 8%, 9% or 10% dividend on the cumulative preference shares.

The result of this is that when the value of equity grows enough, then the returns on common shares (the most subordinated shares) grow extra fast !

And this is the so called "double leverage structure" by using relatively cheap debt to leverage the return on equity.

And within equity, relatively cheap preference shares leverage the return on the common shares.

Another option is using a subordinated loan by the shareholders with "payment in kind" interest (paying back loan & cumulated interest at the end).

But due to restrictions on tax advantages on interest, this is getting less and less popular.

The managers of the target company

For private equity it is a must that the managers of the target company are involved in the deal.

From managers who are for the first time involved in an LBO is expected that they are willing to invest the equivalent of 1 year salary.

From managers who are doing this for the second time (or even more), is expected that they invest half of their net proceeds of the sale into the new buying holding of the target (rolling 50% of the net equity proceeds).

For deals like this always a good tax lawyer needs to be consulted !!

This because the price the managers pay for the shares needs to be based on a decent valuation.

So you need to be very careful with what the managers pay for the shares, because if it is too less, the tax authorities can see this as an un-legitimate profit that will be taxed.

I hope this blog was useful,

See you next week again, best Joris

Source used: Bedrijfsovername. Wolters Kluwer 2023. Overnames door private equity. A. van Holthe tot Echten & H. Kaemingk.

M&A in stages/ The Pre-Exit Strategy

Author: Joris Kersten MSc/ Owner Kersten Corporate Finance

Kersten Corporate Finance: M&A boutique in The Netherlands, focus: sell side & buy side deals with an EBITDA of in between 1 million euro and 10 million euro (enterprise value 5 to 100 million euro) in all industries.

Kersten CF also provides business valuations, and provides training in valuation all over the globe (new york, london, middle east, asia etc.)

Source used: Article – Pre-exit: een gefaseerde bedrijfsverkoop, 2019, Menno Stuker, Tijdschrift Familie Bedrijven.

Introduction

With a pre-exit transaction an entrepreneur sells a part of his company to an investment firm.

This to cooperate with the investor in order to sell the full company 4 to 6 years later.

In general a new holding is set up (newco) that buys the company, and this newco is financed by equity of the investment firm, equity of the entrepreneur, and bank financing.

Let's say bank financing counts for 50% of the transaction, and the rest is done by the current entrepreneur and the investment company in the form of equity.

This would imply that the entrepreneur, and investment company, both hold 50% of the shares in the Newco. And in addition the newco attracts 50% bank debt for the purchase price.

With an equity purchase price of 7 million euro, the current entrepreneur would still hold 50% of the shares for 1,75 million euro (7 -/- 3,5 debt = 3,5. 50% * 3,5 = 1,75).

The investment firm would also hold 50% of the shares for 1,75 million euro, and the newco attracts 3,5 million euro bank financing for the transaction.

The transaction

This transaction results in that the entrepreneur would save a large part of his capital that actually was trapped in his company.

The equity purchase price was 7 million euro, and he keeps for 1,75 million euro shares in his company. This implies that he receives 5,25 million euro (7 -/- 1,75).

This comes from the bank (3,5 million) plus from the investment company (1,75 million).

Also note that the investment company buys 50% of the company shares by brining in only 25% (1,75 / 7 * 100%) of the equity purchase price.

Let's now take a look at the financial dynamics more closely !

Internal rate of return

Let's take a look at another example to analyse the financial dynamics.

An entrepreneur sells 70% of his company to an investment firm. (so he keeps 30% of the company)

The EBITDA is 1,5 million, there is 500k debt, and the EBITDA multiple is 5.

5 times EBITDA = 7,5 million enterprise value.

Enterprise value minus debt = 7,5 -/- 0,5 = 7 million for 100% of the company.

The deal is financed for 50% with debt = 3,5 million.

7 million -/- 3,5 million debt = 3,5 million equity value.

30% for the entrepreneur = 1,05 million equity (30% * 3,5 million).

70% for the investment company = 2,45 million equity (70% * 3,5 million).

This implies that the entrepreneur receives 5,95 million at the moment of the transaction (3,5 bank financing + 2,45 from the investment firm = 5,95).

And this obviously is the price of the transaction minus the amount he keeps in the company (7 -/- 1,05 = 5,95).

But now we are curious about total future returns, and the expected IRR (internal rate of return) of this deal !

Expected EBTIDA + future Debt

The value of the shares of a company is calculated out of an enterprise value.

Enterprise value = EBITDA * factor.

Value of the shares = enterprise value -/- net debt.

When the entrepreneur and the investment company can together grow the company from an EBITDA of 1,5 million to an EBITDA of 2,5 million, then they are (likely) creating value !

And higher EBITDA companies (in general) also have a higher EBITDA multiple!

So when they can sell the company in 5 years (after the initial transaction) for 6 times the EBITDA, this would result in 6 times 2,5 million EBITDA = 15 million enterprise value.

And when debt is build down in this 5 year time period, and when cash accumulated due to net profits (taking CAPEX and net working capital into account), then ideally also some cash is generated in these 5 years.

Let's assume that after paying back debt, CAPEX, and net working capital, 2 million in cash is generated.

Value of the shares at exit then is:

15 million minus -/- 2 million (accumulated cash) = 17 million for 100% of the shares.

30% is exit value for the entrepreneur: 5,1 million (30% * 17m)

70% is exit value for the investment firm: 11,9 million (70% * 17m)

The IRR then is calculated by comparing "equity in" and "equity out":

IRR entrepreneur: (5,1 / 1,05) ^ (1 / 5 years) = 37 % IRR

IRR investment firm: (11,9 / 2,45) ^ (1 / 5 years) = 37 % IRR

Total return for the entrepreneur:

5,95m at the initial transaction + 5,1m at exit = 11,05 m in total.

So this was a numerical example of a staged M&A by using a so called pre-exit strategy.

Source used: Article – Pre-exit: een gefaseerde bedrijfsverkoop, 2019, Menno Stuker, Tijdschrift Familie Bedrijven.

Business Valuation & Debt Leverage

Author: Joris Kersten MSc / Owner Kersten Corporate Finance

Kersten Corporate Finance:

M&A boutique (incl. Business Valuations) in the Netherlands with deal focus of 5 million to 100 million enterprise value (EBITDAs from 1 million to 10 million) in all industries, both sell side and buy side.

Source used: Article – De impact van schuld op de waardering, Chris Denneboom, januari 2021, Tijdschrift Familie Bedrijven.

Introduction

With discounted cash flow (DCF) valuation returns are very important next to free cash flows.

With DCF valuation there are different returns:

WACC = weighted average cost of capital;

CEU = cost of equity unlevered;

CEL = cost of equity levered.

In a company with a yearly free cash flow of 150, this free cash flow is available for the suppliers of the capital of the company.

When 50% of this free cash flow is available for the equity holders, and 50% for the debt holders (in the form of debt repayment and interest), then the free cash flow would be divided in 75 for equity and 75 for debt.

When the free cash would be 10% lower, so 135 (150 -/- 10%) instead of 150, then still 75 would be for the debt holders and 60 (135 -/- 75) would be for the equity holders.

So then the return of the equity holders lowers with 20% (15 / 75 * 100%), while the free cash flow only lowers with 10% !

This is the result of debt leverage, in other words, the return on equity becomes more risky with the use of debt.

Modigliani & Miller 1958

In 1958 Modigliani & Miller published an article with new insights on investment theory.

One of the most important insights tells us that the economic value of a company is not influenced by its capital structure, when we live in a world without taxes.

According to this theory, the equity holders should receive an additional return when debt is attracted by a company.

And this extra return is captured in the CEL with the following formula:

CEL = CEU + (CEU -/- Cd) * debt/ equity

Cd = cost of debt

Debt/ equity = The market value of debt / the market value of equity

(do not forget to use market values here !!)

Let's say the CEU is 15% for a specific business, Cd is 3%, the market value of debt is 125, and the market value of equity is 360, then we can calculate the CEL:

CEL = 15% + (15% -/- 3%) * (125 / 360) = 19,17 %

When we calculate the WACC, the formula is:

WACC = CEL * (equity / TC) + Cd * (debt / TC) * (1 -/- tc)

TC = Total capital based on market values

tc = corporate tax

In first instance we calculate the WACC without corporate tax:

WACC = 19,17% * (360 / 485) + 3% * (125 / 485) * (1 -/- 0) = 15 %

With this calculation the essence of the Modigliani & Miller theory is given.

With any capital structure, the weighted average return is equal to CEU !

The additional risk for the equity holders, by attracting debt, is taken care of in the CEL.

And herewith WACC always stays the same, including the value of a company !

But this is the situation of a theoretical world without taxes.

Taking tax into account

Now we have to take corporate tax into account.

Let's say corporate tax is 25%, and then the casus would be as follows:

WACC = 19,17% * (360 / 485) + 3% (125 / 485) * (1 -/- 25%) = 14,81 %

This results in a lower WACC.

Lower WACC = higher company value.

This due to the ability to deduct the interest expense for corporate tax.

So debt increases the value of the company (a little), and this depends on the capital structure, interest rate and corporate tax level.

Although, take into account that from a tax perspective there can be limits on tax deductibility.

Source used: Article – De impact van schuld op de waardering, Chris Denneboom, januari 2021, Tijdschrift Familie Bedrijven.

Stock based compensation (SBC)

Author: Joris Kersten, MSc

Kersten Corporate Finance: M&A and Valuations @ The Netherlands (medium sized & SME deals). www.kerstencf.nl

Valuation training: 5 day training, 4th – 8th November 2024 @ Amsterdam South (Zuidas). www.joriskersten.nl

Source used: Morgan Stanley Investment Management, Counterpoint global insights. Stock-Based Compensation: Unpacking the issues. Michael J. Mauboussin & Dan Callahan. April 2023.

Introduction

The bulk of employee compensation is in cash.

But public companies in the US are increasingly paying employees with stock, instead of cash.

So they are changing their workers into shareholders.

And this is called "stock based compensation" (SBC).

SBC can be seen as a way to finance growth.

Moreover, SBC can be seen as an incentive for employees to deliver results.

And as a tool to retain workers, and as a tool to foster overall sense of ownership.

SBC in the P&L

SBC became more important in the 1980s and 1990s.

But then SBC was not required to be recognized as an expense on the P&L under US GAAP.

This until 2006.

Companies had to include details about their SBC programs in the footnotes until 2006.

But the expense was until 2006 not in the P&L.

Companies, especially those in the technology industry, lobbied against putting these costs in the P&L.

They claimed that this would lead to a lower stock price.

But subsequent research showed that this concern was not correct.

SBC since 2006

As mentioned, since 2006 SBC is taken up in the P&L.

And total SBC expense in the P&L for companies in the Russell 3000 was about 25 billion USD.

The Russell 3000 tracks the largest stock in the US (by market cap).

It is estimated that SBC was about 270 billion USD in 2022.

(please see source I have used for this blog)

Or 6% to 8% of total compensation for public companies in the US.

Sales over time (2006 – 2022) went from 11.5 trillion USD to 21.1 trillion USD.

And as a percentage of sales, SBC went from 0.2 % in 2006 to 1.3 % in 2022.

Within this perspective, it is useful to look at the "corporate life cycle".

In general, SBC as a percentage of sales, is higher for younger companies, than for older companies.

And the use of SBC also varies greatly by sector.

Information technology, communication services and financials rely most heavily on SBC (SBC divided by total sales).

Subsequently, 4%, 4% and 2.3% of sales in 2022.

And SBC as percentage of sales is the lowest for the utilities and consumer staples sectors.

(less than half a percent in 2022)

Buybacks

Life cycle analysis also shows that returning capital to shareholders (dividends + buybacks) increase as companies age.

This because the older they get, the more profitable, and the more cash available.

Further, companies today pay out a higher percentage of their "free cash flow", than companies in past decades.

Most of this growth comes from "buybacks".

Separately from the P&L, "cash flow from operating activities" does not reflect SBC as an expense.

But SBC is for some companies greater than "cash flow from operating activities".

More than 95 % of public companies now report NON-gaap results.

Adding back SBC expense (in the P&L) is a common adjustment to calculate EPS and EBITDA, as non-gaap numbers.

But buybacks that offset dilution from SBC (a non cash expense), turn SBC into a cash expense.

So companies should not get the benefit of adding back (non cash) SBC expense, without a full acknowledgement of the cost of buying back shares.

Let's look at this a little deeper, by taking a closer look at the involved "accounting issues".

Accounting implications

There are 2 ways to incorporate SBC into valuation that are (technically) equivalent:

1. Treating SBC as an expense;
2. Treating SBC as an employee claim on equity.

SBC as an expense (method 1)

The key is to recognise the entries on the "statement of cash flows" that have NO "net cash outlays", but are in fact two transaction in one.

SBC and leases are the most important ones.

For example:

1. Stock compensation is an operating transaction, where the employee is paid for the service;
2. Stock compensation is a financing transaction, where the employee is a source of equity capital.

Another example:

1. A finance lease is an investing transaction, where a company buys a fixed asset;
2. A finance lease is a financing transaction, where the company raises debt.

Recognising SBC, and leases, as four transactions allows the investor to calculate FCFE (free cash flow to equity) accurately.

This is done as follows:

· Treat SBC first as an expense, and this will reduce the cash flow from operating activities. And secondly, treat SBC as raising equity in the cash flow from financing activities;

· Treat leases first as a capital expenditure (CAPEX) in the cash flow from investing activities. And secondly, treat leases as raising debt in the cash flow from financing activities.

And this description of FCFE (free cash flow to equity) differs from the common definition of free cash flow in two ways:

1. Cash flow from operations is lower;
2. CAPEX is higher.

But when you treat SBC as an expense, and leases in full as CAPEX, you can now project future FCFE.

You can then discount future FCFE with the cost of equity.

And then divide it by "fully diluted shares outstanding" of the ongoing shareholders.

SBC as an employee claim on equity (method 2)

The second method does not recognise SBS as an expense:

1. On the income statement, and,
2. On the cash flow statement.

But rather considers it as a claim on equity.

And moving SBC from an expense to a claim on equity is what creates "dilution".

So FCFE will be higher when no expense for SBC is recognised.

But this will be offset by the employee claim.

So the higher FCFE will divided by the number of ongoing shareholders + the new employee shareholders.

Leases still needs to be added to CAPEX.

But in practise, companies that use a lot of SBC typically do not use lots of leases.

And companies that use lots of leases, do not use lots of SBC.

Concerning buybacks, please note that buybacks have no impact on value per share!

Unless the shares are "mispriced" !!

Because when they are under-valued, or over-valued, then you will have a "wealth transfer".

But at a fair value, they have NO impact on the share value.

So assuming that a company funds buybacks with future cash flow is "double counting".

I hope this blog gave you a better understanding of SBC (stock based compensation).

Thanks for reading,

And see you next week again with a new blog !

Best regards, Joris

Source used: Morgan Stanley Investment Management, Counterpoint global insights. Stock-Based Compensation: Unpacking the issues. Michael J. Mauboussin & Dan Callahan. April 2023.

8. Capital Allocation: M&As and other allocations

Capital allocation of companies: Sources & Uses

Author: Joris Kersten, MSc

Kersten CF: M&A advisory and Valuations @ The Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring, 5 days @ Amsterdam. 4th – 8th November 2024, registration & manual @ www.joriskersten.nl. 130 recommendations @ https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Introduction

The source of capital for companies can be external or internal.

In order to assess whether a company will require external capital, you need to look at NOPAT and ROIC.

NOPAT is net operating profit after taxes, and ROIC is return on invested capital.

In order to check whether a company needs external capital, the growth rate in NOPAT needs to be compared with the ROIC return.

Companies, whether they are young or old, that grow faster (in NOPAT) than their ROIC return, need external capital !

This is fine, and OK, but ONLY when the ROIC of the company is above the cost of capital (WACC).

Because only then the company is creating value ! (ROIC > WACC)

Internal capital

Internal capital comes from the cash a company generates.

This includes cash flow from operations and asset sales.

In cases where the NOPAT growth is below the ROIC the company will have funds available to return to the shareholders, or to put on the balance sheet.

For companies in the US since 1980, internal financing has been the primary source of capital.

These companies have also added new debt steadily, apart from some years when the economy was in a recession.

And these companies have also retired equity on average.

And "net equity issuance" is even negative for the Russell 3000 after taking stock based compensation into account.

Capital structure

The debt to total capital ratio is a measure of "capital structure".

So it says something on how companies finance their operations.

We can look at this ratio for companies in the Russell 3000 from 1985 – 2021 (see source used for this blog). Companies in the financial and real estate sector are excluded.

Debt to total capital ratio is defined as:

Book value of debt / (book value of debt + market value of equity)

That ratio was for 2021 on average 16%.

This versus the long term average of about 31%.

In spite of a general decline in interest rates during 1985 – 2021, capital structures have become more conservative.

This even with for example "10 year US treasury note yields" of 10.6% in 1985 and 1.5% in 2021.

Uses of capital

Companies can use capital to either invest in the business, or to return it to the claimholders.

Internal investments are for example:

- CAPEX = capital expenditures;
- Working capital;
- Investment in R&D;
- Investment in SG&A (excluding R&D) = investments in "intangible assets".

But firms can also make external investments like:

- Mergers & Acquisitions (M&A).

When we look at how companies spend their money in the US since 1985, we get to the picture as shown below.

Mergers & Acquisitions (M&A)

M&A consistently is the largest share of capital companies allocate !

But these M&As are very cyclical and it matches the ups and downs of the economy and the capital markets.

For example, M&A was about 22% of sales in 1998 during the "dot com boom".

But M&A was as low as 3% of sales during 1991 when the US economy was in recession.

The average was about 9% of sales yearly.

Investment SG&A (excluding R&D)

This basically is internal spending that creates intangible assets.

You see a steady increases here, so we get more and more intangible assets.

This item grew from 5.8% of sales in 1985 to 7.1% in 2021.

And when we add investment R&D expenses, total spending on intangible assets went from 7.1% in 1985 to 9.4% in 2021.

CAPEX (capital expenditures)

CAPEX as a percentage of sales declined from 1985 to 2021.

But this is in line with the shift from "tangible assets" to "intangible assets".

CAPEX were 9.7% of sales in 1985 and went down to 5.7% of sales in 2021.

This reduction also reflects a shift in "sector composition" for public companies in the US.

Share buybacks

Share buybacks went from 1.5% of sales in 1985 to 5.4% of sales in 2021.

This shows a change on how companies return money to shareholders.

From 1985 to 2021 buybacks went from 0.6 times dividends to 1.6 times dividends.

When we look at the "sector composition" of companies in the S&P 500, we find answers on why companies allocate their capital differently today compared to a few decades ago.

"Information technology" and "healthcare" companies went from 20% of the market in 1985 to more than 40% in 2021.

And during 1985 to 2021 energy companies, materials companies and industrials went from 34% to 13% of the market.

So the capital allocation mix, and changes from tangible to intangible assets, fit the evolution of the sector division from 1985 to 2021.

Back to ROIC and growth in Invested Capital (IC)

Capital allocation is very important because:

Aggregate ROIC > the aggregate growth rate of NOPAT.

Basically this means:

Companies are generating excess cash !!

The average ROIC was 9.1% from 1990 to 2021 (companies for the Russell 3000).

Here the NOPATs and balance sheets were cleaned for internally generated intangible assets.

And the average growth in NOPAT was 8.5%. So this is lower than ROIC !

Excess cash

The average growth in invested capital (adjusted for inflation) was about 4%, on average, during 1990 – 2021 (see source used for this blog).

Here the definition of invested capital (IC) is WITHOUT excess cash.

The combination of excess cash generation, and the change in sector composition, has led to higher balances of cash and short term investments.

The average of excess cash + short term investments as a percentage of assets, was for the Russell 3000 estimated at 5.4% on average (during 1985 to 2021).

And this was estimated at about 2% in 1985 and at about 10% in 2021, so it grows!

Reason = Aggregate ROIC > Aggregate NOPAT growth.

Capital allocation

Companies need to be careful on how to deploy these "excess funds", because they will not make the "opportunity cost of capital" as a return.

But of course they can function as a buffer.

In the upcoming weeks I will discuss the alternatives, next to excess cash/ short term investments, for capital allocation.

I will discuss the following capital allocations in depth:

1. M&A;
2. Investment SG&A (excl. R&D) = intangibles;
3. CAPEX;
4. R&D;
5. Net working capital;
6. Divestitures;
7. Dividends;
8. Share buybacks.

So see you next week again with a new blog !

Thanks for reading, best regards, Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Capital allocation: Mergers & Acquisitions (M&As)

Author: Joris Kersten, MSc

Kersten CF: M&A advisory and Valuations @ The Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring, 5 days @ Amsterdam. 4th – 8th November 2024, registration & manual @ www.joriskersten.nl. 130 recommendations @ https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Introduction

Among capital allocation alternatives, Mergers & Acquisitions (M&As) are by far the largest allocation.

Let's take a look at annual M&A volume in the US from 1985 to 2021, as well as to M&A as a percentage of sales.

M&A deals in 2021 totalled nearly 2.6 trillion USD, and this was 13.5% of sales.

But as we know, M&A is very "cyclical".

When we look at M&A volume as a percentage of market capitalization from 1985 until 2021, we see the following:

-M&A volume was 7.3% of the market cap on average.

And the peak was 14.2% in 1988.

Private equity and M&A deals

Private equity (PE) entered into M&A actively.

PE activity grew sharply preceding the financial crises of 2008, and dropped heavily after the crises.

But ever since PE activity grew again.

PE deals have averaged 15% of total deal volume since 2000, and 12% when we look at the period from 1985 to 2021.

PE peaked at 2007 with a volume of 29% from the total, and the lowest point was in 1998 with 2%.

When deals add value

M&A deals create value in the aggregate, measured by comparing the combined equity value of the buyer, and seller, before and after the deal.

The problem is that the value of the buying company often goes down following a deal announcement.

And this means there is a wealth transfer from the shareholders of the buyer, to the shareholders of the seller.

This is the result from the "premium" buyers pay in deals.

Deals from 1995 to 2018 showed that the stock price of the buyer went down in 60% of the cases, from the time of the announcement.

(please see the source I have used for this article, for the exact study done)

The average change for all the deals was -/- 1.6% for the buyer's stock price.

But there is a lot of variance, so plenty transactions create value for the buyer.

Here are a few insights for which type of deals generally add value:

- Cash deals do better, on average, than equity funded deals or deals funded with a mix of cash & equity. The basic idea is: Stock is used when the company is overvalued, and cash is used when company is undervalued;
- Deals between companies with similar operations generate better returns than those deals who seek to transform a business. With operational deals the core businesses of the target and acquirer are related (so called: "Bolt on deals");
- Companies with specialised M&A teams generally outperform those without these M&A professionals;
- Higher control premiums are associated with lower excess returns, and lower premiums with higher returns.

EPS accretion/ EPS dilution

Everybody involved in M&A knows that EPS accretion/ dilution analysis is a big, big, thing !

This phenomenon is modelled with a so called M&A model (the target is modelled on top of the buyer in Excel: P&L, BS, CFS, debt schedule etc).

EPS accretion basically means that the combined EPS, should be higher than the EPS of the target, in the upcoming years after the deal.

For example, when you buy an EBITDA multiple that is lower than yourself (the buyer), deals are always EPS accretive, even all equity financed !

But when you buy higher multiples (target has higher ebitda multiple than buyer), and pay all equity, then the deal is EPS dilutive !

But here (with dilutive deals) you can come up with for example "synergies" or use (lots of) debt in order to get the deal EPS accretive.

A survey shows (please see the source I have used for this blog) that executives, sell side analysts and investors care the most about EPS accretion/ dilution in M&A deals.

BUT, there is NO empirical foundation for this view !

Excess returns for the buyer's stock is essentially independent on EPS changes.

Successful M&As

M&As, like other capital allocations, are successful when the value a buyer realises EXCEEDS the price the buyer pays !

So we need to look at our basics:

- The Net present value !!

Net present value of the deal = Present value of the synergies -/- premium paid.

The average deal premium for each year from 1985 – 2021 is 45%.

These are US deals and here every deal receives an equal weight.

Samples limited to larger deals have average premiums of around 30%.

Shareholder value at risk (SVAR)

SVAR is useful to check the downside risk for a buyer's stock price.

In a cash deal the SVAR is defined as the premium pledged divided by the market cap of the buyer.

SVAR basically represents the amount of wealth transfer from the buyer to the seller in case the combination of the companies has NO synergies.

So it gives you a sense of the size of the "bet", and how much value is at risk.

The SVAR is always higher in a cash deal than in a stock deal.

This because in a stock deal, the SVAR is measured as the premium pledged divided over the market cap of the buyer + the seller (incl. the premium).

So the seller is now also sharing in the risk of achieving the synergies (which should justify the premium).

Hope this was useful,

See you next week again with a new blog !

Best Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Capital allocation: Intangibles, CAPEX, R&D, NWC, Dividends & Buybacks

Author: Joris Kersten, MSc

Kersten CF: M&A advisory and Valuations @ The Netherlands. www.kerstencf.nl

Training: Business Valuation & Deal Structuring, 5 days @ Amsterdam. 4th – 8th November 2024, registration & manual @ www.joriskersten.nl. 130 recommendations @ https://www.joriskersten.nl/nl/reviews

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Introduction

Intangible assets are non physical.

They can be divided in three categories:

1. Computerised information: e.g. software development, database development;

2. Innovative property: e.g. R&D, mineral exploration, creating entertaining and artistic originals, design and other product development costs;

3. Economic competencies: e.g. training, market research and branding, business process reengineering.

Measuring internally generated intangible investments is a challenge.

This because they are mixed with maintenance spending within selling, general & administrative (SG&A) expenses in the income statement.

In 1974 the FASB (financial accounting standards board) decided that companies should expense R&D.

This is a prominent form of intangible investments.

Reason was that there is normally a high degree of uncertainty about the future benefits of individual R&D projects.

So by expensing them you are conservative, and it will reduce equity straight away through the P&L.

Nowadays academics are actively researching methods to isolate investments from SG&A, and to estimate useful lives (this for setting the "amortisation").

The most common approach is to assume that:

- All R&D is an intangible investment;
- 30% from SG&A (excluding R&D) is an tangible investment.

(please see the source I have used for this article, this for the original studies on isolating these intangible investments)

Aggregate SG&A, excluding R&D, was in 2021 for companies in the Russell 3000 1.3 trillion USD.

This up from 170 billion USD in 1985.

This went from 5.8% of sales in 1985 to 7.1% of sales in 2021.

It was estimated that in 2021, for companies in the Russel 3000, investment SG&A excluding R&D, and net of amortization, was about 1.9% of sales.

This is a little lower than 30% of 7.1%, cause it is a "net number", so taking amortisation into account.

Capital expenditures (CAPEX)

Companies in the Russell 3000 allocated about 1.1 trillion USD to CAPEX in 2021.

This is about 5.7% of sales.

And CAPEX are investments in tangible assets.

Similar to intangible investments, CAPEX are less cyclical than M&A.

CAPEX can be divided in two parts:

- "Maintenance CAPEX" and "growth CAPEX".

Growth CAPEX were roughly 35% from total CAPEX, over the period 1985 – 2021 for the Russell 3000.

Maintenance CAPEX is often underestimated, since often it needs to be larger than depreciation.

This because there is “inflation” (not taken up in depreciation) and there can be “technological obsolescence” within the assets.

As a rule of thumb, depreciation understates maintenance CAPEX by about 20% overall. (check the source I have used for this article)

Research & Development (R&D)

R&D is largely an intangible investment.

US businesses spend 20 – 25 % of their R&D budget on research, and 75 – 80 % on development.

Investment R&D was 1.3% of sales in 1985 and went up to 2.3% in 2021, for the Russell 3000.

This was mainly the result of a change in the composition of the market.

Since the sector weights of "technology" and "healthcare" have doubled since the mid-1980s to now.

Concerning amortisation on R&D, the weighted average asset life is about 4.4 years.

Net working capital (NWC)

NWC has lost significance as a factor in capital allocation in the last decades.

NWC was nearly 30% from assets in the 1970s, and NWC is less than 10% of assets today.

Reason is the mass reduction in inventory levels.

Dividends

Dividends, once set, are considered equivalent to investment decisions such as capital expenditures.

Buybacks are seen more as a way to disburse residual cash after the firm has made all suitable investments.

Nearly 75% of the companies (in the US) paid a dividend in the late 1970s.

And just 39% of the companies did this in 2002.

It went back up to 48% in 2014, and went down again to 35% of the companies in 2021.

Share buybacks

The percentage of net income that companies are paying out in buybacks was significantly higher in the last 10 years (about 2010 – 2020), compared to 1985 – 1995.

Very rough estimate is 60% of net income during 2010 – 2020, and 30% of net income during 1985 – 1995.

This is a "gross number", so equity issuance is NOT netted out.

And this for companies of the Russell 3000.

While buybacks have surpassed dividends in overall corporate payouts, the aggregate payout has been very steady.

When we look at the "shareholder yield"; (buybacks + dividends) / equity capital of the market, this is quite stable.

Ranging roughly in between 4 – 6 % during 1985 – 2021 for the Russell 3000 (gross number, so equity issuance NOT netted out).

This is (very roughly) in line with the "cost of equity".

Cost of equity & buybacks

This cost of equity comes down from about 12 – 13 % in 1985 to about 8 – 9 % from 2000 on to now.

The total shareholder yield went from 47% of the cost of equity in 1985 to about 62% of the cost of equity in 2021.

One could argue that a company should repurchase its shares ONLY when its stock is undervalued.

AND when no better investment opportunities (than the buybacks) are available !

I have mentioned "EPS accretion/ dilution" before.

And also with buyback "accounting outcomes" (EPS accretion is an accounting outcome) can (potentially) improve.

(improvement is not necessary the case, since EPS accretion actually is a function of "multiples" and "additional interest")

But there is no prove that "EPS accretion" increases shareholder value !

Another reason for the buybacks can be to offset "stock based compensation", so offsetting "equity issuance".

The total "net payout ratio" is still significant for companies.

The definition is:

- (Dividends + net share buybacks) / net income.

So here the ratio is "net of equity issuance".

For the Russell 3000 this ratio was 50% in 1985, and went up to 64% in 2021.

Hope this was useful,

See you next week again with a new blog !

Best Joris

Source used: Morgan Stanley Investment Management, Counterpoint Global Insights. Capital allocation: Results, analysis and assessment. 2022. Michael J. Mauboussin & Dan Callahan.

Kersten Corporate Finance

Visiting address
Gording 67
5406 CN Uden
The Netherlands

Postal address
Gording 67
5406 CN Uden
The Netherlands

Contact
joris@kerstencf.nl
+31 68364 0527
www.kerstencf.nl

kersten
corporate finance