

# P O N S S E



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## **1.0 Introduction**

In this paper we have conducted an investment analysis of the publicly traded company Ponsse and the market it operates in with the help of key-financial figures, various financial models and information gathering pertaining to the market that is Forest Machinery. We have calculated an estimated future price of the stock, commented on the current and future outlooks of the market and have also decided on whether or not this particular stock is over or undervalued based on our findings.

### **1.1 This is Ponsse**

Ponsse is a company originating in Finland with its headquarters located in Vieremä, Finland where it was also started in 1970 by a man obsessed with forestry who in the late 60s would build his own load carrying tractor in a local workshop which would then lay the foundation for the future of Ponsse. As of today, Ponsse is a global company with sales and servicing offices covering more than 40 different countries located anywhere you might find trees in the world.

Ponsse specializes in the sales, manufacturing, servicing and technology of cut-to-length logging method forest machines such as the load carrying machines known as Forwarders and the felling machines called Harvesters. Together, the harvester and forwarder make up the complete cut-to-length process necessary to harvest a forest of its trees and move the logs from the felling with a forwarder to a landing area close to a road that is accessible by cargo transport, most often trucks. Aside from the harvester and the forwarder. Ponsse also manufactures what they call Dual Machines. The Dual Machine is exactly what it sounds like within the context of cut-to-length machinery. That is, a harvester and a forwarder combined.

Aside from Ponsse's base products mentioned above, they also develop and manufacture sustainable and innovative harvesting solutions together with their customers and their special needs and wishes, thus allowing for a more specialized experience. Today Ponsse offers seven different harvester models, seven forwarders, one dual machine and a large variety of different harvester heads in their product catalogue.

### **1.2 Forest Machine Industry and Market Competitors**

The global forest machinery industry was valued close to 4 Billion USD in 2018 and has during the period between 2013-2017 delivered a compounded annual growth rate (CAGR) of over 3,5%, even better, future estimates of CAGR is shown to be 5%. Europe is expected to remain as the leading market, as well as a high-growth market for forest machinery in part due to the common agricultural policy (CAP) which is a policy applied to all countries within the EU that supports farmers and foresters and national development programs that also helps drive sales in the region. Russia has over the past few years shown to be another high-growth market due to an increased effort in upgrading the efficiency of logging by moving away from manual tree-length harvesting to modern, efficient and environmentally friendly logging methods such as the cut-to-length method.

The biggest market by country for Ponsse in 2018 was Russia with Sweden at number two and Finland closely followed. Russia and Asia together accounted for 23% of net sales, Northern Europe 38%, Central and Southern Europe 20% and North and South America 19%. The competition in these different markets are strong, with companies such as John Deere, Komatsu, Rottne and Sampo-Rosenlew amongst others all competing directly with Ponsse for the total market share.

The sales figures for forwarders during 2018 are shown below. Forwarders are what is most commonly measured when comparing the competition due to them being regarded as the most

important piece in the cut-to-length process, but we want to add that harvester sales seem to almost mirror sales of forwarders exactly. Unfortunately, any information regarding total units sold in Russia were not reported during 2018 so Sweden and Finland is what we have available to compare.

Forwarders sold in Sweden 2018 and 2017					Forwarders sold in Finland 2018 and 2017				
Brand	2018		2017		Brand	2018		2017	
	Units	Share	Units	Share		Units	Share	Units	Share
John Deere	105	38,3%	120	36,3%	Ponsse	101	42,6%	118	44,9%
Komatsu	67	24,5%	95	28,7%	John Deere	70	29,5%	79	30,0%
Ponsse	41	15,0%	50	15,1%	Komatsu	40	16,9%	46	17,5%
Rottne	33	12,0%	39	11,8%	Logset	13	5,5%	12	4,6%
EcoLog	12	4,4%	18	5,4%	Sampo	11	4,6%	7	2,7%
Gremo	9	3,3%	6	1,8%	Rottne	2	0,8%	1	0,4%
Sampo	5	1,8%	0	0,0%	Prosilva	0	0,0%	0	0,0%
Tigercat	2	0,7%	3	0,9%	Ecolog	0	0,0%	0	0,0%
Logset	0	0,0%	0	0,0%	Tigercat	0	0,0%	0	0,0%
<b>In Total</b>	<b>274</b>	<b>100,0%</b>	<b>331</b>	<b>100,0%</b>	<b>In Total</b>	<b>237</b>	<b>100,0%</b>	<b>263</b>	<b>100,0%</b>

As we can see Ponsse appear to have a firm grasp in the Finland market where they account for 43% of total sales and in Sweden, they are placed third at 15% of total sales with John Deere being the largest supplier of 2018. If we compare the total units sold between 2017 and 2018, we can tell that a notable decrease in sales has occurred in both markets, -17,2% in Sweden and -9,9% in Finland. This decrease in sales is not due to a lesser demand but is instead explained by the manufacturers not being able to produce enough machines for these customers because of a bottleneck caused by insufficient volumes of transmission and hydraulic components being delivered from third party companies.

As mentioned before, 2018 might look like the start of a downward trend in the market but both Ponsse, its competitors and market experts are all in agreement that this year was simply an inconsistency with the cause explained by the bottleneck that affected every player in the market, they all maintain that 2019 is going to be a big year for the forest machine industry.

Forwarders sold in Sweden 2019 and 2018					
Brand	2019		2018		Change
	Units	Share	Units	Share	
Komatsu	115	31,4%	67	24,5%	71,6%
John Deere	109	29,8%	105	38,3%	3,8%
Ponsse	64	17,5%	41	15,0%	56,1%
Rottne	38	10,4%	33	12,0%	15,2%
EcoLog	16	4,4%	12	4,4%	33,3%
Gremo	10	2,7%	9	3,3%	11,1%
Tigercat	10	2,7%	2	0,7%	400,0%
Sampo	3	0,8%	5	1,8%	-40,0%
Logset	1	0,3%	0	0,0%	-
<b>In total</b>	<b>366</b>	<b>100%</b>	<b>274</b>	<b>100%</b>	

The sales numbers that are just starting to come in from Sweden for Forwarders are reflecting exactly that with major improvements in sales for almost everyone in the market compared to 2018.

## 2.0 Comparative development (2009-2019)

Below is a graph comparing the growth of Ponsse, John Deere and Komatsu as these are both main competitors and they are also the only competitors who are publicly traded as of today. They are put in relation over a 10-year span with OMX30 and OMXH 25 to get a sense of the growth pertaining to the forest machinery industry.

Line	Index	10 Year Growth
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Yellow:	Ponsse	520%
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Green:	John Deere	356,48%
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Red:	Komatsu	160,51%
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Black:	OMX Stockholm 30	188,84%
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Grey:	OMX Helsinki 25	135,32%
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As we can see in the graph, Ponsse has outperformed its biggest market competitors by a large margin with a 10-year growth of 520% compared to John Deere's 356,48%. This information is however not without one major pitfall, that being the fact that John Deere and Komatsu are both significantly larger than Ponsse but are also operating in many different sectors that Ponsse does not. If we were to compare the number of employees for each of the three companies as of 2018, we would have the following:

Company	Number of employees as of 2018
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Ponsse	1 635
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John Deere	74 412
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Komatsu	61 908
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This of course makes it difficult to do any meaningful comparison between the companies because we simply do not know what amount of employees are connected to the forest machine industry but what we do know is that Ponsse would have been a great investment 10 years ago.

## 3.0 History, today and the future of Ponsse

This year Ponsse is celebrating 50 years of continued cut-to-length machinery production. What started in a local workshop is now operating in more than 40 different countries and has since become one of the largest and most recognized manufacturers of these machines.

Looking ahead, Ponsse has just completed their largest project in the company's history, the expansion of their production facility where every Ponsse machine is made and assembled. This expansion has thus far been a great equalizer in meeting the growing market demand and accelerating the assembly process making it possible to meet demand further. The European and Asian market for forest machines is continuing to grow at an impressive rate with 2019 shaping up to be the biggest year in the history of harvester and forwarder sales in large part due to the increasing demand in Russia despite Russia having a wide selection of domestically produced cut-to-length machines, the Russian end-users still prefer imported machines and equipment. This is due to Ponsse and its competitors operating at a much higher quality with their machines being both more efficient and more environment friendly than that of their Russian counterpart.

It is mentioned in Ponsse's interim report for Q1 2019 that there are still risks related to the availability of third party components, but the availability should improve during the next few months and they maintain that the production pace will be upheld to meet the increasing demand.

## **4.0 Analysis of financials**

In this section we will analyze the financial data of Ponsse and use existing models from the literature to try estimate a future price that would represent the current future value. By using these models we will get different suggested prices and we will look at the lowest suggested price and the highest suggested price and in the end combined the different prices and look at an average price that could give us an idea of how a “safe-estimate” scenario could look like, we believe it is better to apply a precautionary principle when valuing companies. Accounting also applies the precautionary principle when equities and other holdings are evaluated in the balance statements. Hence, we argue that it is better to have shy estimates than overly optimistic estimates especially when we are dealing with uncertainty.

### **4.1 Dividend discount model**

The dividend discount model is the backbone for our price estimation. A company is not worth more than the total future cash flow. There are only two ways a stock can generate cash flow to the investor and that is either through selling the stock for a certain market price on a stock exchange if the stock is publicly traded. If the company is private stocks can be sold through an auction though liquidity of the stock may be lower and might not represent the true market price. The second way is dividend payouts, normally dividends are paid out in cash, but occasionally the company can split branches and payout stocks as dividend and then launch that newly formed company on the public stock market as a separate entity, however this is very rare, some examples from Sweden are Atlas Copco split with Epiroc and SCA with Essity. But for simplicity and for the analysis we will only consider two ways cash flow is generated for shareholders, and that is cash dividend payouts and the sell price.

Before we analyze the dividend discount model we must understand and know Ponsse's cost of capital, this will be calculated by the principles from CAPM. In table 4 in the appendix chapter 9.2 we reveal the risk-free interest rate, beta value and market return. We calculate CAPM with the formula  $ER_i = R_f + \beta_i (ER_m - R_f)$  and get that Ponsse's cost of capital is 3,26%. The risk-free return is calculated from German government bonds, the beta value is calculated through market covariance and variance. The beta value measures how the stock moves in price relative to the market. And the final variable is Expected return on the market. To calculate this, we have estimated the average return on OMXH25 from 2019 and 2020.

In our dividend discount model, we are assuming changing growth with two stages, the first 4 years we assume a growth of 4,76% and then we assume that there will be constant growth of

1,61% as seen in table 1 in the appendix. Ponsse is classified as a cyclical small growth company hence we felt that it is necessary to account for a period of higher growth. We found certain periods with abnormal high growth in EPS as seen in figure 1 and we found it necessary to average out the volatility of EPS growth to a more linear relationship. By first excluding these abnormal periods of high growth we could generate an average growth of 1,61% and when we include periods of exceptional high growth, we could calculate an average of 23,80%. Having an average growth of 23,80% is too high, for us to use as a constant linear growth in either stage of our 2-stage growth model. We decided to multiply the 23,80% average with a 20% probability multiplier. After the calculation we get our final average growth rate of 4,76%. The calculations and historical EPS growth can be found in table 2 in the appendix chapter 9.1. Now when we have reached two stages of growth, we can calculate our terminal value P3 as seen in table 3 the terminal price is estimated to be 59,1125 EUR. The equation to calculate  $P_3 = \text{dividend payout } t=2023 / (\text{CAPM} - \text{Constant growth})$  and in numbers:  $P_3 = 0,973583 / (3,26\% - 1,61\%) = 59,1125$  these variables can be found in table 1. When we have calculated and discounted our terminal value, we can calculate an estimated price today denoted P0. The equation to calculate:

$$P_0 = \text{Dividend year 2020} / (1 + \text{CAPM})^1 + \text{Dividend year 2021} / (1 + \text{CAPM})^2 + \text{Dividend year 2022} / (1 + \text{CAPM})^3 + (P_3 / (1 + \text{CAPM})^3) = 56,1914$$

$$P_0 = 0,8468 / (1 + 3,26\%)^1 + 0,8871 / (1 + 3,26\%)^2 + 0,9293 / (1 + 3,26\%)^3 + (59,1125 / (1 + 3,26\%)^3) = 56,1914$$

The result from our dividend discount model suggests a current price of 56,19142 EUR based on our estimates that have been presented above. Observe that this is not our final suggested price, this is just one estimation of many that will later be weighed together to form a general price suggestion.

## 4.2 FCFF model

Free cash flow is a good method to analyze companies. Based on many investing philosophies, companies that can generate strong free cash flows are generally healthy companies. Healthy companies can generate wealth to their investors since the free cash flow is a form of tangible returns and cannot be manipulated with “creative” accounting methods such as EBIT.

To estimate a price based on the free cash flow model we first tried to use a traditional approach where we calculate growth rate based on the equation  $g = \text{RR} * \text{ROIC}$  and WACC as cost of capital see table 6 for calculations of WACC and table 7 for the calculations for the growth rate. However as seen and described in table 8 we can conclude that since we have a world economy with extremely low interest rates the cost of capital and cost of debt are not very high which makes WACC too low in relation to the suggested growth rate from RR and ROIC. This fact makes the denominator negative which generates a negative price, and that is not logical. To combat this fact, we instead estimate our share price based on CAPM and growth from our previous model, the dividend discount model. If we look at table 9 you can see cash from operations, capital expenditure, net debt issued, FCFE, CAPM, growth rate at 1,61% that is much lower than the previous growth rate on 4,54%. However, the approach presented in table 9 generates a value of the equity of 1700 million divide that with 28 million shares and we get a share price of 60,7164 EUR.

To conclude by using an alternative approach to the FCFF model we discount with slightly different estimates however these alternative estimates are consistent with the estimates from our previous model, hence we find it fair and reasonable. FCFF model suggests 60,7164 EUR as a

price and dividend discount model suggests 56,19142 that is around 4,5228 Eur difference which is low. Observe that this is not our final estimated price. Other factors are yet to be evaluated before we can decide a final recommended price.

### 4.3 Key-financials

Market cap EURM	760,2
P/E-tal	14,62
EPS EUR	1,86
Ordinary dividend EUR	0,85
Beta	0,5801
Volatility%	45,63
Return on equity%	28,99
Return on total capital%	15,6
Quick ratio	77,72
Equity ratio%	54,39
Gross margin%	33,42
Net margin%	9,98

In this section we will briefly investigate the key financial and comment on the current situation, this section is not so much about fundamentals but rather how we analyze the key values, so this section is quite subjective but the ratios can give some clues and signals that investors might want to investigate if you are about to invest in this stock. The P/E ratio is one of the most important ratios for us, this ratio reveals how expensive the company is at the current earnings and price. A P/E ratio that are in the interval 5-25 is reasonable, if the P/E ratio is 25+ there must be clear signals that the earnings will grow at a faster rate than other companies that have a more reasonable market valuation. Thus, a P/E of 14,62 is a good signal. The next ratios of importance is EPS and Ordinary dividend, if a company pay out more dividend than EPS that's a warning signal that the company are paying out more dividend than they earn thus the money must come from assets within the company which in our book is a bad signal for the long term health of the company. The beta value reveals how the stock correlates to the total market. A beta of 1 typically correlates perfectly to the market, however the beta value is not an important indication of the health of the company, the beta value could be seen as a compass of how the stock may perform based on the market movements over time. Volatility of 45,63% could be connected to risk, however the market has been moving a lot lately due to the coronavirus outbreak in China, hence the volatility right now is abnormally high. Equity ratio reveals how much debt the company has in comparison with equity and we generally look for companies where the equity ratio is above 35, thus a equity ratio of 54,39 is definitely a good signal. The margins are fine, Ponsses competitor John Deere has a net margin of 10,23%, Ponsse are at least on par with the competition which is also a good signal. The key-financials are solid and are looking good.

#### 4.4 EBIT multiplier rules

This will be a very brief section where we apply extremely simple rules to generate prices that are a method to quickly estimate a price based on the company's EBIT. We view this as good complement to combat further uncertainties in the estimated prices generated from the dividend discount model and FCFF model.

The first table shows EBIT based on the report from 2018 multiplied with x15 this generates a price of 33,06 EUR.

2018 based		
EBIT	61717000	EUR
EBITx15	9,26E+08	EUR
EBITx15/shares	33,06	EUR

The second table shows EBIT based on the report from 2018 multiplied with x10 this generates a price of 22,04 EUR.

2018 based		
EBIT	61717000	EUR
EBITx10	6,17E+08	EUR
EBITx10/shares	22,04	EUR

Why we use this approach is to create a lower bound scenario if our stock valuation in the dividend discount model and FCFF model is too high.

#### 4.5 Price determination according to models

We have not only used one model when estimating the price. Instead of being satisfied with the result from one model, we have instead looked at and applied different approaches since these kinds of estimates and valuations are typically biased and suffer from different degrees of uncertainty. This makes our models nothing more than educated guesses that could be reasonable if the assumptions are fulfilled. The following four prices are the estimated prices we have generated in this analysis: 60,7161 EUR, 56,1914 EUR, 33,06 EUR and 22,04 EUR. We want to state yet again that we have tried to be very cautious when doing our estimations.

If we run an average of our four prices, we get an average price of 43.00 EUR. And this is our final price determination. When this report was written the price was 32.1 EUR. But due to the new market state the price is currently 26.60. For the sake of the project we see this uncertainty as a short-term problem since this is not specific to Ponsse but a problem in the whole economy. We firmly believe Ponsse as a company have not changed this past 2 weeks. However, depending on the impact on the world economy some estimations might need to be readjusted due to supply and demand distortions.

#### 5.0 Conclusion

Ponsse is a well-kept industrial company from Finland that has been perfecting their business area and that is primarily their high-quality harvesters and forwarders. Their key-financials are looking solid and we have in this analysis determined a price of 43.00 EUR. The current market volatility might make Ponsse even more attractive since the price has been reduced without any company specific change in expectation.



## 6.0 Bibliography

### Bibliography

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## 7.0 Appendix

### 7.1 Dividend discount model

(Table 1) describes (EPS growth), (EPS) and (dividend payout rate), and future dividend payouts. Note that there are 4 periods of higher growth at 4,76% and after that we assume a constant growth rate of 1,61%.

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
EPS Growth		4,76%	4,76%	4,76%	4,76%	1,61%	1,61%	1,61%	1,61%	1,61%	1,61%	1,61%
EPS	1,57	1,64	1,72	1,81	1,89	1,92	1,95	1,98	2,02	2,05	2,08	2,11
Dividend pay out rate	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%	51%
Dividend	0,808	0,846811	0,887119	0,929346	0,973583	0,989247	1,005163	1,021335	1,037768	1,054464	1,07143	1,088668

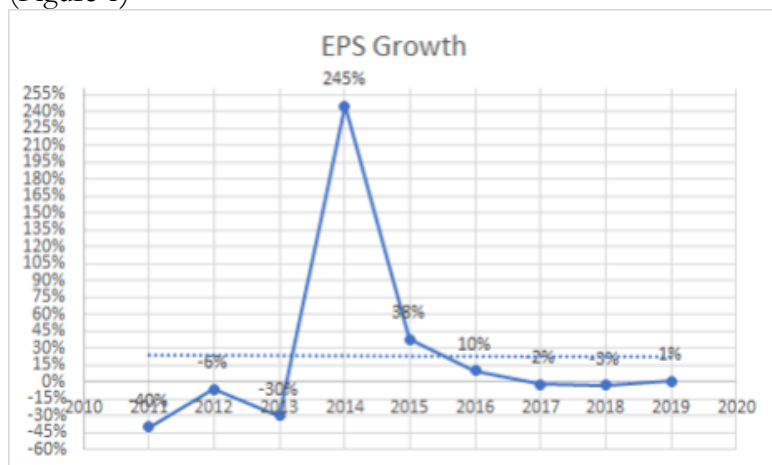
(Table 2) describes historical (Previous EPS), the first difference in EPS, implied EPS growth, (previous dividend payouts), the first difference in dividend payouts and implied dividend growth. This table is critical of how we determine the growth in our 2 stages, the growth is dependent on previous track record and performance of the company.

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Avg	Avg+Anom	20% prob c	Steady gro
Previous EPS	0,78	0,47	0,44	0,31	1,07	1,48	1,63	1,6	1,56	1,57				
ΔEPS	N/A	-0,31	-0,03	-0,13	0,76	0,41	0,15	-0,03	-0,04	0,01	0,087778		New Avg	Steady Avg
Implied EPS growth	N/A	-40%	-6%	-30%	245%	38%	10%	-2%	-3%	1%	1,61%	23,80%	4,76%	1,61%
Previous Div	0,15	0,35	0,35	0,25	0,3	0,45	0,55	0,6	0,75	0,8				
ΔDiv	N/A	0,2	0	-0,1	0,05	0,15	0,1	0,05	0,15	0,05	0,072222			
Implied Div growth	N/A	133,33%	0,00%	-28,57%	20,00%	50,00%	22,22%	9,09%	25,00%	6,67%	13,05%	26,42%		
Previous Div payout rate	19%	74%	80%	81%	28%	30%	34%	38%	48%	51%	51%			

(Table 3) P3 represents the terminal value of the stock, and P0 is the value of the stock today.

DDM with Changing growth		
P3	59,1125	EUR
P0	56,19142	EUR

(Figure 1)



## 7.2 CAPM

(Table 4) CAPM all data is collected from Nasdaq stock exchange. CAPM represent cost of capital.

<b>Dividend Discount Model</b>	
CAPM (cost of asset)	
$ER_i = R_f + \beta_i (ER_m - R_f)$	
Rf risk free	-0,56%
Beta	0,5808
ERm Expected return on market	6,01%
Cost of capital	3,26%
Kommentar	German Gov Bond
Risk Free Rate EU	Gov bond - default spread
Gov bond	-0,38%
Default spread	0,18%
RF	-0,56%
Kommentar	Beta värdet kommer från Avanza
Beta	covariance/variance
Covariance	Measure return relative to market
Variance	Measures how the market moves relative to its mean
$\beta$	0,5808
Kommentar	
Expected return on market	
OMXH 25 2019-01-28	4005,92
OMXH 25 2020-01-28	4246,68
Return on OMXH 25	1,06010105
ERm	6,01%

### 7.3 FCFF

(Table 5) Show a matrix of operating free cash flow and capital expenditure, resulting in Free Cash Flow to Firm.

mil			
Year	Operating	CapEx	FCF
2010	28	-5	23
2011	25	-9	16
2012	12	-18	-6
2013	38	-11	27
2014	37	-19	18
2015	44	-24	20
2016	54	-28	26
2017	57	-38	19
2018	61	-33	28

(Table 6) Calculation of WACC

Re = Cost of equity	3,26%
Rd = Cost of debt	1,66%
E = Market value of the firm's equity	200
D = Market value of the firm's debt	46
V = E + D = Total market value of the firm's financing	246
E/V = Percentage of financing that is equity	0,81300813
D/V = Percentage of financing that is debt	0,18699187
Tc = Corporate tax rate	0,2
WACC	0,028948919
	0,028948919

(Table 7) Different growth estimates, growth from  $g=RR \times ROIC$  and growth from the dividend discount model. See table 2 for reference.

	2018
$g=RR \times ROIC$	
where:	
RR=average retention rate, or (1 - payout ratio)	
ROIC is (net income - dividend) / (debt + equity)	
net income	44
dividend	21
debt	46
equity	200
D/E	0,23
ROIC	0,093496
RR	49%
$g$	4,54%
$g$ from div discount model	1,61%

(Table 8) in this table we calculate the estimated share price with the principles from FCFE with WACC and growth rate based on RR and ROIC, however due to the strange interest rate situation we have on today's markets WACC is too low compared to the growth rate used with RR and ROIC. Thus, this table and calculations are just a demonstration why we use the growth from the dividend discount model instead, where the growth is set to 1,61%. A negative price is not logical.

TO HIGH Growth with low WACC	
FCFE=Cash from operations–Capex+Net debt issued	
Cash from operations	61
CapEx	-33
Net debt issued	0
FCFE	28
r1 = WACC	0,028949
g1 = RR×ROIC	4,54%
Vequity = FCFE / (r-g)	-1706,33
shares outstanding	28
share price	-60,9404

(Table 9) In this table we calculate the estimated share price with the principles from FCFE with CAPM and growth from the dividend discount model. This generates a price that is quite close to the results from our dividend discount model, see P0 in table 3.

REASON	
FCFE=Cash from operations–Capex+Net debt issued	
Cash from operations	61
CapEx	-33
Net debt issued	0
FCFE	28
r1 = CAPM	3,26%
g1 = div discount model	1,61%
Vequity = FCFE / (r-g)	1700,061217
shares outstanding	28
share price	60,71647203