

# Crunchfish AB

## Mixed picture in India with a rights issue pressing closer

Andreas Eriksson | 2023-08-31 11:00

**In June, Crunchfish signed its first breakthrough commercial order for Digital Cash Offline, with Indian IDFC Bank. But the Q2 report left several questions unanswered, most notably the prolonged negotiations with HDFC Bank, the expired MoU with Socio, and the acquisition of an Indian payment platform company that did not materialize. Combined with a dwindling cash reserve, this has put pressure on the stock price. While we see a fundamental value in Crunchfish's solution, well above today's price, a recovery hinges on improved clarity about the near to mid-term outlook, especially financing, lest the Company makes quick commercial progress in the breakthrough order with IDFC.**

### Mixed development

The highlight of the second quarterly report of 2023 was for sure the first commercial agreement with IDFC First Bank, that together with HDFC Bank took part in the pilot overseen by the Indian central bank (RBI) earlier this year. Even though details have not been disclosed, the fact that the company has secured a loan of SEK 7.5m and is looking to bring in new capital, leaves us assuming the upfront payment won't cover Crunchfish's cost base, as was previously expected. The deal does however give Crunchfish access to the Indian direct payment system (UPI), which is crucial for approaching customers in the form of payment solution providers. The prolonged negotiations with HDFC Bank, however, are worrisome. While we had hoped for a firm deal soon, the process has now been put on hold due to HDCF Bank integrating an acquisition.

On a brighter note, Apple unveiled its mixed reality headset, Vision Pro, for release in early 2024. Historically, it often takes a tech giant like Apple or Samsung to launch a product in a burgeoning niche for it to truly gain traction. Once they pave the way, smaller manufacturers, some of whom Crunchfish has collaborated with for Gesture Interaction, tend to follow suit.

### Cash position running dry

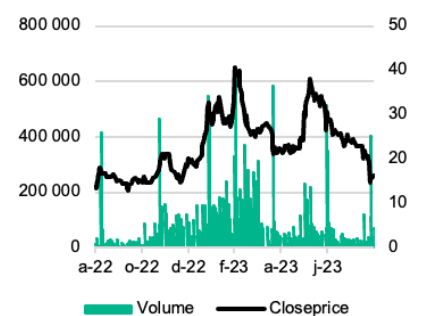
With the prolonged negotiations with HDFC Bank and a lower expected initial deal value with IDFC First Bank, Crunchfish now finds itself in a tighter financial position. The MoU with Danish Socio, for them to acquire three million shares at market price, has once again expired. We now see few other options besides a rights issue, which should amount to at least SEK 40m. A SEK 40m rights issue at today's share price of SEK 16.20, at a 30% discount, would add another 1,7 million new shares, corresponding to a 5% dilution.

### Slight adjustment to anticipated rollout-pace

Given the prolonged negotiation with HDFC Bank, the sparse details on the commercial agreement with IDFC Bank and a rights issue before year end being the most likely scenario, we've made some changes to our estimates. Our new estimated implementation rate for Digital Cash Offline at 10%-25%-50%-85% (25%-50%-75%-100%) among the banks and platform service providers customers, means that 60 million users will be implemented by 2026, in turn suggesting annual sales of SEK 179m based on a per-user-model of SEK 3 per user. In our combined risk adjusted DCF- and target multiple valuation approach this support a fair value of SEK 21 – 29 (SEK 48 – 63) per share, including the dilution from an upcoming rights issue of SEK 40m at 30% discount. All in all, the long-term case remains intact. India alone poses immense potential, but at this stage, the share price development hinges on improved clarity on the near to mid-term outlook.

### Crunchfish

Fair Value, SEK	21 - 29
Current Price, SEK	16,20
Shares (M)	33,0
Market Capitalisation (MSEK)	535
Net Cash (MSEK)	9,6
Enterprise Value (MSEK)	545
Market	First North



## Financial Summary

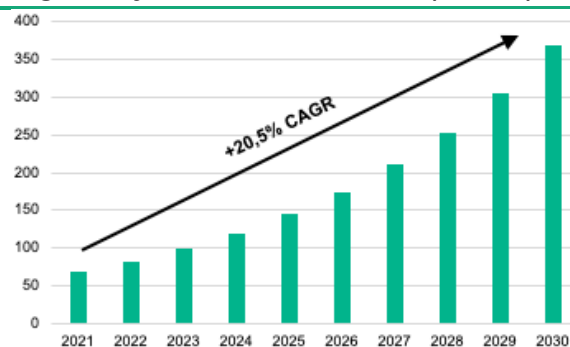
MSEK	2020	2021	2022	2023E	2024E
Revenue	11	4	6	2	30
EBITDA	-18	-29	-18	-26	-20
EBIT	-25	-37	-24	-33	-26
EPS Adjusted	-0,89	-1,24	-0,73	-0,95	-0,76
Sales Growth, %	-	-64%	56%	-76%	1900%
EBITDA Margin, %	-161%	-738%	-293%	-1763%	-65%
EBIT Margin, %	-232%	-932%	-392%	-2184%	-87%
EV/Sales	68,1	187,3	102,1	421,2	21,1
EV/EBITDA	-42,2	-25,4	-34,9	-23,9	-32,3
EV/EBIT	-29,4	-20,1	-26,1	-19,3	-24,2
P/E	-17,9	-20,1	-27,5	-17,1	-21,4

Source: Emergers

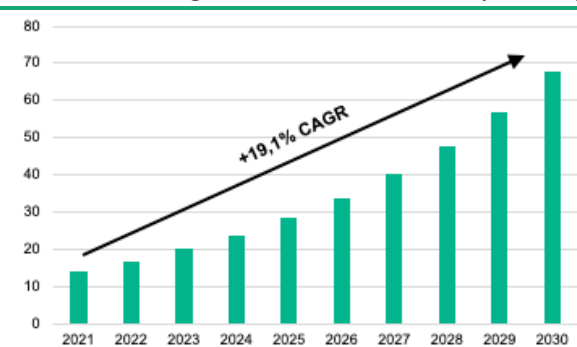
### Crunchfish in brief

Crunchfish is a deep tech company founded in 2010. With an initial focus on developing applications for smartphones, and a soon realized expertise in gesture recognition, the journey towards commercializing the technology began. Today Crunchfish is based on two business verticals, Digital Cash (DC) and Gesture Interactions (GI), where the company is addressing two global markets in rapid growth.

#### Digital Payments Market Growth (USDbn)



#### Gesture Recognition Market Growth (USDbn)



Source: Grandviewresearch, Emergers

## Addressing growing problems on a global scale

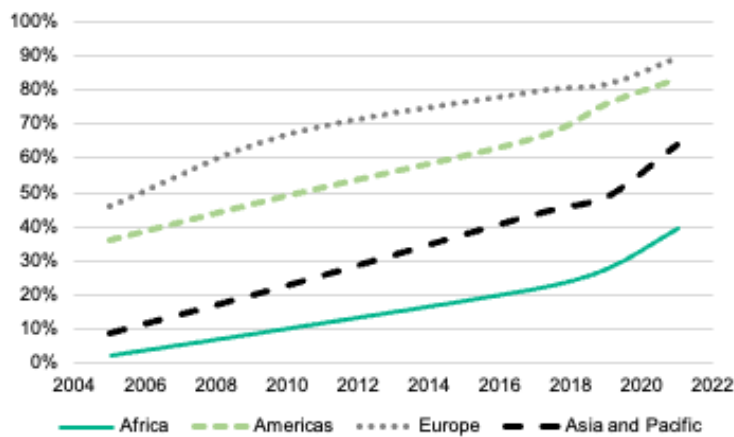
### Offline digital payments

Even though internet connectivity is good throughout the developed world, it doesn't work everywhere, all the time. Payment rails, built on circuit-switched systems, only works if everything else supporting it works, making modern societies vulnerable to IT-attacks, system failures or even just downtime maintenance.

Connectivity in general is a major concern in other parts of the world. In India for example, only about 50% of the 1,4 billion citizens enjoy a stable connection. The same goes for a country like Nigeria, where 70% of the population lives without solid internet connection.

As internet connectivity varies a lot between regions, systems are prone to downtime, and internet connection has become a vital part of existing payment infrastructure, this adds up to a problem in urgent need of a solution. Despite the poor connectivity, India is the supreme leader in real-time payments, where over 74 billion transactions were made through UPI (India's version of Swish) in 2022 alone. This compares to the 4 billion transactions that has been made on Swedish Swish since the service launched in 2012.

## Internet penetration by region (% of population)



Source: International Telecommunication Union, Emergers

### Digital Cash

Crunchfish's main philosophy with regards to their vision to augment payments is to clearly separate the three steps of payments: reserve, pay and settle. There are two general reasons why payments fail today: no internet access and disruptions in banks' backend.

#### Digital Cash Online

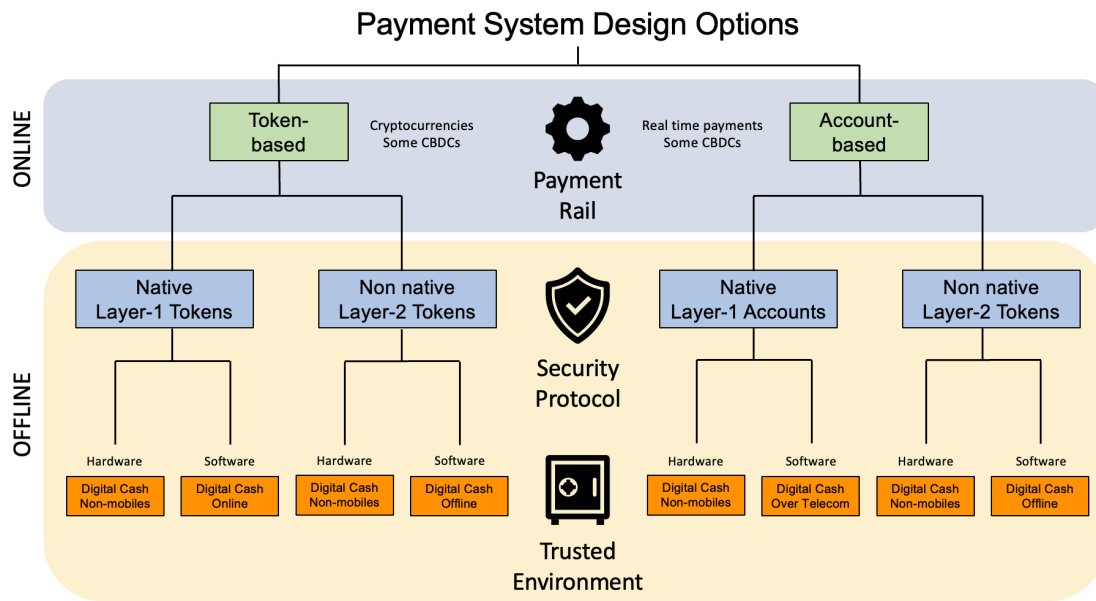
The primary area of usage for DC Online is to unload the massive core banking systems that are handling our bank accounts today and provide a safety net so that we can make payments, regardless of whether the banks are having issues or not. The technology can be compared to the one used by cryptocurrencies, where additional layers of payment rails were created to increase transaction speed and capacity.

#### Digital Cash Offline

DC Offline addresses both the lack of internet access as well as the issues of backend disruptions. Crunchfish's platform can ensure that users are able to pay in proximity in full offline mode or over the telecom network, rather than internet. By separating settlement from the other two steps, reserve and pay, Crunchfish guarantees successful payments in proximity or over the telecom network.

Potential customers include Central Banks, commercial banks and payment service providers such as Amazon Pay, Google Pay and PhonePe. Right now, Crunchfish is doing a pilot project with Indian HDFC bank and another undisclosed bank, which is overseen by the Indian Central Bank, RBI. The pilot is expected to last through Q1'23, and assuming a positive result, a first firm deal with HDFC shouldn't be too far away.

## Payment System Design Options



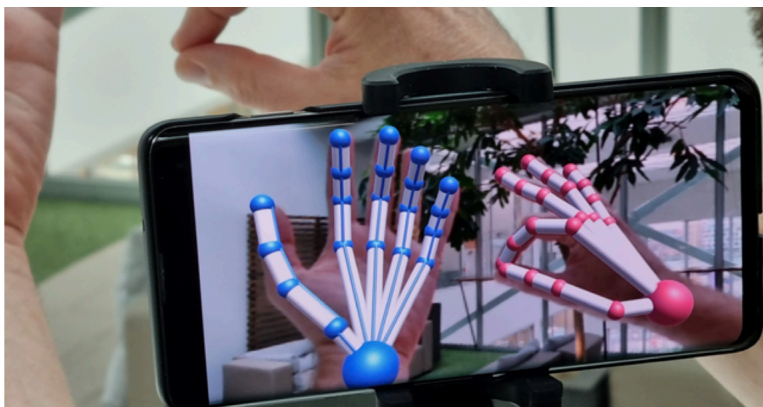
Source: Lipis Advisors, Emergers

## Gesture interaction

### Crunchfish Skeleton Platform

Crunchfish has an AI technology with an ability to detect and track both hand and body movement with extreme accuracy, making it suitable for consumer electronics (AR/VR) as well as for the automotive industry considering the new regulatory landscape. The platform tracks 21 detection points of each hand (in total 42 points simultaneously), creating a skeletal image. Today the platform consists of three different products, listed below, as well as camera rigs, neural networks and processes to create synthetic data.

## Crunchfish Gesture Interaction



Source: Crunchfish

## Forecasting an unproven business model

### Digital Cash Offline

While the tech itself has a proven track record in test surroundings, and we believe that the need for Crunchfish's Digital Cash solution is global and in high demand, it is still an unproven business model. This means we can only speculate how, who and in what way Crunchfish will charge for their platform. To quantify and estimate future revenues we have made the following assumptions in our **Base Case**:

- A model of yearly fees based on SEK 3 per user paid by the bank/payment solution provider
- Three sets of counterparts i.e. banks or payment solution providers with an average of 20/10/5 million users per counterpart
- A step-wise rollout of 10%/25%/50%/85% of the bank/payment solution providers users
- This means that these deals and the rollout will likely be made in tranches where the bank buys a license for part of its retail customers.

With the assumption that Crunchfish manages to land a deal with HDFC Bank in 2023, and a rollout to one (1) big client, two (2) medium clients and two (2) small clients per year starting in 2024, this would amount to sales of SEK 179m in 2026 from DC Offline alone.

### **IDFC First Bank Commercial Agreement**

On the 29<sup>th</sup> of June 2023 Crunchfish signed their first commercial agreement for its Digital Cash Offline-solution with IDFC First Bank. The first release to the bank's customers is planned for late Q3, and the initial use case will be to enable offline UPI payments.

The 3-year license includes a first trench of users, out of a maximum of seven. Should IDFC Bank decide they want to offer the service to more of its customers, additional licenses will have to be purchased.

### **Gesture Interaction**

We believe that the single most important trigger for Crunchfish's GI-vertical to kick in is for major players like Apple or Samsung to release their first line of AR/VR-products. This would create ripple effects across the industry where companies like Lenovo, Oppo etc. would follow suit, which would benefit Crunchfish as a sub-supplier to the Tier-2 and Tier-3 players. According to Bloomberg, Apple's AR-glasses will be released in 2024 or early 2025.

Based on the most recent USD 500k-deal signed with OPPO, that covered only a small portion of Crunchfish's tech, there's reason to believe that sales will kick off once the AR/VR-industry is at a stage where Crunchfish's tech goes from a "nice to have" to a "need to have".

We have therefore estimated a ramp-up from SEK 5m sales in 2023, to SEK 20m by 2025. We see a similar potential for the Automotive vertical, where the regulatory changes will drive a significant increase in demand. While Crunchfish is well on their way, the implementation of their tech is still a bit too far away to include a meaningful scale-up in our model now.

### **SaaS business model with high scalability**

As both of Crunchfish's verticals are fully based on software, the business is highly scalable by nature with high margins. With OPEX at about SEK 35-40m per year (which the company expects to keep intact going forward), future profitability will be high.

## Valuation

In our DCF-model we use a discount factor (WACC) of 20% to take into account the high uncertainty regarding all future cash flows. With estimated sales of SEK 30m in 2024E, to reach SEK 179m in 2026E, our DCF indicates a Market Cap of SEK 1.17bn. With the application of a 60% probability-factor in our DCF, we find support for a fair value of SEK 21 per share. A heavily discounted target multiple of 9x EBITDA'26 compared to sector peers, supports a fair value of SEK 29 per share.

## Risks

**Unproven business model:** Even though one Digital Cash commercial deal has been signed, the business model, earning capacity and rollout-pace are still highly uncertain.

**Addressing a slow-moving market:** Crunchfish's business is focused on critical financial infrastructure such as payment systems. We believe that even though the technology works, an investor needs to keep in mind that these institutions are slow to change and that a rollout might take longer than expected.

## Corporate Governance

**CEO of Crunchfish AB** Joachim Samuelsson has a Master of Science in industrial Engineering and Management from Linköping University. As a serial entrepreneur since 1996, Samuelsson has had successful engagements in ComOpt Ab, Actix Ltd and Biomain AB. Before that Samuelsson worked several years for Ericsson in international technical and marketing roles.

**Chairman of the board** Göran Linder has a Master of Science in Engineering from KTH Royal Institute of Technology in Stockholm. Linder also serves as CEO of Corespring New Technology AB and serves on the board in Powercell AB, Promore Pharma AB, Minesto AB and QCG Sweden AB.

**COO of Crunchfish AB and CEO of Crunchfish Gesture Interaction AB** Joakim Nydemark has a Master of Science in Electrical Engineering from Lund University, with more than 20 years of experience from organizational development and sales as both CEO and executive sales roles.

**CEO of Crunchfish Digital Cash AB** Patrik Lindeberg has a Master of Science in Electrical Engineering from Lund University and National University of Singapore, bringing experience in commercial and technical areas of responsibility.

**Founder and CTO** Paul Cronholm has a master's degree in theoretical physics from Lund University within the field of complex computer simulations. Cronholm has more than 15 years of experience as a senior software designer and project manager in various projects to implement mobile internet around WAP, 3G and DVB-H.

## Crunchfish

### Income Statement

MSEK	2020	2021	2022	2023E	2024E
Sales	10,9	4,0	6,2	1,5	30,0
Operating Costs	-40,5	-39,8	-44,6	-51,2	-58,9
EBITDA	-17,6	-29,2	-18,1	-26,4	-19,6
Depreciation	-7,7	-7,7	-6,1	-6,3	-6,5
Amortisation of Goodwill	0,0	0,0	0,0	0,0	0,0
EBIT	-25,2	-36,9	-24,3	-32,8	-26,1
Non-recurring Items	0,0	0,0	0,0	0,0	0,0
Associated Companies	0,0	0,0	0,0	0,0	0,0
Net Financial Items	-0,1	-1,6	0,2	-0,3	-0,3
<b>Pre-tax Result</b>	<b>-25,3</b>	<b>-38,5</b>	<b>-24,0</b>	<b>-33,0</b>	<b>-26,3</b>
Tax	0,0	0,0	0,0	0,0	0,0
Minority Interest	0,0	0,0	0,0	0,0	0,0
<b>Net Result</b>	<b>-25,3</b>	<b>-38,5</b>	<b>-24,0</b>	<b>-33,0</b>	<b>-26,3</b>

### Capital Expenditure

	2020	2021	2022	2023E	2024E
Capital Expenditure, Absolute	15,1	15,8	13,6	0,1	1,5
As a Pct of Sales	139,2	400,3	220,1	5,0	5,0
Depreciation Multiple	2,0	2,1	2,2	0,0	0,2

### Key Ratios

Share Price: SEK 16,20

	2020	2021	2022	2023E	2024E
Share Price at 31 Dec	16,0	25,00	20,00	16,20	16,20
Number of Shares (Millions)	28,35	30,93	33,04	34,77	34,77
Market Cap	453,6	773,1	660,8	563,2	563,2
Enterprise Value	453,6	740,9	631,9	561,1	582,4
EPS (Reported)	-0,89	-1,24	-0,73	-0,95	-0,76
EPS (Adjusted)	-0,89	-1,24	-0,73	-0,95	-0,76
CEPS	-0,89	-1,24	-0,73	-0,95	-0,76
P/CEPS	n.a.	n.a.	n.a.	n.a.	n.a.
Book Value/Share	1,2	1,8	1,8	0,7	0,0
P/BV	13,0	13,8	11,2	21,9	-973,0
Dividend	0,00	0,00	0,00	0,00	0,00
Dividend Yield (%)	0,0	0,0	0,0	0,0	0,0
Dividend Payout Ratio (%)	0,0	0,0	0,0	0,0	0,0
EV/Sales	68,1	187,3	102,1	421,2	21,1
EV/EBITDA	-42,2	-25,4	-34,9	-23,9	-32,3
EV/EBIT	-29,4	-20,1	-26,1	-19,3	-24,2
P/E (Adjusted)	-17,9	-20,1	-27,5	-17,1	-21,4
Sales Growth, Y/Y (%)	-	-63,6	56,4	-75,8	1900,0
EBIT Growth, Y/Y (%)	-	46,2	-34,2	35,1	-20,4
EPS Growth (Adjusted), Y/Y (%)	-	39,2	-41,5	30,6	-20,2
EBITDA Margin (%)	-161,3	-738,2	-292,8	-1763,0	-65,2
EBIT Margin (%)	-231,7	-931,8	-392,0	-2184,5	-86,9
Return on Equity (%)	-	-84,8	-41,9	-78,1	-209,2
Tax Rate (%)	0,0	0,0	0,0	0,0	0,0

### Financial Position

	2020	2021	2022	2023E	2024E
Interest-Bearing Net Debt	0	-32	-29	-2	19
Net Debt/Equity	0,0	-0,6	-0,5	-0,1	-33,1
Equity Ratio	0,8	0,9	0,9	1,0	0,0
Net Debt/EBITDA	0,0	1,1	1,6	0,1	-1,0

Source: Emergers, Company reports

## Disclaimer

### General disclaimer and copyright

This material is not intended to be financial advice. This material has been commissioned by the Company in question and prepared and issued by Emergers, in consideration of a fee payable by the Company. Emergers standard fees are SEK 240 000 pa for the production and broad dissemination of a detailed note following by regular update notes. Fees are paid upfront in cash without recourse. Emergers may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

**Accuracy of content:** All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained herein represent those of the research analyst at Emergers at the time of publication. The company has been given the opportunity to influence factual statements before publication, but forecasts, conclusions and valuation reasoning are Emergers' own. Forward-looking information or statements contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

**Exclusion of Liability:** To the fullest extent allowed by law, Emergers shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out of or in connection with the access to, use of or reliance on any information contained in this material.

**No personalised advice:** The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Emergers's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in this material may not be eligible for sale in all jurisdictions or to certain categories of investors. Investors are encouraged to seek additional information as well as consult a financial advisor prior to any investment decision.

**Investment in securities mentioned:** Emergers has a restrictive policy relating to personal dealing and conflicts of interest. Emergers does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Emergers may have a position in any or related securities mentioned in this report, subject to Emergers' policies on personal dealing and conflicts of interest.

Copyright: Copyright 2021 Incirrata AB (Emergers)

### United Kingdom

This document is prepared and provided by Emergers for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

### United States

Emergers relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Emergers does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

---

Johan Widmark | Tel: +46739196641 | Mail: johan@emergers.se  
Andreas Eriksson | Tel: +46737307335 | Mail: andreas@emergers.se

---

Emergers  
Incirrata AB  
Enbacken 16  
187 44 Täby  
Sweden

Phone: 0739 – 19 66 41  
Email: johan@emergers.se  
Corp reg no: 556815-7837