GBC AG Investment Research

SYGNIS AG*4,5a,5b,6a,7,10,11

BUY
Price Target: 3.70

current price: 1.66
24/01/2017 / ETR /
4:45 p.m.
currency: EUR

Key Date:

ISIN: DE000A1RFM03
WKN: A1RFM0
Ticker symbol: LIO1
Number of shares³: 37,342
Marketcap³: 62.14
EnterpriseValue³: 60.28
³ in m / in EUR m

Transparency Level:
Prime Standard
Market Segment:
Regulierter Markt
Accounting Standard:
IFRS

Financial year-end: 12/31

Analyst:

Cosmin Filker
filker@gbc-ag.de

Felix Gode, CFA
gode@gbc-ag.de

* catalogue of potential conflicts of interests on page 14

Completion/First Publication:
24/01/2017 / 25/01/2017

Company Profile

Sector: Biotechnology

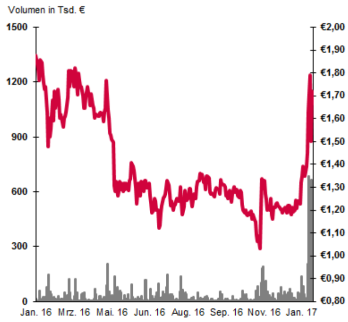
Focus: development and commercialisation of DNA-technologies; Proteomics

Employees: 46 (November 2016)

Founded in: 1997

Headquarter: Heidelberg

Executive Board: Pilar de la Huerta, Dr. Heikki Lanckriet



SYGNIS AG is a life sciences company listed in the Prime Standard of the German Stock Exchange (Deutsche Börse). The company focuses on the development and marketing of innovative molecular biology technologies in the NGS (next-generation sequencing) sector. Its most important products currently on the market are TruePrime™ (DNA amplification) and SunScript™ (translating RNA into DNA), which are sold both through their own marketing and through non-exclusive sales partnerships. Other products (e.g. DNA amplification through liquid biopsy) will shortly be launched to enter into high-volume markets (e.g. hospitals). SYGNIS AG has acquired Expedeon Holdings Ltd. through a capital increase in kind. This expanded the product range into the field of proteomics, the second most important sector in the field of life science. Important synergy effects are arising especially in the sales area, as Expedeon has a direct sales network in the most important life sciences markets worldwide as USA, UK and Asia.

P&L in €m	31/12/2015*	31/12/2016e*	31/12/2017e	31/12/2018e
Revenue	0.56	1.94	7.64	15.25
EBITDA	-3.48	-2.45	0.18	6.23
EBIT	-3.86	-2.93	-0.36	5.06
Jahresüberschuss	-4.01	-3.03	-0.49	4.75
**Stand-Alone SYGNIS AG (until August 2016)*				
Ratios				
EV/Revenue	108.61	31.14	7.89	3.95
EV/EBITDA	neg.	neg.	336.76	9.68
EV/EBIT	neg.	neg.	neg.	11.92
P/E	neg.	neg.	neg.	13.09
P/B	2.09			

Financial Schedule
27/04/2017: Annual Report 2016
11/05/2017: Financial Report Q1
03/08/2017: Financial Report Q2
08/11/2017: Financial Report Q3

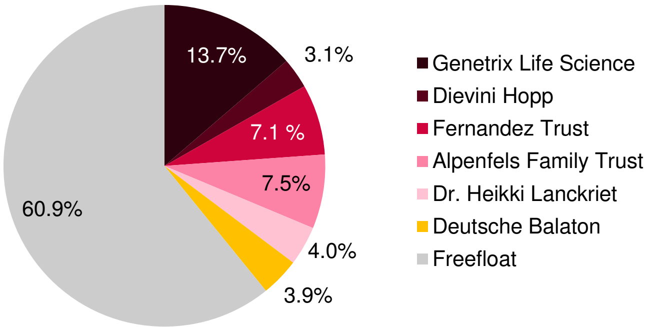
**last research published by GBC:
Date: publication / price target in € / rating
16/06/2016: RS / 3.95 / BUY
17/12/2015: RS / 3.75 / BUY
26/11/2015: RS / 3.75 / BUY
20/11/2015: RS / 3.75 / BUY
8/10/2015: RS / 3.75 / BUY
** the research reports can be found on our website www.gbc-ag.de or can be requested at GBC AG, Halderstr. 27, D86150 Augsburg

COMPANY

Shareholder Structure

Shareholder	in %
Genetrix Life Science	13.,7%
Dievini Hopp	3.1%
Fernandez Trust	7.1%
Alpenfels Family Trust	7.5%
Dr. Heikki Lanckriet	4.0%
Deutsche Balaton AG	3.9%
Freefloat	60.9%

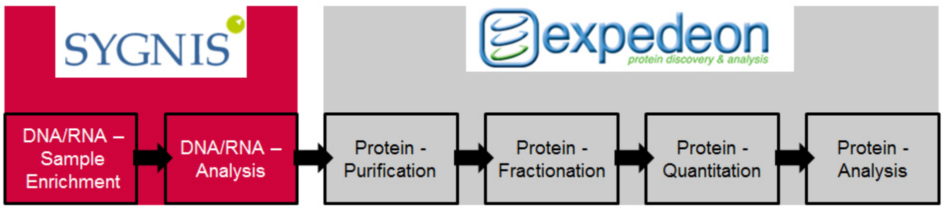
Source: SYGNIS AG; GBC AG



Akquisition of Expedeon Holdings Ltd. in UK

A total of 20.54 million shares were issued as part of the capital increase carried out in July 2016. Of these shares, 15.72 million shares were offered to the Expedeon shareholders as a contribution in kind (the Expedeon shares are the contribution in kind), plus a cash settlement amounting to €1.70 million. In addition to this, existing shareholders and qualified investors subscribed for 4.81 million shares at a subscription price of €1.10 per share, meaning that the gross proceeds generated from the issue amounted to €5.30 million. As such, SYGNIS AG has significantly higher levels of liquidity holdings to finance the integration of the newly acquired Expedeon Holdings Ltd. (incl. the cash settlement).

Expanded product range for SYGNIS AG



The takeover of Expedeon Holdings Ltd. means that the two important sub-divisions and growth markets of Genomics and Proteomics are combined within SYGNIS AG as part of Life Science. The product range of the Expedeon Group thereby covers all the essential components and key applications of the proteomics market. The SYGNIS product range has expanded horizontally with the acquisition of the Expedeon Group, as proteins can now also be analyzed in addition to DNA.

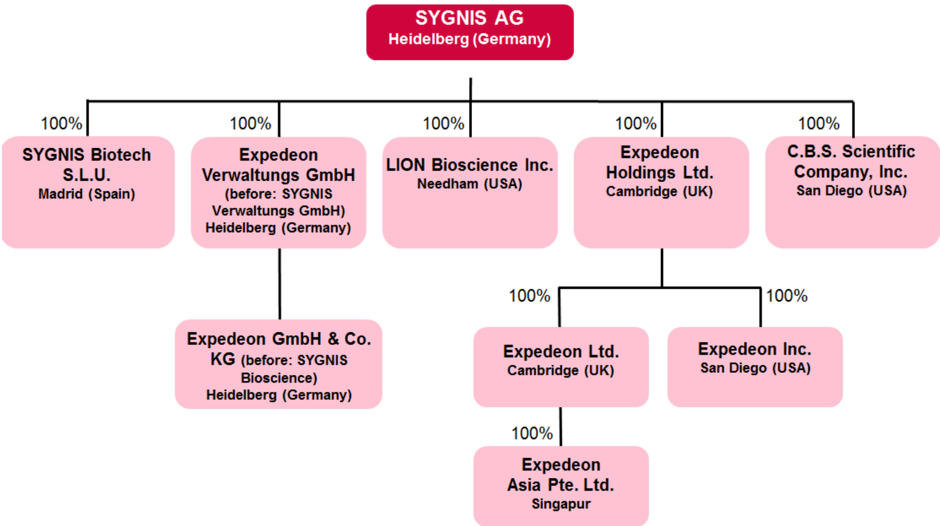
Akquisition of C.B.S. Scientific

After acquiring Expedeon Holdings Ltd., a portion of the liquidity inflow originating from the last capital increase was used for the acquisition of the US electrophoresis supplier C.B.S. Scientific. According to a company statement dated 21/12/2016, a binding agreement for the acquisition of the company, based in San Diego, USA, was concluded for a total amount of USD 0.90 million. Since USD 0.36 million originates from the issue of SYGNIS shares (275,311 new shares to C.B.S. shareholders) from authorised capital, the liquidity outflow for this acquisition was limited to USD 0.54 million.

C.B.S. Scientific acts as a system provider in the field of electrophoresis and thus this acquisition too is to be viewed as a horizontal extension of the product range and thus the SYGNIS AG workflow. Through the sale of lab equipment, C.B.S. represents, at an annual revenue of currently approximately USD 1.50 million, a positive contribution to liquidity and earnings.

In addition to the positive effect on SYGNIS AG's earnings, we have also identified potential synergies, in particular in terms of production, as a result of a planned merger of the Expedeon site and the C.B.S. site in San Diego, USA. In addition, we have identified potential synergies in terms of sales due to the growing customer base.

The current company structure is therefore as follows:



Source: SYGNIS AG; GBC AG

Product launches and product pipeline

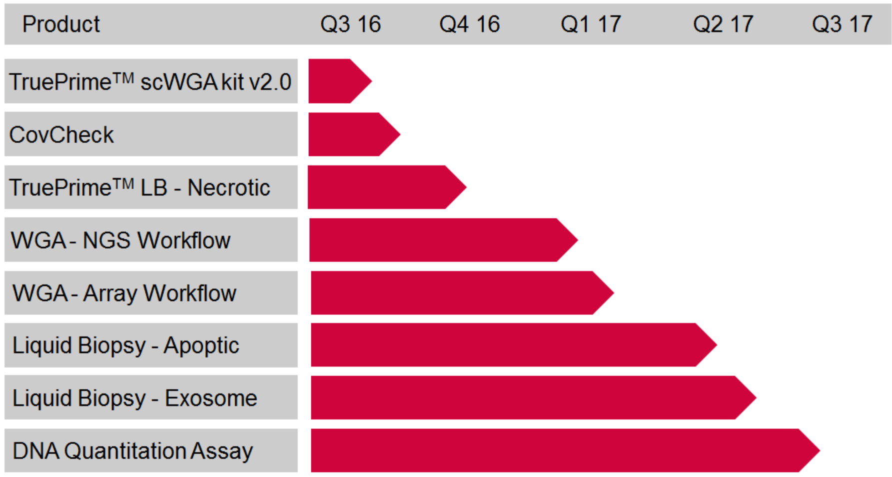
SYGNIS AG has announced further products to be launched on the market in the current 2016 financial year, in parallel with the expansion to the product range to include the proteomics division as a result of the acquisition. The introduction of the **SunScript^{TM} One Step RT-qPCR Kit** as the third product in the SunScript^{TM} product line is aimed at enabling the transcription and amplification of genomic DNA in a single reaction that can be measured in real time.

A new tool was also introduced from the TruePrime^{TM} product line, whereby fragments from the DNA circulating in the blood that originates from tumor cells can be identified and amplified. An additional product for the amplification of whole genomes, the **TruePrime^{TM} Single Cell WGA Kit V2**, was developed.

The third product launched in 2016 was the **CovCheck^{TM} Kit**, which offers quality controls in the whole genome amplification process. It came onto the market in October 2016. All human chromosomes can be checked in one single experiment using this product, and as such, there is a strong correlation between the amplified samples and the actual coverage of the genome through the sequencing. This permits homogeneous and comparable controls of WGA (Whole Genome Amplification) experiments. The newly developed products were presented at various prestigious scientific conferences in Europe and the USA as part of the marketing strategy.

The latest market launch of the **TruePrime™ Liquid Biopsy Kit** allows to address the extremely attractive liquid biopsy market, which is projected to have a market volume globally of around 1.3 billion US dollars in 2020 according to estimates. This amplification kit allows circulating tumor DNA to be ascertained, analyzed and monitored. Providing evidence of tumor DNA traces in the blood is particularly important for early tumor detection and could become a valuable tool both in oncological research as well as in the high-volume diagnosis area.

Further product launches to cover the relevant workflows for the Genetics and Proteomics division are in the introductory or research phase:



Source: SYGNIS AG; GBC AG

GBC AG Investment Research

Business Development 9 months 2016

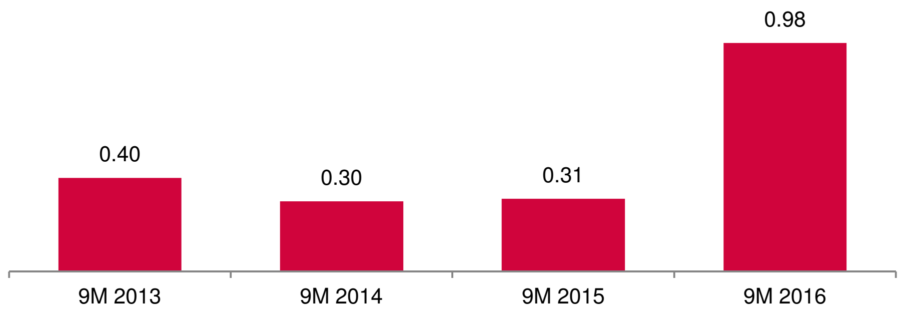
Revenue and earnings development 9 Month 2016

P&L (in €m)	9M 2014	9M 2015	9M 2016
Revenue	0.30	0.31	0.98
EBIT	-1.20	-2.71	-2.13
Net profit	-2.37	-2.78	-2.14

Source: SYGNIS AG; GBC AG

The past reporting period of SYGNIS AG has been characterized by the Expedeon takeover completed in July 2016. Operational development as a whole has been characterized by high inorganic effects as a result of the integration of the proteomic-company as of August 2016. Total revenues at the SYGNIS Group rose significantly with this to €0.98 million (previous year: €0.31 million). We expect an inorganic contribution to revenues of approx. €0.40 - €0.50 million. According to this assumption, SYGNIS AG would have achieved adjusted organic growth of approx. 70%.

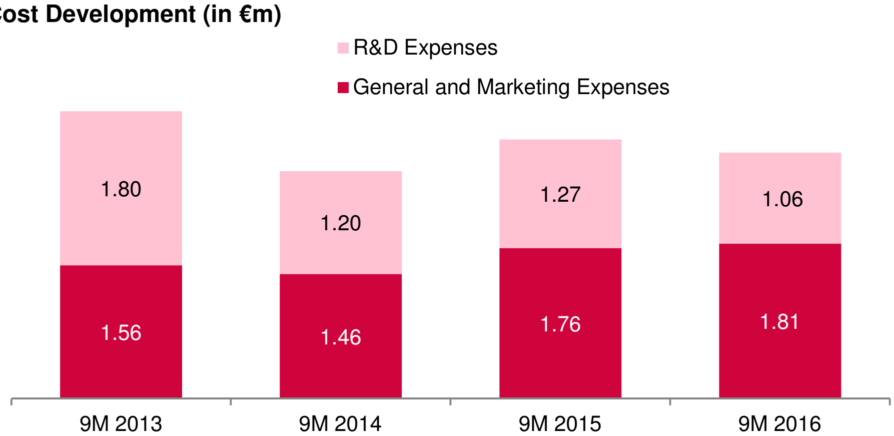
Revenue Development (in EURm)



Source: SYGNIS AG; GBC AG

The significant inorganic effects are, however, accompanied by a costs trend that is disproportionately low despite the integration expenditure incurred, meaning that consolidated EBIT was improved to €-2.13 million (previous year: €-2.71 million). The comparatively positive costs trend is the result of the cost reductions implemented in the previous periods. Administrative structures were heavily streamlined in the previous year and the efficiency of internal processes was increased, resulting in a reduction in the cost structures.

Cost Development (in €m)



Source: SYGNIS AG; GBC AG

The Expedeon integration primarily affects the merger of the sales teams along with associated training on the relevant expanded product range. Aside from the expansion in the sales channels associated with this, particularly for the SYGNIS products, costs were also incurred from the planned consolidation of production capacities (transfer of production to UK is still due to be implemented in the 2016 financial year) and of the administrative structures.

Overall the results after taxes still amounted to a loss of -€2.14 million (previous year: -€2.78 million) in line with expectations. Although the collaboration with Expedeon and potential synergy effects arising from this have not yet taken effect to their full extent as things are still at an early stage, SYGNIS AG was still able to achieve an improvement in results.

Balance sheet and financial situation as at 30/09/2016

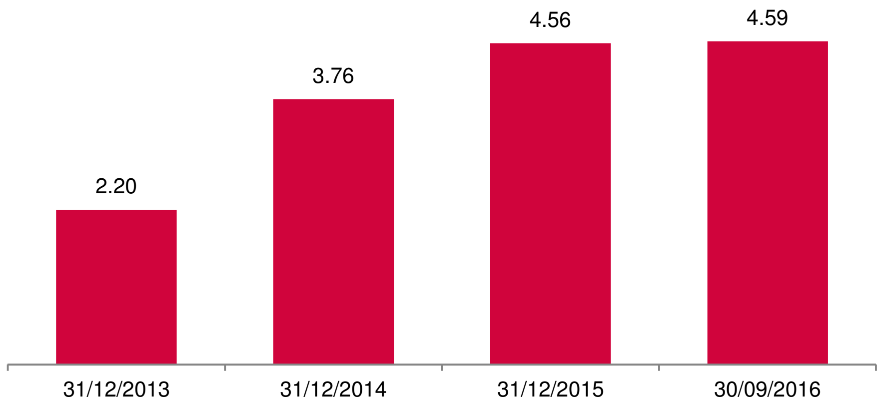
in €m	31/12/2014	31/12/2015	30/09/2016
Shareholder's Capital	8.34	10.41	29.75
Equity ratio (in %)	66.5%	74.2%	86.4%
Liquid assets	3.76	4.56	4.59
Operating Cashflow	-3.58	-3.82	-2.13
Investment - Cashflow	-0.62	-0.53	-2.04
Financing - Cashflow	5.44	4.74	4.19

Source: SYGNIS AG; GBC AG

There have also been considerable changes in terms of the balance sheet following the Expedeon takeover and associated first time consolidation. The first of these to be mentioned is the increase in equity to €29.75 million (Dec 31, 2015: €10.41 million) stemming from the capital increase via cash and contribution in kind. Despite the considerable increase in the consolidated balance sheet total to €34.45 million (previous year: €14.03 million) the equity ratio remains at the high level of 86.4% (Dec 31, 2015: 74.2%).

Following acquisition of the Expedeon assets the tangible fixed assets and intangible assets (property and licensing rights) climbed to a total of €5.86 million (Dec 31, 2015: €2.10 million). Goodwill also increased in parallel to €21.42 million (Dec 31, 2015: €5.94 million) and was thereby the principal reason for the increase in the balance sheet total.

Liquid Assets (in €m)



Source: SYGNIS AG; GBC AG

Given that the break-even point has not yet been reached and considering the negative operating cashflow resulting from this, we attach a lot of importance to SYGNIS AG's liquidity levels. The company also featured free cash flows amounting to -€4.17 million in the first nine months of 2016 (previous year: -€3.48 million), with a one-time outflow of liquidity amounting to €1.70 million taken into account here as a cash settlement for the Expedeon acquisition. The liquidity received from the capital increase amounting to €4.19 million was, however, able to compensate in full for the liquidity consumed, meaning that the company's liquidity holdings remain virtually unchanged at €4.59 million (Dec 31, 2015: €4.56 million).

According to statements from the company, the financial resources should be sufficient until the break-even point is reached as planned during the course of the 2017 financial year. The granted loans from public funds amounting to €1.2 million as well as the funds amounting to €0.75 million for the research and development cooperation with the Spanish National Center for Molecular Biology as announced in the press release from October 27, 2016 will additionally improve SYGNIS AG's financial position until the break-even point is reached. The loans that are earmarked for research and development activities are exempt from repayment for the first three years and feature a long term of ten years and a low interest rate of 0.06%.

FORECAST AND MODEL ASSUMPTIONS

P&L (in €m)	FY 16e* (old)	Fy 16e (new)	FY 17e (old)	FY 17e (new)	FY 18e (old)	FY 18e (new)
Revenue	3.66	1.94	9.59	7.64	15.25	15.25
EBIT	-3.27	-2.93	-0.94	-0.36	5.06	5.06
Net profit	-3.36	-3.03	-1.08	-0.49	4.75	4.75

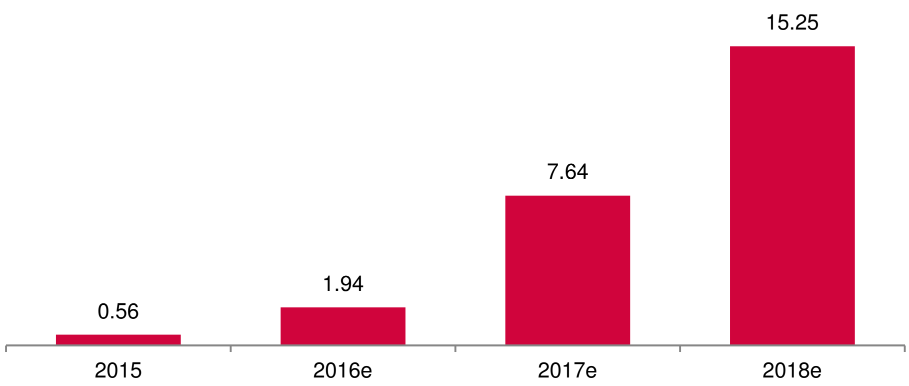
Source: GBC AG

Revenue forecasts

The acquisition of Expedeon Holdings Ltd. will be crucial in determining SYGNIS AG's future corporate development in our opinion. Consolidation of both companies alone results in considerably higher levels of revenues and profit, as is already apparent from the situation as at June 30, 2016. We must bear in mind with this that Expedeon was only included in the past reporting period from August 2016, i.e. for just two months. The positive effects should be significant in the fourth quarter of 2016 and in particular in the 2017 financial year, based solely on full inclusion of the new company and the integration successes in the sales division at SYGNIS AG. From the 2017 financial year, we have also taken into account inorganic effects from the acquisition of C.B.S. Scientific. At an annual revenue of USD 1.50 million (corresponding to €1.42 million), the laboratory supplier represents a positive contribution to earnings and liquidity.

Sales revenues are expected to be within the range of between €1.7 and €2.0 million for the 2016 financial year according to updated corporate guidance. As such SYGNIS AG would have to generate revenues in the year-end quarter amounting to approx. €0.7 - €1.0 million, which we believe to be a realistic assumption. SYGNIS AG sees a strong upside potential for the 2017 financial year. Based on the updated corporate guidance, we have reduced our revenue forecast to €1.94 million for 2016 as well as for the financial year 2017 based upon this. We had originally taken the Expedeon revenues into account for a six-monthly period. We also underestimated the negative impact from the currency effects following Brexit. In addition to this, the sale of SYGNIS Kits via the new sales channels is expected to see a significant increase in the fourth quarter of 2016.

Revenue estimates (in €m)



Source: GBC AG

We have taken into account potential synergy effects for subsequent financial years. The access to established sales channels in particular is for us the most important aspect of the Expedeon acquisition. SYGNIS AG currently markets its products as part of sales partnerships as well as via its own sales channels, primarily via the online shop. However, SYGNIS AG has not up to now had any influence on the sales partners' marketing intensity in terms of the marketing via the sales partnerships. Establishing a separate national sales team would really have been required against this background without the Expedeon takeover, although the initial investment involved with this would have been high. SYGNIS AG has already in the past identified the sale of technologically developed products as the most important criterion for rapid revenue growth. The Expedeon Group has these direct sales channels in the UK, Germany, France, Asia and in the US, as the most significant and largest market for Life Science applications. With this the Expedeon Group generates more than half of its revenues from its own direct sales. SYGNIS AG is able to benefit from the distribution channels here (including OEM agreements) and the sales team of the Expedeon Group in order to considerably increase the presence of its own products in the most important markets. Following the Expedeon acquisition, SYGNIS AG is currently present in more than 45 countries, with a network of more than 43 commercial partners:

Footprint der SYNGIS AG

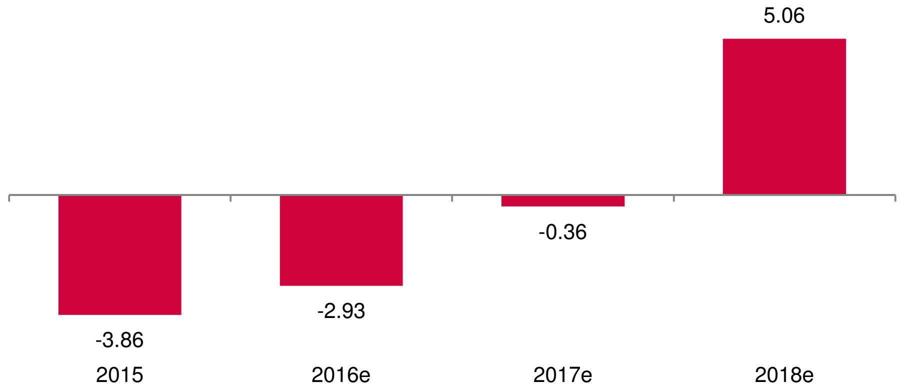
Source: SYGNIS AG; GBC AG

The strong growth in turnover anticipated by us in future years is based on exploiting the effects of scale on the one hand, but is also organic in origin. Here we are assuming higher demand overall for our own TruePrime™ and SunScript™ technologies already launched on the market, and we also expect high revenues to be generated through new products. The launch completed for the TruePrime™ product for the Liquid Biopsy area is worth mentioning here. This procedure allows a low-invasive diagnosis to be completed at an earlier stage with a significant reduction in the time and costs required. We believe that the Liquid Biopsy Kit is an important step towards entering the high-volume hospital market. We expect that NGS applications will become more and more attractive for commercial applications with increases in cost efficiencies.

Earnings forecasts

According to statements from the company, a fall in the negative operating result is expected initially as part of the revenue increases expected, with the break-even point expected for the coming 2017 financial year at quarterly level. Break-even at the level of the overall year is projected for the 2018 financial year. We had also anticipated this so far, and completed an adjustment to the forecast both at EBIT level as well as for the profit/loss after taxes as a result of the reduction in the revenue forecasts.

EBIT forecasts (in €m)



Source: GBC AG

Aside from the typical effects of scale, our results forecasts also take into account potential synergy effects against the background of the consolidation of administrative structures and production capacities. The intention for instance is for synergy effects to be leveraged from the planned consolidation of production operations and manufacturing processes. Production operations and manufacturing processes are due to be relocated to the UK in the fourth quarter of 2016, which should result in further optimization in terms of the cost structure. The company's future costs should therefore be characterized by development in administrative expenditures and in R&D costs that is disproportionately low compared with revenues. By contrast, the sales and production costs should become increasingly significant. The planned merger of the production sites of the two US-based companies, Expedeon Inc. and C.B.S. Expedeon in San Diego, is also to be viewed in this light.

High profit margins are possible for the future as a result of effects of scale and synergies. Long term we expect an EBITDA margin amounting to 45.0%.

Valuation

Model assumptions

We rated SYGNIS AG using a three-stage DCF model. Starting with the specific consolidated estimates for the years 2016-2018 in phase 1, the outlook for 2019 to 2023 was developed in phase 2 using value drivers. We expect increases in revenue of 15.0 %. We have set 45.0% (previously: 50.0%) as the target EBITDA margin. We have included the tax rate in phase 2 at 15.0%, based on the remaining losses carried forward. Additionally, after the end of the forecast horizon, a residual value is determined in the third phase by means of a perpetual annuity. As the final value, we assume a growth rate of 3.0 %.

Determining the capital costs

The weighted average cost of capital (WACC) of SYGNIS AG is calculated from the equity cost and the cost of debt. The market premium, the company-specific beta, as well as the risk-free interest rate have to be determined in order to determine the equity cost.

The risk-free interest rate is derived from the current structured interest rate curves for risk-free bonds in accordance with the recommendations from the “Fachausschuss für Unternehmensbewertung und Betriebswirtschaft” (FAUB, Special Committee for Business Valuation and Business Management) of the “Institut der Wirtschaftsprüfer in Deutschland e.V.” (Institute of Public Auditors in Germany). This is based on the zero bond interest rate calculated using the Svensson Method published by the German Bundesbank. In order to compensate for short-term market fluctuations, the average returns for the previous three months are used and the result is rounded up to the nearest 0.25 basis points. **The value currently used for the risk-free interest rate is 1.00 % (previously: 1.00 %).**

We set the historical market premium of 5.50 % as a reasonable expectation of the market premium. This is supported by historical analyses of equity market returns. The market premium reflects in a percentage the improved return expected from equity markets relative to low-risk government bonds.

According to GBC estimates, a beta of 1.41 is currently determined (previously: 1.41). Using the premises provided, the equity cost is calculated at 8.78 % (previously: 8.78 %) (beta multiplied by risk premium plus risk-free interest rate). As we assume a sustainable weighting of the equity cost of 90 % (previously: 90 %), the result is a weighted average cost of capital (WACC) of 8.43 % (previously: 8.43 %).

Valuation results

The fair value per share resulting from this as at the end of the 2017 financial year equates to a target price of €3.70 (previously: €3.95). The reduction in the revenue and results forecasts for the 2016 and 2017 financial years in particular have the effect of reducing the target price.

SYGNIS AG - Discounted Cashflow (DCF) model scenario

Value driver of the DCF - model after the estimate phase:

consistency - phase	
Revenue growth	15.0%
EBITDA-Margin	45.0%
Depreciation to fixed assets	6.7%
Working Capital to revenue	1.8%

final - phase	
Eternal growth rate	3.0%
Eternal EBITA - margin	43.4%
Effective tax rate in final phase	27.0%

three phases DCF - model:

phase	estimate			consistency					final
in €m	FY 16e	FY 17e	FY 18e	FY 19e	FY 20e	FY 21e	FY 22e	FY 23e	value
Revenue	1.94	7.64	15.25	17.53	20.16	23.19	26.66	30.66	
Revenue change	248.8%	294.5%	99.7%	15.0%	15.0%	15.0%	15.0%	15.0%	3.0%
Revenue to fixed assets	0.33	1.32	2.03	2.03	2.25	2.25	2.25	2.25	
EBITDA	-2.45	0.18	6.23	7.89	9.07	10.43	12.00	13.80	
EBITDA-Margin	-126.7%	2.3%	40.9%	45.0%	45.0%	45.0%	45.0%	45.0%	
EBITA	-2.93	-0.36	5.06	7.39	8.50	9.84	11.31	13.01	
EBITA-Margin	-151.5%	-4.7%	33.2%	42.1%	42.1%	42.4%	42.4%	42.4%	43.4%
Taxes on EBITA	0.00	-0.02	-0.51	-0.74	-0.85	-1.48	-1.70	-1.95	
Taxes to EBITA	0.0%	-6.5%	10.0%	10.0%	10.0%	15.0%	15.0%	15.0%	27.0%
EBI (NOPLAT)	-2.93	-0.38	4.55	6.65	7.65	8.36	9.61	11.06	
Return on capital	-181.9%	-7.9%	86.0%	88.6%	85.5%	89.7%	89.7%	89.7%	70.6%
Working Capital (WC)	-1.00	-0.50	0.00	0.32	0.36	0.42	0.48	0.55	
WC to revenue	-51.7%	-6.5%	0.0%	1.8%	1.8%	1.8%	1.8%	1.8%	
Investment in WC	0.38	-0.50	-0.50	-0.32	-0.05	-0.05	-0.06	-0.07	
Operating fixed assets (OAV)	5.86	5.79	7.50	8.63	8.96	10.30	11.85	13.63	
Depreciation on OAV	-0.48	-0.54	-1.17	-0.50	-0.58	-0.60	-0.69	-0.79	
Depreciation to OAV	8.2%	9.3%	15.6%	6.7%	6.7%	6.7%	6.7%	6.7%	
Investment in OAV	-4.10	-0.47	-2.89	-1.63	-0.91	-1.94	-2.23	-2.57	
Capital employed	4.86	5.29	7.50	8.94	9.32	10.72	12.33	14.18	
EBITDA	-2.45	0.18	6.23	7.89	9.07	10.43	12.00	13.80	
Taxes on EBITA	0.00	-0.02	-0.51	-0.74	-0.85	-1.48	-1.70	-1.95	
Total investment	-19.21	-1.50	-3.39	-1.94	-0.96	-2.00	-2.30	-2.64	
Investment in OAV	-4.10	-0.47	-2.89	-1.63	-0.91	-1.94	-2.23	-2.57	
Investment in WC	0.38	-0.50	-0.50	-0.32	-0.05	-0.05	-0.06	-0.07	
Investment in Goodwill	-15.48	-0.53	0.00	0.00	0.00	0.00	0.00	0.00	
Free cashflows	-21.66	-1.35	2.34	5.21	7.27	6.96	8.01	9.21	176.58

Value operating business (due date)	125.12	137.02
Net present value explicit free Cashflows	24.89	28.34
Net present value of terminal value	100.23	108.68
Net debt	-3.70	-2.25
Value of equity	128.83	139.27
Minority interests	0.00	0.00
Value of share capital	128.83	139.27
Outstanding shares in m	37.34	37.62
Fair value per share in €	3.45	**3.70**

Cost of capital:

Risk free rate	1.0%
Market risk premium	5.5%
Beta	1.41
Cost of equity	8.8%
Target weight	90.0%
Cost of debt	7.0%
Target weight	10.0%
Taxshield	25.0%
WACC	**8.4%**

Return on capital	WACC				
	7.4%	**7.9%**	**8.4%**	**8.9%**	**9.4%**
68.6%	4.45	3.99	3.62	3.31	3.05
69.6%	4.50	4.04	3.66	3.35	3.09
70.6%	4.56	4.08	**3.70**	3.39	3.12
71.6%	4.61	4.13	3.75	3.42	3.16
72.6%	4.67	4.18	3.79	3.46	3.19

ANNEX

Section 1 Disclaimer and exclusion of liability

This document is intended solely for information purposes. All data and information in this study come from sources that GBC regards as reliable. In addition, the authors have taken every care to ensure that the facts and opinions presented here are appropriate and accurate. Nevertheless, no guarantee or liability can be accepted for their correctness – whether explicitly or implicitly. In addition, all information may be incomplete or summarised. Neither GBC nor the individual authors accept liability for any damage which may arise as the result of using this document or its contents, or in any other way in this connection.

We would also point out that this document does not constitute an invitation to subscribe to nor to purchase any securities and must not be interpreted in this way. Nor may it nor any part of it be used as the basis for a binding contract of any kind whatsoever. or be cited as a reliable source in this context. Any decision relating to the probable offer for sale of securities for the company or companies discussed in this publication should be taken solely on the basis of information in the prospectuses or offer documents which are issued in relation to any such offer.

GBC does not provide any guarantee that the indicated returns or stated target prices will be achieved. Changes to the relevant assumptions on which this document is based can have a material impact on the targeted returns. Income from investments is subject to fluctuations. Investment decisions should always be made with the assistance of an investment advisor. This document cannot replace the role of an advisor.

Sale outside the Federal Republic of Germany:
This publication, if sold in the UK. may only be made available to those persons who, in the meaning of the Financial Services Act 1986 are authorised and exempt, or persons as defined in section 9 (3) of the Financial Services Act 1986 (Investment Advertisement) (Exemptions) Decree 1988 (amended version) and must not be transmitted directly or indirectly to other persons or groups of persons.

Neither this document nor any copy of it may be taken into, transferred to or distributed within the United States of America or its territories and possessions. The distribution of this document in Canada, Japan or other jurisdictions may be restricted by law. and persons who come into possession of this publication should find out about any such restrictions and respect them. Any failure to respect these restrictions may represent a breach of the US, Canadian or Japanese securities laws or laws governing another jurisdiction.

By accepting this document you accept all disclaimers of liability and the restrictions cited above.

You can find the details of this disclaimer/exclusion of liability at:
http://www,gbc-ag,de/de/Disclaimer,htm

Legal information and disclosures as required by section 34b para. 1 of Securities Trading Act (WpHG) and Financial Analysis Directive (FinAnV)

This information can also be found on the internet at the following address:
http://www,gbc-ag,de/de/Offenlegung,htm

Section 2 (I) Updates

A detailed update of the present analysis/analyses at any fixed date has not been planned at the current time. GBC AG reserves the right to update the analysis without prior notice.

Section 2 (II) Recommendation/ Classifications/ Rating

Since 1/7/2006 GBC AG has used a 3-level absolute share rating system. Since 1/7/2007 these ratings relate to a time horizon of a minimum of 6 to a maximum of 18 months. Previously the ratings related to a time horizon of up to 12 months. When the analysis is published, the investment recommendations are defined based on the categories described below, including reference to the expected returns. Temporary price fluctuations outside of these ranges do not automatically lead to a change in classification, but can result in a revision of the original recommendation.

The recommendations/ classifications/ ratings are linked to the following expectations:

BUY	The expected return, based on the derived target price, incl. dividend payments within the rel 10%.
HOLD	The expected return, based on the derived target price, incl. dividend payments within the rel 10% and < + 10%.
SELL	The expected return, based on the calculated target price, incl. dividend payments within the <= - 10%.

GBC AG's target prices are determined using the fair value per share, derived using generally recognised and widely used methods of fundamental analysis, such as the DCF process, peer-group benchmarking and/or the sum-of-the-parts process. This is done by including fundamental factors such as e.g. share splits, capital reductions, capital increases, M&A activities, share buybacks, etc.

Section 2 (III) Past recommendations

Past recommendations by GBC on the current analysis/analyses can be found on the internet at the following address:
http://www.gbc-ag.de/de/Offenlegung.htm

Section 2 (IV) Information basis

For the creation of the present analysis/analyses publicly available information was used about the issuer(s) (where available, the last three published annual and quarterly reports, ad hoc announcements, press releases, share prospectuses, company presentations, etc.) which GBC believes to be reliable. In addition, discussions were held with the management of the company/companies involved, for the creation of this analysis/these analyses, in order to review in more detail the information relating to business trends.

Section 2 (V) 1, Conflicts of interest as defined in section 34b para, 1 of the Securities Trading Act (WpHG) and Financial Analysis Directive (FinAnV)

GBC AG and the analysts concerned hereby declare that the following potential conflicts of interest exist for the company/companies described. at the time of this publication, and in so doing meet the requirements of section 34b of the Securities Trading Act (WpHG). A detailed explanation of potential conflicts of interest is also listed in the catalogue of potential conflicts of interest under section 2 (V) 2.

In relation to the security or financial instrument discussed in this analysis the following possible conflict of interest exists: (4,5a,5b,6a,7,10,11)

section 2 (V) 2, Catalogue of potential conflicts of interest

(1) GBC AG or a legal person connected to them holds shares or other financial instruments of this company at the time of publication.
(2) This company holds over 3% of the shares in GBC AG or a legal person connected to them.
(3) GBC AG or a legal person connected to them is a market maker or designated sponsor for the financial instruments of this company.
(4) GBC AG or a legal person connected to them has, over the previous 12 months, organised or played a leading role in the public issue of financial instruments for this company.
(5) a) GBC AG or a legal person connected to them has over the last 12 months agreed to create research reports for this company in return for payment. As part of this agreement the issuer was shown the draft of this analysis (excluding the evaluation section) prior to publication.
(5) b) After receiving valid amendments by the analysed company, the draft of this analysis was changed.
(6) a) GBC AG or a legal person connected to them has over the last 12 months agreed with a third party to create research reports about this company in return for payment. As part of this agreement the issuer was shown the draft of this analysis (excluding the evaluation section) prior to publication.
(6) b) After receiving valid amendments by the third party, the draft of this analysis was changed.
(7) The analyst responsible for this report holds shares or other financial instruments of this company at the time of publication.
(8) The analyst responsible for this company is a member of the company's Executive Board or Supervisory Board.
(9) The analyst responsible for this report received or purchased shares in the company analysed by said analyst, prior to the time of publication.
(10) GBC or a related legal party has closed an agreement with the underlying company regarding consulting services during the previous 12 months.
(11) GBC or a related legal party has a significant financial interest in the analysed company, for example to get mandated by the analysed company or to provide any kind of services (such as the organization of fairs, roundtables, road shows, etc.).

Section 2 (V) 3, Compliance

GBC has defined internal regulatory measures in order to prevent potential conflicts of interest arising or, where they do exist, to declare them publicly. Responsibility for the enforcement of these regulations rests with the current Compliance Officer. Susanne Klebl. Email: klebl@gbc-ag.de

Section 2 (VI) Responsibility for report

The company responsible for the creation of this/these analysis/analyses is GBC AG, with registered office in Augsburg, which is registered as a research institute with the responsible supervisory authority (Federal Financial Supervisory Authority or BaFin. Lurgiallee 12, 60439 Frankfurt, Germany).

GBC AG is currently represented by its board members Manuel Hölzle (Chairman) and Jörg Grunwald.

The analysts responsible for this analysis are:
Cosmin Filker, Dipl. Betriebswirt (FH), Financial Analyst
Felix Gode, CFA, Dipl.Wirtschaftsjurist (FH), Vice Head of Research

Other person involved:
Manuel Hölzle, Dipl. Kaufmann, Head of research

Section 3 Copyright

GBC AG
Halderstraße 27
D 86150 Augsburg
Tel,: 0821/24 11 33-0
Fax,: 0821/24 11 33-30
Internet: http://www,gbc-ag,de

E-Mail: compliance@gbc-ag,de