EDISON **Scale research report - Initiation**

Beta Systems

Technology

31 May 2017

Leading European data processing group

H117 revenues increased 28% and EBIT almost tripled, benefiting from the ongoing strong renewals cycle and upsell in its core mainframe customer base. Taking into account the seasonality bias to H1, management raised its guidance for the year. The shares have justifiably performed strongly and on EV/EBITDA multiples, now trade in line with peers.

Strategy – widening its footprint

By investing in additional services for its mainframe and other customers such as the Enterprise Control Center and the Agilizer, which will be launched this year, as well as by widening its footprint beyond the DACH region, either organically or through acquisitions, management expects to continue to grow its high-margin mainframe business despite the mature market backdrop for the mainframe industry. In parallel, it continues to invest in its decentralised solutions and in widening the sales reach of its smaller IAM division. Over the last year, it has increased its sales capacity within the DACH region and worldwide and is looking to build out a partner network to widen its reach.

Strong first half – guidance increased

Upgrades to its Discovery software (within DCI) and Garancy Portal (within IAM), coupled with a strong renewal cycle, have underpinned a recovery in licence sales over the last two years, and the benefits of management's efficiency programme have enabled EBIT margins to reach historic highs in FY16. H117 results continued in this vein with revenues increasing 28%, underpinned by a 74% increase in licence sales, and a near tripling of EBIT to €12.4m. Taking into account the strong seasonality bias to the first half of the year, management raised its guidance for the full year; it now expects revenue growth of between 4% and 10%, EBIT between €8m and €9.5m and EBITDA of €9.8m to €11.3m.

Valuation: Premium to US peers justified

The strong share price performance over the last year is justifiable given the company's recovery in profitability. There are no consensus forecasts available for Beta Systems; however, assuming it delivers mid of its targeted EBITDA this year, this implies an EV/EBITDA rating of c 10x, broadly in line with its closest US peer and wider peer group. Given the solid outlook for the current year, scope for additional cost savings and the underutilised balance sheet, a premium may be justified. However, management has flagged that 2018 will be a smaller year for licence renewals and the shares may now be up with events.

Consensus estimates

Year end	Revenue (€m)	PBT (€m)	Adjusted EPS (€)	DPS (€)	P/E (x)	Yield (%)
09/13	37.7	1.5	0.08	0.0	330.0	N/A
09/14	33.8	(1.9)	(0.51)	0.0	N/A	N/A
09/15	41.6	(0.3)	0.71	0.0	37.7	N/A
09/16	46.4	5.7	0.99	0.0	27.1	N/A

Source: Bloomberg

Price	**€26.8**
Market cap	**€142m**

Share price graph

Share details

Code	BSS
Listing	Deutsche Börse Scale
Shares in issue	5.3m
Last reported net cash at 31 March 2017	€47.6m

Business description

Beta Systems provides data centre intelligence (DCI) solutions which enable efficient and secure bulk processing of data and Identity Access Management solutions (IAM). The company's headquarters are in Berlin and has sales and support offices in 18 markets globally. Approximately 68% of sales are derived in the DACH region.

Bull

- Market leader in DCI in Europe.
- Current up cycle in licence renewals and further cost efficiency potential.
- Strong balance sheet.

Bear

- Mature mainframe market backdrop.
- Subscale IAM business.
- FY18 outlook affected by down cycle in licence renewals.

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Company description: Business process software

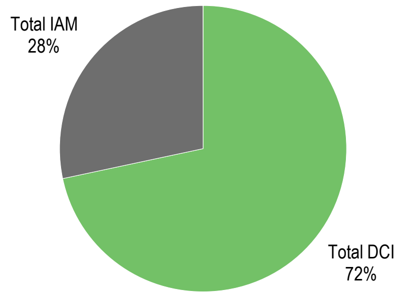
Beta Systems (Beta) provides software solutions for essential business workflows in large data centres. Its software enables the efficient management, automation and secure processing of large amounts of data and documents across complex IT structures. It also provides application and access management systems in the area of IT security. Beta employs approximately 300 people, its headquarters are in Berlin. Its main development centres are in Berlin and Cologne and it has 18 sales and support offices around the globe as well as a network of partners, notably IBM. It is one of Europe's leading independent software vendors in the DACH region, which generated 68% of revenues in FY16. Beta's solutions are relevant for large or mid-sized enterprises, IT service providers or public authorities that operate complex IT structures, and which are required either to honour SLAs or, for compliance reasons, to process, log, archive and audit large quantities of sensitive data. Beta has over 1,300 customers that span a range of industries, although its main focus is on the financial industry.

Operationally (and for reporting purposes) the group is divided into two business units:

DCI – Data Center Intelligence Software (72% FY16 sales). Products enable bulk data processing with a high level of performance and security in data centre operations. Beta offers multi-platform solutions, but is particularly strong in mainframe (z/OS) environments where it is very well represented in the financial sector, in which security and compliance requirements are stringent (50% of its customers are from financial industries; nine of the top 10 banks in Germany are customers). It also has customers from the insurance, trade and utility industries and public administrations that operate complex IT systems. Customers include Allianz, LBS Baden-Württemberg (LBS-BW), SEC SERVIZI and BHF.

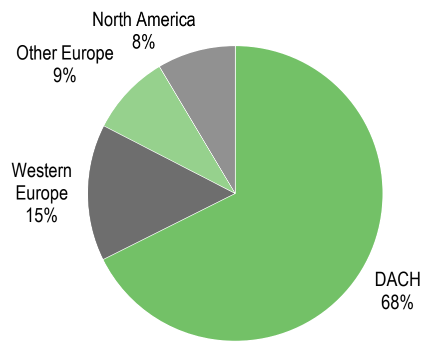
IAM – Identity & Access Management Software (28% FY16 sales). Software to provide data and application access rights to employees, partners or customers to reduce the risk of data breach, loss or damage. Beta's products are recognised for their capabilities in highly customisable environments geared towards the technical user. Customers include NORD/LB, DEVK, Commerzbank, Highmark, Millennium, Banca Intesa and Lufthansa.

Exhibit 1: 2016 revenues by business unit



Source: Beta Systems, Edison Investment Research

Exhibit 2: 2016 revenues by geography



Source: Beta Systems, Edison Investment Research

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Product overview

DCI: Data Center Intelligence – leading independent provider in Europe

Data Center Intelligence products are designed to minimise any disruption in the processing of, access to, and robustness of data. Many business processes require input from various departments and sources before the data can be processed and eventually used or analysed. Beta's solutions enable the automation and analysis of large numbers of business processes daily (10m+ logs, 1m+ jobs) across multi-platform environments.

Solutions are classified into four subcategories, although in practice they tend to be sold in bundles under the Discovery brand (for mainframe) and Beta UX (BUX) for UNIX environments.

- **Output Management and Archiving** systems automate the workflow of document-based information processing – from document design, preparation (data can be pulled directly from linked EPR systems), distribution (print, email, or web portal formats) and audit-compliant archiving. Product examples include Beta 93, LDMS and Beta UX.
- **Workload Automation and Job Management** systems enable the automatic, cross-platform scheduling and monitoring of jobs (an unattended IT system process), and optimise the distribution of these workloads across a network's computing resources to avoid overload and minimise response time. Products include Beta 92 EJM, Enterprise Control Centre, Beta 91, a partner product arvato Streamworks and products from the acquisition of HORIZONT.
- **Security Information Management (or log management)** systems help companies to manage bulk data efficiently. Solutions enable the import of log files across all platforms, analysis and alert systems to identify errors in logs, central processing of logs and audit-compliant archiving. Product examples are Beta 92, Beta 96 and Beta UX.
- **Mainframe Access Management** systems facilitate the administration of IBM's Resource Access Control Facility (RACF). RACF is the identity access management solution for IBM's mainframe operating system. Beta's products facilitate the easier administration of RACF, enabling detailed audit and real-time monitoring of RACF events. Products include the Beta 88 and Beta 89 range.

IAM – Identity & Access Management

IAM solutions work to ensure that the right individuals have the appropriate level of access to the right resources in an organisation.

Beta's software automatically matches HR data, corporate directories and other databases, which allow the automatic rule-based provisioning, governance and monitoring of access rights. It also provides self-service functions including authorisation requests or password reset. Solutions enable the centralised administration and control of all user-related authorisation information (identities, groups, roles) across all IT systems (Windows, UNIX, Linux, z/OS), key business applications (SAP, Lotus Notes, Microsoft AD or RACF) and databases (Oracle, DB2, SQL, Sybase).

IAM solutions are modular, and marketed under the Security Access Manager Enterprise Identity Manager (SAM EIM) for identity governance and provisioning functions, and the Garancy Access Intelligence Manager (AIM) for access analytics.

Unlike the DCI solutions, IAM's customers come principally from a decentralised world, where the complexities of managing access rights across systems can be significant.

Markets: Compliance and security underpins growth

DCI – leading position in the European market with mainframe customers

With the move to client/server computing in the 1980s and now the migration to cloud computing, many in the industry predicted the demise of the mainframe (which is expensive and difficult to manage) for decades. However, the high cost of system migration, as well as the mainframe's stability, security, scalability and processing power, means that it is still relevant in 'mission critical' processing in large organisations, particularly given increasing concerns about security and availability of data. Although considered a niche in the overall global server market, it remains a $5bn industry and a core revenue generator for IBM (which has over 85% market share).

While mainframes still process significant amounts of mission-critical transactions, most companies with a mainframe background have (as in other decentralised systems) developed a hybrid infrastructure, integrating a wide range of proprietary and third-party technology and applications. Consequently, managing and accessing these data has become increasingly complex. This is being exacerbated by skill shortages as the 'old guard' of mainframe engineers approaches retirement age.

Beta's DCI solutions help companies to bridge the gap between the mainframe and decentralised IT infrastructures to remain both competitive and compliant with SLAs and increasingly rigorous regulations relating to the audit, archiving and storage of data (eg Sarbanes-Oxley, PCIDSS, JPIPA).

There are many data centre intelligence software companies. However, there are few that have similar mainframe capabilities to Beta. Its main competitors are US-based CA Technologies and BMC. In Europe, Beta is the leading company in this niche (70%+ market share). Mainframe customers, which require 100% availability of systems, particularly value its 24/7 services offering, in German as well as English.

IAM – more dynamic, competitive market

If the DCI market can be characterised as being fairly stable (in terms of growth and competitive landscape), the IAM market is the reverse. 60% of data theft or loss is thought to be perpetrated by insiders and high-profile cases of data loss such as Snowdon, Sony and Target have raised the profile for the need for effective IAM security frameworks. The IAM market has grown by c 10% pa over the last three years to approximately $8bn, and this rate of growth is forecast to continue (MarketsandMarkets expects a CAGR of 12.9% between 2016 and 2021).

Increased use of cloud-based business applications and BYOD have increased the complexity of the IAM market. At the same time, regulations in many industries are increasingly stringent regarding the controlled access to data. For example, data security is part of the central bank's audits of financial institutions; General Data Protection Regulations (GDPR), which will be introduced in May 2018, will require European companies to demonstrate effective data protection policies; PCI DSS rules in the credit card industry restrict access to cardholder data; HIPAA privacy rules in the US; and MaRisk rules in Germany, among others.

Beta is one of the major IAM vendors in the European financial sector and is recognised by Gartner and KuppingerCole for its capabilities in highly customisable IT environments, as well as for its support and maintenance. However, the market is fragmented and very competitive, which has affected margins and Beta's ability to grow its market share.

Management, background and shareholder structure

Beta's Supervisory Board consists of six members, including two from its longstanding controlling shareholder Deutsche Balaton, from which Wilhelm Zours is chairman. The management board consists of Dr. Andreas Huth and Armin Steiner, who run the group jointly.

Andreas Huth was appointed in February 2015 as CEO/CSO and is responsible for sales, product management and services. He has a doctorate in industrial engineering and over 15 years' management experience, including as CEO at MBB Liftsystems and MD of the German division of OTIS Group. Armin Steiner was appointed to the board in August 2015 as co-CEO and CFO. In addition to his main responsibilities for software development and finance, he is responsible for a number of other corporate functions including legal and HR. Armin Steiner is a graduate in business administration. He started his career as a management consultant at KPMG AG (six years) and before joining Beta Systems he was CFO of IN tIME Express Logistik GmbH (seven years).

Beta Systems was founded in 1983, has been listed on the Entry Standard of the Frankfurt Stock Exchange since 1997 and moved to the Scale segment of the exchange in March 2017. In October 2015 the group raised an additional €6.6m from a rights issue for 6,6m new bearer shares. In December 2016, the group consolidated its share capital in a 5:1 ratio, reducing the number of shares in issue from 26.4m to 5.3m. According to Bloomberg, the investment company Deutsche Balaton and supervisory board member Veit Paas hold 52.6% and 7.5% respectively, leaving a free float of 39.9%. Other significant shareholders include Axxion (12.3%).

Strategy

Under the new management, in 2016 the group was restructured with DCI and IAM carved out into two separate operating divisions sitting beneath the holding company, Beta Systems Software AG, which deals with strategic direction and central functions (finance, HR, etc). The change was made to reflect the differing operating and market characteristics and the divisions are run independently.

Management's strategy for DCI is to defend and expand its position in the mature mainframe market, while investing in its solutions for decentralised IT systems (eg Windows, Linux). In IAM, the group remains subscale and is investing in enlarging its sales capacity in the DACH region.

DCI: Leverage strong position in mainframe and expand decentralised offering

While the mainframe market itself is not seen as a growth market, Beta has a very stable customer base (most clients have been with Beta for more than 10 years) and management believes that by introducing new and updated services to mainframe customers and expanding beyond its core DACH market, its can continue to expand its core mainframe business. In parallel, it is investing to develop its decentralised portfolio of solutions. More specifically:

- Beta's development activities are focused on helping mainframe customers to modernise their legacy systems. During 2017 it plans to launch two new products: Agilizer, middleware which facilitates the transfer of data from the mainframe so that it can be directly accessible eg by online services; and Enterprise Control Center (ECC), a web-based interface that facilitates easier monitoring and management of data centre processes and operations to ensure optimal running of server suites. Innovation in the mainframe market tends to lag the wider industry. These will be the first new services to be launched in the market in more than 10 years and are receiving considerable interest from customers.
- Management is also looking at ways to expand sales outside the DACH region. Currently, the majority of sales are direct (although IBM and others also promote their solutions). During 2016 it established a small team dedicated to developing a partner network and will also consider

acquisitions to widen its reach. In December 2014, Beta acquired HORIZONT, a mainframe software vendor with a strong international position in its product range. As well as bringing first customers in Asia, the acquisition could enable Beta to cross-sell its products in Asia; where it is currently running its first test installations with one of HORIZONT's clients.

- Outside the mainframe environment, Beta is subscale. Most of its decentralised business originates from its legacy mainframe customers, which have migrated to decentralised IT systems. Much of Beta's R&D effort is directed to expanding its offering here. Beta has a strong brand and, in the longer term, hopes to replicate its mainframe success in this larger, but more competitive market.

IAM – develop partnerships to drive scale

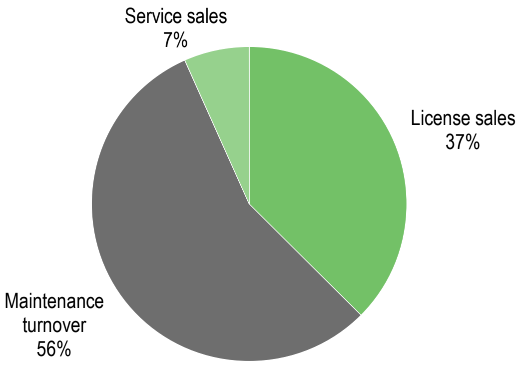
The IAM division remains subscale, margins are relatively low and Beta's challenge is to expand profitably beyond its core financial customers. In March 2017 it upgraded its workflow engine and also enlarged the functionality of its Garancy Portal. It has also expanded its sales team for the DACH region and to strengthen its international presence it is considering additional partners, for instance it recently announced a partnership with KPMG in Germany.

Business model

Beta's software is sold on a licence basis (three- to five-year terms) with maintenance and support services attached. There may also be upfront professional service fees related to the installation of software and training. In FY16 licences accounted for 31% of revenues, maintenance 51% and services 17%; however, this varies considerably between DCI and IAM (Exhibits 3 and 4) where licences are sold on a perpetual basis and where secondary revenues are higher due to the interconnected nature of the product (which requires more software updates).

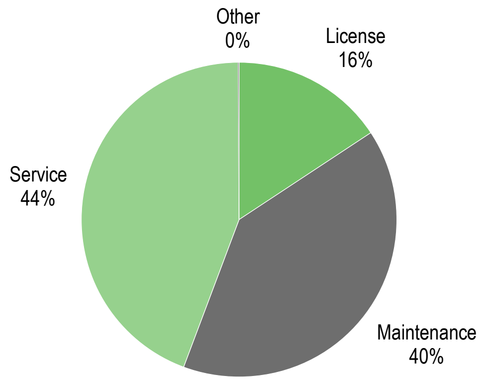
Like most software businesses, the gross margins are high (94% in FY16) with cost of sales mainly third-party licence costs. Operating expenses relate largely to the group's c 300 employees, approximately 40% of which are engineers (the group expenses most of its R&D costs), 40% are involved in sales and support services and the remainder in administration. Consequently, other than sales-related bonuses, operating expenses are largely fixed in nature.

Exhibit 3: DCI revenue classification



Source: Beta Systems

Exhibit 4: IAM revenue classification



Source: Beta Systems

Financials

Exhibit 5 presents Beta's summary five-year financial history.

Exhibit 5: Financial summary

€'000s	2012	2013	2014	2015	2016
Year end 30 September	IFRS	IFRS	IFRS	IFRS	IFRS
Income statement					
Revenue	41.57	37.68	33.81	41.55	46.36
Revenue growth	65%	-9%	-10%	23%	12%
EBITDA	4.769	2.295	-1.299	3.527	6.945
EBITDA margin	11.5%	6.1%	-3.8%	8.5%	15.0%
EBIT	2.71	1.21	(2.24)	(0.50)	5.32
EBIT margin	6.5%	3.2%	-6.6%	-1.2%	11.5%
Profit Before Tax (as reported)	3.08	1.51	(1.90)	(0.31)	5.70
Net income (as reported)	2.14	0.43	(2.22)	2.82	5.19
EPS (as reported) (€)	0.15	0.02	(0.11)	0.14	0.20
Dividend per share (€)	0.00	0.00	0.00	0.00	0.00
Balance sheet					
Total non-current assets	3.52	1.87	2.68	14.36	13.99
Total current assets	48.05	50.27	46.44	48.62	54.13
Total assets	51.56	52.13	49.12	62.98	68.12
Total current liabilities	(15.28)	(15.48)	(14.97)	(25.87)	(18.65)
Total non-current liabilities	(3.01)	(2.86)	(2.76)	(2.86)	(3.87)
Total liabilities	(18.29)	(18.34)	(17.73)	(28.73)	(22.52)
Total Equity	33.28	33.79	31.39	34.25	45.60
Cash flow statement					
Net cash from operating activities	6.52	4.20	3.31	4.45	5.00
Net cash from investing activities	3.54	0.86	(0.01)	(6.10)	(17.87)
Net Cash from financing activities	7.27	(0.65)	(0.36)	7.19	(0.67)
Net Cash Flow	20.55	4.41	(7.68)	5.53	(13.55)
Cash & cash equivalent end of year	25.11	29.52	21.84	27.37	13.83

Source: Company accounts

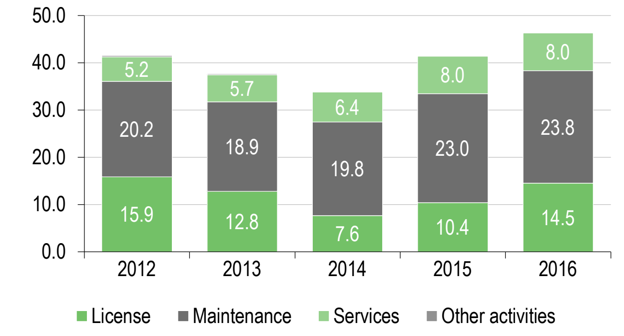
Income statement – strong recovery in EBIT margins

Revenues decreased by 9% and 10% in FY13 and FY14 respectively, but have recovered strongly in FY15 (+23%) and FY16 (+12%) and this strong growth has continued in H117 (+28%). The volatility in growth is largely due to the sale of software licences (Exhibit 6 and 7), where sales cycles tend to be driven by the renewal timetables of existing customers, as well as price increases that come with new versions of the software. After two years in decline, licensing revenues increased significantly in both divisions following the launches of the new-generation Discovery product (DCI) and Garancy (IAM) during FY15. Revenues also benefited from the acquisition of HORIZONT (accounting for 10pp and 5pp of growth in FY15 and FY16 respectively).

Despite the high gross margin (94% in FY16), EBIT margins were negative in 2014 and 2015. During the course of FY15, management embarked on an efficiency programme, targeting infrastructure costs, admin expenses and third-party consulting fees in particular.

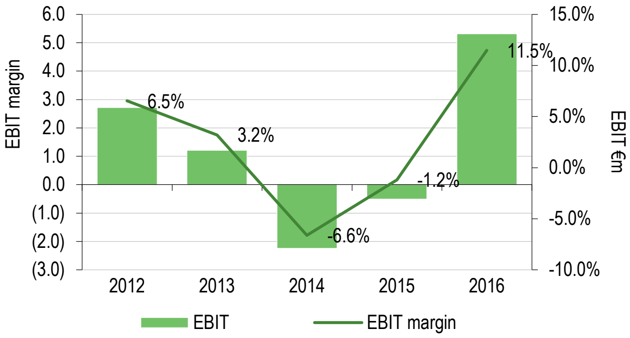
Operating expenses decreased by €1.1m in FY16 and the EBIT margin, which also benefited from mix effects due to a larger share of high-margin software sales, increased to 11.5%, the highest in the group's recent five-year history. Efficiency savings from this programme were still being accrued in H117 with a €0.7m y-o-y decrease in operating expenses. Included within EBIT are non-cash costs relating to the amortisation of acquired intangibles and earnout payments related to the HORIZONT acquisition (approximately €1.6m and €1.8m in FY15 and FY16, respectively). Adjusting for these non-cash items, as well as other one-off items relating to the restructuring (€0.3m in FY16 and €2.6m in FY15), we estimate that the underlying FY16 EBITA margin was closer to 16%.

Exhibit 6: Revenues by classification (€m)



Source: Beta Systems

Exhibit 7: EBIT and EBIT margin profile



Source: Beta Systems

Balance sheet and cash flow – very strong balance sheet

The group has a strong balance sheet, reporting net cash of €13.8m at year-end September 2016, increasing to €22.5m at March 2017.

In 2015 Beta entered into a cash-pooling arrangement with its majority shareholder, Deutsche Balaton. In 2016 it increased its deposits (classified as accounts receivable, not cash) from €7.5m to €25m. The funds are securitised, are accessible with up to six months' notice and yield a more favourable interest rate than the deposit rate in Germany. Taking this into account, it has liquid funds of €47.6m at March 2017. Beta is debt free, although it does run a defined benefit pension scheme liability of €3.1m (annual repayments are fairly modest).

As Beta expenses its R&D costs, the conversion of EBITDA to operating free cash flow (defined as operating cash flow net of capex) is relatively high. Cash conversion will be affected in years of large licence renewals due to IAS provisions, which require companies to recognise a greater share of licence revenues up front than payment terms require). Consequently, EBITDA to operating cash conversion in FY15 was 92%, decreasing to 64% in FY16. Other capex requirements are relatively low, consisting of IT investments made to support Beta's strategy to save on third-party licence costs.

H117 trading and outlook

H117 revenues of €32.5m increased by 28% y-o-y, EBIT of €12.4m almost tripled (+168%) and EBIT margin increased to 38.6% (from 18.3% in H116). Adjusting for one-off items (€0.2m) and the amortisation of acquired intangibles and earnouts related to HORIZONT (€1.0m), underlying EBITA was €13.6m.

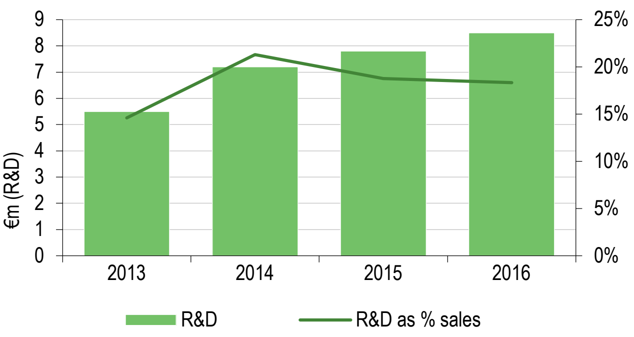
The first half (September to March) is seasonally a much stronger half for Beta Systems. However, H117 licence sales (+74%) were particularly strong owing to an above average volume of contract renewals in DCI and the upsell of some additional products. Maintenance and service revenues were broadly flat y-o-y. The higher share of licence sales underpinned the EBIT margin increase, as did the efficiency programme; a reduced reliance on freelancers and third-party consulting services, as well as some foreign exchange gains enabled operating expenses to decrease by 3.5% (despite the increase in the salesforce).

Cost efficiencies remain a focus of management. However, we understand that the full benefit of this cost saving programme is now largely reflected in the run rate of costs and future savings are unlikely to be as significant.

There is a strong seasonality bias to the first half of the year, and management expects EBIT to be negative in the second half. Despite this, the strength of the H117 results puts Beta Systems ahead of its previous guidance for "a slight increase in sales and EBIT in FY17". Management raised its guidance at the time of the interim results on 23 May to revenues of between €48m and €51m (+4% to +10% y-o-y growth), with EBIT between €8m and €9.5m and EBITDA between €9.8m and €11.3m.

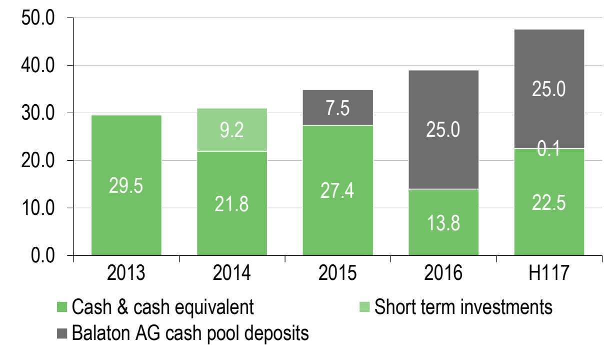
Looking ahead to 2018, there are fewer contracts up for renewal and, while Beta is seeing strong interest in its newer products, licence revenues are likely to contract, which may again affect the margins. Longer term, it targets an operating margin of 15-20%, although we note that on an underlying basis, it is already within this range in FY16.

Exhibit 8: R&D expense evolution



Source: Beta Systems/ Edison

Exhibit 9: Year-end cash, equivalents and cash-pool deposits



Source: Beta Systems/ Edison

Valuation and catalysts

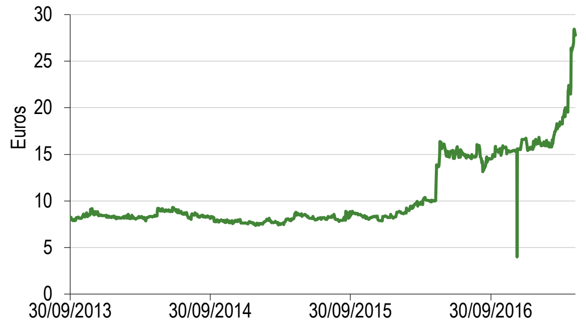
The shares, which had fluctuated between €7 and €10 for several years (taking into account the share capital consolidation in March 2016), stepped up in April 2016 as the company reported a strong FY15 and H116. The shares have rallied strongly since the start of this year as it became clear that this performance continued into 2016 and that management anticipated further growth in FY17 (Exhibits 10 and 11).

There are no consensus forecasts available for Beta Systems on which to benchmark valuation. However, the shares' historic FY16 P/E (defined as current price/FY16 EPS) is 27x, significantly ahead of its closest peer, CA Technologies (18.5x in FY16 on the same basis or 17.9x for FY17e) and the sector average at 18.8x FY16 and 16x FY17e (we refer to a bundle of global infrastructure software peers including IBM, Cisco, Citrix, HPE, Juniper and VMware).

An above average P/E rating is justifiable given the strong FY17 that Beta looks on track to deliver compared to CA (where consensus forecasts expect revenues to decrease by 5% this year), as well as the strong margin recovery this year and the underutilised balance sheet. If management delivers the mid of its targeted €9.8m and €11.3m range, this implies an FY17 EV/EBITDA multiple of c 10x (14.5x FY16); on this basis the shares are valued broadly in line with its peers.

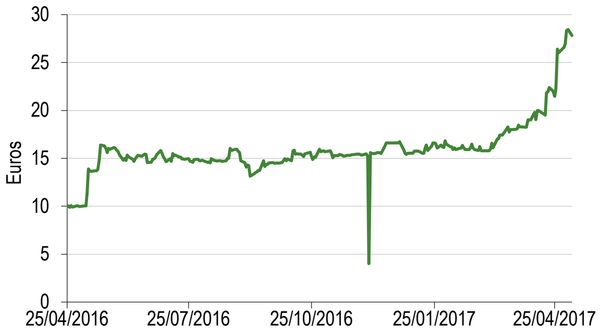
However, software sales can be lumpy in a company of this size and management has guided cautiously for FY18. We believe that for the shares to justify further ratings expansion, investors should look for evidence that Beta can move beyond its core mainframe customer base in the DACH region (for instance by announcing new partnerships, significant customer wins or acquisitions) and that its existing customer base is also subscribing to a wider portfolio of solutions, in particular its newer products.

Exhibit 10: Beta Systems five-year share price



Source: Bloomberg. Note: Spike in December 2016 was a technical issue following the consolidation of the share capital.

Exhibit 11: Beta Systems 18-month share price



Source: Bloomberg. Note: Spike in December 2016 was a technical issue following the consolidation of the share capital.

Sensitivities

Beta System's financial and share price performance may be sensitive to the following factors:

- Macro issues: the financial services sector has been under pressure since the financial crisis in 2007/08 and the subsequent debt crisis. This has intensified cost pressures in the industry and led to consolidation. Most of Beta's products are licensed on a fixed fee basis, and consolidation could affect its addressable market. At the same time, it has resulted in increased governance and compliance requirements, which is fuelling additional growth opportunities.
- Regulatory issues: changing regulations in markets can be both a boon for demand for Beta's solutions, but also, should its products no longer be compliant, could render its solutions uncompetitive.
- Competition with larger companies: Beta competes with global technology companies that are significantly larger. Any significant change in the other companies' strategies could affect Beta's market position. Although, particularly in DCI, Beta's very strong market position in its core European markets and established support services would make it very difficult its US-based competitors to grow market share.
- Industry trends: Beta Systems has a leading market position in solutions for mainframe computing environments. While it also offers a fairly complete product suite for decentralised systems, its market share in this area is significantly smaller and competition greater. Should Beta fail to develop its market position in these 'newer' technologies, its longer-term growth may be affected.
- Product concentration: in FY16 approximately 36% of DCI sales are derived from two products (Beta 93 and Beta 92) and 23% of sales are from the Garancy IAM. Products are dependent on the innovations and business policies of IBM and other major hardware manufacturers. Should these partners fail to innovate or if they significantly change their pricing policies, this could affect demand for Beta's solutions.
- There is a well reported skills shortage in the mainframe industry. Beta provides extensive training (a three-year programme) to new engineers to ensure that it can support its solutions. However, this may add to cost pressures.
- Currency risk: the company conducts business in a variety of currencies in addition to the reporting currency including US$, sterling, Canadian dollar, Swiss franc, Swedish, Danish and Norwegian crown, Czech koruna and yen.

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