

INVESTERINGSKALKYLER



ANDERS TALLBERG

2023

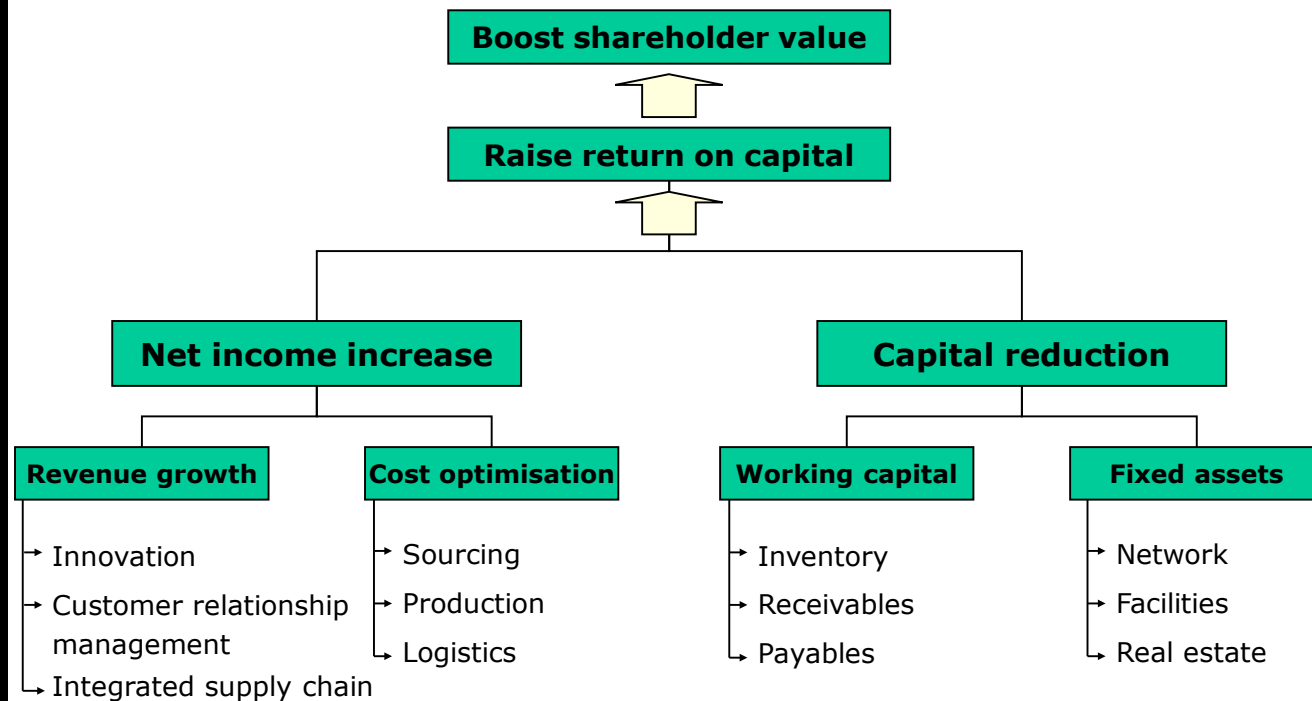
SENIOR FELLOW, HANKEN & SSE EXECUTIVE EDUCATION

Agenda

1. Värdeträäd, leverage och kapitalkostnad
2. Diskontering och nettonuvärden – logiken
3. Fallgropar – hur undvika att göra bort sig
4. Tillämpning på hela företag
5. Frågor? Svar?

Spakar att dra i, rattar att vrida på...

Routes to improved shareholder value



Source : Mercer Management Consulting

16

Leverage: Case Ab Oyab Oy

1. Finansiera och köp
 nödvändiga tillgångar → BR

	Aktiva	Passiva	
		100	Eget kapital
Tillgångar	200	100	Främmande kapital (@ 7% p.a.)
	<u>200</u>	<u>200</u>	

2. Gör business → RR

Omsättning	100
Opex	<u>-80</u>
Rörelseresultat (EBIT)	20
Finansiella kostnader	<u>-7</u>
Vinst	<u>13</u>

ER	50%
ROE	13%
ROA	10%

3. Räkna och fundera!

Varför är ROE högre
 än ROA?

Capital Structure and Financial Leverage

- If the business yields more than the loans cost, it's in principle a good idea for the company to borrow...
- ...but the limits to this are set by the volatility of the business, i.e. how much EBIT (and thus ROA) varies from year to year.
 - a low-risk business can borrow more than a high-risk one;
 - thus, the appropriate equity rate (ER, or leverage) is determined by the variability of earnings.
- Given a proper capital structure – suitable leverage – the return on equity will look surprisingly similar across very different businesses. The amount of equity should be sufficient to absorb the volatility of earnings, but not much more than that.

The Cost of Capital

- Given an appropriate capital structure, we can deduce the threshold value for acceptable ROA.
- It should be sufficient to
 - pay interest on the loans to the lenders, and
 - generate at least a market return on the equity for the owners (over time!).
- WACC = Weighted Average Cost of Capital = the interest rate paid on debt and the required rate of return on equity, weighted by the proportion of debt and equity.
- For instance (simplified calculation):
 - interest paid on liabilities: 4%
 - corporate tax rate 20%
 - target ROE: 10%
 - ER (equity ratio): 40%
 - $WACC = 0.8 \times 4\% \times 0.6 + 10\% \times 0.4 = 6.2\%$

Diskonterade kassaflöden

- En euro om ett år är idag värd vad du skulle behöva investera idag för att ha en euro om ett år.
- Om du får 5% ränta så kan du investera 95.2 cent idag och ha en euro om ett år – så värdet av en euro om ett år är 95.2 cent idag.
- Värdet idag av vad som helst som genererar eller kräver framtida kassaflöden kan räknas fram genom att summera alla diskonterade framtida kassaflöden – nettonuvärdet (NPV, net present value).
- Ett specialfall – perpetuiteter: Ett varje år återkommande (lika stort) kassaflöde är värt vad du skulle behöva investera nu för att få kassaflödet ifråga som avkastning varje år.
- Om du får 5% avkastning så kan du få 5 cent varje år med ett kapital (en investering) på 1 euro, så en 5 cents perpetuitet är värd 1 euro.

Some things that may or may not seem strange but are still true

- If your (weighted average) cost of capital is 6%...
- ...a payment of 1 euro 10 years from now is equivalent to 56 cents today;
- ...a payment of 1 euro 20 years from now is equivalent to 31 cents today;
- ...a payment of 1 euro every year forever is equivalent to 16.67 euros today
- If your (weighted average) cost of capital is 9%...
- ...a payment of 1 euro 10 years from now is equivalent to 42 cents today;
- ...a payment of 1 euro 20 years from now is equivalent to 18 cents today;
- ...a payment of 1 euro every year forever is equivalent to 11.11 euros today
- If your (weighted average) cost of capital is 12%...
- ...a payment of 1 euro 10 years from now is equivalent to 32 cents today;
- ...a payment of 1 euro 20 years from now is equivalent to 10 cents today;
- ...a payment of 1 euro every year forever is equivalent to 8.33 euros today

The core formulas

- Value of a 1 € perpetuity = $1/r$
- Value of a 1 € cash flow n years out in today's money
= DCF (discounted cash flow)
$$= \frac{1}{(1+r)^n}$$
- r = discount rate, e.g. WACC (weighted average cost of capital)
- NPV (net present value) = sum of all discounted cash flows
- Average ROI (return on investment) over a project
= IRR (internal rate of return)
= the discount rate that makes the NPV = 0

An example

- You have two fantastic projects available in the pipeline, but because of constraints on available resources and funds you can only do one of them. Which one should you do?
- They both need a 60M€ investment, and have a 6-year time frame
 - Project A needs you to invest 10M this year, 20M next year, and 30M the year after that, after which there will be total returns of 105 M spread equally over the following three years
 - Project B needs you to invest 50M this year and 10M next year, after which you will get 110M back: returns of 10M per year for three years and a final return of 80M in the last year
- Your cost of capital is 8%.

Excel was created for this!

Excel model structure

<i>r</i> 8%						
Year	0	1	2	3	4	5
CF	0	0	0	0	0	0
DCF	0.00	0.00	0.00	0.00	0.00	0.00
NPV	0.00					

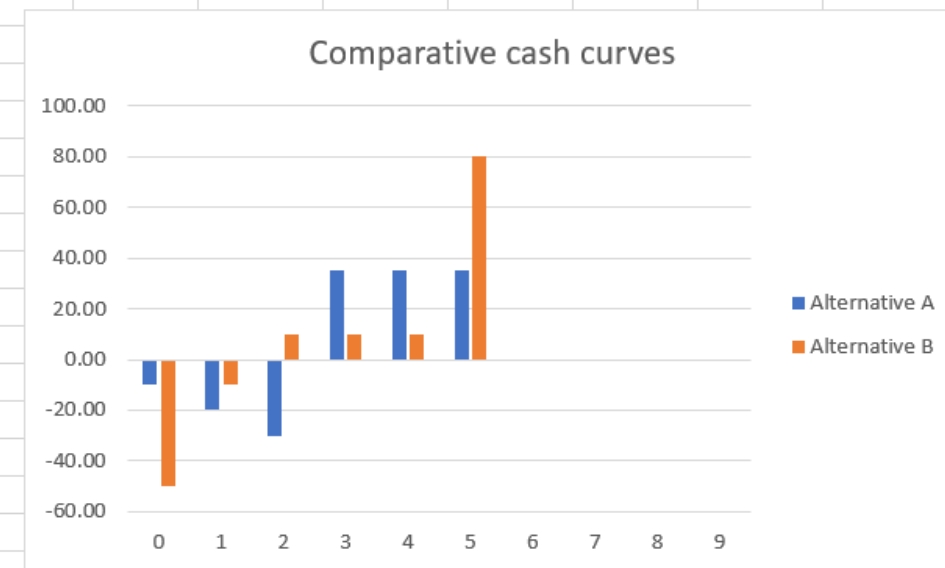
The sum
of all the
DFCs

$$\frac{CF}{(1 + r)^{year}}$$

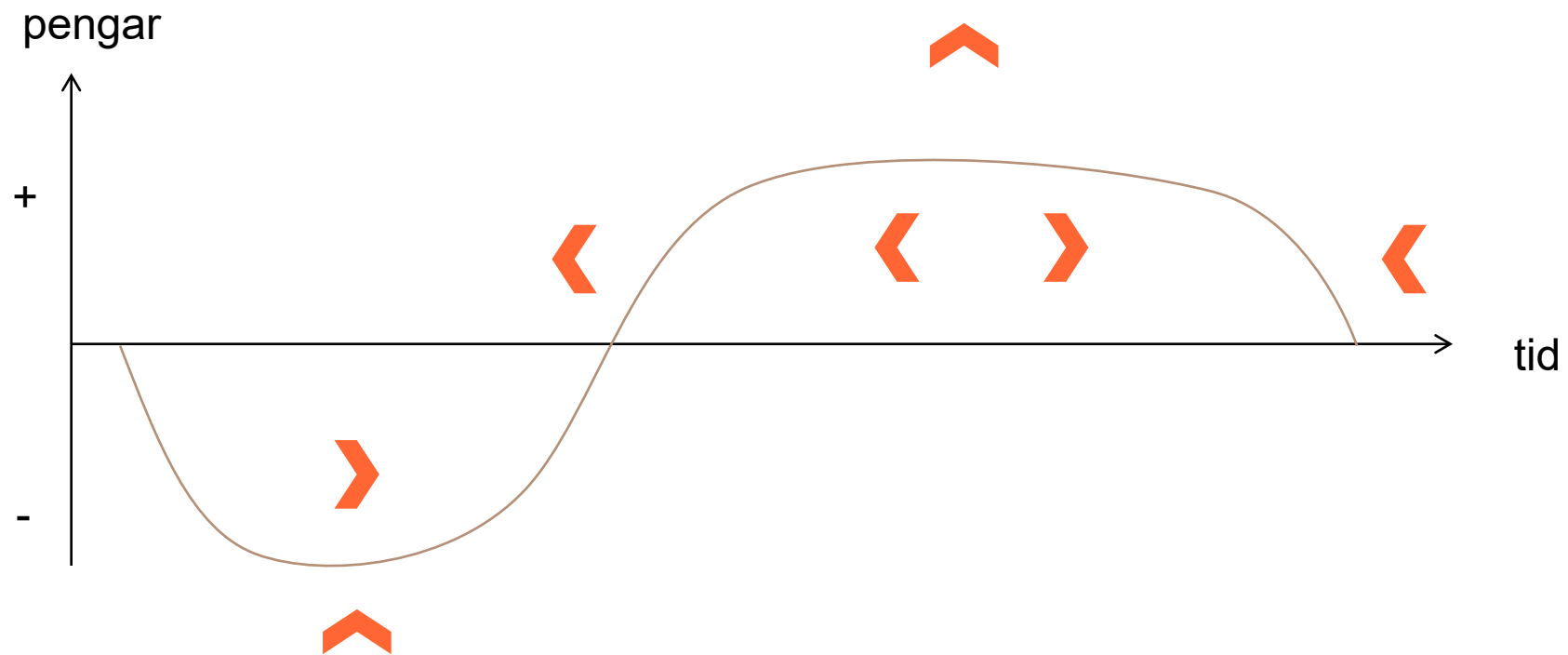
Answer ($r = 8\%$)

Project A	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
CF	-10	-20	-30	35	35	35
DCF	-10.00	-18.52	-25.72	27.78	25.73	23.82
NPV	23.09					
Project B	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
CF	-50	-10	10	10	10	80
DCF	-50.00	-9.26	8.57	7.94	7.35	54.45
NPV	19.05					

	A	B	C	D	E	F	G	H	I	J	K	L
3		8.00%	Discount rate (e.g., WACC)				You can enter values in the colored cells					
4						If you wish to change anything else, go to 'Review' and 'Unprotect Sheet'						
5		Alternative A										
6		Year	0	1	2	3	4	5	6	7	8	9
7		Cash flow										
8		Cash flow										
9		Cash flow										
10		Cash flow										
11		Cash flow										
12		Cash flow										
13		Cash flow										
14		Cash flow										
15		Cash flow										
16		Cash flow	-10.00	-20.00	-30.00	35.00	35.00	35.00				
17		Net cash flow	-10.00	-20.00	-30.00	35.00	35.00	35.00	0.00	0.00	0.00	0.00
18		Discounted cash flow	-10.00	-18.52	-25.72	27.78	25.73	23.82	0.00	0.00	0.00	0.00
19		Net present value	23.09									
20												
21		Alternative B										
22		Year	0	1	2	3	4	5	6	7	8	9
23		Cash flow										
24		Cash flow										
25		Cash flow										
26		Cash flow										
27		Cash flow										
28		Cash flow										
29		Cash flow										
30		Cash flow										
31		Cash flow										
32		Cash flow	-50.00	-10.00	10.00	10.00	10.00	80.00				
33		Net cash flow	-50.00	-10.00	10.00	10.00	10.00	80.00	0.00	0.00	0.00	0.00
34		Discounted cash flow	-50.00	-9.26	8.57	7.94	7.35	54.45	0.00	0.00	0.00	0.00
35		Net present value	19.05									

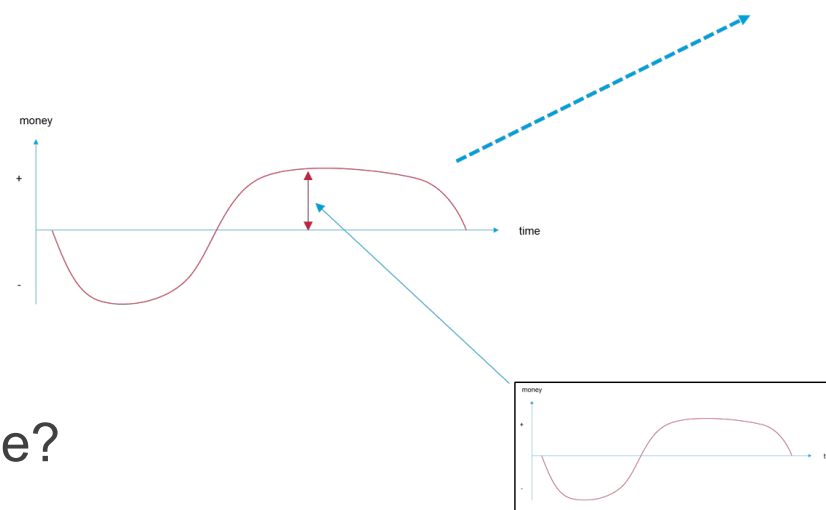


Lönsamhet är att hantera kassaflöden över tiden = risk



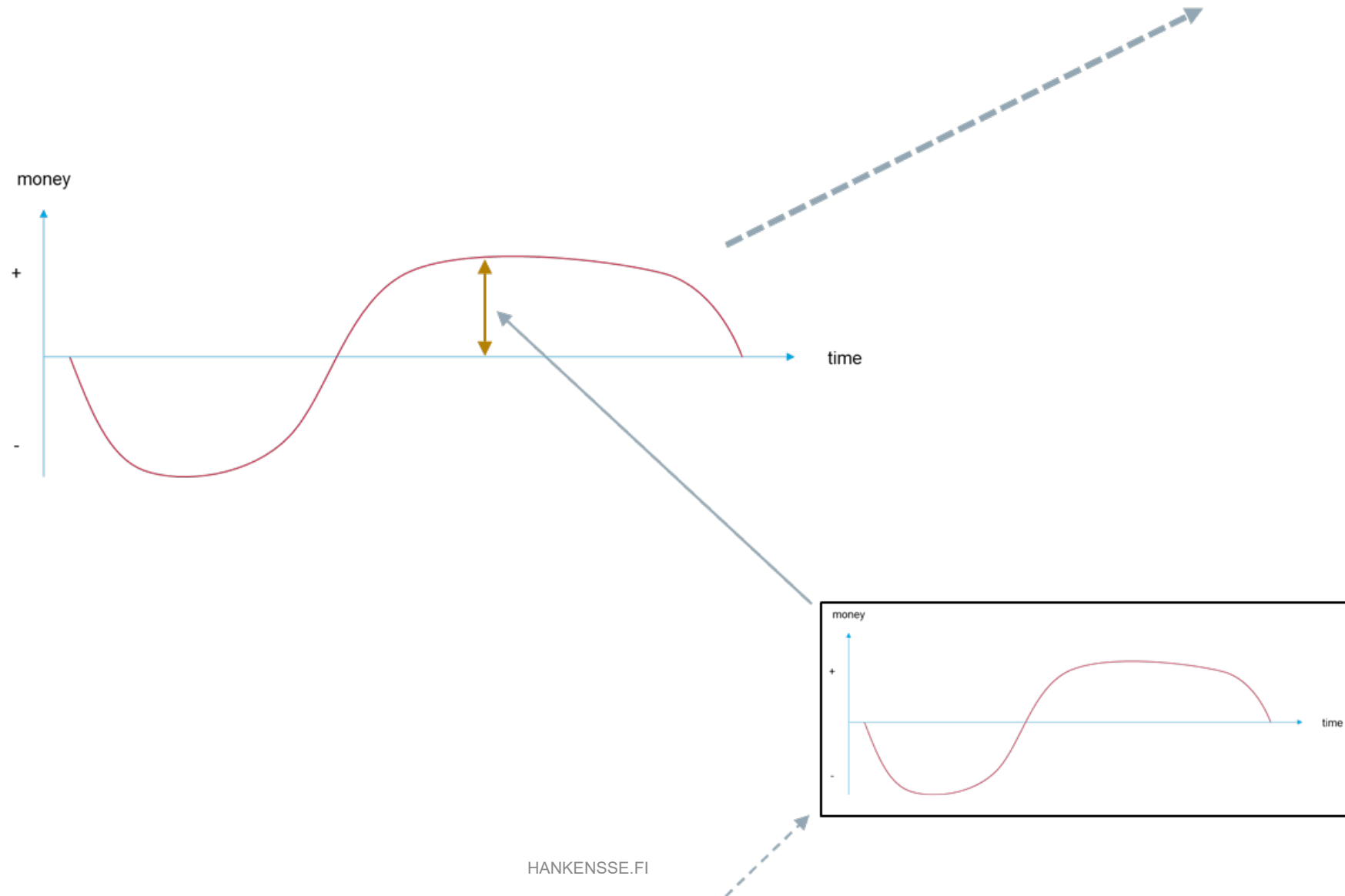
Lönsamhet – att skapa värde – har alltid en tidsdimension

- På lång sikt: Att hitta nya (slags?) lönsamma investeringar.
- På medellång sikt: Att planera och optimera de lönsamma investeringar vi gör.
- På kort sikt: Att se till att vi får in de positive kassaflödena från de investeringar vi har gjort

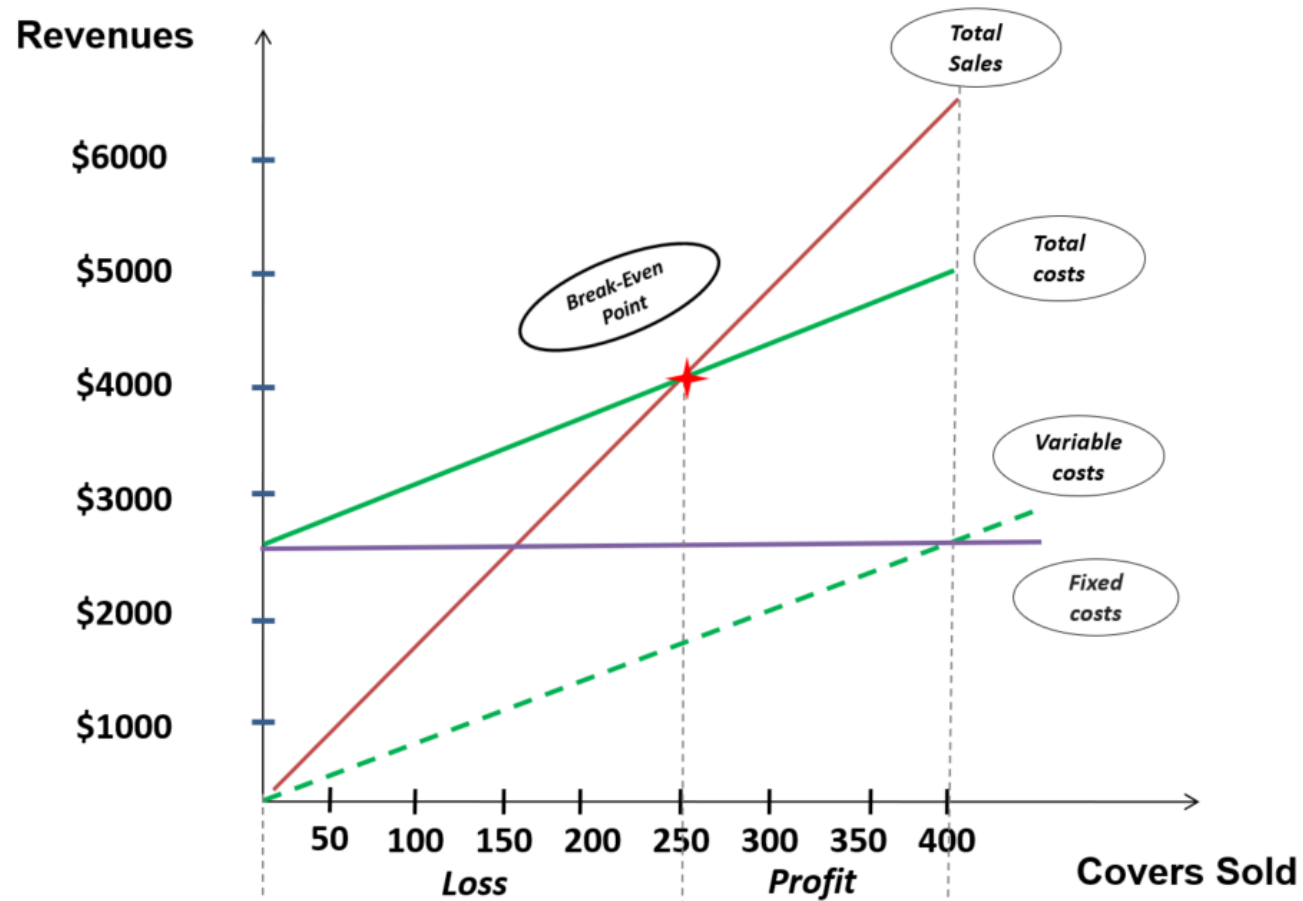


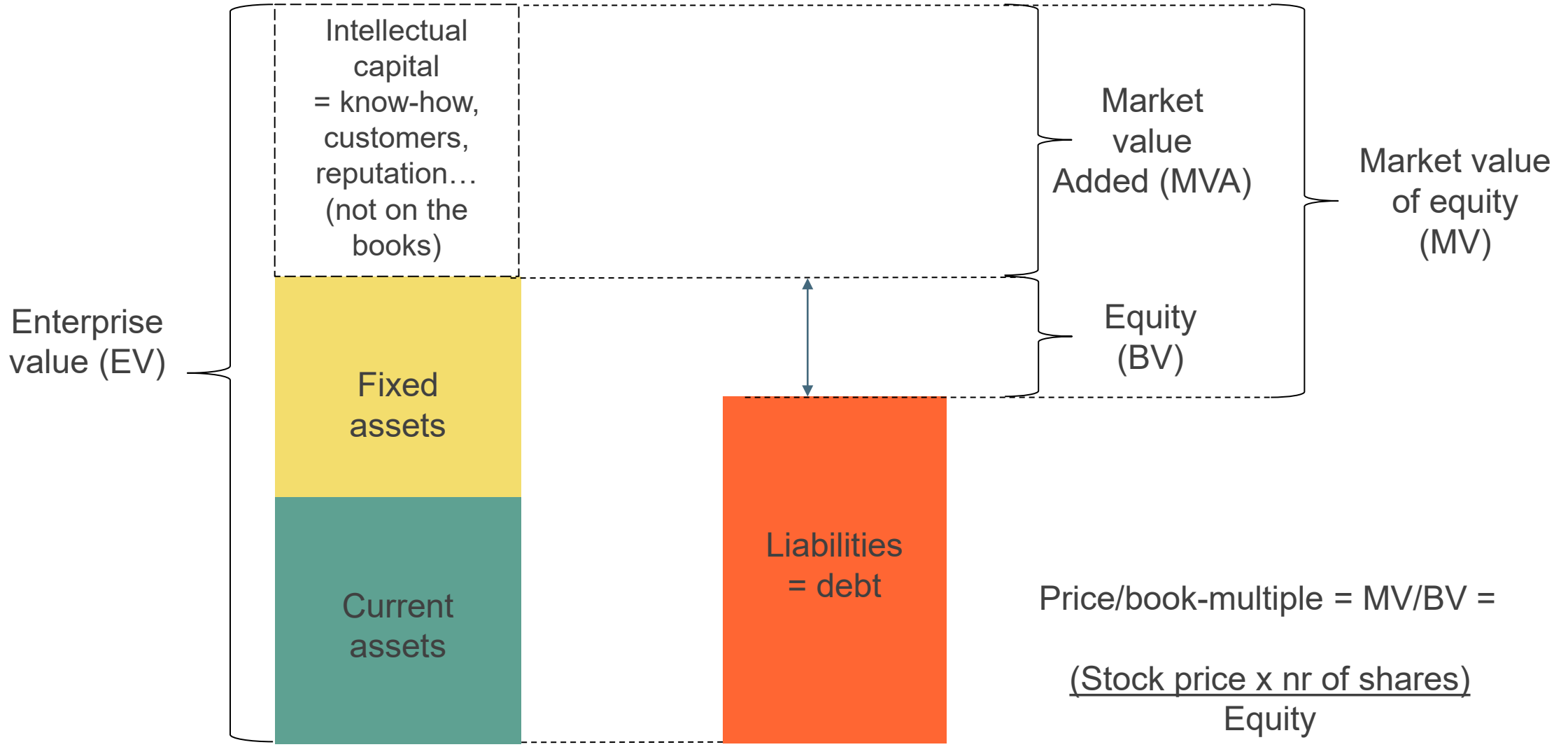
- Redovisade vinster i resultaräkningarna berättar hur det gick, i efterskott. Skapade och tillvaratog vi värde?

Det är en hierarki (och en portfölj)!



En analogi: Bidragslogiken i kostnadskalkyler (CVP)





Let's suppose

- You have borrowed about 1.5 billion euros, at an average cost of 5% and average (bullet) loan period of 5 years. You have about 700M of equity, which should on the average generate about 11% in order to keep your owners from firing your CEO.
 - Your WACC is then around 7%.
- There is a great project in the pipeline that will require 300 million euros in capital now, but will generate 600 million euros: 300 M€ back 6 years from now, and then 100 M€ per year for 3 years, which will immediately be reinvested. The 300M can be borrowed by the group (for 6 years), but at this level of leverage the interest rate will be 7%. What is the value of this project?

Answer 1

Year	0	1	2	3	4	5	6	7	8	9	10
CF -	-300.0										
CF +							300.0	100.0	100.0	100.0	
CF net	-300.0	0.0	0.0	0.0	0.0	0.0	300.0	100.0	100.0	100.0	
PV	-300.0	0.0	0.0	0.0	0.0	0.0	199.9	62.3	58.2	54.4	
NPV	74.8										

Answer 2

Year	0	1	2	3	4	5	6	7	8	9	
CF- (2% extra interest on 300M€)		-6.0	-6.0	-6.0	-6.0	-6.0	-6.0				
CF - (investment)	-300.0										
CF +							300.0	100.0	100.0	100.0	
CF net	-300.0	-6.0	-6.0	-6.0	-6.0	-6.0	294.0	100.0	100.0	100.0	
PV	-300.0	-5.6	-5.2	-4.9	-4.6	-4.3	195.9	62.3	58.2	54.4	
NPV	46.2										

Answer 3

Year	0	1	2	3	4	5	6	7	8	9	10
CF- (2% extra interest on 1.5B€ avg 5y)		-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0	-6.0
			-6.0	-6.0	-6.0	-6.0	-6.0				
				-6.0	-6.0	-6.0	-6.0	-6.0			
					-6.0	-6.0	-6.0	-6.0	-6.0		
						-6.0	-6.0	-6.0	-6.0	-6.0	
CF- (2% extra interest on 300M€)		-6.0	-6.0	-6.0	-6.0	-6.0	-6.0				
CF - (investment)	-300.0										
CF +							300.0	100.0	100.0	100.0	
CF net	-300.0	-12.0	-18.0	-24.0	-30.0	-36.0	264.0	76.0	82.0	88.0	-6.0
PV	-300.0	-11.2	-15.7	-19.6	-22.9	-25.7	175.9	47.3	47.7	47.9	-3.1
NPV	-79.3										

Answer 4

Year	0	1	2	3	4	5	6	7	8	9	10
CF- (2% extra interest on 1.5B€ perpetually)		-85.7									
			-85.7								
				-85.7							
					-85.7						
						-85.7					
CF- (2% extra interest on 300M€)		-6.0	-6.0	-6.0	-6.0	-6.0	-6.0				
CF - (investment)	-300.0										
CF +							300.0	100.0	100.0	100.0	
CF net	-300.0	-91.7	-91.7	-91.7	-91.7	-91.7	294.0	100.0	100.0	100.0	0.0
PV	-300.0	-85.7	-80.1	-74.9	-70.0	-65.4	195.9	62.3	58.2	54.4	0.0
NPV	-305.3										

Let's suppose some more

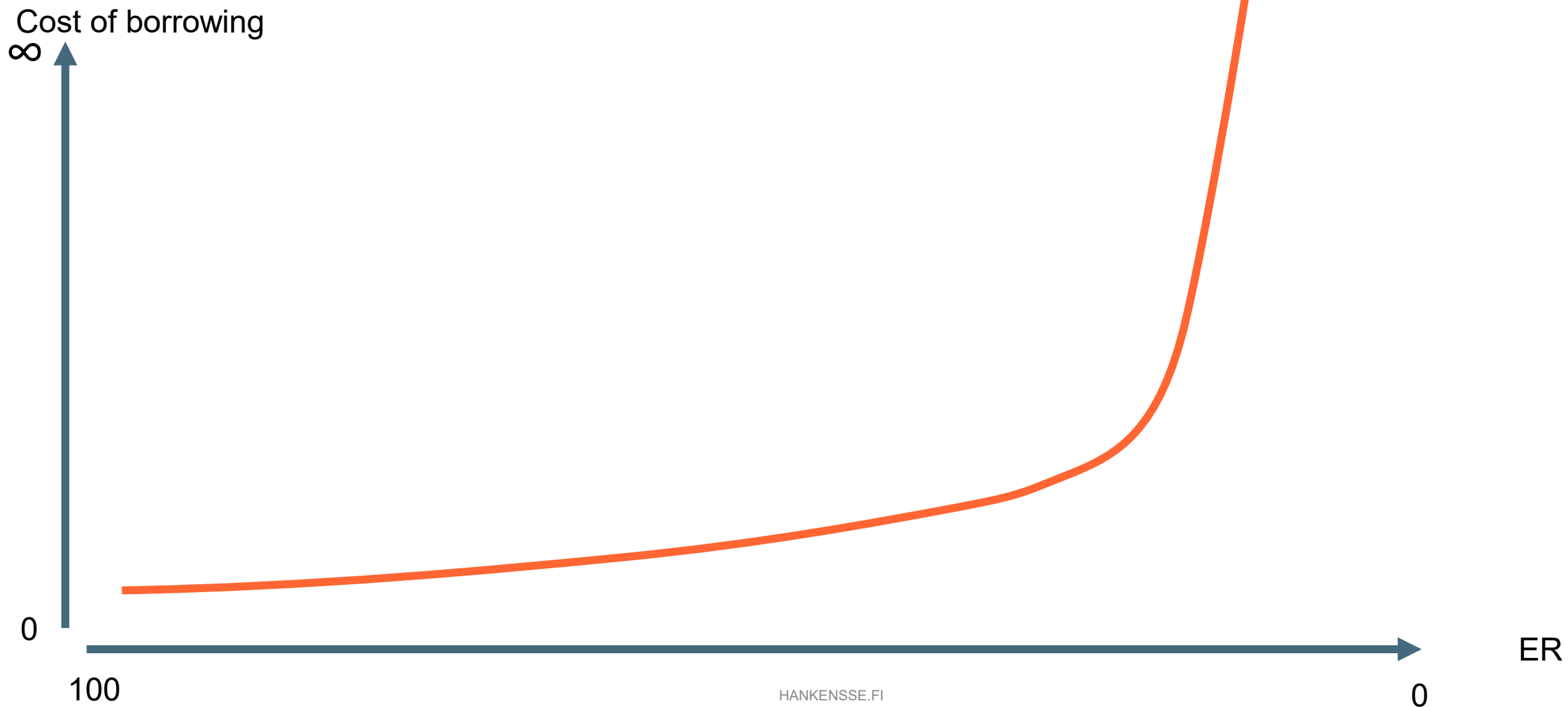
Same as previous, except your company is actually at a level of financial leverage where average borrowing costs will rise by 2% as new debt is issued in order to finance repayments of old loans that fall due.

1. What is the value of an effort where admin etc. costs (overheads) are reduced by 10 million euros per year for the next four years?
2. What is the value of an effort where 200 different projects or units free up an average of 500000 euros each in invested capital, which means that average borrowing costs will rise by only 1% instead of 2%?
3. What if this also means that we then can do the 300M project without impacting borrowing costs?

Answers

1. +41M @ 7%.
2. 100M freed up, plus $(1\% \text{ of } 1,5\text{B} =) 15\text{M} / 7\% = 214.29\text{M}$ in NPV of additional interest payments avoided
= +314.29M (less whatever costs are incurred)
3. The previous number, plus 46.2M gain in value

The cost of capital hockey stick



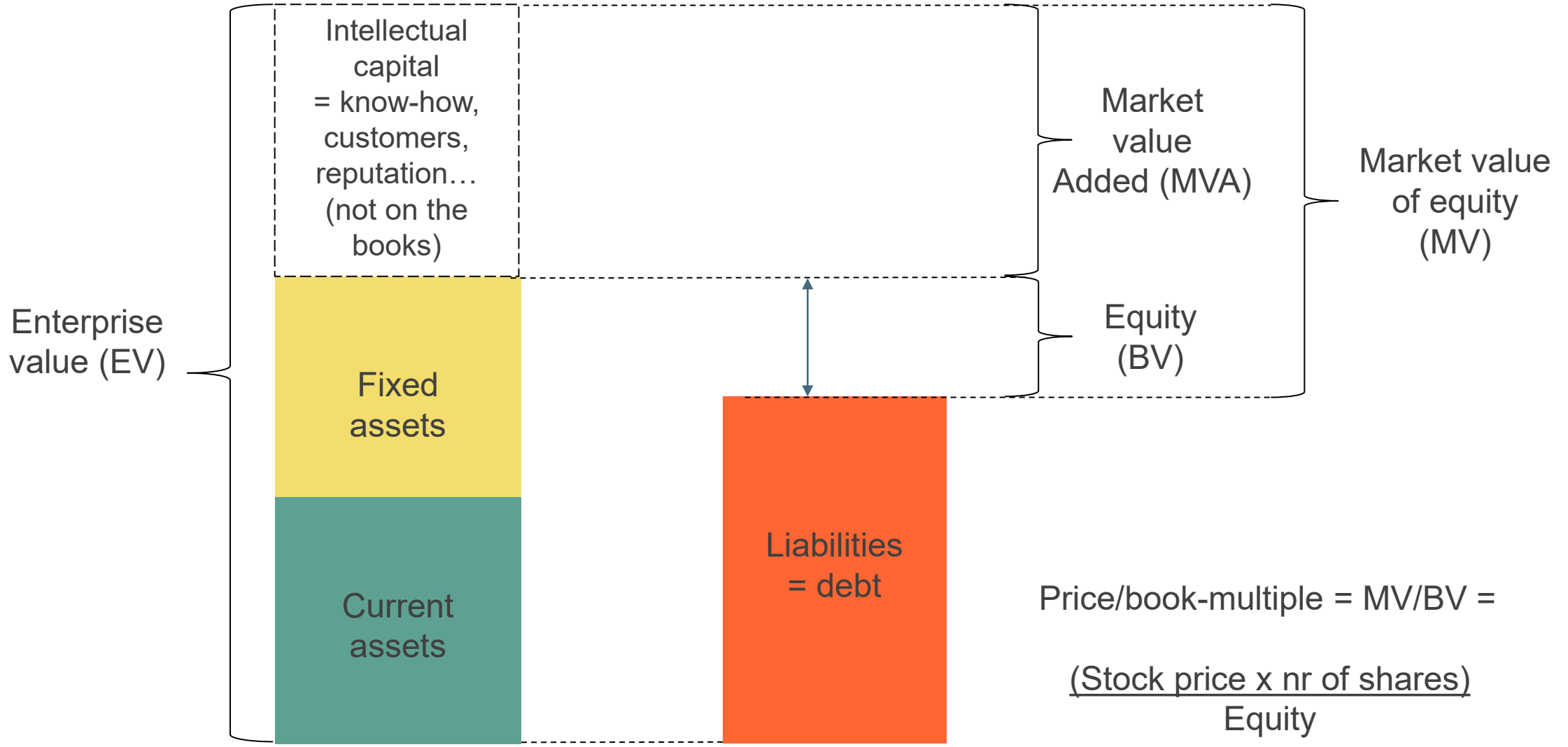
The core takeaways

For a company with a pipeline of profitable but capital-intensive projects available, which has borrowed so much money that interest rates will rise significantly on any new debt, the value multiplier on releasing capital from operations can be really surprisingly high. Every euro of capital released can actually increase the value of the company with several euros!

- A surprising number of companies fall in this category, for at least two diametrically opposite reasons.
- In general, make sure you think about all the differential cash flows when comparing projects

Värdet av ett företag med verksamhet (“going concern”) kan i princip räknas på många olika sätt – de följande metoderna bör i teorin alla ge samma resultat:

- Nettonuvärdet av alla kommande fria kassaflöden (FCF, kassaflöde före finansiering och räntekostnader) diskonterade med WACC;
- Nettonuvärdet av alla kommande dividender diskonterade med avkastningskravet på eget kapital;
- Bokföringsvärdet av eget kapital + nettonuvärdet av alla kommande överavkastningar (EP, economic profit, EVA, economic value added) diskonterade med avkastningskravet på eget kapital



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Ahlstrom ex ante													
2	Required ROE	12.66%												
3	Sales growth initial	0.00%												
4	Sales growth end	0.00%												
5	Operating margin end	7.69%												
6	CT end	1.11												
7	Tax rate	26.00%												
8	Dividend payout rate	100.00%												
9													Terminal	
10		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
11	Sales		1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00		
12	Operating costs		-1405.00	-1405.00	-1404.99	-1404.99	-1404.98	-1404.98	-1404.97	-1404.97	-1404.96	-1404.96		
13	Operating profit		117.00	117.00	117.01	117.01	117.02	117.02	117.03	117.03	117.04	117.04		
14	Financial income		3.00	2.97	2.98	2.98	2.98	2.98	2.98	2.98	2.98	2.98		
15	EBIT		120.00	119.97	119.99	120.00	120.00	120.01	120.01	120.01	120.02	120.02		
16	Financial expenses		-20.00	-18.08	-19.23	-19.22	-19.21	-19.20	-19.19	-19.18	-19.16	-19.15		
17	Taxes		-38.00	-26.49	-26.20	-26.20	-26.21	-26.21	-26.21	-26.22	-26.22	-26.23		
18	Net profit		62.00	75.40	74.56	74.57	74.59	74.60	74.61	74.62	74.63	74.64		
19														
20	Assets	1381.00	1367.00	1373.69	1373.37	1373.06	1372.74	1372.43	1372.11	1371.80	1371.48	1371.17		
21	Equity	580.00	590.00	590.00	590.00	590.00	590.00	590.00	590.00	590.00	590.00	590.00		
22	Interest-bearing debt	395.00	357.00	379.84	379.61	379.39	379.17	378.95	378.73	378.50	378.28	378.06		
23	Other debt	406.00	420.00	403.85	403.76	403.66	403.57	403.48	403.39	403.29	403.20	403.11		
24														
25	Sales growth			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
26	Operating margin		7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%		
27	ER		43.16%	42.95%	42.96%	42.97%	42.98%	42.99%	43.00%	43.01%	43.02%	43.03%		
28	PM		7.88%	7.88%	7.88%	7.88%	7.88%	7.88%	7.88%	7.89%	7.89%	7.89%		
29	CT		1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11		
30	ROE		10.60%	12.78%	12.64%	12.64%	12.64%	12.64%	12.65%	12.65%	12.65%	12.65%		
31	ROI		12.49%	12.52%	12.37%	12.38%	12.38%	12.38%	12.39%	12.39%	12.39%	12.40%		
32	ROA		8.73%	8.76%	8.74%	8.74%	8.74%	8.74%	8.75%	8.75%	8.75%	8.75%		
33														
34	Cost of debt		-5.60%	-4.76%	-5.07%	-5.07%	-5.07%	-5.07%	-5.07%	-5.07%	-5.07%	-5.07%		
35	Cost of equity			-74.69	-74.69	-74.69	-74.69	-74.69	-74.69	-74.69	-74.69	-74.69		
36	EVA			0.71	-0.13	-0.12	-0.11	-0.10	-0.09	-0.07	-0.06	-0.05	-0.41	
37	PV of EVA	0.08		0.63	-0.10	-0.08	-0.07	-0.05	-0.04	-0.03	-0.02	-0.02	-0.12	
38	Dividends			75.40	74.56	74.57	74.59	74.60	74.61	74.62	74.63	74.64		
39	PV of dividends	590.31		66.93	58.75	52.15	46.30	41.10	36.49	32.39	28.76	25.53	201.90	
40														
41				CV per share		37.277	15.83		P/E 06	7.83				
42	Book value	590.00		BV per share			15.83							
43	DAE company value	590.08		P/B			1.00							
44														

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Ahlstrom ex ante new shares (8M at 24)													
2	Required ROE	10.00%												
3	Sales growth initial	0.00%												
4	Sales growth end	0.00%												
5	Operating margin end	7.69%												
6	CT end	1.00												
7	Tax rate	26.00%												
8	Dividend payout rate	100.00%												
9														
10		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Terminal 2015	
11	Sales		1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00	1522.00		
12	Operating costs		-1405.00	-1405.00	-1404.99	-1404.99	-1404.98	-1404.98	-1404.97	-1404.97	-1404.96	-1404.96		
13	Operating profit		117.00	117.00	117.01	117.01	117.02	117.02	117.03	117.03	117.04	117.04		
14	Financial income		3.00	3.39	3.21	3.22	3.23	3.24	3.26	3.27	3.28	3.29		
15	EBIT		120.00	120.39	120.21	120.23	120.25	120.27	120.28	120.30	120.32	120.34		
16	Financial expenses		-20.00	-18.08	-13.15	-13.36	-13.56	-13.76	-13.97	-14.18	-14.39	-14.60		
17	Taxes		-38.00	-26.60	-27.84	-27.79	-27.74	-27.69	-27.64	-27.59	-27.54	-27.49		
18	Net profit		62.00	75.71	79.23	79.09	78.95	78.81	78.67	78.53	78.39	78.24		
19														
20	Assets	1381.00	1559.00	1475.60	1481.25	1486.93	1492.67	1498.44	1504.26	1510.13	1516.04	1522.00		
21	Equity	580.00	782.00	782.00	782.00	782.00	782.00	782.00	782.00	782.00	782.00	782.00		
22	Interest-bearing debt	395.00	357.00	259.79	263.77	267.79	271.84	275.92	280.02	284.17	288.34	292.55		
23	Other debt	406.00	420.00	433.81	435.47	437.14	438.83	440.53	442.24	443.96	445.70	447.45		
24														
25	Sales growth			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
26	Operating margin		7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%		
27	ER		50.16%	53.00%	52.79%	52.59%	52.39%	52.19%	51.99%	51.78%	51.58%	51.38%		
28	PM		7.88%	7.91%	7.90%	7.90%	7.90%	7.90%	7.90%	7.90%	7.91%	7.91%		
29	CT		1.04	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.00	1.00		
30	ROE		9.10%	9.68%	10.13%	10.11%	10.10%	10.08%	10.06%	10.04%	10.02%	10.01%		
31	ROI		11.35%	11.04%	11.52%	11.47%	11.43%	11.39%	11.35%	11.31%	11.26%	11.22%		
32	ROA		8.16%	7.93%	8.13%	8.10%	8.07%	8.04%	8.01%	7.98%	7.95%	7.92%		
33														
34	Cost of debt		-5.60%	-6.96%	-4.99%	-4.99%	-4.99%	-4.99%	-4.99%	-4.99%	-4.99%	-4.99%		
35	Cost of equity			-78.20	-78.20	-78.20	-78.20	-78.20	-78.20	-78.20	-78.20	-78.20		
36	EVA			-2.49	1.03	0.89	0.75	0.61	0.47	0.33	0.19	0.04	0.44	
37	PV of EVA	0.86		-2.26	0.85	0.67	0.51	0.38	0.27	0.17	0.09	0.02	0.17	
38	Dividends			75.71	79.23	79.09	78.95	78.81	78.67	78.53	78.39	78.24		
39	PV of dividends	776.91		68.83	65.48	59.42	53.92	48.94	44.41	40.30	36.57	33.18	325.87	
40														
41				CV per share		45.277	17.29		P/E 06	10.34				
42	Book value	782.00		BV per share			17.27							
43	DAE company value	782.86		P/B			1.00							
44														

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Ahlstrom new shares 3													
2	Required ROE	8.00%												
3	Sales growth initial	8.00%												
4	Sales growth end	4.00%												
5	Operating margin end	7.69%												
6	CT end	1.00												
7	Tax rate	26.00%												
8	Dividend payout rate	50.00%												
9													Terminal	
10		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	
11	Sales		1522.00	1643.76	1767.04	1890.73	2013.63	2134.45	2251.85	2364.44	2470.84	2569.67		
12	Operating costs		-1405.00	-1517.39	-1631.19	-1745.37	-1858.82	-1970.34	-2078.70	-2182.63	-2280.84	-2372.06		
13	Operating profit		117.00	126.37	135.85	145.36	154.82	164.11	173.15	181.81	190.00	197.61		
14	Financial income		3.00	3.39	3.46	3.74	4.01	4.29	4.56	4.83	5.10	5.35		
15	EBIT		120.00	129.75	139.31	149.10	158.83	168.40	177.71	186.65	195.10	202.95		
16	Financial expenses		-20.00	-18.08	-15.28	-17.47	-19.55	-21.51	-23.28	-24.83	-26.10	-27.05		
17	Taxes		-38.00	-29.04	-32.25	-34.22	-36.21	-38.19	-40.15	-42.07	-43.94	-45.73		
18	Net profit		62.00	82.64	91.78	97.41	103.06	108.70	114.28	119.74	125.06	130.17		
19														
20	Assets	1381.00	1559.00	1593.65	1719.73	1847.17	1974.82	2101.41	2225.60	2346.00	2461.16	2569.67		
21	Equity	580.00	782.00	823.32	869.21	917.91	969.45	1023.80	1080.94	1140.81	1203.34	1268.42		
22	Interest-bearing debt	395.00	357.00	301.81	344.93	386.21	424.80	459.82	490.36	515.49	534.27	545.79		
23	Other debt	406.00	420.00	468.52	505.58	543.05	580.58	617.79	654.30	689.70	723.56	755.46		
24														
25	Sales growth			8.00%	7.50%	7.00%	6.50%	6.00%	5.50%	5.00%	4.50%	4.00%		
26	Operating margin		7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%	7.69%		
27	ER		50.16%	51.66%	50.54%	49.69%	49.09%	48.72%	48.57%	48.63%	48.89%	49.36%		
28	PM		7.88%	7.89%	7.88%	7.89%	7.89%	7.89%	7.89%	7.89%	7.90%	7.90%		
29	CT		1.04	1.03	1.03	1.02	1.02	1.02	1.01	1.01	1.00	1.00		
30	ROE		9.10%	10.30%	10.85%	10.90%	10.92%	10.91%	10.86%	10.78%	10.67%	10.53%		
31	ROI		11.35%	11.46%	11.91%	11.84%	11.77%	11.70%	11.63%	11.57%	11.50%	11.43%		
32	ROA		8.16%	8.23%	8.41%	8.36%	8.31%	8.26%	8.21%	8.17%	8.12%	8.07%		
33														
34	Cost of debt		-5.60%	-5.99%	-4.43%	-4.52%	-4.60%	-4.68%	-4.75%	-4.82%	-4.89%	-4.96%		
35	Cost of equity			-64.21	-67.70	-71.49	-75.49	-79.73	-84.19	-88.87	-93.77	-98.87		
36	EVA			18.43	24.08	25.92	27.57	28.97	30.09	30.87	31.29	31.30	391.22	
37	PV of EVA	349.02		17.06	20.64	20.58	20.26	19.72	18.96	18.02	16.91	15.66	181.21	
38	Dividends			41.32	45.89	48.70	51.53	54.35	57.14	59.87	62.53	65.08		
39	PV of dividends	1160.50		38.26	39.34	38.66	37.88	36.99	36.01	34.93	33.78	32.56	832.08	
40														
41				CV per share		45.277	24.98		P/E 06	13.69				
42	Book value	782.00		BV per share			17.27							
43	DAE company value	1131.02		P/B			1.45							
44														

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Elisa 1													
2	Required ROE	27.20%												
3	Sales growth initial	0.00%												
4	Sales growth end	0.00%												
5	Operating margin end	20.71%												
6	ATO end	0.69												
7	Tax rate	20.00%												
8	Dividend payout rate	100.00%												
9														
10		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Terminal 2026	
11	Sales		1637.00	1637.00	1637.00	1637.00	1637.00	1637.00	1637.00	1637.00	1637.00	1637.00		
12	Operating costs		-1298.00	-1298.00	-1297.99	-1297.99	-1297.99	-1297.99	-1297.98	-1297.98	-1297.98	-1297.98		
13	Operating profit		339.00	339.00	339.01	339.01	339.01	339.01	339.02	339.02	339.02	339.02		
14	Financial income		7.00	7.89	7.44	7.43	7.43	7.42	7.42	7.41	7.40	7.40		
15	EBIT		346.00	346.89	346.44	346.44	346.44	346.43	346.43	346.43	346.42	346.42		
16	Financial expenses		-25.00	-29.47	-26.90	-26.86	-26.82	-26.77	-26.73	-26.69	-26.65	-26.61		
17	Taxes		-63.00	-63.49	-63.91	-63.92	-63.92	-63.93	-63.94	-63.95	-63.95	-63.96		
18	Net profit		258.00	253.94	255.64	255.67	255.70	255.73	255.76	255.79	255.82	255.85		
19														
20	Assets	2247.00	2533.00	2388.04	2386.08	2384.13	2382.17	2380.23	2378.28	2376.34	2374.40	2372.46		
21	Equity	926.00	971.00	971.00	971.00	971.00	971.00	971.00	971.00	971.00	971.00	971.00		
22	Interest-bearing debt	991.00	1168.00	1066.33	1064.65	1062.99	1061.32	1059.66	1058.00	1056.34	1054.69	1053.04		
23	Other debt	330.00	394.00	350.71	350.43	350.14	349.85	349.57	349.28	348.99	348.71	348.43		
24														
25	Sales growth			0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		
26	Operating margin		20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%	20.71%		
27	ER		38.33%	40.66%	40.69%	40.73%	40.76%	40.79%	40.83%	40.86%	40.89%	40.93%		
28	PM		21.14%	21.19%	21.16%	21.16%	21.16%	21.16%	21.16%	21.16%	21.16%	21.16%		
29	ATO		0.68	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69		
30	ROE		27.20%	26.15%	26.33%	26.33%	26.33%	26.34%	26.34%	26.34%	26.35%	26.35%		
31	ROI		17.06%	16.61%	17.01%	17.03%	17.04%	17.05%	17.07%	17.08%	17.09%	17.11%		
32	ROA		14.48%	14.10%	14.51%	14.53%	14.54%	14.55%	14.56%	14.57%	14.58%	14.60%		
33														
34	Cost of debt		-2.14%	-2.76%	-2.53%	-2.53%	-2.53%	-2.53%	-2.53%	-2.53%	-2.53%	-2.53%		
35	Cost of equity			-264.11	-264.11	-264.11	-264.11	-264.11	-264.11	-264.11	-264.11	-264.11		
36	EVA			-10.17	-8.48	-8.45	-8.42	-8.38	-8.35	-8.32	-8.29	-8.26	-30.37	
37	PV of EVA	-31.48		-7.99	-5.24	-4.10	-3.21	-2.52	-1.97	-1.54	-1.21	-0.95	-2.74	
38	Dividends			253.94	255.64	255.67	255.70	255.73	255.76	255.79	255.82	255.85		
39	PV of dividends	938.82		199.64	158.00	124.23	97.67	76.80	60.38	47.48	37.33	29.35	107.95	
40														
41				CV per share		167.34	5.61		P/E 06	3.70				
42	Book value	971.00		BV per share			5.80							
43	DAE company value	939.52		P/B			0.97							
44														
45														

	A	B	C	D	E	F	G	H	I	J	K	L	M	
1	Elisa 2													
2	Required ROE	5.00%												
3	Sales growth initial	15.00%												
4	Sales growth end	4.00%												
5	Operating margin end	10.00%												
6	ATO end	0.68												
7	Tax rate	20.00%												
8	Dividend payout rate	90.00%												
9													Terminal	
0		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
1	Sales		1637.00	1882.55	2139.05	2401.08	2662.20	2915.11	3151.96	3364.72	3545.57	3687.39		
2	Operating costs		-1298.00	-1515.10	-1746.98	-1989.56	-2237.60	-2484.86	-2724.25	-2948.18	-3148.83	-3318.65		
3	Operating profit		339.00	367.45	392.06	411.52	424.60	430.25	427.71	416.54	396.74	368.74		
4	Financial income		7.00	7.89	8.57	9.74	10.95	12.15	13.31	14.41	15.39	16.23		
5	EBIT		346.00	375.34	400.63	421.27	435.55	442.40	441.02	430.95	412.13	384.97		
6	Financial expenses		-25.00	-29.47	-34.01	-41.39	-48.93	-56.44	-63.71	-70.50	-76.57	-81.70		
7	Taxes		-63.00	-69.18	-73.33	-75.98	-77.32	-77.19	-75.46	-72.09	-67.11	-60.65		
8	Net profit		258.00	276.70	293.30	303.90	309.29	308.77	301.85	288.36	268.45	242.61		
9														
0	Assets	2247.00	2533.00	2750.70	3127.99	3513.99	3899.27	4273.13	4624.04	4940.14	5209.87	5422.64		
1	Equity	926.00	971.00	998.67	1028.00	1058.39	1089.32	1120.20	1150.38	1179.22	1206.06	1230.32		
2	Interest-bearing debt	991.00	1168.00	1348.06	1640.61	1939.53	2237.29	2525.37	2794.56	3035.40	3238.67	3395.93		
3	Other debt	330.00	394.00	403.98	459.38	516.07	572.66	627.56	679.10	725.52	765.13	796.38		
4														
5	Sales growth			15.00%	13.63%	12.25%	10.88%	9.50%	8.13%	6.75%	5.38%	4.00%		
6	Operating margin		20.71%	19.52%	18.33%	17.14%	15.95%	14.76%	13.57%	12.38%	11.19%	10.00%		
7	ER		38.33%	36.31%	32.86%	30.12%	27.94%	26.21%	24.88%	23.87%	23.15%	22.69%		
8	PM		21.14%	19.94%	18.73%	17.54%	16.36%	15.18%	13.99%	12.81%	11.62%	10.44%		
9	ATO		0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68		
0	ROE		27.20%	28.10%	28.94%	29.13%	28.80%	27.95%	26.59%	24.76%	22.51%	19.92%		
1	ROI		17.06%	16.73%	15.98%	14.87%	13.77%	12.69%	11.62%	10.56%	9.52%	8.49%		
2	ROA		14.48%	14.21%	13.63%	12.68%	11.75%	10.83%	9.91%	9.01%	8.12%	7.24%		
3														
4	Cost of debt		-2.14%	-2.19%	-2.07%	-2.13%	-2.19%	-2.23%	-2.28%	-2.32%	-2.36%	-2.41%		
5	Cost of equity			-49.24	-50.67	-52.16	-53.69	-55.24	-56.76	-58.24	-59.63	-60.91		
6	EVA			227.46	242.63	251.74	255.60	253.53	245.08	230.12	208.82	181.70	3634.08	
7	PV of EVA	3899.00		216.63	220.08	217.47	210.28	198.65	182.89	163.54	141.33	117.13	2231.01	
8	Dividends			249.03	263.97	273.51	278.37	277.89	271.66	259.52	241.60	218.35		
9	PV of dividends	2813.57		237.17	239.43	236.27	229.01	217.73	202.72	184.44	163.53	140.75	962.51	
0														
1				CV per share		167.34	29.10		P/E 06	17.60				
2	Book value	971.00		BV per share			5.80							
3	DAE company value	4870.00		P/B			5.02							
4														
5														

TACK!

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