Cash M&A Deal

Contents

Nature of an Acquisition

Target

	Private Company	Public Company
Assets	The acquisition is incorporated into the acquirer's balance sheet like purchase of PP&E. No new subsidiary is created. Priced based on EV.	The acquisition is incorporated into the acquirer's balance sheet like purchase of PP&E. No new subsidiary is created. Priced based on EV.
Shares	The acquired company becomes a subsidiary of the acquirer. The balance sheet is fully consolidated. Price based on EV or per share basis.	The process is heavily regulated. The price is based on a per share basis. Target shareholders receive control premium (between the offer price and the unaffected price).

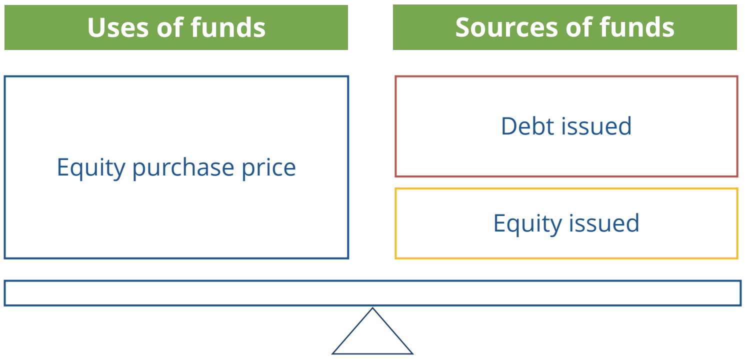
Equity Valuation in an M&A Context

Offer price per share × Number of shares outstanding = Acquisition equity value

Acquisition equity value + Net debt = Acquisition enterprise value

Acquisition EBIT and EBITDA multiples

Sources and Uses of Funds



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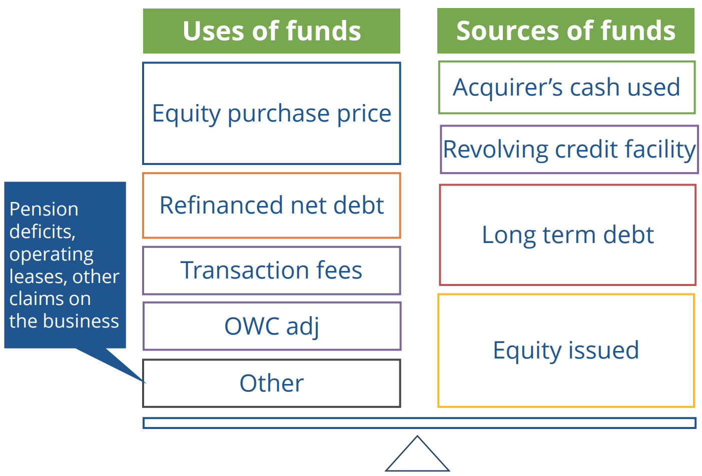

Financing a Transaction

Debt

- Depends on consolidated debt capacity
- Normally based on an EBITDA multiple
- Calculate proforma EBITDA
- Estimate maximum consolidated debt
- Compare with total pre deal debt
- Interest rate based on consolidated risk
- May impact credit ratings

Equity

- Normally more expensive than debt
- New shares issued means dilution
- May be impacted by volatile share prices
- May mean shares "flowback"
- Post deal ownership an issue for acquirer shareholders
- Exchange ratio calculated for offer document

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Transaction Fees

Type of fees	Characteristics
Advisory fees	Fees to bankers, lawyers and accountants, paid in cash and expensed during the year immediately after the deal, calculated on the basis of acquisition EV
Debt issuance fees	Fees to debt underwriters, paid in cash, usually capitalized and then amortized over term of the debt using effective interest method
Equity issuance fees	Fees to equity underwriters. Kept by underwriters post share sale. Amount paid by new equity investors as part of share consideration

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Consolidation – Balance Sheet

Investor + Investee +/- Transaction effects = Consolidated

Transaction effects
The shareholders of the investee have been bought out so: Zero out the investee's shareholders' equity on consolidation
The transaction must be financed so: Summarize in a sources and uses of funds table
Calculate the premium paid above book amount Allocate to component parts, step ups, step downs, goodwill

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Consolidation – Income Statement

Investor + Investee +/- Transaction effects = Consolidated

Transaction effects
Only consolidate from the deal date: "Stub" for deal year – only include post acquisition portion of the year
Extra interest expense on deal debt and lost interest expense on retired debt Lost interest income on balance sheet cash used
Revenue and / or cost synergies
Extra depreciation / amortization on PP&E / Intangibles step ups
Tax impact of the above

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Equity Financing Exchange Ratio

Equity issued to do the deal ÷ Acquirer share price = Acquirer new shares issued

Acquirer new shares issued ÷ Target shares bought = Exchange ratio

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Output – EPS Accretion / Dilution

	Year 1	Year 2	Year 3	Comment
Target EPS	14.40	14.85	15.30	From research or management
Target shares outstanding	562.5	562.5	562.5	Todays: assume no changes
Target net income	8,100.0	8,353.1	8,606.3	Calculate = EPS * share count
Acquirer EPS	6.53	6.75	7.20	From research or management
Acquirer shares outstanding	1,522.1	1,522.1	1,522.1	Todays: assume no changes
Acquirer net income	9,939.3	10,274.2	10,959.1	Calculate = EPS * share count
Synergies	675.0	675.0	675.0	Estimate and benchmark
Synergies post tax @ 25.0%	506.3	506.3	506.3	Calculate = synergies * (1 – t)
Deal debt	6,415.2	6,415.2	6,415.2	From debt capacity analysis
Deal debt interest @ 6.0%	384.9	384.9	384.9	Deal debt * estimated interest rate
Deal debt interest post tax @ 25.0%	288.7	288.7	288.7	Calculate = deal debt interest * (1 – t)
Proforma net income	18,256.9	18,844.9	19,783.0	Target + acquirer + synergies - interest

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Output – EPS Accretion / Dilution

	Year 1	Year 2	Year 3	Comment
Consolidated shares				
Acquirer shares outstanding	1,522.1	1,522.1	1,522.1	Todays: assume no changes
New shares issued	1,472.6	1,472.6	1,472.6	Calculate = equity issued / acquirer share price
Proforma shares outstanding	2,994.7	2,994.7	2,994.7	Calculate = shares outstanding + issued
EPS accretion / (dilution)				
Proforma EPS	6.10	6.29	6.61	Calculate = Proforma net income / proforma shares outstanding
Acquirer EPS	6.53	6.75	7.20	Standalone
EPS accretion / (dilution)	(6.6%)	(6.8%)	(8.3%)	Calculate = (Proforma EPS / Acquirer EPS) -1

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Output – Synergies to Breakeven

Assume no other synergies assumptions were made

	Year 1	Year 2	Year 3	Comment
Synergies to prevent dilution				
Acquirer EPS	6.53	6.75	7.20	Standalone
Proforma EPS	6.10	6.29	6.61	Calculate = equity issued / acquirer share price
EPS shortfall	0.43	0.46	0.59	Calculate = acquirer EPS – proforma EPS
Proforma shares	2,994.7	2,994.7	2,994.7	From previous calculations
Net income shortfall	1,287.7	1,377.6	1,766.9	Calculate = EPS shortfall * proforma shares
Pre tax synergies necessary @25%	1,717.0	1,836.7	2,355.8	Calculate = net income shortfall / (1- target MTR)

$$\text{Synergies to prevent diluton} = \frac{\text{MAX}\left((\text{Acquirer EPS} - \text{Proforma EPS}) * \text{Proforma Shares}, 0\right)}{(1 - \text{Target MTR})}$$

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Output – Relative P/Es

Relative P/Es are useful sense checks; they work for cases with no synergies and 100% debt or 100% equity financing

$$\text{Acquirer P/E} = \frac{\text{Acquirer share price}}{\text{Acquirer EPS}}$$

$$\text{Debt P/E} = \frac{1}{\text{Cost of debt} * (1 - \text{Tax})}$$

$$\text{Acquisition P/E} = \frac{\text{Offer price}}{\text{Target EPS}}$$

Acquisition P/E > acquirer P/E , deal is dilutive using 100% stock

Acquisition P/E > debt P/E, deal is dilutive using 100% debt

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Relative P/Es – Example

Assumptions :
Acquirer P/E = 15.0x
Post tax cost of debt = 4.0%
Acquisition P/E = 18.0x

	P/E	E/P= (1/(P/E)	Comment
Acquisition (target)	18.0x	5.6%	
Acquirer	15.0x	6.7%	If transaction is 100% equity financed, the deal will be dilutive, meaning the return on the deal is less than on acquirer's stock
Debt	25.0x	4.0%	If transaction is 100% debt financed, the deal will be accretive, meaning the return on the deal is higher than on transaction debt

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Output – Debt Capacity

A significant part of M&A transactions are financed with debt.
An analysis of combined credit rating and debt capacity is essential.

Multiple is driven by the desired post deal credit rating

Include synergies for forecast figures

Haircuts might also be applied

Multiple: Max; Cash flow adequacy leverage; Market driven × Value driver: Combo LTM or forecast EBITDA = Multiple based debt capacity

Acquirer EBITDA + target EBITDA + SG&A synergies

Compare combo debt capacity to existing acquirer and target debt to calculate additional debt to be issued in the transaction

Assumed multiple	Value driver	Combo debt capacity
Max debt / LTM EBITDA = 3.0x	Forecast combo EBITDA = 1,200.0	Max debt capacity = 3,600.0 (1,200.0 * 3.0x = 3,600.0)

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Output – Value of Synergies

		Year 1	Year 2	Year 3
Pre tax synergies		100.0	200.0	300.0
Post tax synergies @ 30%		70.0	140.0	210.0
Discount rate	10.0%			
TV (no growth)				2,100.0
Discount factors		90.9%	82.6%	75.1%
PV of synergies		63.6	115.7	157.8
Sum of PV of synergies	337.1			
PV of TV	1,577.8			
Value of synergies	1,914.9			
Total premium paid	2,300.0			
Value created / (destroyed)	(385.1)			

Use target MTR

Target WACC + risk premium

Could assume perpetuity growth

Total premium paid to target shareholders, for public companies acquisition equity value – pre offer market cap

If premium paid < value of synergies, transaction creates value for acquirer shareholders and vice versa

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Output – Return on Invested Capital

ROIC: generic definition

Net operating profit after tax adjusted at ETR

$$\text{ROIC} = \frac{\text{NOPAT}}{\text{Invested capital}}$$

All sources of financing, or capital employed

Compare ROIC to WACC

ROIC: M&A context

Synergies adjusted at target's MTR

$$\frac{\text{NOPAT}_{\text{target}} + \text{synergies post tax}}{\text{Transaction invested capital}}$$

Acquisition enterprise value plus transaction costs

Compare transaction ROIC to target WACC

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Output – Return on Invested Capital

	Deal date	Fwd year 1	Fwd year 2	Fwd year 3
Target EBIT		100.0	110.0	120.0
Synergies pre tax		10.0	30.0	50.0
NOPAT @30%		70.0	77.0	84.0
Synergies post tax @35%		6.5	19.5	32.5
Adjusted NOPAT		76.5	96.5	116.5
Beginning invested capital		1,000.0	1,150.0	1,315.0
- Depreciation		(200.0)	(210.0)	(220.0)
+ Capex		300.0	320.0	340.0
+ Increase in OWC		50.0	55.0	60.0
Invested capital	1,000.0	1,150.0	1,315.0	1,495.0
ROIC on average IC		7.1%	7.8%	8.3%
Target WACC		7.5%	7.5%	7.5%

At target ETR

At target MTR

Signs for operational investments are reversed from CFS

Acquisition EV + transaction fees

ROIC > target WACC?

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Output – Analysis at Various Prices

% premium	Share price	Shares Out	Market cap	Debt	Cash	EV	LTM EBITDA	EV/LTM EBITDA
0.0%	10.00	100.0	1,000.0	100.0	50.0	1,050.0	120.0	8.8x
20.0%	12.00	100.0	1,200.0	100.0	50.0	1,250.0	120.0	10.4x
25.0%	12.50	100.0	1,250.0	100.0	50.0	1,300.0	120.0	10.8x
30.0%	13.00	100.0	1,300.0	100.0	50.0	1,350.0	120.0	11.3x
35.0%	13.50	100.0	1,350.0	100.0	50.0	1,400.0	120.0	11.7x
40.0%	14.00	100.0	1,400.0	100.0	50.0	1,450.0	120.0	12.1x

% premium range and acquisition share price

Implied multiple you are paying for the business, usually compared to transaction comparables

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