

Crunchfish AB

Strong outlook to make 2023 a breakthrough year

Andreas Eriksson & Johan Widmark | 2023-05-09 08:00

After an eventful 2022, Crunchfish looks to make 2023 the year where things take off. With one of the two Indian banks in the ongoing pilot already offering Crunchfish's offline payment solution (Crunchfish Digital Cash Offline) to its 60+ million customers, a first firm deal should not be far away. This would provide a transformational Proof-of-Concept to Crunchfish's business model which would drive a significant revaluation of the share. For now, we continue to find support for a fair value of SEK 48-63 per share.

Slow and steady wins the race in India

The ongoing pilot with Crunchfish Digital Cash (DC) Offline is drawing to a close, and so far, the reporting on it has been sparse but positive. The pilot has been extended to also include P2P-payments, in addition to merely P2M-payments. The participating banks, HDFC Bank and IDFC First Bank together serves over 70 million customers, which makes the pilot a great steppingstone for a broad rollout in the world's leading market for instant payments. According to the webinar following Crunchfish's annual report, discussions have already moved away from DC Offline to how to implement the DC Telecom solution, where users can pay to anyone over the telecom network, even if the payee isn't onboarded with DC, a solution that in our view should be much easier to implement in a country like India with many different public and private sector banks and an already successful ecosystem for direct payments.

Acquisition to enable turn-key solution

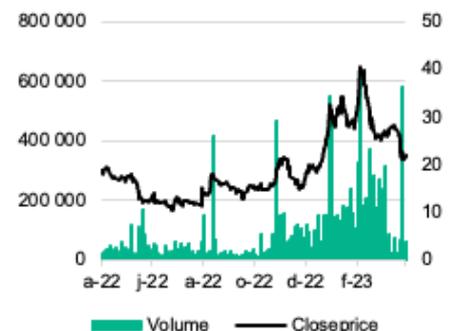
In March 2023, Crunchfish announced a potential acquisition of an Indian payment platform company. In addition to close to hundred existing customers, the target company has a backend compatible with Crunchfish's frontend, meaning the acquisition would enable Crunchfish to deliver a fullstack turn key-solution to banks and payment service providers, without relying on external partners. However, according to CEO Joachim Samuelsson, the company's current cash position is not strong enough to cope with both the acquisition and its working capital needs, meaning cash might be a bottleneck. The MOU with Socio regarding the purchase of 3 million shares has been prolonged until May 21st, which would solve things. But if that fails, the question of financing will quickly climb up the agenda. Company had net cash of 29 MSEK at the end of 2022, which we expect to cover nine months of costs.

Snowball effect hinging on initial firm deals

Obtaining a first firm deal might take a while, considering the slow-moving nature of the banking industry and the fact that payment systems are considered critical infrastructure. Until such a deal is in place, we can only speculate on what the earnings model will look like. We do however believe that 2023 could be a redemptive year for Crunchfish. A successful pilot, backed by the fact that HDFC Bank already [has offered](#) its customers the solution to pay offline, supports our expectation of at least one signed deal by the end of the year. Our Base case estimates DC to reach 100 million users by 2026, which based on a licence of SEK 3 per user translates to annual sales just shy of SEK 300m. We leave our fair value of SEK 48-63 per share intact and note that a successful initiation of the rollout should drive a significant revaluation of the share.

Crunchfish

Fair Value, SEK (12-24 m)	48 - 63
Current Price, SEK	22,65
Shares (M)	33,0
Market Capitalisation (MSEK)	748
Net Cash (MSEK)	29,3
Enterprise Value (MSEK)	778
Market	First North



Financial Summary

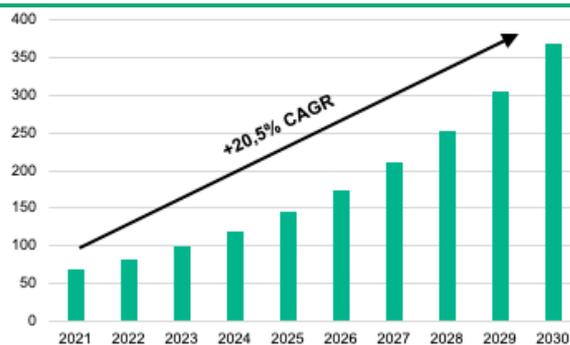
MSEK	2020	2021	2022	2023E	2024E
Revenue	11	4	6	20	78
EBITDA	-18	-29	-18	-23	26
EBIT	-25	-37	-24	-30	20
EPS Adjusted	-0,89	-1,24	-0,73	-0,90	0,47
Sales Growth, %	-	-64%	56%	223%	288%
EBITDA Margin, %	-161%	-738%	-293%	-116%	34%
EBIT Margin, %	-232%	-932%	-392%	-148%	26%
EV/Sales	68,1	187,3	119,8	37,0	9,6
EV/EBITDA	-42,2	-25,4	-40,9	-31,9	28,1
EV/EBIT	-29,4	-20,1	-30,5	-25,1	37,3
P/E	-17,9	-20,1	-37,1	-29,9	57,4

Source: Emergers

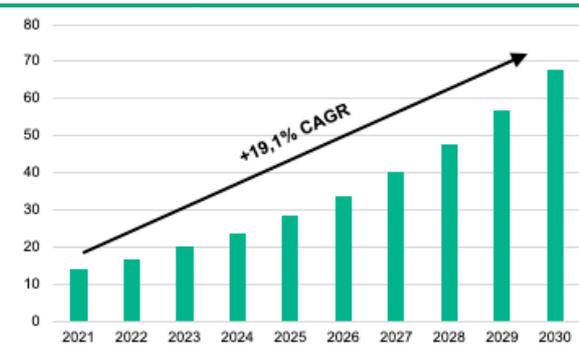
Crunchfish in brief

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

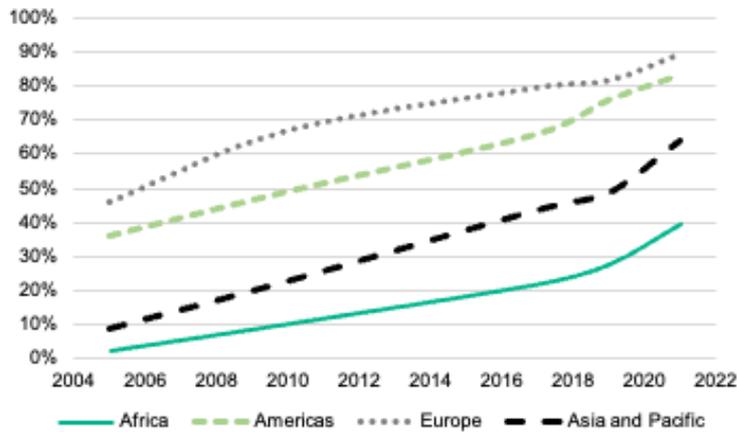
Offline digital payments

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

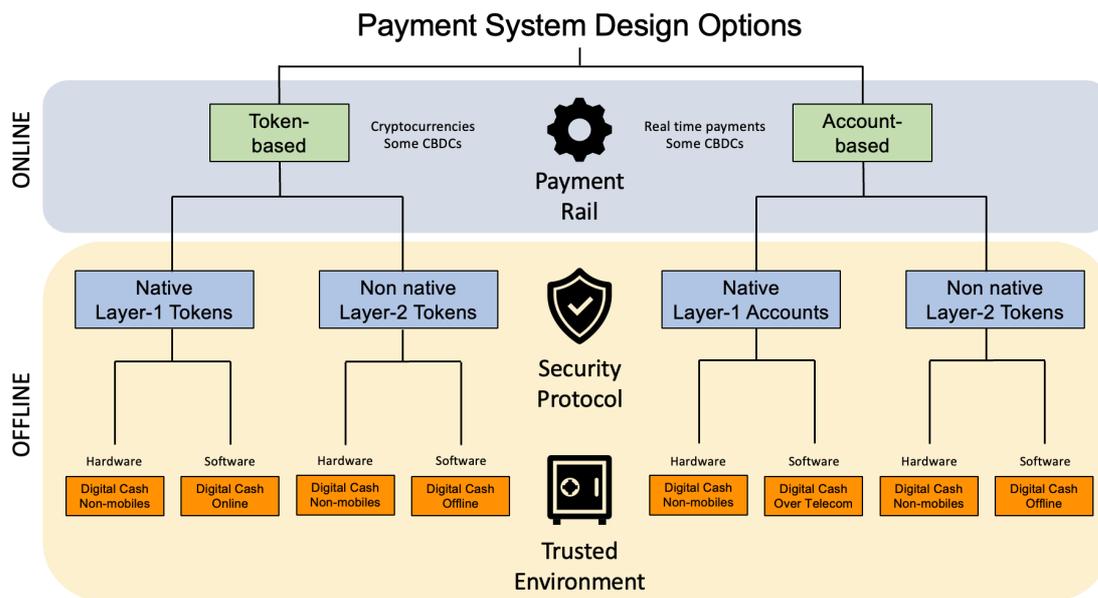
The primary area of usage for DC Online is to unload the massive core banking systems that are handling our bank accounts today and provide a safety net so that we can make payments, regardless of whether the banks are having issues or not. The technology can be compared to the one used by cryptocurrencies, 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 25%/50%/75%/100% 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. For a large bank with 20m customer this would mean a rollout to 5m customers in year 1, another 5m in year 2 etc.

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 285m in 2026 from DC Offline alone.

Digital Cash Offline – Scenario Analysis

Scenario	Implementation rate	Price (based on) per user (SEK)	Sales 2026 (MSEK)
Bull	50%-100%	5	725
Base	25%-50%-75%-100%	3	285
Bear	20%-40%-60%-80%	1	76

Source: Emergers

Digital Cash Online

As we perceive current focus to be on rolling out DC Offline, we have forecasted a slow rollout for DC Online starting in 2025, based on a fee of 0,1% per transaction, an average transaction of SEK 210 and an average number of transactions of 250 per year and person. A rollout where a total of 1 million people use the service, this would contribute sales of SEK 50m. Given the high uncertainty about business model, focus and rollout pace, we risk adjusted all future revenues by 50%.

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.

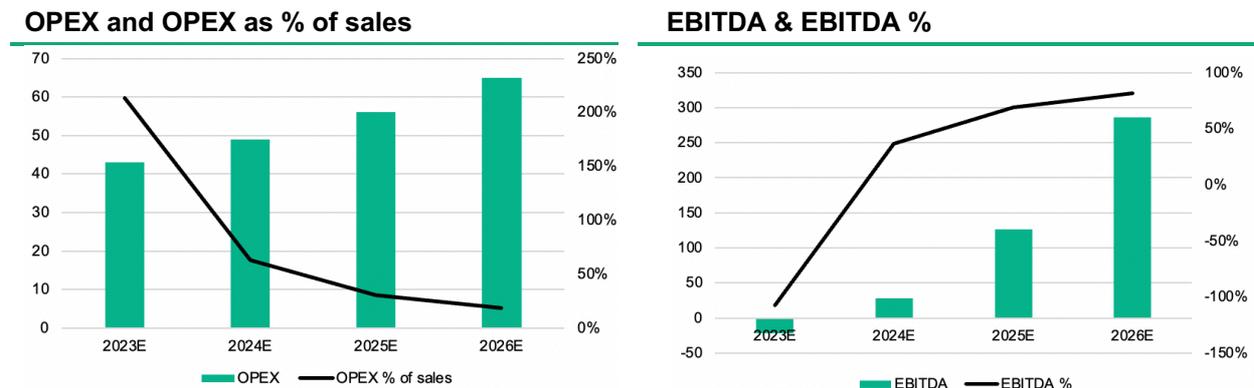
Based on the most recent USD 500k-deal signed with OPPO, that covered only a small portion of Crunchfish's tech, there's reason to believe that sales will kick off once the AR/VR-industry is at a stage where Crunchfish's tech goes from a "nice to have" to a "need to have".

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. Combined with the tight ship Crunchfish is running, with OPEX at about SEK 35-40m per year (which the

company expects to keep intact going forward), future profitability will be high.



Source: Emergers

Financial Situation

Crunchfish has secured their financials for 2023 through a 93% subscribed warrant program in December 2022, which provided the company with SEK 21.5m before transaction costs. The partnership together with Danish management and investment company Socio ApS, (and Eferio Communication, Radiocloud, and Radio Innovation) to provide infrastructure and new technology in Africa has led a Memorandum of Understanding (MoU) between the Crunchfish and Socio. With a current cash position of SEK 29m, the company will need external financing if the announced acquisition is to be a reality as current levels can't withstand both the purchase and provide enough working capital for the remainder of 2023.

Valuation

While both DC Online and Gesture Interaction shows a high potential, we focus on DC Offline as it's the side of the business that is closest to major deals. The USD 500k deal with OPPO led to a positive EBITDA in Q3 2022, which illustrated that Crunchfish has tight cost control and that profitability shouldn't be too far away. A major deal with any of the banks or payment service providers could therefore lead to an operating profit already in 2023. We are however a bit more cautious and forecast a positive EBITDA and last row profit in 2024.

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 78m in 2024, to reach SEK 1.4bn in 2030, our DCF indicates a Market Cap of SEK 3.3bn. With the application of a 60% probability-factor in our DCF, we find support for a fair value of SEK 60 per share.

Peers

For our peer group we have chosen some mature tech companies, where we also include payment service providers Visa and Mastercard. These trade at multiples of 17x and 13x sales and 29x and 19x EBITDA respectively. On an average, our peer group is trading at 7x sales and 16x EBITDA. As previously stated, these are mature companies with proven business models, why we see a target multiple-discount for Crunchfish as justified. Applying a target multiple of 13x EBITDA`26 equals a fair value of SEK 51 per share.

Peers

Company	Fx	Market Cap (M)	EV (M)	Revenue (M)	EBITDA (M)	Rev. growth 1y	EBITDA %	EV/S	EV/EBITDA	Share price dev. 1y
AMD	USD	98 789	96 088	22 828	5 751	54%	25%	4,2	16,7	-49%
Cisco Systems Inc	USD	192 461	181 555	52 289	16 505	3%	33%	3,5	11,0	-22%
Fingerprint Cards	SEK	1 421	1 658	1 028	-15	-25%	3%	1,6	neg.	-82%
Mastercard Inc	USD	358 282	364 771	21 636	12 673	22%	60%	16,9	28,8	0%
Qualcomm Inc	USD	132 042	141 142	44 200	17 250	32%	38%	3,2	8,2	-34%
Taiwan Semiconductor	USD	343 937	322 989	73 673	24 517	29%	65%	4,4	13,2	-34%
Texas Instruments Inc	USD	157 256	156 103	20 190	11 460	15%	56%	7,7	13,6	-6%
Visa Inc	USD	363 897	367 825	29 310	19 681	22%	70%	12,5	18,7	2%
Average								6,8	15,7	
Median								4,3	13,6	

Source: Emergers

Risks

Unproven business model: With no Digital Cash firm deals signed yet, the business model, earning capacity and rollout-pace are 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	20,0	77,5
Operating Costs	-40,5	-39,8	-44,6	-51,2	-58,9
EBITDA	-17,6	-29,2	-18,1	-23,2	26,4
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	-29,6	19,9
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
Pre-tax Result	-25,3	-38,5	-24,0	-29,8	19,6
Tax	0,0	0,0	0,0	0,0	-4,1
Minority Interest	0,0	0,0	0,0	0,0	0,0
Net Result	-25,3	-38,5	-24,0	-29,8	15,5

Capital Expenditure

	2020	2021	2022	2023E	2024E
Capital Expenditure, Absolute	15,1	15,8	13,6	1,0	3,9
As a Pct of Sales	139,2	400,3	220,1	5,0	5,0
Depreciation Multiple	2,0	2,1	2,2	0,2	0,6

Key Ratios

Share Price: SEK 21,00

	2020	2021	2022	2023E	2024E
Share Price at 31 Dec	16,0	25,00	20,00	21,00	21,00
Number of Shares (Millions)	28,35	30,93	33,04	33,04	33,04
Market Cap	453,6	773,1	660,8	693,8	693,8
Enterprise Value	453,6	740,9	631,9	689,4	671,2
EPS (Reported)	-0,89	-1,24	-0,73	-0,90	0,47
EPS (Adjusted)	-0,89	-1,24	-0,73	-0,90	0,47
CEPS	-0,89	-1,24	-0,73	-0,90	0,47
P/CEPS	n.a.	n.a.	n.a.	n.a.	44,6
Book Value/Share	1,2	1,8	1,8	0,9	1,3
P/BV	13,0	13,8	11,2	24,0	15,6
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	31,6	8,2
EV/EBITDA	-42,2	-25,4	-34,9	-27,2	23,9
EV/EBIT	-29,4	-20,1	-26,1	-21,4	31,8
P/E (Adjusted)	-17,9	-20,1	-27,5	-23,3	44,6
Sales Growth, Y/Y (%)	-	-63,6	56,4	223,3	287,5
EBIT Growth, Y/Y (%)	-	46,2	-34,2	21,9	-167,3
EPS Growth (Adjusted), Y/Y (%)	-	39,2	-41,5	24,1	-152,1
EBITDA Margin (%)	-161,3	-738,2	-292,8	-116,2	34,1
EBIT Margin (%)	-231,7	-931,8	-392,0	-147,8	25,7
Return on Equity (%)	-	-84,8	-41,9	-68,0	42,3
Tax Rate (%)	0,0	0,0	0,0	0,0	-0,2

Financial Position

	2020	2021	2022	2023E	2024E
Interest-Bearing Net Debt	0	-32	-29	-4	-23
Net Debt/Equity	0,0	-0,6	-0,5	-0,2	-0,5
Equity Ratio	0,8	0,9	0,9	0,7	0,5
Net Debt/EBITDA	0,0	1,1	1,6	0,2	-0,9

Source: Emergers, Company reports

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