Company Analysis

DR. KALLIWODA | RESEARCH GmbH

Equity Research

May 26, 2016

Europa | Germany | Auto Supplier

DR. KALLIWODA
RESEARCH GmbH

Update

BUY

Target Price: EUR 37.1

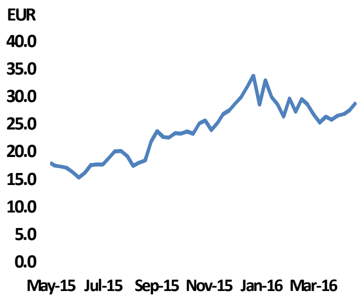
Industry:	Automotive Supplier
Country:	Germany
ISIN:	DE0005558696
Bloomberg:	PGNG.DE
Reuters:	PGN GR
Website:	www.paragon.ag

Last Price:		29.2
	High	**Low**
Price 52 W.:	36.4	14.6
Market Cap. (EURm)		120.3
No. of Shares (in m)		4.1

Shareholders	
Klaus-Dieter Frers	51.3%
Free Float	48.7%

Dividend	**in EUR**	**in %**
2011	0.25	0.9%
2012	0.35	1.2%
2013	0.25	0.9%
2014	0.25	0.9%
2015	0.16	0.5%

1-year Chart



Analyst

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paragon AG

On track to achieve forecasts for 2016

- **Turnover up by 9.4% in Q1/16.** Driven by the acoustic and electromobility business divisions, paragon´s revenues rose from € 21.2m to € 23.2m in the first quarter. The favourable change in own work capitalized enhanced gross profit, which climbed to € 14.2m (14.4% y/y). EBITDA grew by 8.3% y/y to € 3.0m (margin 13.1%) despite the new hired staff and consequent increase in personal costs (12% y/y). Higher financial expenses and tax payments reduced the net income to € 0.1m in Q1/16 (prior year € 0.8m). Available liquidity at the balance sheet date stated at € 12.7m (vs. Q1/15: € 7.3m).

- **E-mobility the fastest growing division.** Voltabox achieved € 1.8m in revenues in Q1/16 primarily because the battery systems sales in the US, a market where paragon began supplying two local clients. The acoustic business increased sales by 14.8% y/y, a performance that likely should improve given the confirmed production launch of the seat belt microphones for a German premium carmaker. Sensor revenues climbed by 2.0% (37.5% in group revenues), while the cockpit and body kinematics sales fell 4.3% and 12.0% y/y respectively.

- **Capex volume expected normalised in 2016.** During the last year paragon has almost completed the investment stage finalized to expand internationally the business and start new facilities. Capex are expected to reach roughly € 14m in 2016, and thus stabilized. The rise in total assets lowered equity ratio to 19.2% (prior year 23.7%).

- **Order backlog boost our forecasts.** It is scheduled for Q3/16 the production launch for a major starter battery order received the last year in the electromobility business. Based on the further expansion in Voltabox, we estimated a substantial EBIT growth (23.3% CAGR 2015-2018E), which accompanied by a decline in capex and scale effects for the next years should drive cash generation. Hence, we have revised up our target price from €35.4 to €37.1 per share.

- **Key Figures**

EURm	2012	2013	2014	2015	2016E	2017E
Net sales	70.4	73.9	79.0	95.0	103.5	114.9
EBITDA	11.7	12.2	10.5	14.1	16.9	20.8
EBIT	7.8	7.9	6.2	7.8	10.1	13.4
Net income	4.6	3.9	2.8	3.4	5.1	7.3
EPS	1.1	1.0	0.7	0.8	1.2	1.8
BVPS	3.2	3.9	4.2	4.7	5.8	7.4
RoE	40.6%	27.3%	16.8%	18.6%	23.3%	27.0%
EBIT margin	11.0 %	10.7 %	7.9 %	8.2 %	9.7 %	11.7 %
P/E	27.7x	32.5x	46.2x	37.7x	25.4x	17.5x
P/BVPS	9.8x	8.1x	7.5x	6.9x	5.5x	4.3x
EV/EBITDA	14.4x	13.8x	16.0x	11.9x	9.9x	8.1x

Source: Company, Dr. Kalliwoda Research GmbH

Content

1 Company Profile

paragon AG was founded in 1988 as an electronics manufacturer. The company's headquarters are located in Delbruck (North Rhine-Westphalia). Other Company’s divisions are based in Suhl, St. Georgen, Bexbach and Nuremberg (production or development). The paragon AG has also finished to build a battery production plant in Texas (USA), as well as a factory in Kunshan (greater Suzhou region), which will be fully operative in Autumn 2015. The Group currently employs a staff of 482 permanent and 79 temporary workers.

1.1 Products and Market Share

Founded as a contract manufacturer for electronics, paragon is now a pure Tier 1 automotive supplier. Its main focus relies on auto electronics for interior products to enhance the health, comfort, communication and efficiency. The product catalog includes more than 170 products with a capacity of over 15 million units produced per annum, in addition to its 250 patents owned.

Divisions

Sensors	Acoustics	Electromobility
Air quality sensor AQS	Microphone	Energy Storage Powerpack
Air improvement system	Seatbelt microphone blet mic	Motor Controller MoDrive
Air treatment system		DC/DC Converter DCCon
Clutck travel sensor		Onboard Charger ChargeON
All gear sensor		
Start-stop sensor		
Cockpit	**kinematics**	
Interfaces	Aerodynamic	
Cradles & Consoles	Comfort	
cTablet docking station	Convertible tops	
Instruments	Safety	
Controls		
Reversing camera system		
Stepper Motors		

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Many of paragon’s products own its unique features, such as the Voltabox battery systems, when they come to fruition in the enhancement of electromobility for commercial vehicles. The sensors, besides, can be softer and simultaneously faster gearshift, as well as for the vehicle manufacturer resulting in economic benefits, where a separate reverse gear sensor is no longer required.

1.2 Clients

paragon AG maintains long-term customer relationship, which is translated in the fact that its over 170 products are currently demanded by 23 customers for 172 vehicle models, where the largest automotive producers, Audi, VW, Daimler, BMW and Porsche, cover approximately about 77% of total sales (end of 2015). Even though the company is increasingly receiving new orders from new products and developed applications, such as CO² sensors, wireless charging products or new innovative belt microphones.

2 SWOT

Strengths

- **Combination of innovation and integration of force** through company-wide culture of innovation with a focus in developing new products , while observing the product integration into the overall system for the automobile manufacturers; by First-Mover-Advantage and high success rate of bringing products to the market. Over 170 products and 250 patents.
- **Products with unique features in niche markets** with high quantities in automated manufacturing. Therefore high margins and strong market position in several areas.
- **Direct supplier** with many years of customer loyalty, knowing what customers want, means entry-market barriers.

Weaknesses

- **High business risk** due to strong sales focus on three German automotive manufacturers in the premium area, tempered by long-term customer relationships under contracts, all model series, and the relatively small dependence of premium manufacturers.
- **Low negotiating power** with customers and suppliers in the low-selling environment of numerous competitors mitigated by the relatively higher willingness to pay the premium end-user customers.
- **Strong competition** with high pressure to innovate, since more than half of key innovations are taking place in the field of electronics.

Opportunities

- **Increasing use of paragon products in the compact and mid-range** through new technologies and efficient production with a high degree of automation and economies of scale, eg. Air quality.
- **Growth and diversification through the field of electric mobility** by expanding the customer base to smaller commercial vehicles in domestic and urban areas, where applications are already in use for electric mobility. With this regard, more distribution channels are sought.
- **Reduction of product-specific integration costs for the customer** through development of applications to support the vehicle installation can be a significant competitive advantage.

Risks

- **Products are not expected to develop their potential** and the number of units produced cannot cover the costs. paragon AG tries to avoid this by an intensive dialogue with automobile manufacturers.
- **Competitor may displace** paragon of revenue-important market niches.
- **An unexpected slump in the automobile industry** may lead to liquidity difficulties at paragon.

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3 Valuation

In order to estimate paragon AG fair value we have used a traditional DCF model, which incorporates our outlook and forecasts. The final result is a 12-month target price of **€** 37.1 per share.

a. WACC

The discount rate was calculated by deriving the weighted cost of capital. We assumed that the target capital structure will not change in the subsequent business years. Risk free rate is based on the average profitability of the 10-year German government bond. Figuring a risk prime follows the capital asset pricing model (CAPM) and covers in particular the systemic risks (market risk prime exp. company specific risk).

WACC assumptions	
Growth propositions	
Long-term growth rate	2.0%
Equity	
Long-term risk free rate	0.3%
Market risk premium	6.2%
Beta	1.30
Equity costs	**8.3%**
Debt	
Debt costs (before tax)	6.0%
Taxe rate on debt interest	30.0%
Debt costs (after tax)	**4.2%**
Equity value	67.6%
Debt Value	32.4%
Gearing	48.0%
WACC	**7.0%**

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b. DCF

In our Discounted Cash Flow model we have assumed:

- **Revenues**: the forecasted revenues are based on the growing performance of the overall business divisions and especially the electromobility segment. The revenues are anticipated to expand rapidly with the most notable period 2016-2018, in which we assumed new contracts from Voltabox Germany.

- **Terminal growth rate**: growth rate is forecasted to drop to 2% in the terminal period, which is in line with the long term inflation rate.

- **EBIT margin:** we assumed a margin of around 10.3% on average.

- **Fair value**: we calculated a fair value of equity of € 142.6m after deducting € 39.9m of net debt, which correspond to a 12-months fair value per share of € 37.1.

DCF-Analysis

Discounted-Cash-Flow-Model (Basis 5/2016)

in EUR m	2016E	2017E	2018E	2019E	2020E	2021E	2022E
Net sales	**103.50**	**114.89**	**123.27**	**128.94**	**133.84**	**137.19**	**140.51**
(y-o-y change)	9.0%	11.0%	7.3%	4.6%	3.8%	2.5%	2.4%
EBIT	**10.08**	**13.41**	**14.66**	**14.84**	**15.11**	**15.04**	**15.42**
(EBIT margin)	9.0%	10.8%	11.0%	10.6%	10.4%	10.2%	10.2%
NOPLAT	**7.05**	**9.39**	**10.26**	**10.39**	**10.58**	**10.53**	**10.79**
+ Depreciation and Amortization	6.86	7.38	7.67	7.77	7.80	7.72	7.62
= Net operating cash flow	13.91	16.77	17.94	18.16	18.37	18.24	18.41
- Total investments (Capex and WC)	-13.24	-9.41	-8.70	-8.50	-7.68	-6.75	-5.95
Capital expenditure	-13.77	-8.50	-8.19	-8.15	-7.38	-6.55	-5.74
Working capital	0.54	-0.91	-0.51	-0.35	-0.30	-0.20	-0.20
= Free cash flow (FCF)	0.67	7.36	9.24	9.65	10.69	11.49	12.47
PV of FCF's	**0.65**	**6.61**	**7.75**	**7.58**	**7.85**	**7.88**	**8.00**

PV of FCFs in explicit period	46.31
PV of FCFs in terminal period	136.58
Enterprise value (EV)	**182.89**
+ Net cash / - net debt	-39.94
+ Investitionen / - Minderheiten	0.00
Shareholder value	**142.96**
Number of shares outstanding (m)	**4.11**

WACC	7.0%
Cost of equity	15.3%
Pre-tax cost of debt	6.0%
Normal tax rate	30.0%
After-tax cost of debt	4.2%
Share of equity	25.0%
Share of debt	75.0%
Fair value per share in € (today)	**34.74**
Fair value per share in € (in 12 months)	**37.16**

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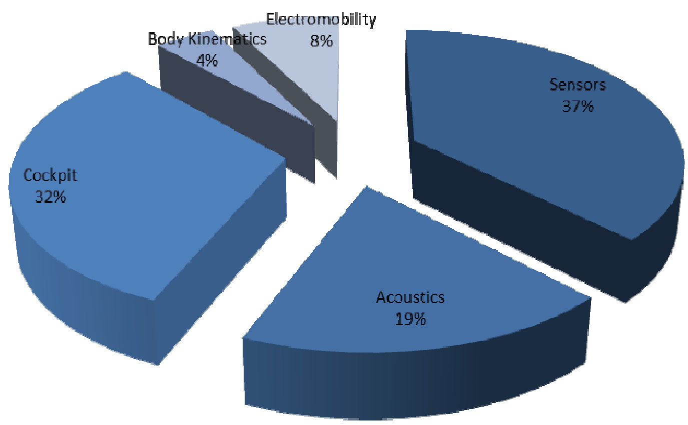
4 Q1/2016 Turnover

Consolidated revenues of the Delbrück company in Q1/16 were 9.4% higher to €23.15m compared to the prior year´s quarter. The reason was a better performing in the acoustics (up €0.6m) and electromobility business divisions (up €1.7m). Almost 82% of the e-mobility growth stemmed from Voltabox Texas Inc. in the US. The sensor segment, main group business (37.5% of total revenues) grew its sales by 2% (in line with automotive market development), while a weaker quarter war recorded for the cockpit and body kinematics segments, declined by 4.3% and by 12.0% respectively.

Sales breakdown by segments on a quarterly base



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Q1/16 results compared to the previous year

in EURm	Q1/16	Q1/15	Q1/16 vs Q1/15
Net sales	**23.15**	**21.16**	9.4%
EBITDA	**3.03**	**2.80**	8.3%
EBITDA-Marge	*13.1%*	*13.2%*	
EBIT	**1.36**	**1.40**	-2.6%
EBIT margin	*5.9%*	*6.6%*	
Net income	**0.09**	**0.77**	-88.2%
Net margin	*0.4%*	*3.6%*	

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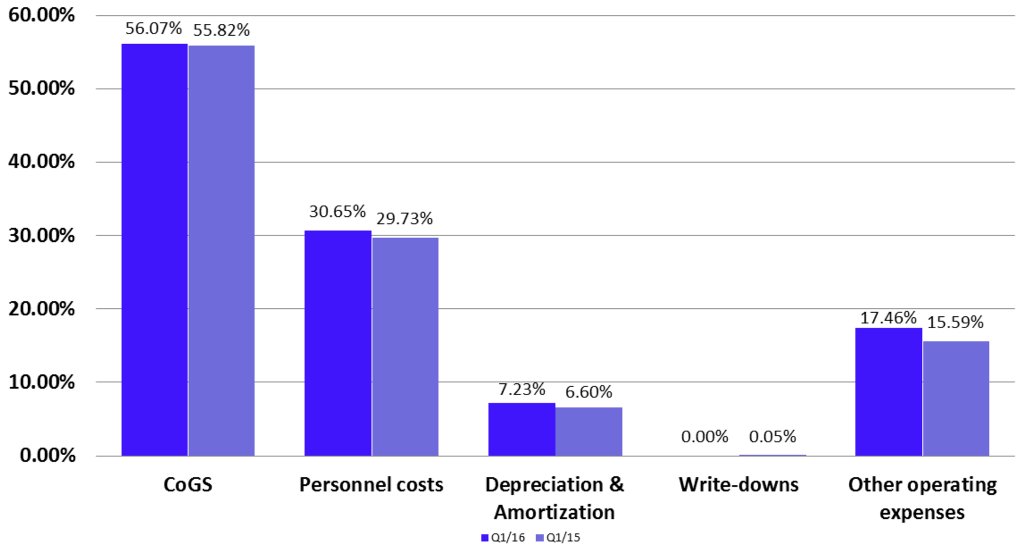
Profitability

Cost Structure at Q1/16 compared to Q1/15



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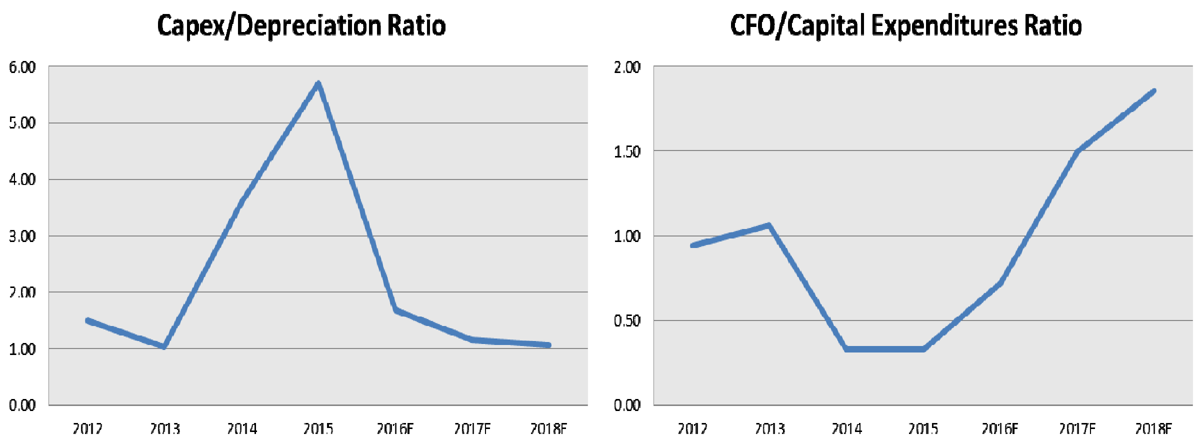
Due to the e-mobility business development and products launched, costs of materials increased by 9.9% to €13.0m compared to the prior year´s quarter. Although personal costs rose by 12% as with the new hired staff, EBITDA grew by 8.3% y/y to €3.0m. Net of financial result (€-0.7m Q1/16 vs. € -0.4m Q1/15) and income taxes costs (€ -0.5m Q1/16 vs. €-0.2m Q1/15), the net income at the end of the period declined from €0.8m to €0.1m, and EPS thus stated at €0.02 (prior €0.19).

As the balance sheet date, total assets increased from €75.0m to €102.3m y/y, primarily because the acquisition of the building in Delbrück and the manufacture place in Texas (US). Therefore mains changes in paragon balance sheet therefore were (1) non-current loans (€25.8m vs. €11.4m), intangible assets (€26.6m vs. €14.4m), and PP&E (€34.4 vs. €24.9m).

With regard to the tangible assets, paragon completed recently the investment stage referred to the electromobility business and air quality sensors facilities. Hence, PP&E were significantly higher (c. 34% of total assets Q1/16), compared to the ideal capital structure (e.g. PP&E c. 25% in FY2013). However, according the company guidance, capex is expected normalized by the end of 2016 with consequent improvements expected in free cash flows.

An overview of paragon´s capital spending phase is given in the following capex/depreciation ratio chart, with a pick in long-term investments in FY2015 that suggests future sales expansion. We estimated a normalized level around one for 2016-2018E. The right chart below shows the cash from operations to capex ratio with a turning point in FY2015 that represents a chance to fund future operations.

Capex to Depreciation and Cash from Operations to Capex Ratios (2012-2018E)



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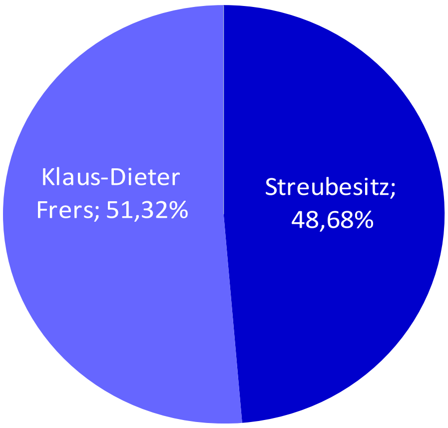
As with the decrease in net income and lower rise in trade payable, operative cash flows fell from €2.8m to €1.5m. After the above mentioned investments recorded last year, cash flows from investing activities returned to a normal volume and improved from € -9.5m to €-4.9m (lower cash outflows for investments in PP&E). Financing cash flows rose from €2.8m to €4.6m (improvement in the cash proceeds from loans), and thus overall change in cash amounted to €9.7m (beginning period € 8.5m).

Outlook

Based on paragon last year´s investments (production site in Germany, the US and China), and company competitive position in the e-mobility and in the sensor business, we have forecasted revenues of € 103.5m in 2016E and € 114.9m in 2017E. Order on hand at the beginning of the fiscal year 2016 includes a major one for lithium-ion starter batteries, which should give a contribution in revenues performance already in 2016. For mid-2016, a serial production is planned to be launched in Voltabox Germany, which will further decrease the dependence from the traditional business.

We have assumed a lower capital intensity structure and a higher automatization in paragon niche applications. These should lead to a better efficiency and higher margins. Nevertheless, we have considered various risks in the analysis such as risks related to the increase of OEMs´ pricing pressure and technological and replacement risks for the lithium-ion battery. Our analysis of the funding sources has assumed a decrease in company debt, which is translated in a lower net debt/EBITDA ratio of 2.65x in 2016E and 1.98x in 2017E.

5 Shareholder's Structure



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6 Profit and Loss Statement

Profit and Loss statement - paragon AG						
	Fiscal year					
in EURm	2012	2013	2014	2015	2016E	2017E
Net sales	**70.45**	**73.88**	**79.04**	**94.99**	**103.50**	**114.89**
Change in inventories	0.57	0.26	0.79	1.44	0.62	0.74
Capitalised assets	2.03	1.68	5.15	12.75	4.59	5.24
Total Output	**73.04**	**75.81**	**84.98**	**112.37**	**111.96**	**124.17**
Cost of goods sold	-36.95	-36.27	-41.85	-55.52	-55.42	-62.09
Gross profit	**36.09**	**39.54**	**43.13**	**56.85**	**56.54**	**62.09**
Personnel costs	-18.85	-19.60	-21.76	-26.31	-28.62	-31.61
Depreciation & Amortization	-3.89	-4.31	-4.27	-6.29	-6.86	-7.38
Write-downs	-0.14	-0.27	-0.02	-0.11	0.00	0.00
Other operating expenses	-7.45	-8.54	-12.20	-16.33	-14.24	-12.99
EBIT	**7.78**	**7.92**	**6.25**	**10.99**	**10.08**	**13.41**
Net financial results	-1.08	-1.49	-1.96	-2.79	-2.86	-2.94
EBT	**6.70**	**6.43**	**4.29**	**8.21**	**7.21**	**10.47**
Income taxes	-2.07	-2.49	-1.51	-1.62	-2.16	-3.14
Minority interests	0.00	0.00	0.00	0.00	0.00	0.00
Net income / loss	**4.64**	**3.95**	**2.78**	**6.59**	**5.05**	**7.33**
EPS	1.13	0.96	0.67	0.83	1.23	1.78
Change y-o-y						
Net sales	n.a	4.87%	6.98%	20.18%	8.96%	11.00%
Total Output	n.a	3.80%	12.09%	32.22%	-0.36%	10.91%
Cost of goods sold	n.a	-1.85%	15.39%	32.66%	-0.17%	12.03%
Gross profit	n.a	9.58%	9.07%	31.80%	-0.54%	9.81%
Personnel costs	n.a	3.98%	10.98%	20.92%	8.78%	10.47%
Depreciation & Amortization	n.a	10.91%	-1.02%	47.55%	8.96%	7.65%
Write-downs	n.a	98.52%	n.a	n.a	n.a	n.a
Other operating expenses	n.a	14.59%	42.85%	33.92%	-12.81%	-8.74%
EBIT	n.a	1.88%	-21.13%	75.90%	-8.33%	33.09%
Net financial results	n.a	38.35%	31.68%	42.05%	2.69%	2.62%
EBT	n.a	-3.99%	-33.36%	91.39%	-12.07%	45.17%
Income taxes	n.a	20.34%	-39.15%	7.01%	33.77%	45.17%
Minority interests	n.a	n.a	n.a	n.a	n.a	n.a
Net income / loss	n.a	-14.82%	-29.71%	137.37%	-23.33%	45.17%
EPS	n.a	-14.82%	-29.71%	22.63%	48.40%	45.17%
DPS	n.a	n.a	n.a	n.a	n.a	n.a
Share in total revenues						
Net sales	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Total Output	103.68 %	102.62 %	107.52 %	118.29 %	108.17 %	108.08 %
Cost of goods sold	-52.45 %	-49.09 %	-52.95 %	-58.44 %	-53.55 %	-54.04 %
Gross profit	51.23 %	53.53 %	54.57 %	59.85 %	54.63 %	54.04 %
Personnel costs	-26.76 %	-26.54 %	-27.53 %	-27.69 %	-27.65 %	-27.52 %
Depreciation & Amortization	-5.51 %	-5.83 %	-5.40 %	-6.62 %	-6.62 %	-6.42 %
Write-downs	-0.19 %	-0.36 %	-0.02 %	-0.12 %	0.00 %	0.00 %
Other operating expenses	-10.58 %	-11.56 %	-15.43 %	-17.19 %	-13.76 %	-11.31 %
EBIT	11.04 %	10.72 %	7.91 %	11.57 %	9.74 %	11.67 %
Net financial results	-1.53 %	-2.02 %	-2.48 %	-2.93 %	-2.77 %	-2.56 %
EBT	9.51 %	8.71 %	5.42 %	8.64 %	6.97 %	9.12 %
Income taxes	-2.93 %	-3.36 %	-1.91 %	-1.70 %	-2.09 %	-2.73 %
Minority interests	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Net income / loss	6.58 %	5.34 %	3.51 %	6.93 %	4.88 %	6.38 %

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7 Balance Sheet

Balance Sheet - paragon AG						
	Fiscal year					
in EURm	2012	2013	2014	2015	2016E	2017E
Assets						
Cash and cash equivalents	14.08	17.65	13.26	8.45	6.22	10.88
Inventories	7.31	7.47	6.91	11.22	11.20	12.54
Trade accounts and notes receivables	1.79	6.04	9.76	10.38	11.31	12.55
Other current assets	2.20	1.95	2.40	2.81	3.11	3.45
Current assets	**25.39**	**33.10**	**32.34**	**32.86**	**31.83**	**39.42**
Property, plant and equipment	13.54	12.98	20.18	34.55	40.57	41.38
Sonstige immaterielle Vermögenswerte	4.91	5.60	9.44	23.96	24.86	25.16
Firmenwert	0.00	0.00	0.00	0.77	0.77	0.77
Other assets	0.12	0.25	0.47	0.41	0.45	0.50
Deferred tax assets	0.00	0.00	0.00	0.00	0.00	0.00
Non-current assets	**18.58**	**18.83**	**30.08**	**59.69**	**66.64**	**67.81**
Total assets	**43.97**	**51.94**	**62.42**	**92.55**	**98.47**	**107.23**
Liabilities						
Trade payables	3.04	3.36	6.12	10.72	10.70	11.98
Other liabilities	8.13	5.91	4.54	7.04	8.80	9.54
Short-term financial debt	2.39	2.86	5.50	9.34	9.26	9.09
Provisions	0.30	0.06	0.09	0.02	0.14	0.17
Current liabilities	**13.86**	**12.18**	**16.24**	**27.12**	**28.89**	**30.78**
Long-term financial debt	12.26	20.21	24.71	38.53	38.03	37.53
Special benefits	2.09	1.50	1.27	1.18	1.66	1.84
Pension obligations	2.73	1.22	1.88	2.09	1.86	2.32
Deferred tax liabilities	0.00	0.94	1.12	3.51	4.14	4.25
Long-term liabilities	**17.08**	**23.86**	**28.98**	**45.31**	**45.69**	**45.94**
Total liabilities	**30.94**	**36.04**	**45.23**	**72.43**	**74.58**	**76.72**
Shareholders equity	**13.03**	**15.89**	**17.20**	**19.40**	**23.89**	**30.52**
Minority interests	0.00	0.00	0.00	0.00	0.00	0.00
Total equity and liabilities	**43.97**	**51.94**	**62.42**	**91.83**	**98.47**	**107.23**

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8 Cash Flow Statement

Cash Flow statement - paragon						
	Fiscal year					
in EURm	2012	2013	2014	2015	2016E	2017E
Net income	4.64	3.95	2.78	3.40	5.05	7.33
Depreciation	3.89	4.31	4.27	6.29	6.86	7.38
Change of working capital	-1.62	-3.42	-2.24	-0.30	0.54	-0.91
Others	-1.10	0.27	0.22	2.32	0.74	0.15
Net operating cash flow	**5.80**	**5.10**	**5.03**	**11.72**	**13.18**	**13.95**
Cash flow from investing	**-6.15**	**-4.81**	**-15.30**	**-35.96**	**-13.77**	**-8.50**
Free cash flow	-0.35	0.29	-10.27	-24.24	-0.59	5.45
Cash flow from financing	**-0.90**	**3.27**	**5.89**	**19.43**	**-1.65**	**-0.79**
Change in cash	-1.25	3.56	-4.38	-4.81	-2.24	4.66
Cash, start of the year	15.33	14.08	17.65	13.26	8.45	6.22
Cash, end of the year	14.08	17.65	13.26	8.45	6.22	10.88

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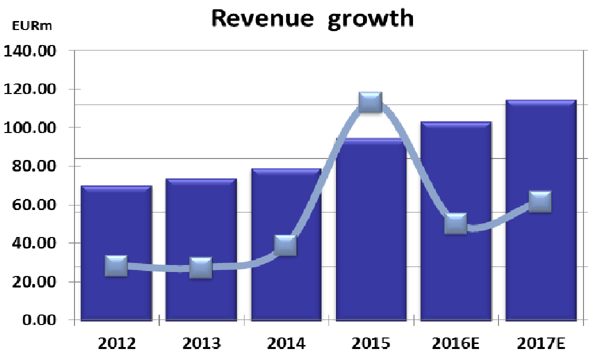

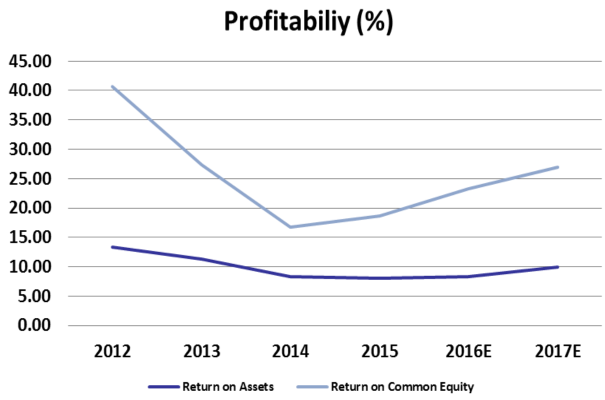

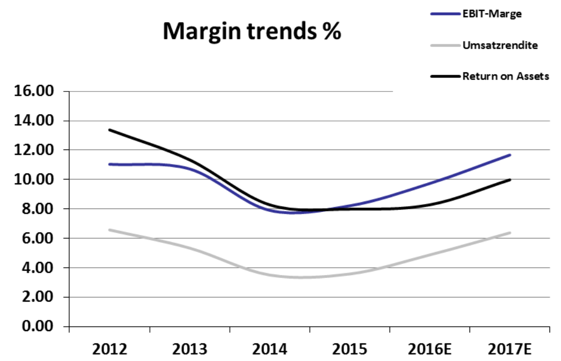

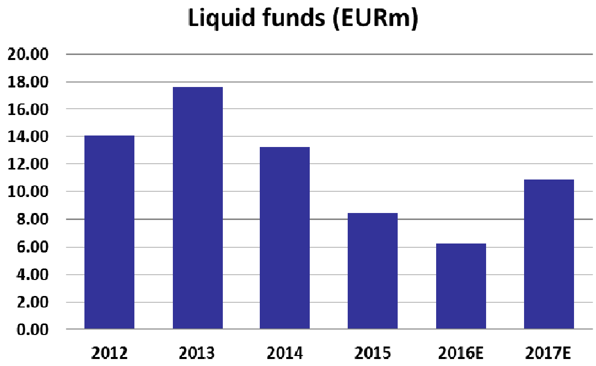

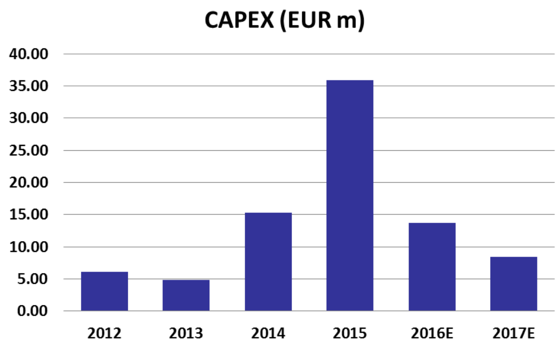

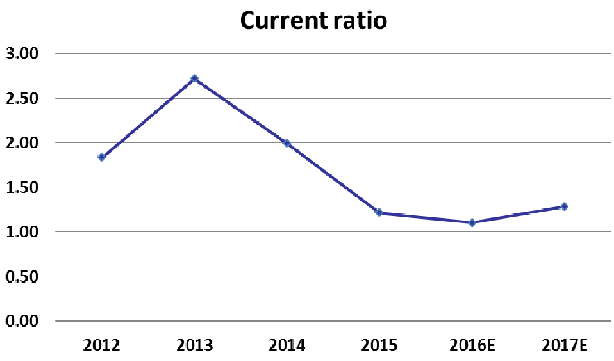

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