



Research report (Anno)



High NAV upside potential despite crypto winter - Investment opportunity in one of the leading European Crypto investment companies

**Target price: € 7.12
(previously: €18.35)**

Rating: BUY

Note in accordance with MiFID II regulation for research "Minor Non-Monetary Contribution": The present research meets the requirements for classification as "Minor Non-Monetary Contribution". For further information, please refer to the disclosure under "I. Research under MiFID II".

IMPORTANT NOTICE:

Please note the disclaimer/risk notice
as well as the disclosure of possible conflicts of interest in accordance with §34b WpHG from page 12

Date and time of completion of the study: 13.12.2022 (14:45)

Date and time of the first distribution: 14.12.2022 (10:00)

Validity of the target price: until max. 31.12.2023

Cryptology Asset Group plc*5a;5b;6a;7;11

Rating: Buy
Target price: € 7.12
(previously: € 18.35)

current price: € 2.49
01.12.2022 17:35 Xetra
Currency: EUR

Stock data:

ISIN: MT0001770107
WKN: A2JDEW
Ticker Symbol: CAP:GR
Number of shares³: 57.22
Market cap³: 142.22
³ in million / in EUR million
Free float: 50.44

Market segment:
Over-the-counter
Accounting:
IFRS

Fiscal year: 31.12

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* Catalog of possible conflicts
of interest on page 12

Company profile

Industry: Investment companies

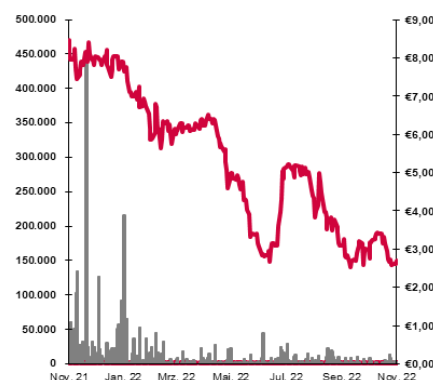
Focus: Cryptocurrencies and blockchain technologies

Employees: 3 Status: 12/31/2021

Foundation: 2018

Headquarters: Sliema (Malta)

Management Board: Patrick Lowry (CEO), Jefim Gewiet (COO)



Cryptology Asset Group (German exchange, ISIN: MT0001770107; Ticker: CAP:GR) is a leading European holding company for Bitcoin and Blockchain-related business models. Cryptology was founded by Christian Angermayer's family office, Apeiron Investment Group, and crypto-legend Mike Novogratz. Noteworthy portfolio companies include Bitcoin behemoth B1, leading HPC data center operator Northern Data, commission-free online neobroker nextmarkets, and digital asset management group Deutsche Digital Assets (formerly Iconic).

P&L in EUR million \ FY-end	31.12.2019	31.12.2020	31.12.2021
Sales	15.00	2.55	13.20
Profits on sale of AFS	0.00	8.70	34.09
EBIT	2.50	10.62	34.24
Net income	1.47	10.26	33.80

Key figures in EUR			
Earnings per share	0.03	0.19	0.59
Dividend per share	0.00	0.00	0.00

Key figures			
Equity in € million	70.54	308.60	387.20
NAV per share in €	1.29	5.71	6.77

Financial Calendar

30.06.2023: Annual Report 2022

30.09.2023: Semiannual report 2023

**last research from GBC:

Date: Publication / Target price in EUR / Rating

07/28/2022: RS / 18.35 / BUY

07/06/2021: RS / 17.92 (pre 20:1-split: 358.43) / BUY

** Research studies listed above can be viewed at www.gbc-ag.de or requested from GBC AG, Halderstr. 27, D86150 Augsburg, Germany.

EXECUTIVE SUMMARY

- The Cryptology Asset Group is one of the leading European holding companies for Bitcoin and Blockchain related business models. According to the latest shareholder letter, the strategy is to be adjusted and €100 million will not be invested in crypto funds as planned. Instead, the company wants to focus on its own investments.
- Currently, we are in a "crypto winter." Bitcoin (BTC), the lead currency for the broader crypto market, is currently hovering around \$17,000, down 75% from its November 2021 peak. Bitcoin is not the only crypto under downward pressure. Ethereum (ETH) and other leading altcoins such as Cardano (ADA) and Polygon (MATIC) have lost more than 70% so far this year. This trend is also reflected in Cryptology Asset Group's portfolio. In our opinion, however, the share price currently reflects this development too pessimistically. Thus, the market capitalization (€ 142.22 million as of 01.12.2022) was also significantly below the balance sheet equity of € 295.31 million, with an equity ratio of 98.4%.
- **The company is currently trading at € 2.49 (01.12.2022 17:35 Xetra) per share and has published a NAV of € 4.79 per share (30.11.2022) according to IFRS principles. We have reviewed the individual holdings of the portfolio and have determined a NAV of € 7.12 per share according to the GBC valuation. Thus, the company is currently trading significantly below NAV and we assign a Buy rating in view of the high upside potential.**

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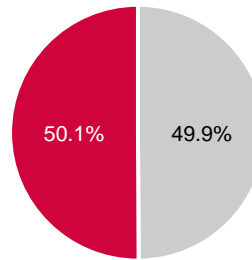
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COMPANY

Shareholder structure

Shareholders in %	31.12.2021
Apeiron Investment Group Limited	49.9%
Free float	50.1%

Sources: Cryptology Asset Group plc, GBC AG



- Apeiron Investment Group Limited
- Streubesitz

Company description

Cryptology Asset Group (German exchange, ISIN: MT0001770107; Ticker: CAP:GR) is a leading European holding company for Bitcoin and Blockchain-related business models. Cryptology was founded by Christian Angermayer's family office, Apeiron Investment Group, and crypto-legend Mike Novogratz. Noteworthy portfolio companies include Bitcoin behemoth B1, leading HPC data center operator Northern Data, commission-free online neobroker nextmarkets, and digital asset management group Deutsche Digital Assets (formerly Iconic).

Portfolio



Source: Cryptology Asset Group plc

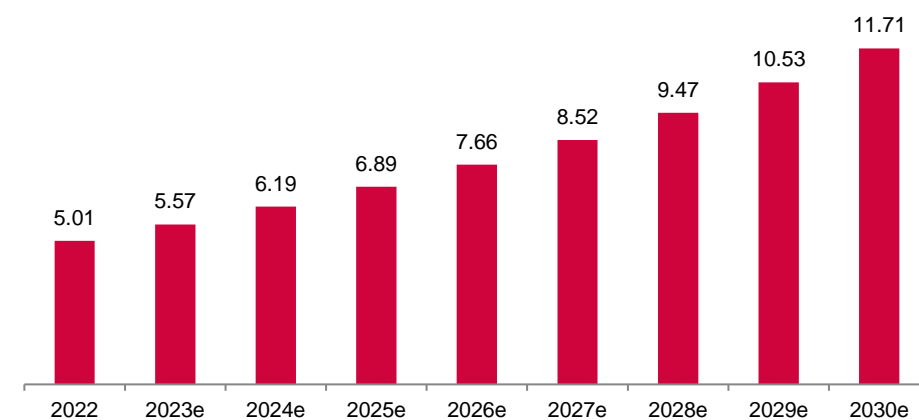
MARKET AND MARKET ENVIRONMENT

The cryptocurrency markets, which are of key importance to Cryptology AG, have been in reverse since the end of 2021. Indicative of this is the decline in Bitcoin (BTC), which fell to a new two-year low of USD 15,500 in November 2022. Uncertainty about the FTX collapse and its possible consequences caused bitcoin prices to fall. Crypto prices stabilized in the last days of the month, despite crypto company BlockFi filing for bankruptcy on November 28. Bitcoin was on track to end the month above USD 17,000.

Ethereum, the second major cryptocurrency, has mirrored the development of Bitcoin. After the price of Ethereum (ETH) fell below the threshold of USD 1,100, it stabilized and was at USD 1,300 at the end of November.

Over the past year, the cryptocurrency winter has drained about \$2 trillion in market capitalization from the broader cryptocurrency market since its peak in November 2021. So far this year, BTC and ETH have each fallen by about 75%. The demise of crypto exchange FTX is just the latest in a series of problems contributing to the crypto winter of 2022. Inflation, rising interest rates, and economic uncertainty have led investors to sell risk assets, including stocks and cryptocurrencies, throughout the year. The selling first exposed over-indebtedness in the crypto-credit market and triggered the bankruptcies of Voyager Digital and Celsius, as well as the demise of Singapore-based crypto hedge fund Three Arrows Capital following the collapse of algorithmic stablecoin TerraUSD in May 2022.

Global cryptocurrency market



Source: ResearchandMarket

Nevertheless, we are optimistic about the future. ResearchandMarket expects the global enterprise cryptocurrency market size to reach USD 11.71 billion by 2030, growing at a CAGR of 12.2% from 2022 to 2030. The market growth is expected to be driven by the increasing demand for better data security, operational transparency, and incorporation of blockchain technology in digital payment systems. Moreover, legalization/regulation of buying, selling, and trading of digital currencies in several developed countries is boosting the industry's expansion.

CORPORATE DEVELOPMENT

in € million	FY 2018	FY 2019	FY 2020	FY 2021	HY1 2022
Sales	2.65	15.00	2.55	13.20	2.32
Net gain from the sale of AFS Investments	0.00	0.00	8.70	34.09	5.08
EBIT	-2.23	2.50	10.62	34.24	4.87
Net income (loss)	-1.57	1.47	10.26	33.80	4.74

Sources: Cryptology Asset Group plc; GBC AG; (AFS - Available-for-Sale Securities)

Sales and earnings development 2021

With its asset disposal, Cryptology AG achieved a significant increase in sales in fiscal year 2021. The company was able to increase sales by 418.5% to € 13.18 million (previous year: € 2.55 million) in fiscal year 2021. The revenue was primarily generated through the sale of digital assets, which accounted for € 7.97 million (PY: € 0). Furthermore, € 2.78 million (PY: € 2.35 million) was generated from the sale of investments held for trading and € 2.35 million (PY: 0) related to the exercise of conversion options. A further € 0.10 million (PY: € 0.16 million) was generated by consulting services. The significant increase in revenue should have been driven by the very positive crypto market sentiment in 2021.

Earnings were significantly higher than sales, as proceeds from the sale of assets held for sale (AFS) amounted to € 34.09 million (previous year: € 8.7 million). As a result, a net profit of € 33.8 million (previous year: € 10.26 million) was achieved.

Sales and earnings development 1st half 2022

In the first half of 2022, sales of € 2.32 million (previous year: € 2.45 million) were almost at the previous year's level.

The sale of assets held for sale (AFS) generated earnings of € 5.08 million in the first half of 2022 (previous year: € 15.64 million). The net result for the first half of 2022 was therefore € 4.74 million (previous year: € 16.68 million).

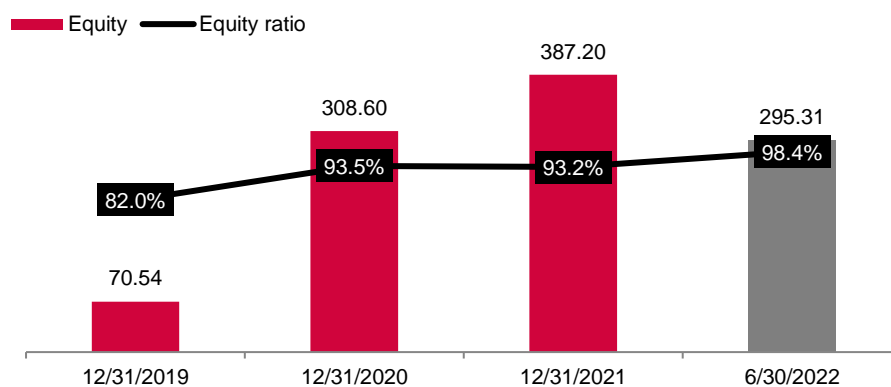
Balance sheet and financial situation as of 06/30/2022

in € million	31.12.19	31.12.20	31.12.21	30.06.22
Equity	70.54	308.60	387.20	295.31
Equity ratio	82.0%	93.5%	93.2%	98.4%
AFS investments	79.93	326.22	407.46	294.13

Sources: Cryptology Asset Group plc; GBC AG

The Cryptology Asset Group's balance sheet is typical for investment companies. As the investments were financed almost exclusively from equity and the changes in the fair value of the investees are recognized in equity, the company has a high equity ratio of € 295.31 million as of June 30, 2022 (December 31, 2021: € 387.2 million) and a correspondingly high equity ratio of 98.4% (Dec. 31, 2021: 93.2%). As of June 30, 2022, there were € 0.44 million in cash and cash equivalents. Interest-bearing liabilities amounted to € 4.04 million.

Development of equity (in € million) and equity ratio (in %)



Sources: Cryptology Asset Group plc; GBC AG

From July 18, 2022 up to and including November 11, 2022, the company also repurchased 30,430 shares.

VALUATION

Cryptology Asset Group (Cryptology) regularly publishes its own NAV. As of November 23, 2022, this was € 4.79 per share, according to the company. With 57.22 million shares outstanding, this corresponds to a total company NAV of € 274.07 million.

According to the latest shareholder letter, the strategy is to be adjusted and €100 million will not be invested in crypto funds as planned. Instead, the company wants to focus on its own investments.

Block.one

The largest investment of Cryptology Asset Group is Block.one. Cryptology has a stake of about 4.9% in Block.one. Block.one raised \$4.2 billion in its 2018 initial coin offering (ICO), which sold a proprietary token called EOS. This marks the largest ICO to date. The company invested heavily in Bitcoin as well as Ethereum, in addition to numerous smaller companies and tokens. Its current focus is on Bullish Global (bullish.com), a blockchain-based cryptocurrency exchange that aims to combine the performance, privacy, and compliance of centralized order book technology with the vertically-integrated user benefits of decentralized financial market architecture (DeFi). According to Q2 2022 business updates from Bullish Global, the pro forma valuation is \$6.79 billion.



Pro Forma Valuation (in USD m)	Gem. Bullish As of 22.7.2022	Adjusted according to GBC
Bullish Exchange Total Enterprise Value	2,500	2,500
Market value of digital assets	2,662	2,144
Existing cash and cash equivalents in the balance	1,026	1,026
New cash on the balance sheet	600	600
Excess transaction costs of the buyer	4	4
Pro forma equity value	6,792	6,274

Source: Bullish Global

Market value of digital assets

USD	Quantity	20-day Ø rate as of 07/22/2022	Market value in million as of	Course as of 01.12.2022	Market value in mil- lion as of 01.12.22
BTC	119,726	20,767.87	2,486	16,415	1,965
ETH	85,921	1,225.17	105	1,231	106
EOS	29,567,646	0.98	29	0.90	27
USDC	24,666,738	1.00	25	1	25
LINK	1,523,301	6.40	10	7.27	11
LTC	135,305	52.12	7	74.05	10
Total		2,662			2,144

Sources: Bullish Global, 20-Day Avg. Price

Of the pro forma valuation of \$6.79 billion, digital assets account for \$2.66 billion. According to Bullish, the digital assets were valued at a 20-day average price as of 7/22/2022. We have updated the valuation of these digital assets using rates as of 12/01/2022 and have determined a current market value of € 2.14 billion.

Due to the reduced market value of the digital assets, the Bullish valuation currently amounts to USD 6.274 billion, which is equivalent to € 5.991 billion (USD 1 = EUR 0.955053 as of 01.12.2022, 13:30 UTC).

Block.one's other investments or other liquid assets are difficult to assess from the outside. Therefore, we refer exclusively to Bullish Global for the Block.one valuation, whereby

further company values of Block.one would still mean an upside. **With Cryptology Asset Group holding a 5.0% stake in Block.one, this would mean an NAV of € 299.6 million.**

Northern Data AG



Northern Data is a global B2B technology company that develops, uses and sells solutions on a vertically-integrated High Performance Computing (HPC) infrastructure. This enables it to offer comprehensive computing services on a global scale. Mainly, the company generates revenues from Bitcoin and Ethereum mining.

Northern Data is listed on the stock exchange and the share price has developed very similarly to the crypto markets. For example, the share price temporarily rose to € 143.00 per share during the crypto boom in 2022, but against the backdrop of the current challenging crypto environment, the share price of € 8.20 (Xetra 01.12.2022 14:30) is significantly below the peak value. In addition to the decline in crypto prices, the conversion of Ethereum's consensus mechanism is also likely to have had a negative impact on the price. After Ethereum switches from Proof of Work (PoW) (i.e., mining) to a different consensus mechanism called Proof of Stake (PoS) in September 2022, future ETH mining revenues are expected to be completely eliminated. Cryptology's management remains confident in Northern Data. Moreover, liquidating the position would not make sense at the current valuation. Therefore, significant upside outweighs a potential sale.

We continue our valuation approach from the initial coverage and use the consensus price target as the basis for our NAV valuation. A current price target is only available from Hauck & Aufhäuser (dated September 5, 2022), who estimate the fair value at € 65.00 per share, which corresponds to an enterprise value of € 1,548.00 million. **With a shareholding of 6.1% in Northern Data by Cryptology Asset Group, this would mean an NAV of € 94.43 million.**

Deutsche Digital Assets (formerly Iconic Holding GmbH)



DEUTSCHE
DIGITAL ASSETS

Since the beginning of December 2022, the entire Iconic Holding group of companies has been renamed Deutsche Digital Assets. Deutsche Digital Assets (DDA) is a global crypto asset management group. DDA is the issuer and manager of a range of regulated passive and actively-managed crypto investment vehicles, including a physically-backed bitcoin ETP that trades on the regulated market of the Frankfurt Stock Exchange. In total, the company has invested in more than 25 companies and has increasingly evolved from an investment company into an asset manager. DDA also launched the first regulated index crypto fund in Europe in 2019, which was then used as the basis for issuing ETPs. **According to management, the last capital increase took place in mid-2022 at a valuation of € 25 million. With a stake of 8.9%, this corresponds to an NAV of € 2.23 million.**



cloudeo AG

cloudeo AG operates a platform through which professional geoinformation services from leading national and international manufacturers can be obtained. cloudeo carried out a capital increase in December 2020/January 2021 and was valued at around € 50 million according to our estimate. **Based on this valuation, an unchanged NAV valuation of € 7.15 million results for a 14.3% stake.**



nextmarkets AG

The nextmarkets offers a neobroker. The company's focus is on building a leading trading and online learning platform for private investors that is simple and intuitive. In addition, there are opportunities for investors to participate in the success of other traders via CFDs or certificates through various following options. We assume that further rounds of financing have taken place and estimate this at € 18 million. **With a participation rate of 25.2%, this means an NAV of € 4.54 million for Cryptology Asset Group. In our opinion, an IPO of the neobroker could also occur, which would probably mean a significant valuation upside.**



New York Digital Investment Group LLC - NYDIG (formerly Bottlepay)

Bottlepay was a successful exit after only a few months. As part of this, Bottlepay was acquired by NYDIG. NYDIG offers Bitcoin products for all industries, from banking and insurance to fintech and non-profit organizations. This is combined with high regulatory standards. NYDIG is among the larger crypto market participants. NYDIG raised about \$1 billion in December 2021 at a valuation of \$7 billion. Bottlepay was a very small company by comparison at the time, and we assume that Cryptology Asset Group owns a very small stake in NYDIG. **With a conservatively estimated stake of 0.01%, the NAV for Cryptology should be USD 0.7m or € 0.67m.**



Chintai Network Services PTE

Chintai is a Singapore-based company. The Chintai platform uses blockchain technology to modernize capital markets for banks, financial institutions and asset managers. The end-to-end solution offers traditional financial firms a one-stop platform with a robust automated compliance engine. **We currently estimate the valuation to be around \$25 million, which is equivalent to € 23.88 million. At a 4.4% ownership rate, this translates to a NAV of € 1.06m.**



Xpay Holding AG

Xpay is a provider of embedded finance solutions and develops branded Mastercard® card programs with integrated loyalty components for its customers. In combination with exclusive and individualized benefits, Xpay makes brand experiences for consumers tangible in completely new areas of life. Successful credit card companies are valued at revenue multiples of well over 10x. Should Xpay grow successfully, significant valuation jumps should be possible. **We value Xpay at € 42m, which translates into a NAV of € 2.1m given Cryptology's 5.0% stake.**



Topl Inc

Topl is an impact technology that enables companies and corporations to unlock the value of their positive impact. The blockchain aims to track their CO₂ footprint across the supply chain. Blockchain ecosystem Topl raised \$15 million in a Series A funding round to help companies track and monetize social initiatives. **We assume this was done at a valuation of about \$55 million, or € 52.53 million. At a 0.89% ownership rate, this equates to an NAV for Cryptology Asset Group of € 0.47 million.**



Fund

We assume that around € 10 million was invested in funds.

Own shares

The Cryptology Asset Group constantly carries out share buybacks. Currently, shares worth around € 0.1 million should be in the company's own portfolio.

Net debt and holding costs

Net financial debt and holding costs were calculated at € 15.34 million in the initial research. In the meantime, administrative expenses increased and net debt decreased in the opposite direction. These effects have almost completely offset each other and we have determined net debt and holding costs at € 15.22 million.

	NAV USD mil- lion	NAV EUR m	Participation rate	NAV in € mil- lion pro rata
Block.one	6.274	5.992	5.0%	299.60
Northern Data AG		1.548	6.1%	94.43
Iconic Holding GmbH		25	8.9%	2.23
Cloudeo AG		50	14.3%	7.15
nextmarkets AG		18	25.2%	4.54
NYDIG	7.000	6.685	0.01%	0.67
Chintai Network Sevices PTE	25	24	4.4%	1.06
Xpay Holding AG		42	5.0%	2.10
Topl Inc	55	53	0.89%	0.47
Fund				10.00
Cryptology Asset Group Shares				0.10
Net debt & holding costs (discounted)				-15.22
NAV in € million				407.12
Shares outstanding				57.22
NAV / share in €				7.12

In total, we have calculated an NAV of € 412.24 million across all investments. In addition, there is around € 10.0 million in funds and a further € 0.1 million in treasury shares. Less net debt and holding costs of € 15.22 million, we have calculated a total NAV for Cryptology Asset Group of € 407.12 million, or € 7.12 per share. Given the very high upside potential to the current share price (€ 2.49 Xetra 01.12.22 17:36), we continue to assign a Buy rating.

APPENDIX

I.

Research under MiFID II

1. there is an agreement between the research company GBC AG and the Issuer regarding the independent preparation and publication of this research report on the Issuer. GBC AG shall be remunerated for this by the Issuer.
2. the research report shall be made available simultaneously to all investment service providers interested therein.

II.

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Legal information and publications in accordance with § 85 WpHG and FinAnV

The notes are also available on the Internet at the following address

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The respective recommendations/classifications/ ratings are associated with the following expectations:

BUY	The expected return, based on the determined price target, including dividend payment within the corresponding time horizon is $\geq + 10\%$.
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GBC's historical recommendations on the present analysis(es) are available on the Internet at the following address
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§ 2 (IV) Information base:

For the preparation of the present analysis(es), publicly available information about the issuer(s), (where available, the three most recently published annual and quarterly reports, ad-hoc announcements, press releases, securities prospectus, company presentations, etc.), which GBC believes to be reliable, has been used. In addition, discussions were held with the management of the company(ies) in question in order to have the facts relating to the business development explained in more detail.

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7. The analyst responsible, the principal analyst, the deputy principal analyst and/or any other person involved in the preparation of the study
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