

ifa systems

The opportunity is clear

As the leader in the German market, ifa systems has an established position in the expanding international market for ophthalmology software and clinical decision support systems. It is well placed to gain from the expected growth in this area in the US, Latin America and China. We forecast that after several years of heavy spend on market and product development, if a should see strong growth in revenues and margins. In spite of this, its shares trade at material discounts to both European and US peer groups.

Year end	Revenue (€m)	PBT* (€m)	EPS* (c)	DPS (c)	P/E (x)	Yield (%)
12/12	7.4	0.9	23.7	3.0	27.6	0.5
12/13	7.8	1.5	41.7	8.0	15.7	1.2
12/14e	8.4	1.7	47.8	10.0	13.7	1.5
12/15e	9.1	2.1	59.1	12.0	11.1	1.8

Note: *PBT and EPS are normalised, excluding acquired intangible amortisation, exceptional items and share-based payments.

Leveraging a leadership position in Germany

As an established player in healthcare IT, ifa systems is an opportunity for investors to gain exposure to an expanding area of IT spend. ifa has a leading position in the German market, where it has a solid base of high-margin recurring revenues, and it is using its decades of experience and its product's technical advantages to build revenues in the Americas and China.

The Americas and China set to drive growth

The growth in US revenues is expected to come from the move to electronic medical records and clinical decision support systems, driven by economics and legislation and management anticipates that Latin America will follow in its wake. In China, where blindness is a major social and economic problem, the company is working with a local partner and a leading teaching hospital to develop a duallanguage clinical decision support system that it believes could be adopted in clinics across China.

Valuation: Growth not factored into the price

Our valuation work shows ifa's shares to be trading at revenue and earnings multiple discounts to both its US and European peer groups - discounts that we regard as unjustified. Our basic DCF model suggests a share price of €9.9, based on assumptions of high-mid single figure percent pa revenue growth over the rest of the decade with EBIT margins building up from 21% (2014e) to a peak of 29% (2024e) and a cost of capital of 10%. Our reverse DCF work finds the current share price can be seen as reflecting low single figures revenue growth in the medium term, with ongoing operating margins at 20% - levels well below those suggested by ifa's opportunities in the US, Latin America and China.

Initiation of coverage

Software & comp services

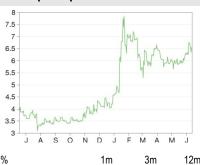
16	June	2014
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Price	€6.55
Market cap	€16m
Net cash (€m) at December 2013	0.2

Shares in issue 2.5m Free float 48.4% Code IS8

Primary exchange Frankfurt Secondary exchange N/A

Share price performance



%	1m	3m	12m
Abs	4.9	10.0	59.1
Rel (local)	3.2	0.1	30.0
52-week high/low		€7.83	€3.10

Business description

ifa systems provides software and clinical decision support systems for ophthalmology in clinics and hospital departments. Its principal products deal with the collection, management and use of electronic medical records (EMR) but it also has key technologies relating to device integration. clinical decision support and telemedicine.

Next event

3 July 2014 General Meeting

Analysts

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Investment summary

Company description: Visibility on growth drivers

As an established player in healthcare IT, ifa systems is an opportunity for investors to gain exposure to an expanding area of IT spend. Furthermore, this growing IT spend is happening in multiple geographies, most notably in the US, Latin America and China, and is being driven by economic, political and social imperatives.

ifa systems provides software for ophthalmologists. The core of ifa systems' product is electronic medical records, but its software covers all areas of an ophthalmological practice including clinical decision support.

Valuation: Discount despite revenue and profit growth prospects

ifa systems trades at what we regard as an undeserved discount to the European- and US-listed healthcare IT comparators we have considered. Our examination using a DCF approach suggests the shares are undervalued at the current share price. We have also applied a reverse DCF methodology to find a scenario in our model that matches the share price. The scenario implied by the current share price is low single figures revenues growth in the medium term (from 2017e to 2024e) and operating margins at 20% (below current levels) – an outcome we regard as too pessimistic.

Financials: US and China expansion drivers

Our forecasts include impressive revenue growth for ifa systems and significant improvements in profitability. This is driven by the expected increase in revenues from the US, Latin America and Chinese markets, underpinned by the very high level of recurring revenues from the German market. Margins should increase too, as operational gearing has an impact and the heavy product and market development expenditure requirement seen in recent years declines.

With growing revenues and declining development expenditure requirements, our forecasts show growing cash generation over the coming years, which we anticipate as providing support for a healthy dividend. Management suggests that approximately 25% of profits will be returned to shareholders and our dividend forecasts provide a prospective yield of 1.5% (FY14e).

Sensitivities: Upside requires revenue growth

The primary sensitivities for ifa systems are the ability to grow sales in the US, Latin America and China while controlling the cost of delivery.

Our expectation of revenue growth in the US is based on the impact of the move to electronic medical records and the enforced adoption of IDC 10 data standards. However, we have already seen delays in the level and rate of adoption of EMR and deferrals of deadlines. We believe the move now has sufficient momentum to be unstoppable regardless of official wavering.

Although it is the early leader in China, the acceptance of ifa as the de facto standard is not guaranteed and, as ever, politics and bureaucracy could impede progress.

Although it is difficult to say with certainty how well management will control costs in new markets and business areas, this is obviously a risk as the company increases its international sales. We note, however, that in recent years with marketing and business development spend, management has demonstrated an ability to actively reduce costs.



Software and systems for ophthalmologists

ifa systems is an opportunity for investors to gain exposure to the expanding healthcare IT spending through an established player. Furthermore, this growing IT spend is happening in multiple geographies, most notably in the US and China, driven by economic, political and social imperatives.

Ophthalmology software and decision support - clear needs

ifa systems provides software for ophthalmologists including clinical decision support systems. The core of ifa systems' product is electronic medical records (EMR) but its software covers all areas of an ophthalmological practice. In its local German and Austrian markets this includes billing, but elsewhere it links in with the established billing products.

ifa systems has a long heritage in the provision of ophthalmology software, having started doing so in a different corporate form in the mid-80s. This gives it an unmatched understanding of the business of ophthalmology and of its specific technical requirements. One of the key features of ophthalmology that sets it apart from most ambulatory care settings is the quantity and sophistication of the associated diagnostic devices in the clinic setting. All these devices generate data in prodigious quantities and, to be effective, ophthalmology software has to link into these devices and provide an effective way for users to use and manage the data. Management regards the ability of ifa's product to link readily with ophthalmological instruments as a competitive advantage, but it sees the company's most exciting advantage in its clinical decision support systems.

ifa has a number of key products within its core offering, the first three of which are typically sold together:

- The first and most important is electronic medical records (EMR). This constitutes the bulk of ifa's revenues. It includes the Clinical Code Management Module (CCMM) that allows communication of clinical information between different systems and different languages.
- Medical image data systems are used to collate, store and manage the digital images created by modern diagnostic and monitoring equipment.
- Interface components or middleware link instruments and systems.
- Clinical decision support systems (CDSS) take the use of medical records beyond that of traditional software to the point where the system helps the clinician to diagnose problems and plan treatment. These systems are sold alongside an increasing proportion of EMR implementations.

In addition to these, ifa also provides solutions in the areas of:

- Disease registries and quality assurance systems that allow structured recording of data on findings, diagnoses, treatments and outcomes.
- Quality management systems for diagnosis and treatment, which help ensure the correct processes are followed.
- Computer-assisted research systems, which help with the recording and evaluation of data during and after clinical research.
- Telemedicine systems to allow remote monitoring, data recording and even remote diagnosis and treatment planning.

What is an ophthalmologist, what do they do and not do?

The provision of eye health services is a complex business and this is augmented by the fact that titles and roles vary significantly from country to country. It takes at least 11 years to qualify as an



ophthalmologist, including pre-qualification as a physician prior to specialising in ophthalmology. The majority of ophthalmologists undertake surgical operations, taking place in ophthalmology clinics or specialist departments of larger hospitals.

Although there is considerable variation in the way ophthalmologists work from one country to another, one fact that remains true across all the markets is that ophthalmologists, and ophthalmic surgeons in particular, sit atop the pile. There is a universal focus on maximising the use of ophthalmologist time, but non-treatment tasks undertaken by ophthalmologists vary considerably depending on the presence and cost of other eye healthcare professionals and support staff.

In most countries optometrists are a significant part of eye health structure. Optometrists in North America are medically qualified and can prescribe drugs for treatment, but elsewhere the training and role is not as significant, and in some countries, eg Germany and France, optometrists barely feature as part of the eye care landscape at all. In the UK, optometrists were formerly known as ophthalmic opticians and their role is primarily one of measurement, elementary diagnosis and prescriptions for glasses and contact lenses. In most countries the role of optician is to provide glasses or contact lenses.

Further to these factors, there can be considerable variation in the number and nature of other support staff (scribes, technicians etc) depending on economics and personal preferences. ifa's years and breadth of experience mean it is able to provide solutions that work with most circumstances, whether it be the Swiss ophthalmologist personally seeing 20 patients each day or their German colleague handling, with the help of a handful of technicians, four or more times that number.

Although the costs of an ifa implementation vary widely from client to client depending on the range of products taken, how far the customer has already moved towards a paperless system, the number of ophthalmologists etc, a broad-brush figure of \$25,000-30,000 initial cost per ophthalmologist is a baseline guide to the pricing outside Europe. This should, however, be considered alongside the hundreds of thousands of dollars' worth of instrumentation and technical equipment required even for a clinic with just one ophthalmologist.

Geographic sales

ifa addressed the strategic imperative of providing its software in English and other languages, including Spanish, Italian and Portuguese, and selling its products internationally in the 1990s, but management adopted a conservative approach to international expansion. Although the company has now built a substantial international revenue stream, it has typically focused its efforts on larger projects (such as larger hospital clinics or research programmes) where there has been an attractive long-term income potential or where participation brought know-how, skills or credibility. In terms of current revenues, the German and US markets are the most important to ifa but the growth drivers in the short to medium term are seen as expansion in the US, Latin America and China. Sales within German-speaking markets and the US account for approximately two-fifths of revenues and a third of revenues, respectively.



Exhibit 1: Ophthalmologists by	y country (2012)	
Country	Ophthalmologists	Per million population
Australia	895	40
Austria	800	95
Brazil	14,679	75
Mexico	5,459	48
Argentina	6,003	149
China	28,338	21
France	7,000	111
Germany	6,638	81
India	11,000	9
Italy	4,074	67
Japan	13,911	110
Russia	14,600	102
UK	3,200	52
US	25,152	81
Source: International Council of Oph	thalmology	

Germany

Management believes ifa is approaching 30% of the German ophthalmology market. Germany was one of the first countries to transition to computerised records and management systems back in the mid-1990s. ifa's own market research suggests 90% of ophthalmic clinics have a specialist IT solution, but that only 10% of public eye clinics (such as university hospital clinics) have made the move. The vast majority of ophthalmologists work within non-public clinics, so there is limited potential for dramatic growth within Germany and ifa's focus is currently on building revenues within the hospitals and larger clinics.

Germany does, however, provide a stable, high-margin revenue base. The bulk of the revenues are run-time licences (ie fees to allow usage and access to updates) and there is little impetus for existing users to change software providers, there being no major anticipated changes in the way that ophthalmology works in Germany or in the way ifa systems' products work.

US

The US healthcare IT market is undergoing a period of significant change, driven not by technological progress but by legislation, economics and politics.

The Health Information Technology for Economic and Clinical Health Act (HITECH) was set out as part of the American Recovery and Reinvestment Act of 2009. HITECH aimed to spend over \$25bn of public funds on healthcare IT with an intention of creating a national set of electronic health records and ensuring these records are of "meaningful use" with interoperability between systems and locations. A series of incentives (and penalties) was put in place under the Medicare and Medicaid programmes to promote the adoption of electronic health records (EHR) and their application in a "meaningful" way – most notably the potential \$44,000 total incentive per practitioner from Medicare (the programme focused on the elderly). Despite being delayed several times, the deadline for incentives has now passed (on 31 March 2014). (Note: while EHR and EMR are often used interchangeably, they are not quite the same. EMR relates to records within one setting [eg an ophthalmic clinic], while EHR encompasses the wider records wherever the patient may receive healthcare treatment.)

Demonstrating "meaningful use" is not, however, something that can be achieved with simple record-keeping systems. The data has to be recorded, managed and delivered in such a way as to help improve the delivery of effective treatment rather than getting the billing right. As an example, historically a patient who presented at a hospital in the US with a severe burn to their left arm would have the treatment of a burn recorded. However, "meaningful use" would require more detail, including specifying which arm was treated, so if the patient subsequently represented at that or



another hospital, the treatment would not simply be repeated, and consideration would be given as to whether there was a more significant condition to consider.

Alongside this is a requirement for the implementation of ICD-10 CM and ICD-10 PCS, the US variants of the most recent International Statistical Classification of Disease and Health Problems. Although their adoption has also been delayed before, the current deadline for adoption of these standardised codings of conditions and treatments is now October 2015. This makes the move across to EHR not just financially attractive but also a necessity.

Management believes the company has approximately 7.5% of the US market, but that as the market evolves and all 25,000 ophthalmologists in the US adopt EHR (up from 40% at present), it believes a market share in double figures should be achievable. Although the extra functionality provided by CDSS is not required to achieve meaningful use, management believes that the benefits offered by ifa's knowledge-based systems will play a key part in helping to increase its market share. We believe that ifa could gain market share, as it did in Germany, from the further attrition of a number of the smaller players in the market over the coming years.

China

Blindness and vision impairment are major public health problems in China. China is struggling to deal with the problem of cataracts, faced with an ageing population and a limited number of suitably qualified surgeons. Blindness is an issue not only of social welfare but also of simple economics. The direct and indirect economic costs of having a high number of blind elderly are considerable – so much so that addressing the issue of blindness was a salient part of the 11th Five Year Plan. With a limited number of trained ophthalmologists and no easy way of increasing their number in the short or even medium term, the state intends to use software as a primary means to make more effective use of the limited resources.

ifa systems' management believes it currently has no real competitors in China, despite the considerable market potential. ifa has been working for several years alongside its local partner Global Vision Corp, the country's largest supplier of eyecare products, with the University of Beijing to develop a dual-language version of its top-of-the-range Premier product – giving Chinese users access to a Chinese language (Mandarin) based clinical decisions support system with English alternatives and access to English language online research and resources. The product went live at the start of this year.

Management anticipates sales into China could become the primary driver of growth in revenues on a relatively short timescale – within the next two to three years. It is expected that this solution will be the basis for systems for use in major eyecare clinics across China. There are over 1,000 such clinics nationally, and management suggests initial fees in the mid-tens of thousands of euros could be achieved for these implementations, with mid-teens percent of these fees being subsequently achievable annually on run-time licences.

Other European markets

ifa's presence across Europe beyond Germany has been limited in large part by local peculiarities of the markets, eg in France and the UK, but where it has made material progress, notably Benelux, Austria and Switzerland, it has achieved leading market positions.

At present the Eastern European ophthalmology software market has yet to truly develop, but management believes the company is well positioned both in terms of geography and product to be a leading player in these markets as and when they grow.

The French market is superficially attractive but there are local software players with products tailored specifically to match the local market and practices. The French system is dominated by the government as the purchaser, with eyecare provided privately by ophthalmologists without a



role for optometrists in the structure. ifa systems expends no efforts in attempting to address the French or French-speaking markets.

In the UK the NHS dominates the provision of ophthalmology, and the ophthalmology software market is 'owned' by local player Medisoft. There are also a significant number of optometrists in the UK, leading to a focus within ophthalmology on the provision of surgery. if a systems sells into the UK market but primarily into larger hospital or research projects, and management does not regard the UK as a core driver of revenue growth.

Latin America

Management believes there is longer-term potential in the Latin American markets, where moves towards healthcare IT systems are expected to be along the lines of the US model. ifa has made significant progress in recent years in establishing a position in these nascent markets, with the most notable recent example the Instituto de Oftalmologia in Mexico City. This clinic is a large project even by international standards and management anticipates that further hospital and larger ophthalmology clinics across Latin America will follow its lead. Of course, ifa has had products in Spanish and Portuguese languages for some time, giving it a potentially significant advantage against the US-based competitors that might be attracted by the forecast growth in these markets.

Rest of the world

Although the economic growth across Asia-Pacific is driving demand for healthcare IT systems, it is far from being a heterogeneous market and in many of the countries a dual-language solution will be required. Although ifa has proved it can deliver a dual language solution, we believe efforts and attention will be very much focused on the Chinese opportunity for the medium term.

In the wealthiest areas of the Middle East, there has long been a willingness to invest in healthcare IT, but the scale of the ophthalmic opportunity remains relatively modest for the moment. That said, if a systems has seen success in Saudi Arabia with a telemedicine solution for the ophthalmic care of diabetes patients.

Competition

ifa faces a number of competitors worldwide but most are geographically specific.

Even in the US the major medical IT companies have limited interest in entering the ophthalmic market because of the technical challenges it poses and the limited overlap with other disciplines. Where they have done so, the offering has typically been limited and customers have later moved on to more specific solutions, such as ifa's.

Primary competition in the US is in the form of both specialist players and products from within the broader offerings of larger companies with the leaders being NextGen, Medflow, MDOffice, MDIntellysis, Compulink and EyeMD.

The US market sees the largest concentration of competitors; the innovation culture, focus on profit in healthcare and promise of a mini boom in healthcare IT post HITECH led to a flurry of new ventures in the second half of the last decade. At the major ophthalmology conferences in the US in recent years, 25 to 30 EMR vendors have exhibited, but management has stated that at more recent conferences their number has been reduced to the mid-teens. Management believes that this attrition has increased the customers' focus on the financial health of the software providers, to the benefit of ifa.

It is noteworthy that there was a similar growth in supplier numbers in Germany when EHR records were adopted there. At one time there were nearly 70 providers (or claimed providers) of EMR software in Germany, but now that figure has more than halved with little more than a handful in the ophthalmology market, of which ifa is the leader.



The healthcare IT market is a long established one in the US, but until the advent of HITECH its primary focus as an industry had been on billing – ensuring that every test, diagnosis and treatment was recorded and billed to the payer (typically the insurer), and that everything was billed that justifiably could be. The priority was effectively on recording financial data, rather than recording healthcare data and providing more effective treatment.

ifa's long history of serving the German market and working extensively with leading eye hospitals and research projects means that its offering is built more around recording broader healthcare data more effectively. ifa is, in some ways, more of a life sciences business than a simple IT company, because rather than provide an empty shell of a software application, as its competitors do, ifa includes, among other things, the database of terminologies, medical guidelines and clinical decision support templates. This means that not only has it, so the management believes, found matching the requirements of "meaningful use", as set out in HITECH, less challenging than its competitors have, but its method of data input is faster for users. These potential savings of tens of minutes per day translate into allowing one or two more patients to be seen per day and into potentially tens of thousands of dollars of extra revenues a year.

The 'threat' of software as a service

Software as a service (SaaS) (the running of the software on the vendor or a third-party provider's servers rather than the client's) is the focus of much industry and investor attention at present, both as a route to market and as a business model in itself. Although there are some US ophthalmology products built on the SaaS model, ifa's management does not regard SaaS as a viable and effective way to provide its products. ifa's products are not implemented as standalone units but are linked to other software, for example billing software, and to hardware devices. This makes SaaS implementation significantly more challenging. Furthermore, the typical customer will already require a server and network of some description to handle the instruments and digital records they generate, so the hardware cost savings of SaaS are limited.

While issues regarding data security and ownership have merely hampered the advance in SaaS in some sectors, they pose greater hurdles in the healthcare arena. It is noteworthy that Germany and the US may be particularly difficult for SaaS healthcare software. Germany is well known for its tight regulations on privacy of information and while the US has no federal regulation covering data protection in general, the protection of healthcare information is specifically covered in the HITECH Act.

People

ifa employs 70 people, with just under 50 in Germany and the remainder in the US. The largest element of staffing is in installation, training and support, accounting for just under a quarter of staff. There are 16 staff working in product development but the company also outsources some elements of its development work.

Product development and certification

As with almost all technology companies, ifa systems invests on an ongoing basis in its products. In the second half of the last decade, in anticipation of the international opportunities ahead, ifa's management increased its investment. Although the company has one core product set for all markets, the focus of the additional investment has been on ensuring the products are entirely suitable for the technical challenges in the US markets and building the Clinical Decision Support systems product. The latest product for the US market is expected to be launched by mid-2014. We believe that the level of development investment spend peaked in 2012, at €3.8m, and that it should decline at a gradual pace in absolute terms in the medium term from €2.7m in 2013.



Although the focus of product development work is on new products, the need to be able to connect its software with all the latest equipment is significant – in the range of €350,000-450,000 a year. Management believes that the fact that 60% of ophthalmological equipment worldwide is made by German companies does give ifa systems an advantage against competitors from elsewhere, principally the US. Alongside the work to create the products there is also a significant cost of ensuring certification in the US, German and Austrian markets. This is something of a double-edged sword for ifa as although it bears these costs, they do provide a barrier to entry for new competitors.

Routes to market

Sales in German markets are made direct. Larger and strategically significant international clients/projects are also handled direct but most international sales are made via resellers. Typically these resellers are medical device vendors and the ifa content of their overall revenues will be in the mid-single figures percent.

Selling into medical institutions and practices, ifa's customer base is a combination of technically demanding and conservative. Given the value of the contracts, the sales and implementation processes can be relatively extended, both being typically 12-36 months in length. With more complex sales, such as those of clinical decision support systems and projects, it is not unknown for the sales process to extend to four years or even longer.

Management

ifa systems is still managed and, to a significant extent, owned by its founders. Approximately 51.6% of the shares are held by the management, employees, friends and families.

There is a key leadership team of six: Guido Niemann (CEO), Jörg Polis (CTO), Christoph Reinartz (CIO), Rainer Waedlich (chairman of the board), Claudia Wente-Waedlich and Susanne Post-Schenke. Most of these individuals have been at the company, in its various forms, for more than two decades. In addition to these six, there are a number of highly experienced managers working within a relatively flat management structure and who participate in decision-making and own shares.

Sensitivities

Although it is clear that there is a wholesale shift towards EMR and EHR in the US, it is widely speculated that the deadlines put in place could continue to be moved to the right or perhaps even abandoned. Much of the reasoning behind HITECH was as part of the economic stimulus and as the US economy recovers so this impetus may fade.

With the right commercial and political backing, the opportunity in China could be realised very rapidly indeed. It could also fail to be realised despite encouraging rhetoric. if a systems could find itself facing either of these scenarios across China.

The Latin American market is still only just following the US lead so it is not a substantial element of our published revenue estimates. However, it is expected to be a significant driver of growth in the medium and longer term. Therefore, if the Latin American markets do not grow as management suggests this would negatively affect valuations.

ifa could see the ophthalmic market targeted aggressively by one of the major healthcare IT players. Although we would not expect such a turn of events, we note that the simplest, and in fact the usual, way for the larger healthcare IT companies to enter a market is through acquisition and ifa's background and pole position in China would likely make it a target in such circumstances.



The dynamics of the software industry, and in large part the shift towards software as a service, could leave ifa exposed to low priced competition. We note that the overall cost of the solution remains relatively low against other capital costs and ongoing expenditures for ophthalmologists. With the issue being more about revenue gains than costs, data security concerns and device integration pose considerable challenges for SaaS solutions.

The majority of sales are in euros, but US sales, which account for about a third of the total, are made in US dollars. This does not currently create a significant currency risk because the US dollar costs are still running ahead of the level of revenues because of the costs of certification and transition, such as ICD-10 implementation. As international revenues and profits grow, as our forecasts suggest, the currency risk could become significant, but we believe that management is fully cognisant of the matter and will address it accordingly.

Financials

Earnings

Our forecasts are for revenue growth of 8% and EBIT improvement of 11% in 2014 vs 2013. This is slightly ahead of the 5% and 10% figures for revenues and EBIT for 2014 suggested in the Q1 statement, but we are looking to the second half of the year and the benefits of revenues growth from new products in both the US and Germany.

Our forecasts include revenues rising in the US in 2014 and 2015 by over 10%, following the release of new products. With regard to revenues from China, we expect revenues of several hundred thousand euros this year building to approximately €0.5m in 2015 and €1m in 2016. We anticipate revenues for Latin America in the hundreds of thousands of euros in 2014 with this growing strongly into 2015 and 2016.

Because of the nature of its customer base and the limited anticipated changes in the way the ophthalmology works, ifa possesses a high level of recurring income. Over 40% of sales are run time licences, allowing customers continuing access to the software and upgrades, and ifa sees a greater than 95% retention rate on these customers. ifa's products work well, and the company endeavours to ensure that its products are up to date, which means there is usually little reason for customers to change software suppliers. Furthermore, run time licences are far higher margin than first time licence and implementation sales.

Management has stated that the longer-term potential operating margins lie in the range of 30-35%, helped by the increase in levels of high-margin run time licenses and the fading significance of the €700k or so of low-margin pass-through hardware sales that the company makes in Germany.

Our forecasts are for a move up to mid-20s percent operating margins in the short to medium term. However, taking 2016 as an example, if ifa could add €1m extra revenues from China with 90% gross margins, then our model framework suggests that mid-30s percent operating margins could actually be achieved in a relatively short timescale.

In addressing the opportunities in the US, Latin America and China, ifa systems' management invested in understanding the market and building a market foundation. This involved significant expenditures on market research, marketing campaigns, attending exhibitions etc over several years. Having established a market position, management has actively reduced costs in these areas, cutting personnel costs from €4.2m in 2012 to €3.5m in 2013 and taking 'Other costs', of which a significant proportion is market development spend, from €4.6m in 2012 to €3.6m in 2013. We forecast a gradual increase in operating costs but at a lower rate than revenue growth.

Although we expect that revenues from outside Germany will increase significantly over the coming years, we believe that the costs and corporate structure will mean that the vast majority of the



profits will continue to be earned in Germany such that the tax rate paid will not change significantly from the current level of around 30%.

Cash flow

As a software company with a strong market position and an established set of technologies, one would expect ifa to be strongly cash generative. In recent years, however, this has not been the case because of the expenditure in product development and marketing. As these outflows diminish so we anticipate that ifa systems will demonstrate a level of cash generation more typical of a niche software business with high recurring revenues.

Exhibit 2: Cash flow						
€000s	2011	2012	2013e	2014e	2015e	2016e
Cash flow from ongoing activities post tax and interest	473	2,583	3,267	2,074	2,412	2,688
Cash flow from investment activities (inc development)	(2,860)	(3,587)	(2,588)	(1,750)	(1,550)	(1,300)
Cash flow from equity financing activities (inc dividend)	2,435	1,265	(75)	(200)	(250)	(300)
Net cash flow (excluding movements in debt)	48	261	604	124	612	1,088
Source: ifa systems, Edison Investment Research	ch					

Balance sheet

As at 31 December 2013 ifa systems had a small net cash position (€190k), but a solid liquidity position – current assets being twice the level of current liabilities. The salient features of the balance sheet (as at 31 December 2013) are the considerable intangible assets, €13.9m, most of which is development work capitalised, and the €2.4m of deferred tax liabilities associated with this development investment. Although this may appear, and in fact is, high for a company of ifa's size, it should be noted that the capitalisation and subsequent amortisation is based in large part on ifa's experience with previous and current products. And, as the high level of recurring level might suggest, the economic life of ifa's product is long by software industry standards, with many clients having used their systems for over a decade.



Valuation

Undervalued on all methodologies used

We have considered the valuation of ifa systems on both a traditional multiples based approach and a discounted cash flow model, using both traditional DCF to find a valuation and a 'reverse' DCF to find what the share price might imply about growth and margins. Both the multiples and traditional DCF approaches suggest to us that the shares are undervalued at the current share price, and we find that the reverse DCF scenario matching the €6.55 share price implies revenue growth of only 3% accompanied by operating margins of only 20% in the period 2017-24e. As a final sense check, we examine the value of the run-time licences as an income stream and find that these alone could be seen as worth 121% of the current market capitalisation.

Discount on multiples undeserved

Unsurprisingly, there are no direct listed ophthalmology software comparators of ifa systems. There is a significant base of US-listed healthcare IT companies but these are generally far larger operations with more general products and typically with a focus more towards the revenue cycle than towards clinical decision support. The table below shows that the selected US comparators mostly trade at revenues and earnings multiples above those of ifa systems. It is noteworthy, with regard to our forecast revenue growth for ifa, that the table also shows that most of these US-focused companies are forecast to show strong earnings growth over the coming two years.

In Europe there is a handful of listed healthcare software companies and they are smaller in scale than the US majors. Once again, as can be seen in the table below, ifa systems trades at revenues and earnings multiples discounts to most of these comparators, the exception being niche imaging specialist MeVis. Although some of these entities have some exposure to potential growth in US healthcare IT spend, they typically lack the direct exposure to the Chinese market that ifa systems provides. We believe that the level of discount to the European peers is too great, even after considering ifa's limited free float, liquidity and relatively small size.

O	Chana	E\/ /m\	V4	CDITDA	E\//				//CDITDA			D/E	
Company	Share price	EV (m) (local currency)	Year 1 end	EBITDA Margin	EV/	revenues		EV	//EBITDA			P/E	
					Yr1	Yr2	Yr3	Yr1	Yr2	Yr3	Yr1	Yr2	Yr3
ifa systems	6.55	16.2	Dec-13	33.1%	2.1	1.9	1.8	6.1	5.8	5.1	15.7	13.7	11.1
US comparators													
Cerner	53.8	17745	Dec-13	34.6%	6.1	5.3	4.7	17.8	15.4	13.2	38.2	32.4	27.6
Allscripts	15.4	3258.5	Dec-13	15.9%	2.4	2.3	2.1	18.1	14.2	12.1	57.0	12.5	11.3
Quality systems inc	16.2	1020.1	Mar-14	20.7%	2.3	2.2	2.0	13.3	10.5	9.4	22.5	21.0	17.8
Merge Healthcare	2.2	432.9	Dec-13	19.2%	1.9	2.0	1.9	11.7	10.4	9.1	37.2	13.9	10.6
European comparators													
CompuGroup	20.1	1366.1	Dec-13	21.7%	3.0	2.7	2.6	14.0	12.4	11.0	41.9	20.5	17.3
Craneware	5.5	116.9	Jun-13	29.5%	2.8	2.6	2.4	9.5	9.0	8.3	16.5	17.0	14.7
MeVis	15.3	40.5	Dec-13	39.0%	2.8	3.3	3.2	6.4	8.4	8.3	6.5	9.4	9.3
Emis	7.4	480.1	Dec-13	33.2%	4.5	3.6	3.4	14.7	10.8	10.3	21.8	18.6	17.7
Nexus	12.04	157.9	Dec-13	20.5%	2.2	2.0	1.8	11.3	9.6	8.2	20.1	15.4	14.0
All (ex ifa)					3.1	2.9	2.7	13.0	11.2	10.0	29.1	17.9	15.6
North America					3.2	2.9	2.7	15.2	12.6	11.0	38.7	20.0	16.8
Europe (ex MeVis)					3.1	2.7	2.6	12.4	10.4	9.4	25.1	17.9	15.9

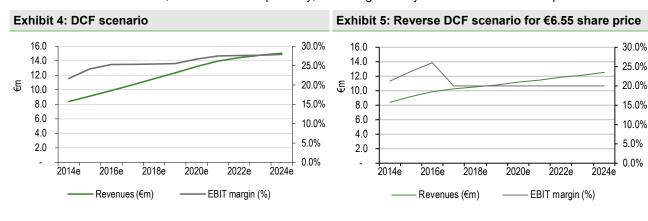
Placing the shares on a prospective FY14 P/E of 15.2x, a 15% discount to the European comparator group (to reflect the smaller size and free float/liquidity issues) ex-Mevis yields a value per share of €7.27, 11% ahead of the current share price.



'Traditional' DCF and 'reverse' DCF

DCF range €8.6 to €11.5

In our DCF we take our published forecasts for FY14 to FY16 and continue them forwards as set out in the chart below. The primary drivers to the revenue growth are the US and China and the ongoing build of run time revenues. We model that there will be some operational gearing benefits over the period 2017e to 2024e, but only to the extent that operating margins peak at 28% at the end of the period. But, as noted above, margins significantly in excess of that are targeted by the management, and could readily be achieved if revenues materially exceed our forecasts. The charge for depreciation and amortisation reaches \leq 1.1m in 2016e after which time we assume it should be at or ahead of the capitalisation of development spend. We assume a constant tax rate of 30% with all tax payable. Our terminal value is based on an assumption of a terminal growth rate of 2%. We calculated the valuations using costs of capital of 9%, 10 and 11%, which return valuations of \leq 11.5, \leq 9.9 and \leq 8.6 respectively, values significantly above the current share price level.



Source: Edison Investment Research

Source: Edison Investment Research

Reverse DCF suggests the market may expect limited growth

As a sense check, we have also 'reversed' the DCF to find a scenario that would tie into the current €6.55 share price based on a cost of capital of 10%. Working forward from our published figures (2014-16e), we find that a scenario that includes medium-term revenue growth of 3% in the period 2017-24e, along with an operating margin of 20% (ie below current levels) over that period yields the current share price. We would regard such revenue growth and operating margin outcome as highly disappointing given the opportunities facing the company in the US, Latin America and China.

Run-time licence reinforces value story

Another way to consider the valuation of ifa systems is to examine the value of the run-time licences on their own. Management suggests that 75% of run-time licence revenues flow through to operating profits. If our forecast for 2014 run-time licence revenue (€3.7m) is valued as a cash flow over 15 years at a 30% tax rate, a discount rate of 8% and with assumed annual growth of 3%, these assumptions yield a valuation of €19.8m. This is equivalent to 121% of the current market capitalisation and provides significant support to the view that the shares are undervalued at current levels.



€000s	2012a	2013a	2014e	2015e	2016
	IFRS	IFRS	IFRS	IFRS	IFR
	7,402	7,771	8,379	9,141	9,89
	(689)	(698)	(712)	(740)	(770
	6,713	7,073	7,667	8,401	9,12
	1,489	2,648	2,775	3,177	3,56
	958	1,601	1,775	2,177	2,56
	0	0	0	0	
	0	0	0		
					2,56
	_ , ,				(67
					2,50
					2,50
					(751
					1,75
	573	1,043	1,196	1,477	1,75
	2.4	2.5	2.5	2.5	2.
	23.7	41.7	47.8	59.1	70.
	23.7	41.7	47.8	59.1	70.
	23.7	41.7	47.8	59.1	70.
	3.0	8.0	10.0	12.0	14.
	90.7	91.0	91.5	91.9	92.
					36.
					26.
	15 361	16.480	17 180	16.480	17,18
				-,	14,59
					27
					2,30
					2,59
	,		,		7
					1,51
					1,00
		0			.,00
		(1.387)			(1,263
					(1,034
					(229
				. ,	(3,249
					(458
					(2,791
		14,138	15,258	14,138	15,25
		·	·	·	
	2 968	3 825	2 654	3 112	3,50
					(67
	(318)	(498)	(512)	(633)	(751
					(1,300
	· · /				(1,000
				0	
					(30)
					1,08
					(92
		1		. ,	(32)
		•			
	164	(191)	(315)	(927)	(2,01
		7,402 (689) 6,713 1,489 958 0 0 0 0 0 0 958 (67) 891 891 891 (318) 573 573 573 2.4 23.7 23.7 23.7 23.7 20.1 12.9 15,361 12,211 651 2,499 2,174 117 1,364 693 0 (1,094) (884) (210) (3,023) (647) (2,376) 13,418 2,968 (67) (318) (3,587) 0 1,515 (250) 261 474 (1) 50	7,402 7,771 (689) (698) (6,713 7,073 1,489 2,648 958 1,601 0 0 0 0 0 0 0 0 0 0 0 0 958 1,601 (67) (60) 891 1,541 881 1,541 (318) (498) 573 1,043 573 1,043 573 1,043 573 1,043 2.4 2.5 23.7 41.7 23.7 41.7 23.7 41.7 23.7 41.7 23.7 41.7 23.7 41.7 23.7 41.7 3.0 8.0 90.7 91.0 20.1 34.1 12.9 20.6 15,361 16,480 12,211 13,896 651 279 2,499 2,305 2,174 2,294 117 75 1,364 1,341 693 878 0 0 0 (1,094) (1,387) (884) (1,158) (210) (229) (3,023) (3,249) (647) (458) (2,376) (2,791) 13,418 14,138 2,968 3,825 (67) (600) (318) (498) (3,587) (2,588) 0 0 0 1,515 0 (250) (250) (75) 261 604 474 164 (1) 1	7,402 7,771 8,379 (689) (698) (712) 6,713 7,073 7,667 1,489 2,648 2,775 958 1,601 1,775 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 958 1,601 1,775 (67) (60) (677) 891 1,541 1,708 891 1,541 1,708 891 1,541 1,708 891 1,541 1,708 891 1,541 1,708 891 1,541 1,708 891 1,541 1,708 891 1,41 478	7,402 7,771 8,379 9,141 (689) (688) (712) (740) 6,713 7,073 7,667 8,401 1,489 2,648 2,775 3,177 988 1,601 1,775 2,177 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 981 1,541 1,778 2,177 2,178 2,110 1891 1,541 1,708



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Revenue by geography (2013 and estimates)



CAGR metrics		Profitability metrics		Balance sheet metrics		Sensitivities evaluation	
EPS 2012-16e	31.1%	ROCE 15e	10.5%	Gearing 15e	N/A	Litigation/regulatory	•
EPS 2014-16e	21.0%	Avg ROCE 2012-16e	8.9%	Interest cover 15e	N/A	Pensions	0
EBITDA 2012-16e	24.4%	ROE 15e	10.4%	CA/CL 15e	1.7x	Currency	•
EBITDA 2014-16e	13.4%	Gross margin 15e	91.9%	Stock days 15e	3.0	Stock overhang	•
Sales 2012-16e	7.5%	Operating margin 15e	23.8%	Debtor days 15e	53.5	Interest rates	0
Sales 2014-16e	8.7%	Gr mgn / Op mgn 15e	3.9x	Creditor days 15e	46.2	Oil/commodity prices	0

Management team

CEO: Guido Niemann

Mr Niemann joined the former ifa group in 1991, initially as application consultant, and later changed to distribution and sales. In the predecessor company, he was responsible for the sales department in Germany and Europe. In 2001, he founded today's ifa systems AG with the partners.

CIO: Christoph Reinartz

After his industrial training as a management assistant in data processing, Christoph Reinartz worked as a developer in different software companies. In 1989 he joined the former ifa group and in 1998, he was appointed head of research and development. In 2001, he founded today's ifa systems AG with the partners and was appointed member of the board.

Board member: Claudia Wente-Waedlich

In 1992 Claudia Wente-Waedlich joined the former ifa group, where she worked in market research, product management, marketing and training. She has also worked extensively in managing international and research projects. After the founding of the ifa systems AG, of which she is a founding member, she was appointed a member of the board. Mrs Wente-Waedlich is the wife of chairman Rainer Waedlich.

CTO: Jörg Polis

After studying chemistry at Cologne University and subsequent industrial training, Jörg Polis worked in the field of commercial and technology training. In 1989, he began working for the former ifa group as product specialist and trainer. In 2001, he founded today's ifa systems AG with the partners and was appointed a member of the board. He is responsible for the operations of the integration activities and for finances, personnel and customer support.

Chairman of the board: Rainer Waedlich

After his maths and business studies, Rainer Waedlich was, among other roles, managing director at a manufacturer of ophthalmic optics products for 12 years. He was a founder and managing director of the original ifa business in 1984 and continued in this role in subsequent entities. He was appointed chairman of the board of ifa systems in 2002.

Board member: Susanne Post-Schenke

Susanne Post-Schenke has been working for the ifa group since 1985. In 2001, she founded today's ifa systems AG with the partners and was appointed member of the board in April 2005 (substitute member since 2001). Most recently, she has been responsible for organization and marketing.

Principal shareholders	(%)
Employees, family and friends	26.5
Supervisory board	13.0
Board	12.1

Companies named in this report

Merge Healthcare (MRGE), Craneware (CRW.L), Cerner (CERN), Allscripts Healthcare Solutions (MDRX), Quality Systems (QSII), CompuGroup Medical (COP.DE), Emis Group (EMIS.L), Nexus (NXU.DE), Mevis Medical Solutions (M3V.DE)



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