

NanoFocus AG

Date: 10/19/2016

Recommendation		Buy	
before:		-	as of -
Target price (EUR)		5.20	
Price (Xetra) (EUR)		2.25	
10/18/16	4:31 PM		
Share price potential		131%	

Company data	
Sector	Industrial measurement technology
Market segment	Entry Standard
ISIN	DE0005400667
Reuters	N2FGn.DE
Bloomberg	N2F

Share data	
Shares (m)	4.530
Freefloat	62.7%
Market cap. (EURm)	10.2
∅ Trading Volume	4,710
52W High	12/14/15 EUR3.35
52W Low	09/30/16 EUR1.80

Events	
German Equity Forum	November 21 - 23, 2016
Q4 results	March 2017

	Performance	
	absolute	relative to DAX
1 month	-4.3%	-6.4%
3 months	-8.2%	-13.6%
6 months	-27.2%	-29.0%
12 months	-24.0%	-27.2%

Index weighting	
Entry Standard All Share	0.7%

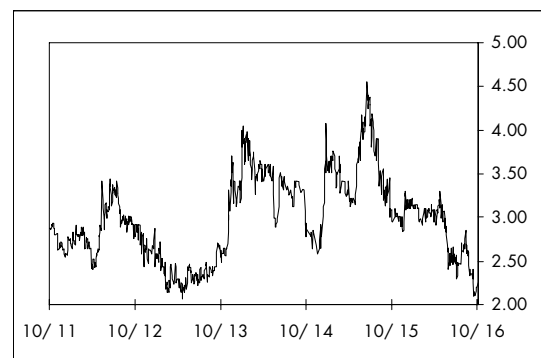
Additional serial products in the pipeline

- ⇒ NanoFocus is approaching plannable serial production and economies of scale with the order to deliver a pilot system of the µsurf cylinder (pilot system in Q4 2016) received in May, the introduction of the new process tool capable of in-line use to inspect probe cards (pilot system approved by customer; follow-up orders still pending) and the current production of a fully automatic device to inspect wafers. The technology of the acquired BMT allows NanoFocus to faster develop the µsurf cylinder that is integrated in the production process.
- ⇒ The manufacturing of high-price systems should drive sales, especially as of 2018. The 2016 sales target of EUR15m appears ambitious, though. Economies of scale should cause a jump in earnings. Our EPS forecasts for 2016 (EUR0.03 (before: 0.07)) and 2017 (EUR0.18 (before: 0.23)) take already the latest capital increase into account. However, growth financing remains a central subject. Due to the potential of serial products we confirm our Buy recommendation with a price target of EUR5.20 (before: 5.80).

	2012	2013	2014	2015	2016E	2017E
Sales	8.9	8.2	11.2	10.8	14.5	17.3
Sales growth	8.7%	-8.5%	37.2%	-3.8%	33.8%	19.9%
EBIT	0.3	-1.2	0.4	-1.1	0.3	0.9
EBIT margin	3.0%	neg.	3.3%	neg.	2.3%	5.4%
Net income	0.1	-1.4	0.7	-1.6	0.1	0.8
Net margin	1.7%	neg.	6.1%	neg.	1.0%	4.6%
EPS	0.05	-0.47	0.23	-0.49	0.03	0.18
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Net financial debt/ EBITDA	-0.5	-	0.8	120.6	2.4	1.2
Net Gearing	-0.1	0.1	0.1	0.2	0.2	0.2
Free cash flow (FCF)	-0.4	-1.1	-0.5	-2.1	-0.7	-0.2
FCF per share	-0.14	-0.37	-0.18	-0.65	-0.16	-0.05
EV / sales	0.9	1.0	1.0	1.3	0.9	0.7
EV / EBITDA	8.5	neg.	10.6	865.8	12.6	7.2
EV / EBIT	30.1	neg.	31.9	neg.	38.5	13.7
EV / FCF	neg.	neg.	neg.	neg.	neg.	neg.
P/E ratio	57.4	neg.	15.2	neg.	66.5	12.8
P/B ratio	0.9	0.9	1.1	1.0	0.8	0.8
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Figures in EURm except EPS, DPS and FCF per share (EUR), PERs based on average share prices

Source: Independent Research, NanoFocus AG



Source: NanoFocus AG, Bloomberg

Contact

 Independent Research GmbH

Friedrich-Ebert-Anlage 36
60325 Frankfurt am Main

Telephone: +49 (69) 971490-0
Telefax: +49 (69) 971490-90
Internet: www.irffm.de

Author: Stefan Röhle, CFA (analyst)

E-mail: sroehle@irffm.de

Please take note of the information concerning the preparation of this document, the information concerning potential conflicts of interest, the compulsory information required by Section 34b WpHG (Wertpapierhandelsgesetz - German Securities Trading Act), and the liability statement at the end of this document. This financial analysis in the meaning of Section 34b WpHG shall only be distributed to professional clients or eligible counterparties according to Section 31a WpHG.

Valuation

Rising EBIT margin reflects increasing scalability

Three-stage DCF model

In our three-stage discounted cash flow model (DCF model) we have employed our specific forecasts in our detailed planning period until and including 2017. As of 2018 we switch to a trend analysis. Until 2020 we assume the sales growth to fall to 7.5%. The EBIT margin rises to 13.0% until 2020. This reflects the fact that we expect NanoFocus to generate significant economies of scale with concrete projects in the Semiconductor and Automotive/Powertrain units thus changing from an R&D-driven towards a manufacturing company (in-line production). One product in the Semiconductor unit has entered serial production in 2015. Regarding the second product, however, there is a delay in the acceptance of the pilot system and the order of the final development up to maturity phase. NanoFocus has developed the μ surf cylinder that is integrated in the production process together with Breitreimer Messtechnik in 2015. In 2017, we expect the final development and acceptance of the serial model that should boost sales and earnings as of the end of 2017. In phase III (terminal value) we expect the free cash flow to grow by 2.0% along with inflation.

DCF model										
EURm	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E	2025E
Sales	14.5	17.3	20.5	23.2	24.9	26.8	28.8	31.0	33.3	35.0
Growth y/y	33.8%	19.9%	18.5%	13.0%	7.5%	7.5%	7.5%	7.5%	7.5%	5.0%
EBIT margin	2.3%	5.4%	6.3%	9.7%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
EBIT	0.3	0.9	1.3	2.2	3.2	3.5	3.7	4.0	4.3	4.5
- Income taxes	0.0	0.0	0.0	-0.1	-0.3	-0.3	-0.4	-1.2	-1.3	-1.4
+ Amortisation and depreciation	0.7	0.8	0.9	1.0	1.0	1.1	1.2	1.3	1.4	1.4
+/- Change in long-term provisions	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
+/- Others	-0.6	-0.4	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Gross operating cash flow	0.5	1.4	2.0	3.1	4.2	4.6	4.8	4.4	4.7	4.9
-/+ Change in net working capital	0.1	-1.0	-1.2	-0.9	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
-/+ Investments in fixed assets	-0.4	-0.5	-0.7	-1.0	-1.1	-1.2	-1.3	-1.3	-1.4	-1.4
Free cash flow	0.2	-0.1	0.1	1.1	2.7	2.9	3.0	2.5	2.8	3.0
Present values	0.2	-0.1	0.1	0.8	1.8	1.8	1.7	1.3	1.3	1.2
Total present values	10.0									
Terminal value	16.3									
										in % of total value: 62%
Value of operating business	26.2									
+ Cash and cash equivalents	1.8									
- Financial debt	-4.3									
Fair market value of equity	23.7									
Number of shares outstanding (m)	4.533									
Fair value per share (EUR)	5.23									

Model parameters / entity DCF model					
Target capital structure:	Equity:	85%	Financial debt:	15%	
Risk-free rate:	3.0%	Beta:	1.5	Risk prem. debt:	4.0%
		Risk prem.:	5.0%	Tax shield:	30.0%
		Cost of equity:	10.5%	Cost of debt:	4.9%
Growth FCF:	2.0%	WACC:	9.7%	Date:	10/19/16

Source: Independent Research

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

		Discount rate (WACC)			
		9.2%	9.7%	10.2%	10.7%
Growth (TV)	2.0%	5.83	5.23	4.79	4.41
	2.5%	6.05	5.50	5.02	4.60
	3.0%	6.43	5.81	5.28	4.82
	3.5%	6.87	6.17	5.58	5.07

Source: Independent Research

WACC of 9.7%

We calculate a WACC of 9.7%. The relatively high figure is owed to the beta of 1.5 (risk-free interest rate of 3.0% assumed) that reflects the volatility and risk of the business model (small company; still R&D driven). On the other hand, we have assumed an equity ratio of 85% (at market value) in the long-term target capital structure as NanoFocus has relatively low financial debt. We have assumed a debt interest rate of 7.0% before tax and 4.9% after tax, based on the interest rates for the loans already granted (between 5.9% and 6.3%) and the approved credit line.

Fair value of EUR5.23 (before: 5.82) per share

Fair value calculation: taking into account the latest capital increase

We have calculated a fair value of equity of EUR23.7m (before: 24.4). The lower fair value is owed to the unexpected high loss in 2015. The loss is offset by the gross income of EURO.9m from the latest capital increase (+0.330m shares at EUR2.60 each). Based on now 4.530m (before: 4.200m) shares we have calculated a fair value per share of EUR5.23 (before: 5.82).

Share currently valued under book value again

Valuation multiples should further improve

Based on the fair value, the EV/EBIT ratio 2016 is 79.4 and the P/E ratio is 154.6. On the one hand, NanoFocus benefits from the first serial production in the Semiconductor unit. Also, the planned goodwill amortisation should decrease by about a net EURO.2m. On the other hand, there will be one-off expenses of about EURO.4m for moving into the new corporate building and integration expenses for Breitmeier Messtechnik. In 2017, we expect further positive sales and earnings effects from serial production and synergies with BMT that will also affect the valuation (implied EV/EBIT 2017E: 28.2; implied P/E ratio 2017E: 29.7). It must also be considered that the share is currently valued with a price-to-book ratio 2016E of 0.8 and thus below its book value - and that even though NanoFocus' equity capital is lower already due to the goodwill amortisation of EUR3.8m since 2004 according to the German Commercial Code compared to accounting under IFRS rules. This is rather unusual for a growth share like NanoFocus.

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Financial, balance sheet and income analysis

Income analysis

H1 2016 sales still about 10% behind plan

Recovery of the automotive sector causes strong growth in H1 2016

As we had expected, NanoFocus AG (individual financial statement without Breitmeier Messtechnik) raised its H1 2016 sales by 31% to EUR4.9m (3.7; our forecast: 5.4). In the preceding year, the business was burdened by buying restraint of automotive clients, especially due to the emissions scandal at Volkswagen. This is clearly reflected by the sales recovery of the Automotive/Powertrain unit of EURO.9m (0.1; H1 2014: 1.2). The Standard unit (sales: EUR2.4m (2.1; H1 2014: 1.9)) confirmed the success of the newly aligned distribution structure (sales Semiconductor unit: +11%; sales OEM: -11%). Sales, however, were about 10% below planning figures in H1 2016. According to management, this was mainly owed to delays of several projects and the still below-average growth of the automotive sector. Breitmeier Messtechnik (BKT), which was acquired in H1 2016, also generated sales slightly lower than planned of EURO.4m (not part of the mentioned NanoFocus AG sales), however, which reflects the project character and seasonality of the business.

Operating costs remain stable

Usual H1-loss owed to seasonality - stable cost basis

H1 2016 EBIT of NanoFocus AG was negative amounting to EUR-1.1m (-1.6; our forecast: -1.2) due to seasonality as we had expected. This includes one-off items of EURO.4m for relocating the head office. The increased material cost rate of 42% (41%; H1 2014: 31%) stands out. This reflects the higher sales share of lower-margin Standard unit as well as the first serial production in the Semiconductor unit with higher unit prices and material costs. The stable operating cost base in H1 2016 with personnel expenditures of EUR2.6m (2.6; H1 2016: 2.6) and other operating expenses of EUR1.6m (1.3; H1 2014: 1.3; includes relocation costs in H1 2016) are noteworthy.

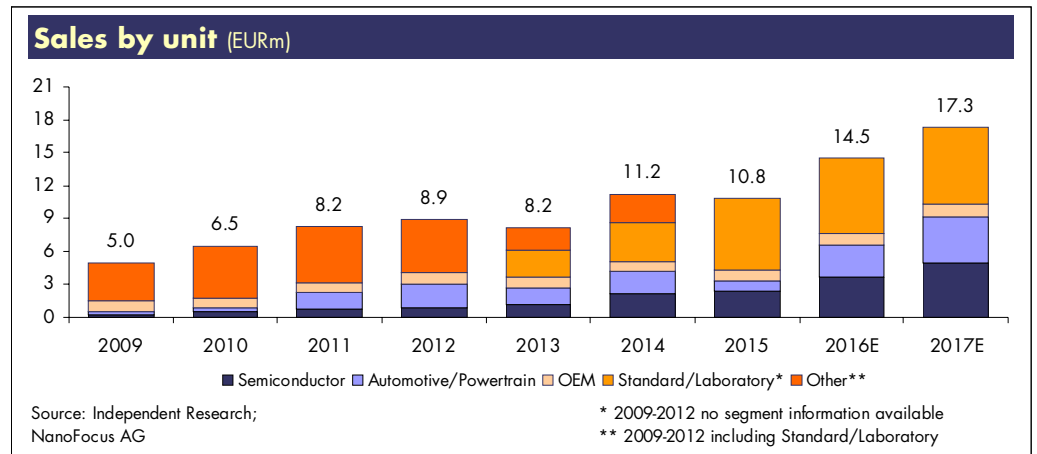
Key figures of the income statement

	Unit: EURm	H1 2014	H1 2015	H1 2016	H1 2016E
Financial year:	Dec. 31	Reported	Reported	Reported	IR forecast
Accounting standard:	*HGB				
Sales		4.6	3.7	4.9	5.4
growth yoy		69.0%	-18.1%	31.4%	43.6%
Total operating performance		4.9	4.4	5.3	5.7
EBIT		-0.6	-1.6	-1.1	-1.2
EBIT margin		neg.	neg.	neg.	neg.
Net income		-0.8	-1.8	-1.3	-1.3
Net margin		neg.	neg.	neg.	neg.
Earnings per share (EUR)		-0.27	-0.57	-0.32	-0.30

Source: Independent Research (IR); NanoFocus AG

*HGB: German Commercial Code

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document



H2 with clearly higher sales and earnings due to seasonality

Confirmed sales and earnings targets for 2016 increasingly ambitious

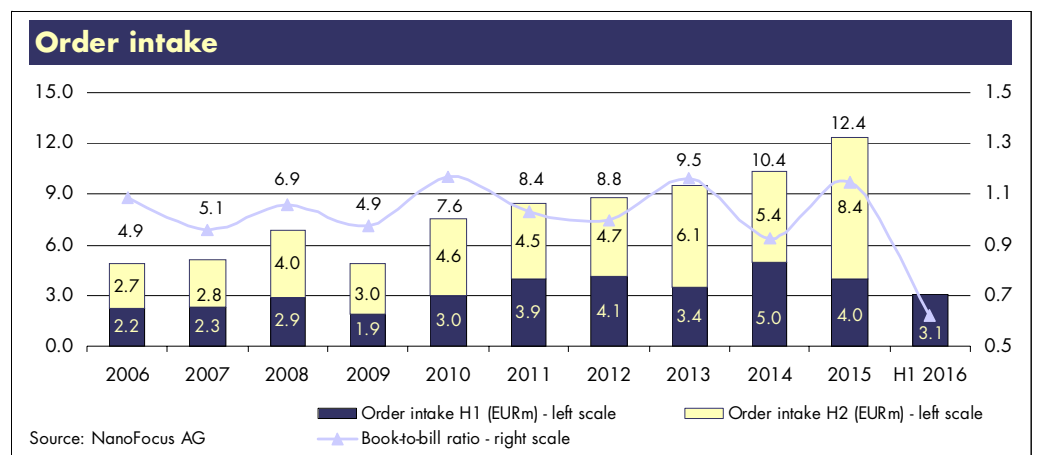
NanoFocus has confirmed its sales forecast at group-level of EUR15m (EUR13m without BMT) for 2016. The EBIT margin target of 3%-5% for NanoFocus AG and about 10% for BMT is also upheld. The order inflow was disappointing in H1 2016 for NanoFocus AG with EUR3.1m (4.0), also when compared to preceding years. However, it has increased to EUR4.9m (plus BMT with 1.5) already in August 2016. According to CFO Sorg, the upside trend currently is almost in line with the schedule, again. However, there still are delays in the Semiconductor unit. Due to seasonality, we expect a clearly stronger H2, even though our sales forecast of EUR14.5m (before: 15.2) is more conservative than the guidance. On the income level, we forecast group EBIT of EURO.3m (before: 0.6). Our lower sales expectations and the higher material cost rate should partly be compensated for by cost reductions (reduced hours in some units, amongst others).

Accelerated growth trend

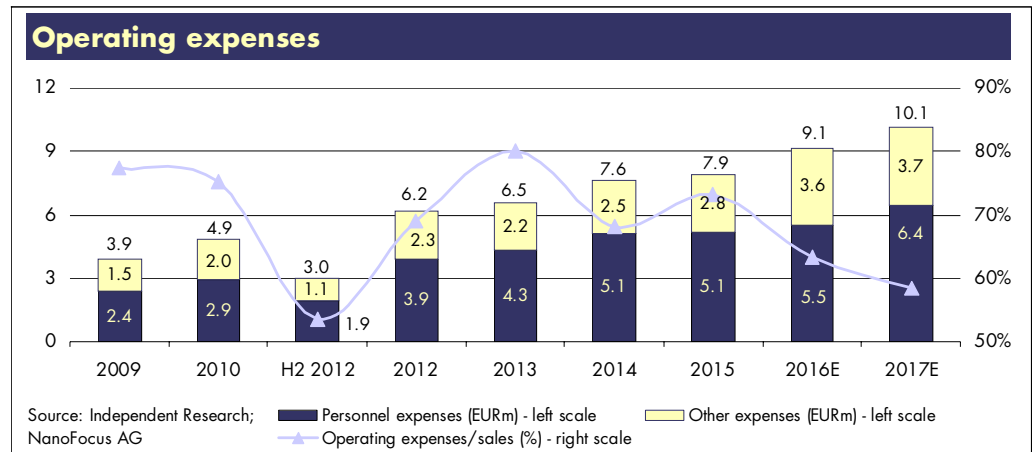
First large serial deliveries in the Semiconductor unit

We still expect an increase in growth in the coming years as NanoFocus increasingly transfers products into serial production. The products already are in serial production:

- Fully automated wafer inspection for a manufacturer of semiconductors; the product is rolled out in several plants, but remains a solution according to client specifications



Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document



- Serial control of knee joints and tooth implants
- Measurement of micro welds in the automotive industry

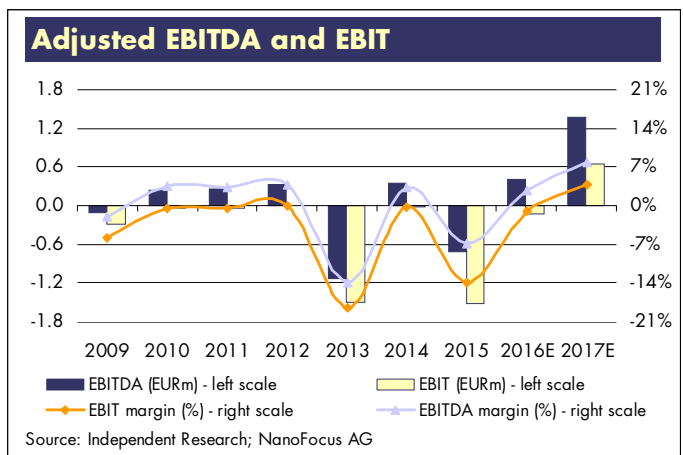
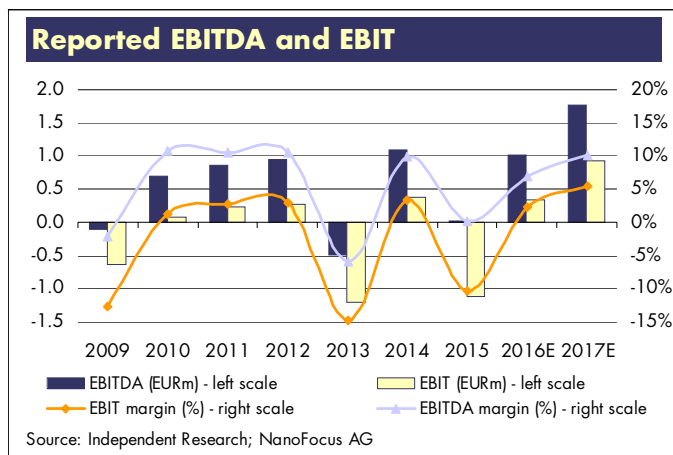
Development of μ surf cylinder that is integrated in the production process within schedule

The pilot system of the second serial product in the Semiconductor unit, a fully automated device to inspect probe cards, has already been approved by the customer. However, the follow-up order to develop the serial product is still pending. The order to develop the μ surf cylinder that is integrated in the production process is of strategic importance. The schedule (delivery of pilot system in Q4 2016; serial production beginning at the end of 2017) lets us expect a strong sales increase as of 2018.

EPS dilution from capital increase

Economies of scale from higher-margin products and cost discipline

In our opinion, the stable operating cost structure of NanoFocus is an indicator for the improving scalability of the business model. The margin should further benefit from the rising demand for serial products (higher margin compared to the Standard unit). We thus forecast sales of EUR17.3m (before: 18.2) and EBIT of EURO.9m (before: 1.3) in 2017. Due to the dilution from the capital increase in June/July 2016, we expect EPS of EURO.18 (before: 0.23).



Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Financial analysis

Still sound equity ratio

Despite of the equity ratio declining to 52% as at June 30, 2016 (December 31, 2015: 58%; June 30, 2015: 65%) NanoFocus has still a solid equity structure based on the individual financial statement of NanoFocus AG. The decline in equity to EUR9.9m as at June 30, 2016 (December 31, 2015: 11.3) is owed to the seasonally usual half-year loss. This effect should be compensated for in H2 2016. The equity was further enhanced by the capital increase carried out in June 2016 and registered in July 2016 (issue of 330k shares at EUR2.60 each; gross issuing proceeds: EURO.9m). With regard to the group financial statement for 2016, which will be issued for the first time, both equity and equity ratio should reach the level of the NanoFocus AG figures according to preliminary calculations.

Further working capital investments necessary to generate sales growth

Growth financing remains a challenge, both regarding the seasonal demand for liquidity in H1 and the increase in working capital. NanoFocus AG (individual financial statement) posted an operating cash flow of EUR-0.6m (-0.8) and a free cash flow of EUR-1.2m (-1.1) for H1 2016 thus reaching a usual H1 level. Working capital (individual financial statement) increased to EUR4.5m as at June 30, 2016 (December 31, 2015: 4.2). In 2016 and 2017 we expect an increase in working capital by EUR1.9m on group level also due to further investments in demonstration devices and a rising share of higher-value serial products (higher sales price but also higher material use/value of stocks). In total, we expect a negative free cash flow on group level in 2016 and 2017 of EUR-0.7m and EUR-0.2m, respectively.

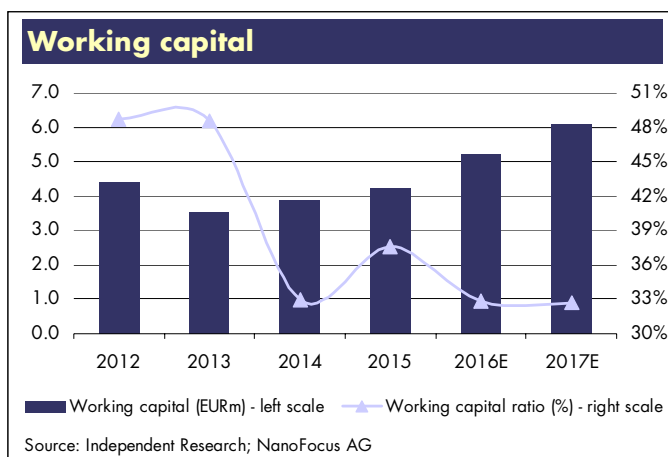
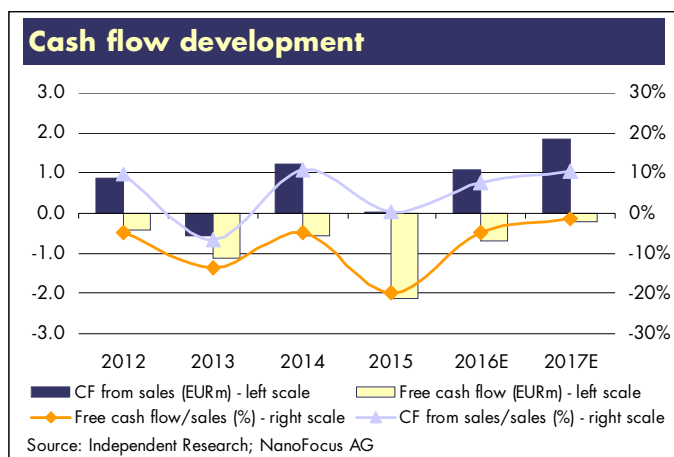
Growth financing remains on the agenda

In our opinion, the financing structure for the acquisition of Breitmeier Messtechnik (BMT) is preserving liquidity. The balance sheet of NanoFocus AG comprises BMT in the financial assets with EUR3.5m (including cash of EURO.5m) while the first down payment was only EUR1.0m in 2015. The second payment of EURO.8m will be paid shortly. It is already in fixed deposit (restricted cash among the financial assets) and thus does not again burden liquidity of NanoFocus. The third payment of EURO.5m is due at a later point in time, only, as is the earn-out-component of EURO.6m. We further welcome that NanoFocus was able to use current accounts of EURO.9m in H1 2016 to finance the usual seasonal negative

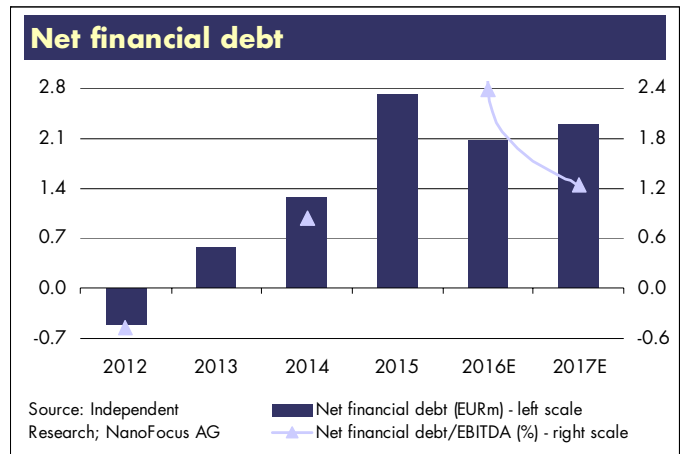
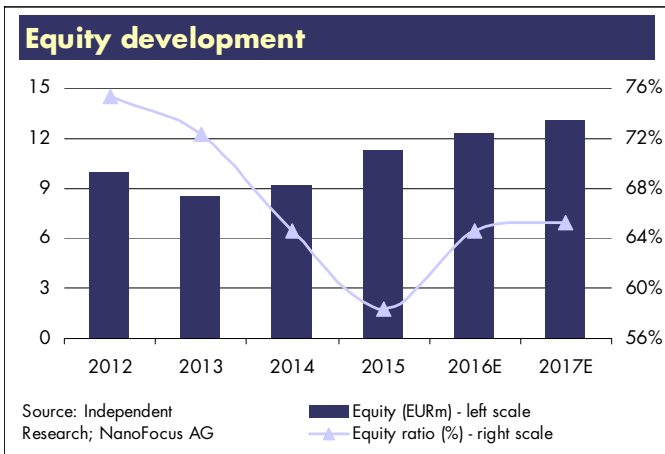
Capital increase with gross proceeds of EURO.9m

Seasonally negative cash flow in H1 2016

Acquisition of BMT is preserving liquidity



Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document



Short-term loans and current accounts used for interim financing in H1 2016

free cash flow and win short-term loans of EURO.8m to finance projects ordered. Despite the proceeds from the latest capital increase and the new loans, the free cash according to the individual financial statement as at June 30, 2016 of EURO.4m (plus EURO.5m of BMT), the partly significant short-term interim financing and annual loan repayment of about EURO.3m show the need for further financing measures, in our opinion.

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Income statement

	Unit: Financial year: Accounting standard:	EURm Dec. 31 HGB	2012	2013	2014	2015	2016E	2017E
Sales			8.9	8.2	11.2	10.8	14.5	17.3
Change in inventory			-0.1	0.1	-0.1	0.0	0.0	0.0
Own work capitalised			0.6	0.6	0.7	0.7	0.6	0.4
Other operating income			0.2	0.1	0.2	0.3	0.3	0.3
Total operating performance			9.6	9.0	12.1	11.9	15.3	18.0
Cost of materials			-2.5	-2.9	-3.4	-3.9	-5.2	-6.1
Gross profit			7.1	6.1	8.7	7.9	10.1	11.9
Personnel expenses			-3.9	-4.3	-5.1	-5.1	-5.5	-6.4
Other operating expenses			-2.3	-2.2	-2.5	-2.8	-3.6	-3.7
EBITDA			0.9	-0.5	1.1	0.0	1.0	1.8
Depreciation and amortisation			-0.7	-0.7	-0.7	-1.1	-0.7	-0.8
EBIT			0.3	-1.2	0.4	-1.1	0.3	0.9
Financial results			-0.1	-0.1	-0.1	-0.2	-0.2	-0.1
EBT			0.2	-1.3	0.2	-1.3	0.1	0.8
Extraordinary expenses			0.0	0.0	1.0	0.0	0.0	0.0
Income taxes and other taxes			0.0	-0.1	-0.6	-0.3	0.0	0.0
Minority interests			0.0	0.0	0.0	0.0	0.0	0.0
Net income			0.1	-1.4	0.7	-1.6	0.1	0.8
Weighted average number of shares (m)			2.915	3.000	3.000	3.306	4.365	4.530
Earnings per share (EUR)			0.05	-0.47	0.23	-0.49	0.03	0.18
Dividend per share (EUR)			0.00	0.00	0.00	0.00	0.00	0.00

Source: Independent Research; NanoFocus AG

Income statement (positions in % of sales)

	Unit: Financial year: Accounting standard:	in % Dec. 31 HGB	2012	2013	2014	2015	2016E	2017E
Sales			100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Change in inventory			-1.1%	0.8%	-0.7%	0.0%	0.0%	0.0%
Own work capitalised			6.9%	7.9%	6.6%	6.9%	4.1%	2.3%
Other operating income			2.1%	1.3%	2.0%	3.1%	2.0%	1.6%
Total operating performance			108.0%	110.0%	107.9%	109.9%	106.1%	103.9%
Cost of materials			-28.5%	-35.8%	-30.0%	-36.5%	-36.0%	-35.2%
Gross profit			79.5%	74.1%	77.9%	73.4%	70.1%	68.6%
Personnel expenses			-43.6%	-52.9%	-45.5%	-47.7%	-38.2%	-37.2%
Other operating expenses			-25.3%	-27.2%	-22.6%	-25.6%	-25.0%	-21.3%
EBITDA			10.6%	-5.9%	9.8%	0.2%	7.0%	10.2%
Depreciation and amortisation			-7.6%	-8.9%	-6.5%	-10.5%	-4.7%	-4.8%
EBIT			3.0%	-14.8%	3.3%	-10.4%	2.3%	5.4%
Financial results			-0.9%	-0.7%	-1.3%	-1.5%	-1.2%	-0.8%
EBT			2.1%	-15.5%	2.0%	-11.8%	1.0%	4.5%
Extraordinary expenses			0.0%	0.0%	9.1%	0.0%	0.0%	0.0%
Income taxes and other taxes			-0.4%	-1.6%	-5.0%	-3.0%	0.0%	0.1%
Minority interests			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income			1.7%	-17.1%	6.1%	-14.9%	1.0%	4.6%

Source: Independent Research; NanoFocus AG

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Balance sheet

	Unit: EURm						
Financial year:	Dec. 31	2012	2013	2014	2015	2016E	2017E
Accounting standard:	HGB						
Capital subscribed not paid in		0.0	0.0	0.0	0.0	0.0	0.0
Expenditures for start-up and expansion of business operations		0.0	0.0	0.0	0.0	0.0	0.0
Intangible assets		3.0	3.0	2.2	2.2	4.4	4.5
Property, plant and equipment		0.5	0.5	0.5	0.4	1.0	1.0
Financial assets		0.1	0.1	2.1	6.4	2.1	2.1
Total non-current assets		3.6	3.6	4.8	9.0	7.5	7.6
Inventories		2.6	2.9	3.2	3.5	4.6	5.4
Receivables and other assets		3.4	3.2	4.2	5.2	5.3	5.7
Trade receivables		2.6	1.9	2.2	2.6	3.1	3.5
Other current receivables/assets		0.9	1.4	2.1	2.6	2.1	2.2
Securities		0.0	0.0	0.0	0.0	0.0	0.0
Cash and cash equivalents		1.8	0.3	0.8	0.6	0.5	0.2
Total current assets		7.9	6.4	8.2	9.3	10.4	11.3
Deferred expenses and accrued income		0.1	0.1	0.1	0.1	0.2	0.2
Deferred tax assets		1.7	1.7	1.1	0.9	0.9	0.9
Total assets		13.2	11.8	14.3	19.4	19.0	20.0
Subscribed capital		3.0	3.0	3.0	4.2	4.5	4.5
Capital reserve		6.1	6.1	6.1	8.6	9.1	9.1
Retained earnings related to deferred taxes		1.2	1.2	1.2	1.2	1.2	1.2
Capital contributions		0.0	0.0	0.0	0.0	0.0	0.0
Profit/loss carried forward		0.0	0.0	0.0	-1.1	-1.1	-1.1
Retained earnings		0.0	0.0	0.0	0.0	0.0	0.0
Net income		-0.4	-1.8	-1.1	-1.6	-1.5	-0.7
Total equity		9.9	8.5	9.2	11.3	12.3	13.1
Investment grants to non-current assets		0.0	0.0	0.0	0.0	0.0	0.0
Provisions		0.3	0.3	0.5	0.6	0.7	0.8
Financial liabilities		1.3	0.9	2.0	2.8	2.1	2.0
Advanced payments received		0.0	0.2	0.1	0.1	0.1	0.1
Trade payables		0.8	1.0	1.5	1.8	2.5	2.7
Liabilities to affiliated companies		0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities		0.3	0.1	0.5	2.1	0.7	0.7
Total liabilities		2.4	2.3	4.0	6.8	5.3	5.4
Deferred income and accrued expenses		0.0	0.0	0.0	0.1	0.1	0.1
Deferred tax liabilities		0.5	0.7	0.5	0.6	0.6	0.6
Total equity and liabilities		13.2	11.8	14.3	19.4	19.0	20.0

Source: Independent Research; NanoFocus AG

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Balance sheet (positions in % of balance sheet total)

Unit: Financial year: Accounting standard:	in % Dec. 31 HGB	2012	2013	2014	2015	2016E	2017E
Capital subscribed not paid in		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Expenditures for start-up and expansion of business operations		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Intangible assets		22.5%	25.3%	15.5%	11.3%	23.0%	22.7%
Property, plant and equipment		3.6%	4.3%	3.3%	2.0%	5.4%	4.8%
Financial assets		1.1%	1.2%	14.9%	33.1%	11.2%	10.6%
Total non-current assets		27.1%	30.8%	33.7%	46.5%	39.7%	38.1%
Inventories		19.6%	24.5%	22.6%	18.2%	24.4%	26.7%
Receivables and other assets		26.0%	27.2%	29.6%	26.8%	27.7%	28.7%
Trade receivables		19.5%	15.8%	15.2%	13.2%	16.5%	17.5%
Other current receivables/assets		6.4%	11.5%	14.4%	13.6%	11.1%	11.1%
Securities		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash and cash equivalents		14.0%	2.8%	5.4%	3.2%	2.6%	1.1%
Total current assets		59.6%	54.5%	57.6%	48.2%	54.7%	56.4%
Deferred expenses and accrued income		0.6%	0.6%	1.0%	0.7%	0.9%	1.0%
Deferred tax assets		12.7%	14.2%	7.7%	4.6%	4.7%	4.5%
Total assets		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Subscribed capital		22.7%	25.4%	21.0%	21.7%	23.8%	22.6%
Capital reserve		46.5%	51.9%	43.0%	44.4%	48.0%	45.5%
Retained earnings related to deferred taxes		8.8%	9.9%	8.1%	6.0%	6.1%	5.8%
Capital contributions		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Profit/loss carried forward		0.0%	0.0%	0.0%	-5.6%	-5.7%	-5.4%
Retained earnings		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Net income		-2.7%	-14.9%	-7.5%	-8.3%	-7.7%	-3.3%
Total equity		75.3%	72.3%	64.6%	58.3%	64.6%	65.2%
Investment grants to non-current assets		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Provisions		2.3%	2.5%	3.3%	2.9%	3.7%	3.9%
Financial liabilities		9.8%	7.6%	14.3%	14.7%	10.9%	10.0%
Advanced payments received		0.0%	1.6%	0.6%	0.4%	0.4%	0.4%
Trade payables		5.8%	8.7%	10.3%	9.0%	13.0%	13.4%
Liabilities to affiliated companies		0.0%	0.0%	0.0%	0.1%	0.1%	0.1%
Other liabilities		2.4%	1.2%	3.2%	11.0%	3.4%	3.3%
Total liabilities		18.0%	19.1%	28.3%	35.2%	27.8%	27.2%
Deferred income and accrued expenses		0.2%	0.3%	0.3%	0.4%	0.5%	0.6%
Deferred tax liabilities		4.2%	5.7%	3.6%	3.3%	3.3%	3.2%
Total equity and liabilities		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Independent Research; NanoFocus AG

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Cash flow statement

Unit:	EURm						
Financial year:	Dec. 31	2012	2013	2014	2015	2016E	2017E
Accounting standard:	HGB						
Net income		0.1	-1.4	0.7	-1.6	0.1	0.8
+/- Loss/gain on the disposal of PP&E		0.0	0.0	0.0	0.0	0.0	0.0
+ Depreciation and amortisation		0.7	0.7	0.7	0.8	0.7	0.8
+/- Own work capitalised		0.0	0.0	0.0	0.0	0.0	0.0
+/- Changes in provisions		0.0	0.0	0.1	0.0	0.1	0.1
+/- Other non-cash expenses/income		0.0	0.1	-0.3	0.8	0.2	0.1
Cash flow from sales activities		0.9	-0.6	1.2	0.0	1.1	1.8
-/+ Changes in inventories, receivables/other current assets		-0.2	-0.1	-1.5	-1.6	-0.5	-1.2
+/- Changes in payables and other liabilities		-0.3	0.3	0.6	0.2	-0.1	0.2
+/- Gain/loss from extraordinary items		0.0	0.0	0.0	0.0	0.0	0.0
Cash flow from operating activities		0.4	-0.3	0.4	-1.3	0.5	0.8
+ Proceeds from sale of assets		0.0	0.0	0.0	0.0	0.0	0.0
- Expenses for purchase of assets		-0.2	-0.2	-0.6	-0.3	-0.4	-0.5
- Own work capitalised		-0.6	-0.6	-0.7	-0.7	-0.6	-0.4
- Payouts for investments in financial assets		0.0	0.0	0.0	-0.8	0.8	0.0
+ Interest received		0.0	0.0	0.0	0.0	0.0	0.0
- Acquisitions		0.0	0.0	0.0	-1.0	-0.3	0.0
Cash flow from investing activities		-0.9	-0.8	-1.3	-2.8	-0.5	-0.9
+ Proceeds from equity increases		0.6	0.0	0.0	3.7	0.8	0.0
+ Proceeds from finance lease		-0.1	0.0	0.0	0.0	0.0	0.0
-/+ Repayments of/proceeds from financial liabilities		-0.5	-0.4	1.0	-0.3	-0.8	-0.1
+ Incoming payments from grants received		0.0	0.0	0.5	0.3	0.0	0.0
- Interest paid		0.0	0.0	-0.1	-0.1	-0.2	-0.1
Cash flow from financial activities		0.0	-0.4	1.4	3.5	-0.1	-0.2
Change in financial position		-0.4	-1.5	0.5	-0.6	-0.1	-0.3
Other non-cash items		0.0	0.0	0.0	0.5	0.0	0.0
Financial position - start of period		2.2	1.8	0.3	0.8	0.6	0.5
Financial position - end of period		1.8	0.3	0.8	0.6	0.5	0.2

Source: Independent Research; NanoFocus AG

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

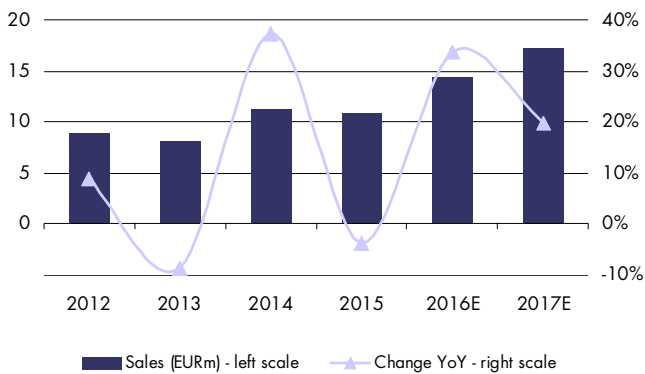
Key figures

Financial year: Accounting standard:	Dec. 31 HGB	2012	2013	2014	2015	2016E	2017E
Growth rates							
Sales growth		8.7%	-8.5%	37.2%	-3.8%	33.8%	19.9%
EBITDA growth		8.7%	-	-	-98.5%	5976.5%	75.1%
EBIT growth		21.1%	-	-	-	-	181.8%
EBT growth		63.4%	-	-	-	-	425.9%
EPS growth		130.3%	-	-	-	-	419.9%
Margins							
EBITDA margin		10.6%	neg.	9.8%	0.2%	7.0%	10.2%
EBIT margin		3.0%	neg.	3.3%	neg.	2.3%	5.4%
EBT margin		2.1%	neg.	2.0%	neg.	1.0%	4.5%
Net margin		1.7%	neg.	6.1%	neg.	1.0%	4.6%
Yield analysis							
ROI		1.1%	-11.2%	5.2%	-9.5%	0.8%	4.1%
ROCE		2.7%	-17.6%	2.5%	-12.8%	2.5%	7.1%
ROE before taxes		1.9%	-13.7%	2.5%	-12.5%	1.3%	6.2%
ROE after taxes		1.6%	-15.1%	7.7%	-15.6%	1.3%	6.3%
ROIC		1.9%	-12.7%	1.9%	-10.8%	2.2%	6.2%
Balance sheet analysis							
Equity ratio		75.3%	72.3%	64.6%	58.3%	64.6%	65.2%
Equity/non-current assets ratio		2.8	2.3	1.9	1.3	1.6	1.7
Equity + non-current debt/non-current assets ratio		3.1	2.5	2.3	1.7	2.0	2.1
Asset intensity		27.1%	30.8%	33.7%	46.5%	39.7%	38.1%
Inventory turnover		3.4	3.0	3.7	3.2	3.5	3.5
Receivables turnover		3.3	3.7	5.6	4.6	5.1	5.2
Days of sales outstanding		110.0	99.1	65.7	79.9	71.9	70.1
Working capital/sales ratio		48.7%	48.6%	33.0%	37.5%	32.8%	32.7%
Days of payables outstanding		132.8	112.0	135.3	148.9	148.0	153.8
Debt ratios							
Net financial debt		-0.5	0.6	1.3	2.7	2.1	2.3
Net financial debt/EBITDA		-0.5	-	0.8	120.6	2.4	1.2
Net Gearing		-0.1	0.1	0.1	0.2	0.2	0.2
EBITDA interest coverage		9.3	-	6.8	0.1	5.3	11.9
EBIT interest coverage		2.6	-	2.3	-	1.7	6.3
Cash flow analysis							
Free cash flow (FCF)		-0.4	-1.1	-0.5	-2.1	-0.7	-0.2
FCF/sales		-4.7%	-13.6%	-4.9%	-19.8%	-4.9%	-1.3%
FCF/net income		-282.6%	-	-80.1%	-	-475.1%	-27.9%
FCF per share (EUR)		-0.14	-0.37	-0.18	-0.65	-0.16	-0.05
FCF yield		-4.9%	-14.4%	-5.3%	-18.4%	-7.1%	-2.2%
Capex		0.2	0.2	0.6	0.3	0.4	0.5
Capex/depreciation		71.8%	42.5%	155.2%	60.9%	72.3%	74.8%
Capex/sales		2.7%	1.9%	5.3%	2.5%	2.8%	3.1%
Valuation multiples							
EV/sales		0.9	1.0	1.0	1.3	0.9	0.7
EV/EBITDA		8.5	neg.	10.6	865.8	12.6	7.2
EV/EBIT		30.1	neg.	31.9	neg.	38.5	13.7
EV/FCF		neg.	neg.	neg.	neg.	neg.	neg.
P/E		57.4	neg.	15.2	neg.	66.5	12.8
P/B		0.9	0.9	1.1	1.0	0.8	0.8
P/CF		19.9	neg.	26.4	neg.	20.9	12.1
P/S		1.0	0.9	0.9	1.1	0.7	0.6
Dividend yield		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source: Independent Research; NanoFocus AG

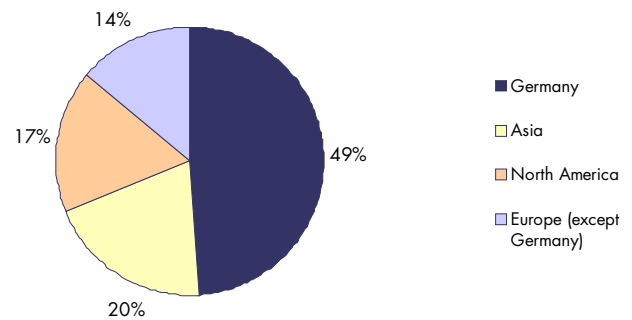
Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Sales development



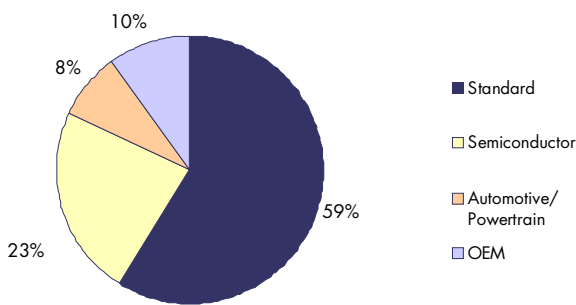
⇒ In 2015, NanoFocus suffered from weak demand in the automotive industry due to the emissions scandal at Volkswagen, amongst others.
 ⇒ Especially as of 2016 we expect strong growth due to serial production.

Sales by region (2015)



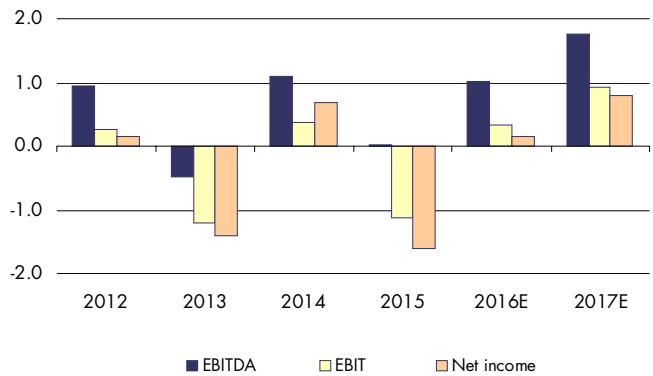
⇒ NanoFocus generates half of its sales in Germany.
 ⇒ Because of strong growth in the semiconductor segment (e.g. customer Samsung) the Asian business gained in importance.

Sales by business unit (2015)



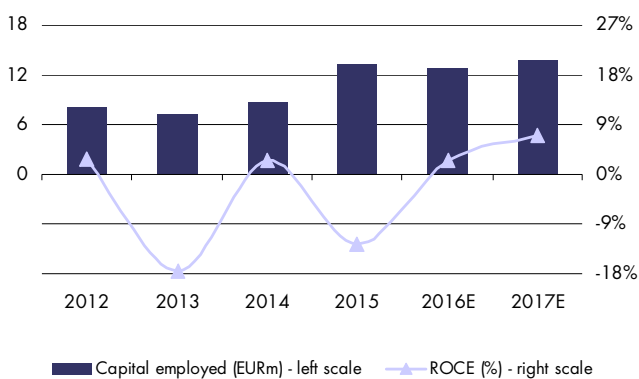
⇒ After the realignment of sales and distribution the Standard business unit improved. The Semiconductor unit benefited from first serial production. After the difficult year 2015 the Automotive unit ought to improve again.

Earnings development (EURm)



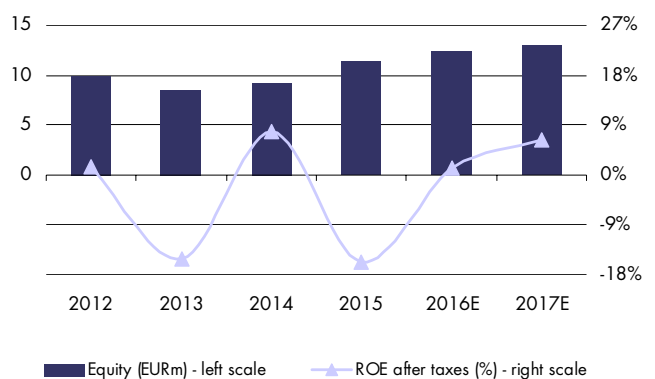
⇒ The postponement of higher-margin projects had a negative impact in 2015.
 ⇒ Along with the change towards a producing company economies of scale should gradually gain in importance.

ROCE and capital employed



⇒ Due to the loss in 2015 the ROCE was negative.
 ⇒ Due to increasing economies of scale and no more goodwill amortisation as of 2017 the ROCE should rise clearly.

ROE and equity



⇒ Capital increase in 2016: EURO.9m (330,000 shares at EUR2.60 each)
 ⇒ In line with successively increasing profitability the ROE should improve steadily as well. However, the ROE 2017E should still be below the cost of capital.

Source: Independent Research; NanoFocus AG

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Disclaimer

Recommendations concerning particular shares (starting December 18, 2009)

- Buy: According to our assessment, the stock will rise by at least 15% in absolute terms within a 6-month period.
- Hold: According to our assessment, the stock will rise by between 0% and 15% in absolute terms within a 6-month period.
- Sell: According to our assessment, the stock will decline in absolute terms within a 6-month period.

Recommendations concerning particular shares (until December 17, 2009)

- Buy: According to our assessment, the stock will rise by at least 15% in absolute terms within a 6-month period.
- Accumulate: According to our assessment, the stock will rise by between 0% and 15% in absolute terms within a 6-month period.
- Reduce: According to our assessment, the stock will decline by between 0% and 15% in absolute terms within a 6-month period.
- Sell: According to our assessment, the stock will decline by least 15% in absolute terms within a 6-month period.

Compulsory information required under Section 34b of the German Securities Trading Act (WpHG) and the Financial Analysis Regulation

Key sources of information

Key sources of information used in the preparation of this document are publications in foreign and domestic media such as information services (e.g. Reuters, VWD, Bloomberg, DPA-AFX etc.), the financial press (e.g. Börsenzeitung, Handelsblatt, FAZ, FT, Wall Street Journal, Financial Times etc.), specialised journals, published statistics, rating agencies and publications of the issuers under coverage.

Summary of the valuation principles used:

Analyses of shares:

In valuing companies standard and accepted valuation methods (amongst others the Discounted Cash Flow Method (DCF Method), Peer-Group Analysis) are applied. Under the DCF Method the net value of the issuer is calculated, which represents the sum of the discounted company results, i.e. the net present value of the issuer's future net cash flows. The net value is therefore determined with reference to the company's anticipated future results and the discount rate applied. Under the Peer-Group Analysis Method issuers quoted on the Stock Exchange are valued with reference to the comparison of valuation multiples (e.g. price/earnings ratio, price/book value, enterprise value/sales, enterprise value/EBITDA, enterprise value/EBIT). Comparability of the valuation multiples is primarily determined by business activity and economic prospects.

Sensitivity of the valuation parameters:

The figures taken from the income statement, the cash flow statement and the balance sheet, upon which the valuation of companies is based, are numerical estimates and therefore subject to risks. These may change at any time without prior notice.

Quite apart from the valuation method applied, there is a very real risk that the share price target may not be reached in the anticipated period of time. Risks include unforeseen changes in competitive pressure or in demand for the issuer's products. Such fluctuations in demand may arise as a result of changes of a technological nature, the overall level of economic activity or in some cases as a result of changes in moral concepts. Changes in tax law, in exchange rates and, in certain business segments, in regulations are other factors which can influence valuations. The above discussion of valuation methods and risk factors makes no claim to be exhaustive.

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Timing conditions of planned updates:**Analyses of shares:**

Independent Research GmbH maintains a list of issuers for whom company-based financial analyses („Coverage list of share analyses“) are published. The criterion for the inclusion or removal of an issuer from this list is governed primarily by the company's inclusion in an index (DAX®, EuroStoxx 50SM, and Stoxx Europe 50SM). In addition, selected issuers from the mid and small cap segment or from the US markets are included. In such cases the inclusion or removal of these issuers from the coverage list is at the sole discretion of Independent Research GmbH. If deemed appropriate by the analysts, Independent Research GmbH will release a short expert commentary or studies concerning the companies on the coverage list. As a rule, such research products will be published following the release of financial figures of a company under coverage. Moreover, every day company-specific events such as ad hoc announcements or important news relating to individual companies on the coverage list are evaluated. The decision as to which issuers are covered by such publications is at the sole discretion of Independent Research GmbH. Moreover, fundamental analyses are prepared for the issuers included on the coverage list. The decision as to which issuers are covered by such publications is at the sole discretion of Independent Research GmbH.

It may occur at any time that, in fulfilment of the provisions of the German Securities Trading Act, the publication of financial analyses of individual issuers included in the coverage list is restricted without any prior warning.

Internal organisational measures to deal with the prevention or handling of conflicts of interest:

Employees of Independent Research GmbH who are involved in the preparation and/or the offering of financial analyses are subject to the company's internal compliance regulations which classify them as employees in an environment requiring confidentiality. The company's internal compliance regulations are in accordance with Sections 33 and 33b of the German Securities Trading Act (WpHG).

Possible conflicts of interest – as at: 10/19/2016 –

There are potential conflicts of interest with the following issuers mentioned in this research report:

Issuer	Conflicts of interest
NanoFocus AG	5, 6

Independent Research GmbH and/or its affiliated companies:

- 1) own at least 1% of the issuer's share capital.
- 2) have been involved in the management of a consortium issuing financial instruments of the issuer by way of a public offer within the last twelve months.
- 3) look after financial instruments of the issuer in a market through the placement of buying or selling orders.
- 4) have concluded an agreement with issuers within the last twelve months, which are either themselves or through their financial instruments the object of a financial analysis, covering services related to investment banking transactions or have received a service or a promise of services in such an agreement.
- 5) made this financial analysis available to the issuer prior to publication without the Valuation/Forecasts section and subsequently amended it.
- 6) have concluded an agreement with the issuers which are either themselves or through their financial instruments the object of the financial analysis regarding the preparation of the financial analysis.

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document

Liability statement

This document is for information purposes only. It has been prepared by Independent Research GmbH and shall be distributed in Germany only. This document is not directed to persons or companies domiciled and/or maintaining branch-offices outside Germany, particularly in the United States of America, Canada, United Kingdom, and Japan. This document shall only be distributed according to the applicable laws of the respective country. Any persons receiving this document, i.e. this information and material, shall be obliged to inform themselves about the applicable laws of the respective country and to act accordingly.

This document constitutes neither an offer nor an invitation to subscribe to or to purchase a security. Especially with preparation of this document Independent Research GmbH shall neither act as an investment consultant nor act on the basis of some asset management duty or obligation. Any investment decision regarding any security or other financial instruments must be based on individual, professional advice and/or on the prospectus or information memorandum.

This document constitutes an independent assessment of the respective issuer and/or the negotiable securities by Independent Research GmbH. All and any herein contained assessments, opinions and statements are those of the author of this document and do not necessarily reflect the opinion of the issuer or third parties.

All and any information this document is based on has been taken from resources considered as reliable but has not necessarily been verified by Independent Research. Therefore, Independent Research GmbH does not warrant the accuracy, completeness and correctness of the information and opinions contained herein.

Independent Research GmbH assumes no responsibility or liability for direct or indirect damage arising from the use or distribution of this document or of the information contained therein or which otherwise may arise from it.

The information, opinions and statements represent the status quo of the day of the preparation of the document. Future developments may render them out of date without any changes made to this document. Price movements experienced in the past, simulations or forecasts are no reliable indicators for future price movements of securities. The tax treatment of financial instruments depends on the individual circumstances of the respective investor and may be subject to future changes, which may be retroactive.

Although Independent Research GmbH may provide hyperlinks to websites of companies mentioned in this study, the inclusion of a given hyperlink shall not mean that Independent Research GmbH confirms, recommends or authorises all and any data on the respective website or data that can be accessed from the website. Independent Research GmbH assumes no liability for such data nor for any consequences arising from the use of same.

As at: 10/19/2016

**Independent Research GmbH
Friedrich-Ebert-Anlage 36
60325 Frankfurt am Main
Germany**

Responsible supervisory authority:
Federal Financial Supervisory Authority
(Bundesanstalt für Finanzdienstleistungsaufsicht)
Graurheindorfer Str. 108, 53117 Bonn
and
Marie-Curie-Straße 24-28, 60439 Frankfurt

Please notice the advice regarding possible conflicts of interests as well as the disclaimer at the end of this document