

# CREALOGIX Group

Leader in digital banking technology

Initiation of coverage

Software & comp services

CREALOGIX's front-end banking applications have gained strong credence in the Swiss market, where the group's core online/mobile applications are in exclusive use in 11 of the top 30 Swiss banks. CREALOGIX is now expanding the opportunity globally, primarily targeting the UK, Germany and Austria as well as the nascent Asian market. The group returned to EBITDA profitability in H116 and in our view is well positioned to benefit from attractive business drivers as traditional banks are forced to update their technology to maintain competitiveness against nimble fintechs entering the space.

Year end	Revenue (CHFm)	PBT* (CHFm)	EPS* (CHF)	DPS (CHF)	P/E (x)	Yield (%)
06/14	50.1	(0.2)	0.08	0.00	N/A	N/A
06/15	49.3	(12.6)	(8.13)	0.00	N/A	N/A
06/16e	61.2	0.3	0.13	0.00	N/A	N/A
06/17e	73.7	3.6	2.31	0.00	42.0	N/A

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

## Digital banking in strong growth phase

Digital banking is in a major growth phase globally, boosted by the advent of smartphones and tablets; smartphones are expected to take 80% of the banking market by 2020 (AT Kearney). This is driving increasing spend on front-end systems and CREALOGIX expects the front-end system spend to rise to c 50% of banks' total IT spend within five years, from c 20% at present and c 5% traditionally.

## Interim results: Returns to positive EBITDA

H1 revenue jumped 16% to CHF27.9m, as EBITDA swung to CHF0.1m from a CHF6.3m loss in the prior period. The group launched a CHF25m convertible bond last November boosting the cash position to CHF36.7m (or CHF 12.7m net cash). CREALOGIX completed the acquisition of the Elaxy group in January.

## Forecasts: The ramp-up begins for the Swiss fintech

We forecast revenues to grow by 24% in FY16, including an initial contribution from Elaxy, and by a further 20% in FY17. We forecast adjusted operating profit of CHF0.1m in FY16, rising to CHF4.0m in FY17. We forecast the group to end FY16 with CHF0.8m net debt (after paying CHF12.1m for Elaxy), with a further c CHF13.7m of acquisition liabilities relating to the MBA and Elaxy acquisitions.

## Valuation: CHF140-186 per share with upside

CREALOGIX has a heavily invested modern software platform and several key components are now in place to underpin strong revenue growth, while investment has peaked. On our base revenue growth assumptions, we suggest a valuation range of CHF140 (10% operating margin target, 8% WACC) to CHF186 (20% margin, 10% WACC). However, if Elaxy is successfully integrated and management can deliver on the internationalisation strategy, there is additional upside potential.

13 June 2016

**Price** CHF96.90  
**Market cap** CHF103m

Net cash (CHFm) as at 31 December 2015	12.7
Shares in issue	1.06m
Free float	30.0%
Code	CLXN
Primary exchange	Switzerland
Secondary exchange	N/A

### Share price performance



%	1m	3m	12m
Abs	3.1	19.6	0.1
Rel (local)	3.2	19.2	15.4
52-week high/low	CHF100.00	CHF81.00	

### Business description

CREALOGIX Group provides digital banking technology solutions to banks, wealth managers and other financial services companies. The company's suite of solutions includes online and mobile banking, digital payments, digital learning and security.

### Next events

Annual results	20 September
AGM	31 October

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## Investment summary: Leaders in digital banking tech

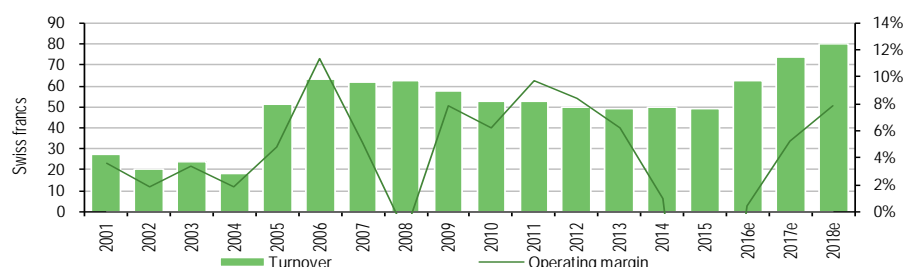
### Company description: Swiss fintech – the ramp-up begins

Zurich-based CREALOGIX was founded in 1996 by Bruno Richle, Richard Dratva, Daniel Hiltbrand and Peter Süssstrunk, who all continue to work with the company and together own 70% of the share capital. CREALOGIX has c 420 employees and provides front-end banking software solutions that operate through multiple channels (essentially mobile phones, tablets and PCs). The group has established the leading position in the Swiss market, where 11 of the 30 largest Swiss banks are exclusively using its core online/mobile applications while a further seven are using some aspect of the group's technology. The company has been boosting its international exposure and now has offices extending to the UK (London and Winchester), Austria (Vienna), Singapore and Germany (Stuttgart, Puchheim/Munich and Jever).

### Financials: Scaling up for global growth

Each software installation involves a software licence along with significant professional services as each customer will require installation and customisation. Going forward, there are 18-21% annual support and maintenance fees. Further, there is a regular flow of follow-up services work in the form of change requests. Most installations are on its clients' servers, though the group's UK private wealth business operates a hosted SaaS model, and the international expansion is expected to involve further hosted SaaS sales. The company has a good profitability track record (underlying operating basis), only recording losses in FY08 (though this was after a CHF1.4m amortisation charge and a CHF2.1m impairment) and in FY15 due to the planned accelerated investment.

**Exhibit 1: Revenue and operating margin trends**



Source: CREALOGIX (historics), Edison Investment Research (forecasts)

### Sensitivities: Budget cuts and new fintech threats

An economic downturn could slow investment in fintechs (eg, peer-to-peer lending and crowdfunding) and slow the pace of change in CREALOGIX's traditional banking sector customer base. There is a risk that nimble fintechs and challenger banks will make a bigger inroad into the traditional banking sector over the long term. Mergers in the traditional banking sector could reduce the potential customer base. Major back-end software vendors and ERP software providers could take a more active approach in the front-end while specialist direct competitors could develop better solutions or more attractive business models. There is execution and integration risk in the acquisition strategy and increasing currency risk as the company expands abroad.

### Valuation: Heavily invested high growth fintech

The stock trades on c 743x our earnings in FY16e, which falls to c 42.0x in FY17e and to c 23.8x in FY18e. On our base revenue growth assumptions, we suggest a valuation range of CHF140 to CHF186 per share. The valuations have been adjusted for the dilution impact from the convertible bonds, which we estimate reduces them by c 9%.

## Company description: Digital banking enabler

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CREALOGIX develops and implements software solutions that enable digital banking for “the digital bank of tomorrow”. The solutions are most often used by traditional banks to enable their journey to digitalisation, through the provision of a sophisticated, modern omni-channel offering to their clients. The group’s products are front-end solutions that integrate with the customers’ back end systems, such as a core banking system from Temenos, Avaloq or Infosys. CREALOGIX’s primary target customers are traditional retail, commercial and wealth banks that need to upgrade their legacy in-house systems to maintain competitiveness, reduce cost, differentiate and provide greater flexibility in a constantly evolving (swiftly digitalising) marketplace. CREALOGIX has a “customer centric focus” to optimise the user experience across the areas of mobility, security, personalised advice and education.

CREALOGIX sees itself as a pioneer in digital banking, having launched the first internet banking solution in Switzerland with Credit Suisse in 1997. The group has c 320 employees, including c 76 in research and development, c 162 in project and implementation and c 19 in sales (including pre-sales engineers). The acquisition of Elaxy in January has added a further 100 employees.

### Digital banking background

Digital banking remains in a major growth phase globally, boosted by the advent of smartphones and tablets; smartphones are expected to take 80% of the online banking market by 2020 (AT Kearney). Further, digital banking has overtaken compliance as the area of highest importance within banking sector IT budgets. Regulatory changes, like PSD2 (Payment Services Directive), put additional pressure on banks to upgrade their front end systems.

Digital banking essentially covers online banking and mobile (including tablets), as well as related services such as analytics and social networking. Substantially all banks offer online banking and penetration across the EU has been advancing at a healthy pace to 45.6%, up from 16.2% in 2004 (EU-Digital Economy & Society Index). In the UK and Germany, the penetration rate has risen from 22.3% and 20.7% to 58.4% and 51.0% respectively over 2003 to 2015 (EU-DESI). In Switzerland, e-banking penetration has risen from 21% in 2004 to 49% in 2014 (BHF 2014 Omnibus). Mobile banking penetration is lower but growing much faster. According to a KPMG report on mobile banking (July 2015), the number of mobile banking users worldwide rose from 0.6bn users in 2013 to 0.8bn in 2014 and is set to rise to 1.8bn by 2019.

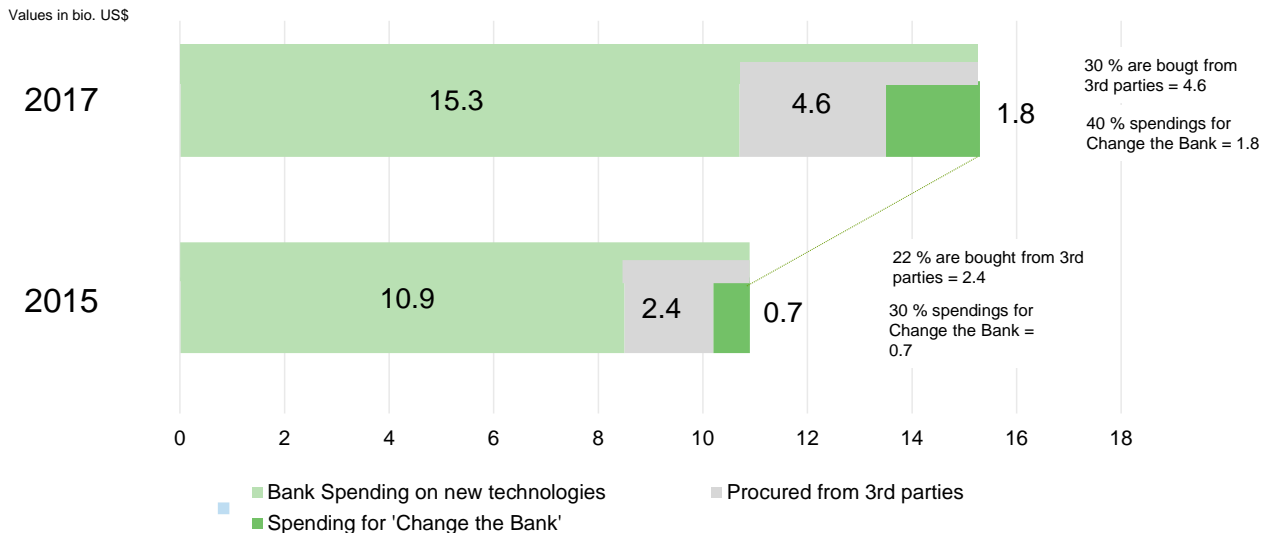
The changing backdrop is driving increasing spend on front-end systems and CREALOGIX expects the front-end system spend to rise to c 50% of banks’ total IT spend within five years, from c 20% at present and c 5% traditionally. The front-end solutions in this space need to be more agile than the back-end core banking systems and must offer a seamless experience. Innovation is clearly much more prevalent in the front-end than at the back end.

### The global banking sector is in a state of flux

The global banking sector is facing unprecedented challenges. Increased regulation in the wake of the global financial crisis means banks must hold significantly higher levels of capital against their assets, which puts huge pressure on profitability. At the same time their customer bases are being targeted by challenger banks entering the space as well as a plethora of new fintechs offering alternative products (such as peer to peer lending, crowd funding, bitcoin and various investing solutions). To maintain competitiveness, traditional banks must be able to offer modern solutions. While the large global banks have the financial resources to develop their own solutions in-house, the rest have no choice but to purchase technology if they wish to stay in the game. We also note that the numbers of banks have been in long-run structural decline across the globe, eg, in Switzerland the number of banks has fallen by 16% from 2004 to 2013 to 283.

Exhibit 2 shows that total European banks' IT investment is expected to rise from \$10.9bn in 2015 to \$15.3bn in 2017, according to Celent. Of these, 30% are expected to be purchased from third-party software suppliers such as CREALOGIX in 2017, up from 22% in 2015. Of the amount procured from third parties, 40% is forecasted to be spent on "change the bank" strategies in 2017, up from 30% in 2015. This results in a 157% increase in the amount spent on such strategies in 2017 to \$1.8bn, up from \$0.7m in 2015.

**Exhibit 2: European banks' IT investment - Spendings for 'change the bank' are predicted to increase 2.5 times in 2 years**

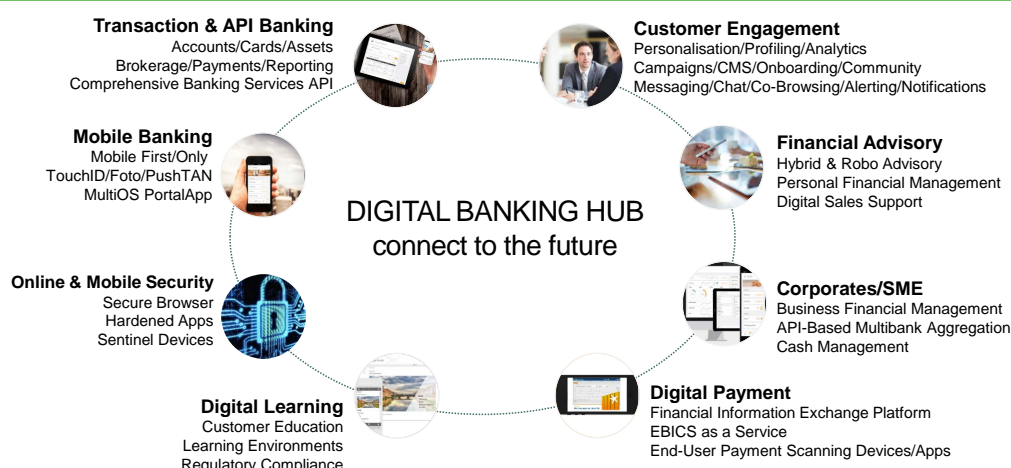


Source: Celent, IDC, CREALOGIX estimates

## CREALOGIX's response – The Digital Banking Hub

Following a period of significant investment, the group launched its Digital Banking Hub last year. It gives small and mid-sized banks the opportunity to offer highly competitive Digital Banking offerings. The hub is a modular system that has been tailored for customers, having been developed in conjunction with them. It is a comprehensive platform for online banking across all channels (essentially PC, tablet and mobile phones). It covers eight fields of expertise, as shown in Exhibit 3. Each field covers a range of products, which are broken down into separate modules. It has a modern interface and APIs and includes pre-built out-of-the box modules. The APIs enable it to integrate fintechs, third-party modules and in-house built widgets.

### Exhibit 3: The new software platform – functionalities for the Digital Banking Hub



Source: CREALOGIX

The platform's primary areas are Transaction & API Banking, Mobile Banking, Digital Payment and Digital Learning. Customers will take both the flagship online Transaction & API Banking and Mobile Banking solutions to create a multichannel offering. Additionally, CREALOGIX offers a range of online and mobile security products. The Digital Banking Hub is open and can be integrated into all systems; a user friendly navigation concept can link in various CREALOGIX modules and third-party applications. The product is white labelled, with each client bank adapting the style to suit its existing design. It is cost effective, because the system is based on a lean and open architecture and is perfectly compatible with all standard devices. The group uses java and HTML5 programme languages, with java in the back end and HTML5 up front. The product uses modern concepts including responsive design (resizes with different devices) and zero footprint (no software installation required on the device). The product offering has a six-month upgrade cycle, but the plan is to bring this down to three months.

Digital Banking is the group's broadest offering and, along with related modules, generated c 60% of FY15 revenues, while Digital Payment generated c 20% of revenues and Digital Learning c 20%. The Digital Learning module is an LMS (learning management system) used by the group's banking customers to train their clients and employees (typically young professionals) in financial literacy. It replaces paper-based systems, so helps reduce risk.

The implementation of the group's solutions helps IT departments shift their focus from development to supporting the business and this is an attractive proposition from the business end of the bank. This is because banks need greater flexibility to cope with regulatory changes and to position themselves strategically to deal with fintechs. They also need the latest technology to help them in the fight to win new customers.

## History – 20 years building in-depth digital banking expertise

Founded in 1996, CREALOGIX offered the first 1997 e-banking solution in Switzerland with Credit Suisse, and Credit Suisse was voted the best internet bank in Europe in 1999. CREALOGIX floated on the Swiss Stock Exchange near the top of the internet bubble in 2000. The group underwent a strategic change in 2003 and again in 2010 when it decided to focus entirely on the banking end-market. In 2013, CREALOGIX took a 37% stake in Qontis in exchange for providing the technology platform to the Qontis start-up venture. Qontis is a Switzerland-based online personal finance management platform that was established in 2013 as part of a commercial enterprise between CREALOGIX and the Neue Zürcher Zeitung media group. The group acquired MBA Systems in early 2015 and announced the acquisition of the ELAXY group in October 2015. In January 2016

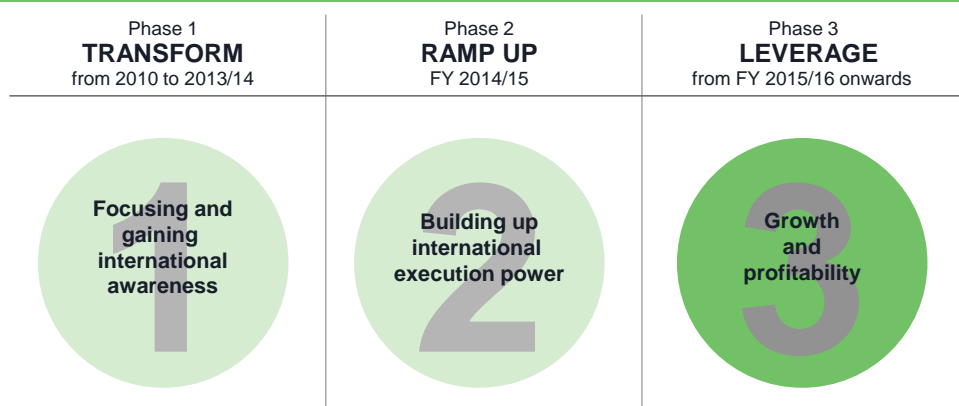
Bruno Richle stepped down as CEO, with Thomas Avedik taking on the CEO role. Mr Avedik has been with CREALOGIX for nine years, previously heading up the group's e-banking operations. Mr Richle retains the position of executive chairman.

## Strategy – transform, ramp up and leverage

The group has been through a heavy investment phase, which peaked in FY15. It has been investing in the development of its software platform to address the challenges to the banking sector, spending 21.5% of sales on R&D in FY15, which resulted in an EBITDA loss of CHF10.6m. The major work on the platform has completed and R&D costs have been cut back, largely through a reduction in freelancers and the shift to near/offshore centres. The aim now is to seek the benefits from scaling the platform across a much larger international base and in 2014, offices were opened in London, Vienna and Singapore. Management believes there are also significant opportunities in Asia, where digital banking is less advanced.

The group has also made several acquisitions to gain access to new geographic markets and technologies. The MBA acquisition provided the group with strong experience in wealth management and added c 30 clients using hosting in UK. The hosting capabilities have been extended to the entire platform. The group's international revenues will now move beyond the wealth management vertical, as the group has expanded its office infrastructure and also due to the acquisition of Elaxy in Germany.

**Exhibit 4: The group roadmap**



Source: CREALOGIX

## Acquisition of Elaxy group from Fiducia & GAD IT

In October 2015, CREALOGIX announced a long-term commercial agreement with Fiducia & GAD IT, the IT-service provider owned by the German Volksbank and Raiffeisenbank co-operatives. Fiducia & GAD IT was created through the merger of Fiducia IT and GAD in mid-2015. Fiducia & GAD's customers include all 1,100 local cooperative banks in Germany, as well as other entities. Fiducia & GAD has c 5,500 employees and generates annual revenues of c €1.26bn. The deal also involved CREALOGIX acquiring 80% of Elaxy Financial Software & Solutions (Elaxy FSS) and 20% of Elaxy Business Solution & Services (Elaxy BSS) from Fiducia & GAD. The two acquisitions were effective from 1 January 2016 and CREALOGIX has an option to acquire the outstanding shares. We have assumed the acquisitions cost €11m (c CHF12.2m), with a similar deferred payment, and we have assumed deal costs of c CHF1.7m. CREALOGIX plans to increase its shareholdings in the two businesses in the medium term.

Elaxy group is a leading German fintech provider for interactive advisory solutions for banks and financial service providers. Elaxy's customer base includes c 380 Volksbanks and Raiffeisenbanks and over 120 Sparkasse savings banks. The acquisition broadens CREALOGIX's product portfolio



into the area of interactive digital banking advisory services, which includes retirement planning, financial management and financial planning. It also accelerates the group's move into hosting/SaaS. Elaxy FSS is a product company providing software solutions and related consulting services in the advisory area, while Elaxy BSS is a hosting business specialised in the banking area with its own data centre. The two companies each generate around €10m (c CHF11.1m) in sales and each employ around 100 staff. The acquisition increased the group's employees by c 100 to more than 420 and makes Germany the group's second-largest country exposure.

CREALOGIX has had a presence in Germany since 2011, with an office in Stuttgart and over 40 people. Elaxy FSS has added offices in Puchheim/Munich and Jever. CREALOGIX was already supplying five of the 10 largest internet banks (online banks that do not have branches) in Germany. This includes Deutsche Kreditbank (DKB), which has built a credit card application using CREALOGIX's technology for its own clients, and it is also running the application for third parties such as BMW.

Fiducia & GAD offers a core banking solution and the partnership will deliver combined offerings in selected fields. The deal provides CREALOGIX with an established route to the German banking market, which otherwise would be more difficult to break into. The Volksbanks and Raiffeisenbanks are facing increasing competition and now require modern digital banking solutions. We see Fiducia & GAD's committing to a commercial agreement with CREALOGIX as a major endorsement of CREALOGIX's offering.

Cooperative banks represent at least 25% of the German banking market, and CREALOGIX's increased presence in Germany will also boost the group's ability to target Sparkassen (38% market share) and private banks (<10% market share). Elaxy FSS has recently won a contract to roll out a digital solution at Bankhaus August Lenz in Germany for the needs of its financial advisers and their clients, exemplifying Elaxy's strong position in the wealth management vertical.

## Acquisition of MBA Systems

In January 2015, CREALOGIX acquired MBA Systems, for c CHF8.7m, which includes an outstanding earn-out of CHF2.7m. MBA provides internet-based information and trading systems to the securities and wealth management industries. MBA supports and hosts systems from its own secure data centre for almost all of its clients (one has an onsite installation). CREALOGIX is now able to offer a hosted version of its Digital Banking offerings to MBA's clients –which exceed 30 and include leading brokers, wealth managers and international banks – as well as to new clients.

CREALOGIX already has some success in cross selling products, eg, Medirect replaced Intelligent Environments with CREALOGIX Digital Banking Hub and the CREALOGIX payments module was added. In this case, Infosys runs core banking.

## Product development

The R&D team is led from Zurich. Development work is carried out in countries where the group is active, with around a third of the work handled from nearshore/offshore development centres in Belgrade (with more than 50 employees) and Manila (with more than 20 employees). Belgrade handles both R&D and project implementation (as most skills can be used for both since they are the same systems architectures) while Manila handles bug fixing and project implementation.

## Competitive environment

We divide the group's competitors into five categories:

- IT departments of banks, which suffer cost and flexibility disadvantages against software vendors;

- specialist software providers, eg, Intelligent Environments (UK private company), Backbase (Dutch private company), Misys (UK-based, owned by private equity), Sopra Banking Software (part of Sopra Steria (EPA:SOP));
- core banking software providers, eg, Temenos (SWX:TEMN), FIS (NYSE:FIS), Infosys (Bombay listed, NSE:INFY) and Avaloq (Swiss private) which are focused on back-end systems and typically have little presence or less sophisticated solutions for the front-end;
- ERP giants SAP (ETR:SAP) or Oracle (NYSE:ORCL) are able to offer solutions; and
- systems integrators such as IBM (NYSE:IBM) that work on a time and materials basis and typically will partner with specialist software vendors.

In our view, CREALOGIX has a number of advantages over other specialist software providers, including the greater depth of its platform (eg some lack the banking functionality or the quality of the user experience), the proven experience gained in the Swiss market with top-class references and the transparency associated with being a public company, along with the strong balance sheet. In the client-centric game of front-end systems, it is all about building the best user interface, which gives specialist players an opportunity, and CREALOGIX has been able to develop comprehensive functionality.

The group's wealth management offering competes with small local players and IRESS (ASX:IRE).

## Capital structure

In November 2015 the company issued CHF25m of four-year convertible bonds. The bonds have a conversion price of CHF104.5 and a coupon of 2.375%. Management chose the convertible bond financing option because the company had the authorised capital available and it enabled it to issue new equity at an effective 26% premium to the-then current market price, assuming that the bonds eventually convert. However, the bond holders also benefit from an attractive coupon while the ordinary shares do not pay a dividend.

Assuming all the bonds convert, it will require the issuing of 239,234 new shares, representing 18.4% of the expanded share capital. Based on proforma numbers, that would return the group to c CHF9.6m net cash while nearly doubling net assets to c CHF49m.

<b>Exhibit 5: Capital structure</b>				
CHF 000's	30/06/15	30/12/15	30/12/15 Pro forma	30/12/15 Bonds convert
Cash	(10,815)	(36,658)	(36,658)	(36,658)
Short-term borrowings	0	0	0	0
Long-term borrowings	0	0	0	0
Convertible bonds	0	23,995	23,995	0
Net cash	(10,815)	(12,663)	(12,663)	(36,658)
Short-term securities	(2,322)	0	0	0
MBA deferred payment	2,630	2,654	2,654	2,654
Assumed ELAXY payment made in January 2016	0	0	12,210	12,210
Assumed ELAXY deferred payment	0	0	12,210	12,210
Adjusted net debt (cash)	(10,507)	(10,009)	14,411	(9,584)
Net assets	26,682	25,335	25,335	49,330
Debt/equity	(39.4%)	(39.5%)	56.9%	(19.4%)
Source: CREALOGIX accounts, Edison assumptions.				

## Financials: A flexible array of revenue models

### Business model: Perpetual licence, term licence & hosted SaaS

The company offers a range of revenue models to its customers. The group's traditional Swiss client base are all on the perpetual licence model plus implementation along with annual support



and maintenance fees (in the range of 18% to 21% depending on the overall solution). We note that many banks in continental Europe prefer an onsite solution, due to attitudes towards security risks. The group's UK clients (c 30 customers acquired via MBA) operate on hosted SaaS, committed for five years. We note that MBA has been incorporated into the Digital Banking Hub, and the entire platform is now available on a hosted basis. CREALOGIX also offers a SaaS licence for five to seven years while one company is onsite rental. CREALOGIX regularly receives change requests from clients (eg adding functionality, acquire an entire hub or a more general adaptation), which generates additional licence and services revenues.

Additionally, CREALOGIX is using the systems-integration reseller route to market via a partnership with Hewlett-Packard Enterprise (NYSE:HPE), which enables it to cover the entire value chain through consultancy and conception to suitable solutions as well as integration and operation. In the relationship Hewlett-Packard takes the services work.

The company sells to both the business side and the IT department. However, the position of chief digital officer is becoming much more common in banks and is typically the most effective person to sell to. The sales cycle is typically in the range of 6-18 months and averages 12 months. There will typically be a proof of concept, but the scale of this will depend on the requirements of customer. For example, the customer might simply be concerned with the look or feel for the end customer. Alternatively, they may wish to integrate third-party software or in-house widgets, or customise it so it looks and functions like the customer's other corporate websites. Ultimately, the customer needs to make the decision of whether to invest in-house or in new front-end software.

Recurring revenues consists of support & maintenance (CHF12.4m or 54% of licence revenues in FY15), along with hosting SaaS services (CHF1.5m in FY15). In total, this came to 28% of FY15 revenues, but we expect this to rise significantly on that back of hosted/SaaS growth and the maintenance price increase and given that Elaxy has over 60% recurring revenues reflecting its substantial maintenance book.

Goods represents hardware used for secure online invoice payments. This consists of a payment scanning device and a payment slip reader. We assume this area continues to decline as the company focuses on software.

## **H116 results: The group has returned to positive EBITDA**

H1 revenue jumped 16% y-o-y to CHF27.9m. EBITDA swung to CHF0.1m from a CHF6.3m loss in the prior period, which reflects management's planned actions to boost revenues while reducing costs. 37% of H1 revenues were generated from outside Switzerland, up from 32% in FY15 and 27% in FY14. This is set to move higher as ELAXY contributes to revenue from 1 January 2016. R&D costs were cut by a third to CHF6m from CHF4m in H115.

Licensing fees jumped by 18% to CHF11.9m (which we estimate c 55% are from maintenance fees). Services grew by 5%, while goods slipped by 13% and hosting/SaaS (MBA Systems acquired in early 2015) generated CHF1.7m against zero in the prior period.

Income from associates jumped to an impressive CHF571k, reflecting the group's 37% interest in Qontis, due to one-off effects and we do not expect this level of profitability to continue.

In H1 there was a cash outflow from operations after interest (CHF0.1m) and tax (zero) of CHF0.8m. Capex was neutral after a small asset disposal, and hence free cash outflow was CHF0.8m. After the granting of a loan (CHF0.4m), sale of short-term securities (CHF2.3m) and release from pension surplus (CHF0.4m), this turned to a CHF1.6m cash inflow. After the net purchase of treasury shares (CHF0.4m), convertible bond sale (CHF24.4m) and small exchange movement (CHF0.1m), the total cash position rose from CHF10.8m as at 30 June 2015 to CHF36.7m at the end of December. The debt component of the convertible bond is CHF24.0m,

leaving net cash of CHF12.7m. The acquisition of Elaxy group was settled after the period end (see Exhibit 5).

#### Exhibit 6: Half-by-half analysis

Half-by-Half Analysis	2015			2016e			2017e
	H1A	H2A	FY	H1A	H2F	FY	FY
Services	11,665	9,110	20,775	12,300	10,748	23,048	25,866
Goods	2,248	1,825	4,073	1,945	1,721	3,666	3,299
Hosting and SaaS services	0	1,462	1,462	1,720	3,080	4,800	8,700
Licensing fees	10,076	12,921	22,997	11,924	17,754	29,678	35,793
Total Revenue	23,989	25,318	49,307	27,889	33,303	61,192	73,658
Gross profit	17,398	19,619	37,017	22,316	27,217	49,533	60,897
Gross Margin	72.5%	77.5%	75.1%	80.0%	81.7%	80.9%	82.7%
Opex before depn & amortisation	(23,664)	(23,908)	(47,572)	(22,198)	(25,958)	(48,156)	(55,739)
Adjusted EBTDA	(6,266)	(4,289)	(10,555)	118	1,259	1,377	5,158
Depreciation	(588)	(672)	(1,260)	(630)	(670)	(1,300)	(1,200)
Adjusted operating profit	(6,854)	(4,961)	(11,815)	(512)	589	77	3,958
Operating Margin	(28.6%)	(19.6%)	(24.0%)	(1.8%)	1.8%	0.1%	5.4%
Associates	(374)	(463)	(837)	571	(71)	500	200
Net interest	166	(71)	95	(132)	(170)	(302)	(550)
Edison Profit Before Tax (norm)	(7,062)	(5,495)	(12,557)	(73)	348	275	3,608
Amortisation of acquired intangibles	(775)	(841)	(1,616)	(1,003)	(1,497)	(2,500)	(2,500)
Profit before tax (FRS 3)	(7,837)	(6,336)	(14,173)	(1,076)	(2,849)	(3,925)	1,108

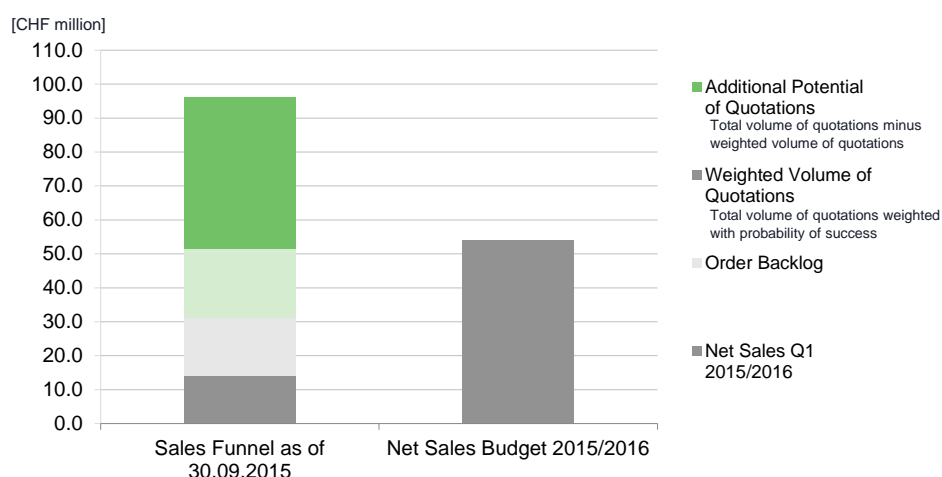
Source: CREALOGIX (historics), Edison Investment Research (forecasts)

#### Outlook: Underpinned by strong backlog and healthy pipeline

Management guidance is for revenue growth to exceed 20% in FY16 (including ELAXY), and it anticipates revenue growth to exceed 20% in the medium term. Product revenues are expected to generate 60% of group revenue in FY16 (50% in FY15) and to exceed 70% in the medium term. International revenues are expected to reach 40% in FY16 and 50% in the medium term. The EBITDA margin is expected to be positive in FY16 and exceed 10% in the medium term.

The near-term outlook is underpinned by a strong backlog, as well as the healthy pipeline, as shown in Exhibit 5. This outlook is significantly boosted by the ELAXY transaction that was effective from 1 January 2016.

#### Exhibit 7: FY16 revenues underpinned



Source: CREALOGIX. Note: Sales funnel includes the acquisition of ELAXY FS&S (Order Backlog, Weighted Volume and Additional Potential), while the Sales budget excludes ELAXY.

#### Forecasts: Potentially very conservative

We forecast revenues of CHF61.2m in FY16, which includes six months contribution from Elaxy FSS, rising by 20% to CHF73.7m in FY17 and by 9% to CHF80.1 in FY18. We forecast CHF1.4m

EBITDA in FY16, rising to CHF5.2m in FY17 and to CHF7.3m in FY18. Much of the near-term growth is from Elaxy, which we forecast will generate c CHF11m of revenues on an annualised basis. To illustrate this point, the group generated c CHF56m annualised in H116, adding Elaxy takes the number to CHF67m, and hence the group needs to generate organic growth of c 10% over 18 months to reach our FY17 revenue forecast of CHF74m.

We anticipate the growth to be led by licensing and hosting/SaaS revenue segments, with services growing at a slower pace and hardware sales to continue their recent decline. For FY16, we forecast licensing fees to jump 29% to CHF29.7m, hosting/SaaS to more than treble to CHF4.8m while services rise 11% to CHF23.0m and goods slip 10% to CHF3.7m.

We forecast operating costs (including depreciation) to rise 1% to CHF49.5m, as recent cost reductions are outweighed by the inclusion of ELAXY in H2. We note that CREALOGIX expenses all its R&D costs. This leaves the group with a modest adjusted operating margin of 0.1% in FY16. While margins are difficult to forecast, we are taking a conservative view, forecasting operating margins to rise to 5.4% in FY17 and to 7.7% in FY18 as the group scales up its international revenues.

Associates represent Qontis, which is very difficult to forecast, and ELAXY BSS from 1 January 2016, which we expect to generate c CHF0.2m on a full-year basis. We are conservatively forecasting a small loss in H2, given the difficulty in forecasting Qontis, to generate CHF0.5m for FY16, slipping back to CHF0.2m in FY17, which represents what we expect from ELAXY BSS.

Net interest includes the coupon on the convertible bond, which amounts to CHF594k per year.

Goodwill is amortised over five to 10 years under Swiss GAAP and we are forecasting amortisation of CHF2.5m in FY16.

We forecast a tax rate of 28% on normalised profits in FY16, easing to 27% in FY17 and to 26% in FY18.

The minority interest represents the 20% outstanding in ELAXY FSS which we anticipate will be acquired by CREALOGIX half way through FY18, ie, three years after the purchase date.

We are forecasting capital investment of CHF0.7m (1.2% of sales) in FY16, rising to 1.5% of sales thereafter. We forecast working capital reductions of 0.5% per year, representing the cash generating upfront licence and hosted SaaS revenues.

We are not forecasting any dividends before FY19.

**Exhibit 8: Forecasts**

(CHF000s)	2013	2014	2015	2016e	2017e	2018e
Revenues						
Services	22,352	21,966	20,775	23,048	25,866	24,210
Goods	6,359	4,229	4,073	3,666	3,299	2,969
Hosting and SaaS services	0	0	1,462	4,800	8,700	13,200
Licensing fees	20,562	23,918	22,997	29,678	35,793	39,710
Total Group revenues	49,273	50,113	49,307	61,192	73,658	80,089
Growth (%)		1.7	(1.6)	24.1	20.4	8.7
Gross profit	38,889	41,461	37,017	49,533	60,897	67,964
Gross margin(%)	78.9	82.7	75.1	80.9	82.7	84.9
Opex before depn & amortisation	(34,684)	(39,751)	(47,572)	(48,156)	(55,739)	(60,678)
EBITDA	4,205	1,710	(10,555)	1,377	5,158	7,285
Normal depreciation	(1,149)	(1,209)	(1,260)	(1,300)	(1,200)	(1,100)
Adjusted operating profit	3,056	501	(11,815)	77	3,958	6,185
Operating margin (%)	6.20	1.00	(23.96)	0.13	5.37	7.72
Growth (%)		(83.6)	(2,458.3)	(100.7)	5,019.2	56.3
Associates	(3)	(915)	(837)	500	200	250
Net interest	162	168	95	(302)	(550)	(500)
Profit before tax norm	3,215	(246)	(12,557)	275	3,608	5,935
Amortisation of acquired intangibles	0	(1,609)	(1,616)	(2,500)	(2,500)	(2,500)
Exceptional items (net of tax)	0	0	0	(1,700)	0	0
Profit before tax	3,215	(1,855)	(14,173)	(3,925)	1,108	3,435
Taxation	(663)	331	3,899	63	(920)	(1,478)
Minority interest	0	0	0	(200)	(241)	(131)
Net income	2,552	(1,524)	(10,274)	(4,062)	(53)	1,826
Adjusted EPS (CHF)	2.41	0.08	(8.13)	0.13	2.31	4.08
P/E - Adjusted EPS (x)	40.3	1,208.3	N/A	743.4	42.0	23.8

Source: CREALOGIX (historics), Edison Investment Research (forecasts)

## Sensitivities: Fintech is a swiftly evolving space

We highlight the following sensitivities:

- Economic slowdown – an economic downturn could slow investment in competing fintechs (eg, areas such as peer-to-peer lending and crowd sourcing) and consequently slow the pace of change in CREALOGIX's traditional banking sector customer base.
- Competitive environment – there is a risk that nimble fintechs and challenger banks will make a bigger inroad into the traditional banking sector over the longer term. Mergers in the traditional banking sector could reduce the potential customer base. Major back-end software vendors and ERP providers could take a more active approach in the front-end while specialist direct competitors could develop superior solutions or more attractive business models.
- Customer/currency concentration – the group has a high exposure to Swiss-based banks and the Swiss currency. However, this is gradually being diversified as the group broadens its customer base internationally. CREALOGIX is not overly exposed to any particular company.
- Acquisition risk – there is implementation/integration risk in the acquisition strategy and increasing currency risk as the company expands abroad. We note the Elaxy group acquisition is very significant and the impact on the business is difficult to assess.
- Low free float – this means there is liquidity risk for investors.

## Valuation: Heavily invested high growth fintech

CREALOGIX has established a strong track record of delivering software solutions to the banking industry in Switzerland through its established operations and it is now transitioning the business to the international markets. If management can successfully execute on the strategy, we believe

there is significant potential upside in the shares for investors. We believe there are several reasons why it should generate stronger margins in the medium term than it has done historically, assuming the group does successfully execute its expansion strategy:

- the benefits from economies of scale created by the acquisitions;
- the group has a much stronger focus than was the case historically, on the financial services sector;
- a broader solution suite and increased opportunities for cross-selling;
- the solution suite consists of more off-the-shelf solutions, which are higher margin, and high-margin product is expected to represent a higher percentage of revenues; and
- making greater use of cost-effective near/far shore sites for R&D and delivery.

We highlight the following points on the group's valuation:

- **Traditional P/E valuation:** the stock trades on 743x our earnings forecasts in FY16, falling to 42.0x in FY17 and to 23.8x in FY18. These numbers are above its peers (see Exhibit 11), reflecting the fact the business is now moving out of losses, in anticipation of revenue growth in wake of a period of heavy investment. A more standard 10% operating margin on the same revenues would reduce the FY16 PE to c 23x, FY17 to c 21x and FY18 to c 18x.
- **Cash flow:** We forecast a CHF1.4m free cash outflow in FY16 swinging to CHF3.4m inflow in FY17, and rising to CHF5.0m in FY18.

#### Exhibit 9: Cash flow

CHF000s	FY13	FY14	FY15	FY16e	FY17e	FY18e
Adjusted operating profit	3,056	501	(11,815)	77	3,958	6,165
Depreciation	1,149	1,209	1,260	1,300	1,200	1,100
Adjusted EBITDA	4,205	1,710	(10,555)	1,377	5,158	7,285
Working capital	(3,221)	3,952	3,036	305	369	400
Pension	(103)	(228)	1,635	0	0	0
Provisions	0	0	1,444	0	0	0
Exceptional items/misc	6	83	(63)	(1,700)	0	0
Op cash flow	887	5,517	(4,503)	(17)	5,527	7,685
Net interest	60	34	91	(302)	(550)	(500)
Tax paid	(232)	(293)	(269)	(300)	(500)	(938)
Purchase of tangible assets	(1,391)	(859)	(1,018)	(734)	(1,105)	(1,201)
Free cash flow	(676)	4,399	(5,699)	(1,353)	3,372	5,046

Source: CREALOGIX (historics), Edison Investment Research (forecasts)

- **Discounted cash flow valuation:** based on our forecasts, along with conservative medium-term revenue growth assumptions (averaging c 9.6% organic CAGR over 10 years, which includes 9.4% CAGR in the seven years beyond the forecast period), a long-term margin target of 15%, a 2% terminal growth rate and a weighted average cost of capital (WACC) of 9%, our DCF model values the shares at CHF168, 74% above the current share price. In calculating this number, we have included the dilution impact from exercising the convertible bonds and reversed them from the adjusted net debt, which in aggregate reduces the valuation by 9% from CHF184. We have conservatively ignored the CHF0.66m pension fund surplus in our DCF calculation.
- **DCF scenario analysis.** In Exhibit 10, we show the sensitivity of valuations to changes in WACCs, margins and growth assumptions. Starting from our base scenario (10% total net sales revenue growth), a WACC of 9% and operating margin of 15%, the table shows that a 5% increase in the margin assumption increases the valuation by 31% from CHF168 to CHF220, while a 5% rise in the growth assumption increases the valuation by 70% to CHF287, and a 1% reduction in the WACC boosts the valuation by 21% to CHF203.

**Exhibit 10: DCF scenario analysis**

		WACC 8%			WACC 9%			WACC 10%		
		Long-term operating margin targets*								
Revenue scenarios (see notes below)		10.0%	15.0%	20.0%	10.0%	15.0%	20.0%	10.0%	15.0%	20.0%
	Out-performance	CHF239.7	CHF351.0	CHF462.2	CHF196.1	CHF286.5	CHF377.0	CHF164.2	CHF239.4	CHF314.6
	Base scenario	CHF140.0	CHF203.1	CHF266.3	CHF116.3	CHF168.3	CHF220.2	CHF98.9	CHF142.6	CHF186.2
	Under-performance	CHF91.9	CHF131.0	CHF170.7	CHF77.3	CHF109.6	CHF142.5	CHF66.5	CHF93.8	CHF121.7
Revenue scenarios as follows:										
Out-performance		Out-performance. Compound group Net Sales Revenue growth of 15% over FY15-FY25, fading thereafter to 2%.								
Base Scenario		Compound group Net Sales Revenue growth of 10% over FY15-FY25 and growth fading thereafter to 2%.								
Under-performance		Compound group Net Sales Revenue growth of 5% over FY15-FY25, fading thereafter to 2%.								
Source: Edison Investment Research. *Note. Tapered up to the target in year seven.										

- **Peer comparison:** The stock generally trades at a significant premium to most of its peers, which reflects the fact it is moving out of a loss-making period and has potentially very strong growth prospects. A more standard 10% operating margin would reduce the FY17 P/E to 20.8x. We note that along with CREALOGIX there are just two other IT stocks quoted on the Swiss Stock Exchange – Temenos and Kudelski.

**Exhibit 11: Peers**

	Share price	Market cap	Market cap	EV/sales		EBITDA margins		EV/EBITDA		PE	
	Local curr	Local curr m's	CHF's m's	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
CREALOGIX	96.90	103	103	1.8	1.5	2.3%	7.0%	82.1	21.9	743.4	42.0
A) Large, diverse, banking software suppliers											
FIS	75.14	24,530	23654	3.7	3.6	30.5%	31.6%	12.3	11.3	19.8	17.2
Infosys	18.23	41,873	40378	3.5	3.1	27.5%	27.8%	12.7	11.3	18.8	16.9
Sopra Steria	114.55	2,342	2542	0.8	0.7	9.1%	9.8%	8.5	7.5	13.9	11.8
Temenos	56.35	3,917	3917	7.1	6.5	36.0%	37.0%	19.8	17.6	29.0	24.9
Iress	12.19	1,964	1397	5.3	4.9	30.5%	31.3%	17.4	15.6	26.5	22.9
Medians				3.7	3.6	30.5%	31.3%	12.7	11.3	19.8	17.2
B) European banking-related fintech peers											
FinTech Group	15.20	255	277	N/A	N/A	23.7%	39.7%	N/A	N/A	27.6	12.3
First Derivatives	2000	485	667	3.7	3.4	19.7%	20.0%	19.0	17.1	35.2	32.5
GFT	1994	525	570	1.4	1.3	11.8%	11.8%	11.6	10.5	16.4	15.6
Sopra Steria	114.6	2342	2542	0.8	0.7	9.1%	9.8%	8.5	7.6	14.0	11.9
Tecnocom	1,510	113	123	0.3	0.3	6.3%	7.6%	5.9	5.5	31.9	14.6
Temenos	56.35	3,917	3917	7.1	6.5	36.0%	37.0%	19.8	17.6	29.0	24.9
Medians				1.4	1.3	15.8%	15.9%	11.6	10.5	28.3	15.1
C) Quoted Swiss IT companies											
Kudelski	19.40	1052	1052	1.2	1.1	12.8%	13.0%	9.4	8.9	18.4	16.6
Temenos	56.35	3,917	3917	7.1	6.5	36.0%	37.0%	19.8	17.6	29.0	24.9
Medians				4.2	3.8	24.4%	25.0%	14.6	13.2	23.7	20.7

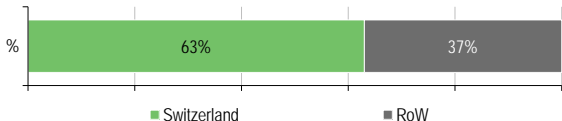
Source: Edison Investment Research forecasts (CREALOGIX and GFT), Bloomberg consensus data (all other companies). Note: Prices at 9 June 2016.



**Exhibit 12: Financial summary**

	CHF000s	2013	2014	2015	2016e	2017e	2018e
Year end 30 June		Swiss GAAP	Swiss GAAP	Swiss GAAP	Swiss GAAP	Swiss GAAP	Swiss GAAP
<b>PROFIT &amp; LOSS</b>							
Revenue		49,273	50,113	49,307	61,192	73,658	80,089
Gross Profit		38,889	41,461	37,017	49,533	60,897	67,964
EBITDA		4,205	1,710	(10,555)	1,377	5,158	7,285
Adjusted Operating Profit		3,056	501	(11,815)	77	3,958	6,185
Amortisation of acquired intangibles		0	(1,609)	(1,616)	(2,500)	(2,500)	(2,500)
Exceptionals		0	0	0	(1,700)	0	0
Associates		(3)	(915)	(837)	500	200	250
Operating Profit		3,053	(2,023)	(14,268)	(3,623)	1,658	3,935
Net Interest		162	168	95	(302)	(550)	(500)
Profit Before Tax (norm)		3,215	(246)	(12,557)	275	3,608	5,935
Profit Before Tax (Statutory)		3,215	(1,855)	(14,173)	(3,925)	1,108	3,435
Tax		(663)	331	3,899	63	(920)	(1,478)
Profit After Tax (norm)		2,552	85	(8,658)	338	2,688	4,457
Profit After Tax (Statutory)		2,552	(1,524)	(10,274)	(3,862)	188	1,957
Minority interest		0	0	0	(200)	(241)	(131)
Net income (norm)		2,552	85	(8,658)	138	2,447	4,326
Net income (Statutory)		2,552	(1,524)	(10,274)	(4,062)	(53)	1,826
Average Number of Shares Outstanding (m)		1.06	1.06	1.06	1.06	1.06	1.06
EPS - normalised (CHF)		2.41	0.08	(8.13)	0.13	2.31	4.08
EPS - Statutory (CHF)		2.41	(1.44)	(9.65)	(3.83)	(0.05)	1.72
Dividend per share (CHF)		0.00	0.00	0.00	0.00	0.00	0.00
Gross Margin (%)		78.9	82.7	75.1	80.9	82.7	84.9
EBITDA Margin (%)		8.5	3.4	(21.4)	2.3	7.0	9.1
Op Margin (before GW and except.) (%)		6.2	1.0	(24.0)	0.1	5.4	7.7
<b>BALANCE SHEET</b>							
Fixed Assets		6,874	14,865	20,371	28,305	25,710	23,312
Intangible assets and deferred tax		2,388	6,169	14,115	22,615	20,115	17,615
Tangible Assets		1,951	1,841	1,869	1,303	1,208	1,310
Investments & pensions		2,535	6,855	4,387	4,387	4,387	4,387
Current Assets		43,085	40,273	28,217	42,447	49,632	51,361
Stocks		4,330	3,563	3,447	4,278	5,149	5,599
Debtors		12,226	12,424	11,633	14,437	17,378	18,895
Cash		24,101	21,724	10,815	23,733	27,104	26,866
Current Liabilities		(12,215)	(15,367)	(19,183)	(23,124)	(27,306)	(29,673)
Creditors		(12,215)	(15,367)	(19,183)	(23,124)	(27,306)	(29,673)
Short term borrowings		0	0	0	0	0	0
Long Term Liabilities		(1,157)	(1,350)	(2,723)	(27,223)	(27,223)	(24,593)
Long term borrowings		0	0	0	(24,500)	(24,500)	(24,500)
Other long term liabilities		(1,157)	(1,350)	(2,723)	(2,723)	(2,723)	(93)
Net Assets		36,587	38,421	26,682	20,406	20,814	20,406
<b>CASH FLOW</b>							
Operating Cash Flow		887	5,517	(4,503)	(17)	5,527	7,685
Net Interest		60	34	91	(302)	(550)	(500)
Tax		(232)	(293)	(269)	(300)	(500)	(938)
Capex		(1,391)	(859)	(1,018)	(734)	(1,105)	(1,201)
Acquisitions/disposals		(1,554)	(253)	(4,158)	(12,210)	0	(2,654)
Financing		(3,009)	(6,515)	(1,201)	1,981	0	0
Dividends		0	0	0	0	0	0
Net Cash Flow		(5,239)	(2,369)	(11,058)	(11,582)	3,372	2,392
Opening net debt/(cash)		(29,297)	(24,101)	(21,724)	(10,815)	767	(2,604)
Other		43	(8)	149	0	0	0
Closing net debt/(cash)		(24,101)	(21,724)	(10,815)	767	(2,604)	(4,996)

Source: CREALOGIX (historics), Edison Investment Research (forecasts). Note: The FY16 outflow represents the Elaxy group acquisition (we assume the outstanding shares are acquired in FY19 at the same price) and the FY18 outflow represents the outstanding acquisition liabilities for MBA Systems.

Contact details	Revenue by geography (H116)
Baslerstrasse 60 8048 Zurich Switzerland +41 58 404 8000 www.crealogix.com	
Management team	
<b>Chief executive officer: Thomas Avedik</b> Mr Avedik joined the group as CEO of CREALOGIX E-Banking in mid-2007 and took on the role of CEO at the beginning of 2016. Mr Avedik began his professional career with UBS where he managed the digital transformation for 16 years, broadly involving the development and expansion of e-banking. Other projects included the launch of the UBS market data system, the design and implementation of an e-banking security solution as well as the development of the global e-banking strategy for UBS.	<b>Chief financial officer: Rolf Lichtin</b> Mr Lichtin joined the group in September 2013 as CFO. Prior to CREALOGIX, Mr Lichtin was CFO at Trivadis Holdings, a Zürich-based IT company. Before that, he served in various management positions at Siemens Schweiz over 19 years. He was CFO of Siemens IT Solutions and Services AG and Atos IT Solutions and Services AG over 2009-12.
<b>Chief strategy officer: Richard Dratva</b> Richard Dratva is a founding member of CREALOGIX. Prior to CREALOGIX, Mr Dratva worked as a consultant with Teleinform. From 1992 to 1994, he was engaged as a research associate at the Institute of Information Management at the University of St. Gallen. From 1987 to 1991 Mr Dratva was employed as an internal consultant with the Swiss Bank Corporation (now UBS).	<b>Executive chairman: Bruno Richle</b> Mr Richle was a founding member of CREALOGIX in 1996 and led the group through its IPO on the Swiss Exchange SWX in 2000. He retired as CEO at the end of 2015. From 1990 to 1996, he was a member of the executive management and technical director with Teleinform, which at that time was the leading Swiss telematics company. From 1985 to 1989 Mr Richle was employed at the Bühle Group, and from 1986 was head of the department of Electronic Engineering with Oerlikon Aerospace (then part of Bühle Group) in Montreal, Canada. Mr Richle is also a director of Yachtwerft Portier and Elektrizitätswerk Jona-Rapperswil. He holds a foundation board mandate at Foundation FUTUR and Innovation Foundation of the Bank of Canton Schwyz and is a member of the Hochschulrat der Hochschule für Technik in Rapperswil (HSR).
Principal shareholders	(%)
Richard Dratva	24.20
Bruno Richle	23.78
Daniel Hillebrand	15.49
Peter Susstrunk	6.60
Noser Management	3.93
Companies named in this report	
FinTech Group, First Derivatives, FIS, GFT, Infosys, Iress, Kudelski, Sopra Steria, Tecnomcom, Temenos	

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