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RESEARCH



## Argo Blockchain

15<sup>th</sup> March 2021

### Bitcoin price surge send shares to all time high with new Texas facility providing significant long-term expansion potential

Argo Blockchain is a global leader in cryptocurrency mining, mining Bitcoin and Zcash with one of the largest and most efficient operations, powered by clean energy.

#### ■ Bitcoin price surge sends shares to all time high

Since we last updated on Argo Blockchain on 26<sup>th</sup> November 2020, Bitcoin has surged through its previous all-time high of c.\$20,000 to c.\$60,000 as we write. As every \$1 increase in the BTC price falls through to gross margins, Argo has seen record trading activity. Boosted by a recent US listing, the markets have sent the shares from 11.75p at the time of our last note to a high of 339.81p.

#### ■ Fundraisings bring in a combined £49.2 million

In mid-January, Argo took advantage of its rising share price to raise a total of £22.4 million at a price of 80p per share via a private placement. The net proceeds are being used for working capital as well as for the expansion of mining capacity in Q1 and Q2 of 2021 through a purchase from two leading but un-named manufacturers. Then in March another £26.8 million was raised at 200p per share, with the funds to be used, amongst other things, for investments in crypto businesses and capital investment.

#### ■ Increased cash flow allows investments in wider crypto market

Over the past few months Argo has used its increased cash flows to make investments in two crypto market businesses. In late December the company co-lead an investment in Luxor Technologies, a hashrate management platform, putting in \$100,000. Then in early February Argo announced it had taken a 25% stake in crypto venture capital and technology company Pluto Digital Assets for c.£1 million, becoming its lead investor.

#### ■ Texas land deal provides significant long-term upside

The big news on the infrastructure fund is that Argo has acquired 320 acres of land in West Texas with access of up to 800MW of electrical power. Argo intends to build a new 200MW mining facility over the next 12 months which will provide electricity at some of the lowest rates in the world, with the majority from renewable sources. Argo will also gain access to a pre-negotiated \$100 million credit facility to fund the build out of the facility and further expand the mining fleet.

#### ■ Valuation matrix suggests both upside and downside potential

We have put together a valuation matrix for Argo which covers a range of scenarios regarding BTC price growth and earnings multiples. The matrix suggests both upside and downside to the current share price, although we assume no contribution from the planned Texas facility whose long-term contribution could be massive. Our stance is **Speculative Buy**.

### SPECULATIVE BUY



#### Key data

EPIC	ARB
Share price	240p
52 week high/low	339.81p/2.6p
Listing	Main
	Market/OTCQX
Shares in issue	381,761,289
Market Cap	£916m
Sector	Crypto Mining

#### 12 month share price chart



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## **Operational and Financial Developments**

We last updated on Argo Blockchain on 26<sup>th</sup> November last year, a time when the Bitcoin price had just pushed through its previous all-time high of close to \$20,000. Since then, due to a number of factors discussed in more detail below, the BTC price has gone on to hit new highs of over \$60,000. As a result, Argo Blockchain has seen record monthly financial results, seen its share price surge from 11.75p at the time of our last update to a high of 339.81p and taken several corporate decisions designed to take advantage of the price rise.

### **Monthly financial updates**

In November 2020, Argo mined 115 Bitcoin Equivalent (BTC), down from 126 in October due to changes in mining difficulty and the Zcash halving which took place on 17<sup>th</sup> November. Mining revenue for the month amounted to £1.48 million, up from £1.2 million in October due to higher prices. Argo generated this income at an average monthly mining margin of approximately c.57%. December saw BTC mined down to 96 but revenues up to £1.63 million as prices continued to surge, at a margin of c.60%. For 2020 as a whole, that took total BTC mined to 2,465, up from 1,330 in 2019.

Into 2021 and Argo had its best month ever in January in terms of revenue and profits, with 93 BTC mined for £2.48 million of revenue, generated at an average margin of c.71%. Also, in the second half of the month the company purchased a total of 172.5 BTC as part of its asset management strategy – a shrewd move given the subsequent price rise.

February was even better, with 129 BTC mined and revenues of £4.34 million at an average margin of 81%. At the end of the month 599 BTC were held. At the time, Argo also announced that from 1<sup>st</sup> March, CEO Peter Wall, will be paid his salary in Bitcoin. The company has also offered other Argo team members to be paid in Bitcoin for part or all of their salaries.

### **Corporate developments**

#### **Placings to raise £22.4 million and £26.8 million**

In mid-January, Argo took advantage of its rising share price to raise a total of £22.4 million at a price of 80p per share via a private placement. The net proceeds will be used for working capital as well as the expansion of mining capacity in Q1 and Q2 of 2021 through a purchase from two leading but unnamed manufacturers. The new mining hardware expansion is expected to be installed in batches at Core Scientific's facilities in the U.S. between February to June, and is scheduled to be fully operational by the end of H1. This expansion will add approximately 610 petahash to installed computing power, bringing it to a total of 1,685 petahash or 1.68 Exahash.

Then in early March Argo completed an additional £26.8 million fundraise, this time at a price of 200p per share, via a placement and offer for subscription. The funds will be used to; fund an additional investment in crypto venture capital and technology company Pluto Digital Assets (see page 5); pursue strategic opportunities in crypto mining; for capital investment; DeFi/Web 3.0 initiatives; and general working capital purposes.

#### **Infrastructure update**

Back in November 2020, Argo entered into an equipment lease with cryptocurrency lending platform Celsius Network for 4,500 state-of-the-art Bitmain Antminer S19 and S19 Pro miners for a period of 24 months. In early January, 1,058 were delivered ahead of schedule and were fully installed and hashing by 29<sup>th</sup> January, three weeks early. The remaining 3,442 machines were delivered on time in late February and are fully operational.

In terms of hosting facilities, back in October Argo announced that it had entered into a conditional Letter of Intent (LOI) with partner GPU.one, setting out terms on which it would make a strategic purchase of the two data centres in Quebec owned and operated by GPU.one which currently house Argo's cryptocurrency mining equipment. The data centres have a combined total of 20MW of power capacity, and the acquisition will provide Argo with long term stability and direct control over the facilities. The latest news (3<sup>rd</sup> February) is that the two companies have now signed a Share Purchase Agreement and subject to a number of conditions, the purchase is expected to close in the coming weeks. While no figure was put on the purchase price, Argo stated that it will be funded out of existing deposits with GPU.one, and a small cash consideration.

### **Priority supply agreement**

On 22<sup>nd</sup> February, Argo announced it has signed a commercial agreement with ePIC Blockchain Technologies (ePIC), a supplier of industry-leading ASIC mining machines which will allow Argo priority access to state-of-the-art ASIC mining rigs. The companies will also work together throughout the development process to build machines specifically to Argo's specifications.

As part of the agreement, Argo has committed to an initial purchase of \$8 million of ePIC's mining rigs and will have priority on all future production runs of ePIC machines globally for 2021 and 2022. Expected delivery of the machines will begin in early Q4, 2021, with larger scale delivery of ePIC machines commencing in 2022.

In addition, Argo will assist in the development and testing of future products and will be given an option of a first right of refusal to purchase additional production. Argo will also provide space and capacity at one of its facilities for ePIC's research and innovation engineering teams for development purposes for future machines.

### **Texas deal to potentially increase capacity sevenfold**

The biggest news on the infrastructure front is that Argo has further decided to take control of its mining operations by entering into a \$17.5 million deal with DPN LLC of New York to acquire 320 acres of land in West Texas with access of up to 800MW of electrical power. Argo intends to build a new 200MW mining facility over the next 12 months, which when complete will provide electricity at some of the lowest rates in the world, with the majority from renewable sources. **This deal provides the opportunity for Argo to increase capacity from current levels of c.30MW by almost sevenfold.**

The completion of the acquisition was announced on 8<sup>th</sup> March, with an initial \$5 million worth of new Argo shares issued as payment. The balance of \$12.5 million will be satisfied in installments as contractual milestones are fulfilled. The value of all the new shares to be issued will be 104.4p per share - based on the 3 day Volume Weighted Average Price up to 8<sup>th</sup> February 2021.

As part of the project, Argo will also gain access to a pre-negotiated \$100 million credit facility at "competitive" rates. This will provide sufficient debt capital to build out the facility and further expand the mining fleet to upscale the operations and capacity.

## Investments in crypto companies

Over the past few months Argo has taken the opportunity to use its increased cash flows to make investments in two crypto market businesses. In late December the company co-lead an investment in **Luxor Technologies**, a hashrate management platform, putting in \$100,000. Luxor's Switch software product is a profit-switching algorithm that maximises earnings by switching between blockchains and venues to maximise hashrate rewards. Argo has been using the platform for its Equihash hashrate since it was launched in 2020. Luxor intends to use the capital to make several key engineering hires to strengthen the development of its hashrate management platform and further build out its proof-of-work software infrastructure.

Then in early February Argo announced it had taken a 25% stake in crypto venture capital and technology company **Pluto Digital Assets** for c.£1 million, becoming its lead investor. Pluto invests in, incubates and advises digital asset projects based on decentralised technologies (DeTech), decentralised finance (DeFi) and networks such as Ethereum and Polkadot. It also supports the operation of proof-of-stake networks by staking and operating validator nodes. Argo believes that this investment complements its leading position in the Bitcoin and proof-of-work consensus mechanism.

This investment at 3p per share, as part of an investment round of £2.5 million, was satisfied entirely by the contribution of Argo's holding of 75,000 Polkadot (DOT) cryptocurrency, which were originally purchased in Q1 2019 at a cost of just \$75,000. As part of the terms of the investment, Argo has negotiated substantial anti-dilution protections including the option to retain its 25% stake through future funding rounds, either via new Argo shares or cash. Argo will also receive 1 warrant per share purchased, exercisable at 6p for two years.

Pluto seeks to democratise participation in cryptocurrency markets and the blockchain space, with its senior leadership team having a wealth of experience in establishing successful cryptocurrency and blockchain ventures. Some of the most notable projects they have invested in include the YOP Platform and Protocol, a highly anticipated DeFi project launched on the leading IDO platform Polkastarter. YOP is backed by leading crypto VCs and supported by some of the most influential names in crypto, and has increased by over 1,800% since listing in January 2021.

This was a shrewd bit of business from Argo, with the £1 million investment effectively bought for c.£55,000 following the contribution of its DOT holding, which rose significantly in value. Pluto has said that it is in preparation for a listing on the London Stock Exchange later this year, so with the current excitement surrounding cryptocurrencies there could be a significant uplift in value not so far in the future.

Further, in early March, Argo agreed to invest a further £7.3 million in Pluto as part of an additional funding round in order to maintain its shareholding in Pluto at c25%. Argo will receive 121 million new shares in Pluto issued at a price of 6p Argo will also receive 121 million warrants exercisable at a price of 12p.

## Adds US listing

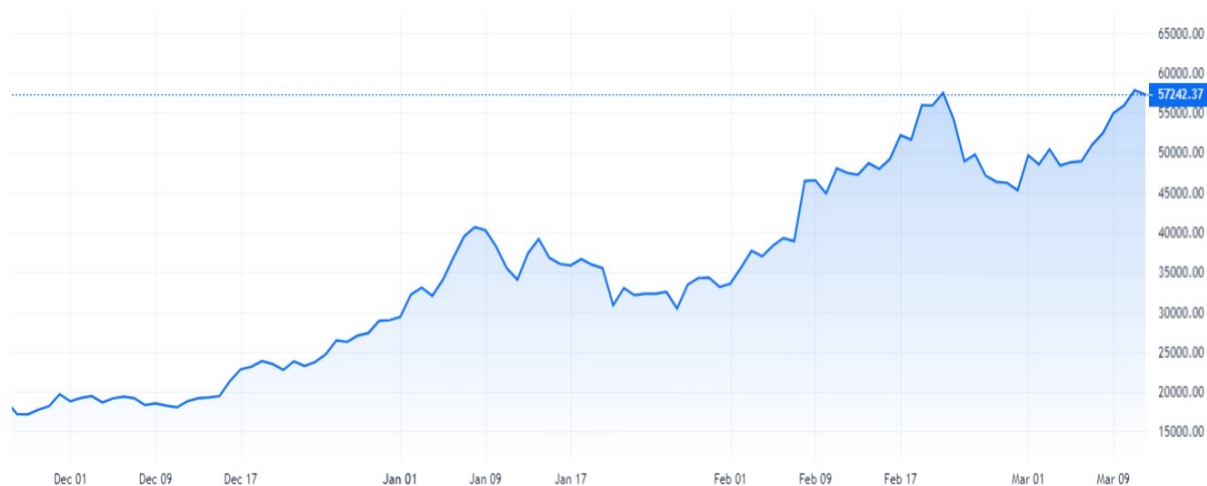
Finally, since our last update, in addition to its existing LSE listing, Argo listed its shares for trading on the US OTCQB Venture Market under the ticker ARBKF, making them more widely available to North American investors. In late February the company then graduated to the OTCQX market, one which has stricter listing requirements and is designed for established, investor-focused US and international companies.

## Crypto market developments

### Crypto prices

As we have stated constantly over the past two years, the Bitcoin price is the key driver of Argo's revenues, with every \$1 increase in the price all falling through to gross margins as there are no additional direct costs incurred. Since our last update note on 26<sup>th</sup> November 2020, a time when the Bitcoin price had just pushed through its previous all-time high of close to \$20,000, it has since risen to a high of just over \$60,000. ZCash meanwhile, which Argo mines in much smaller quantities, has risen from c.\$69 at the time of our last note to a peak of c\$.180 (c.\$161 as we write).

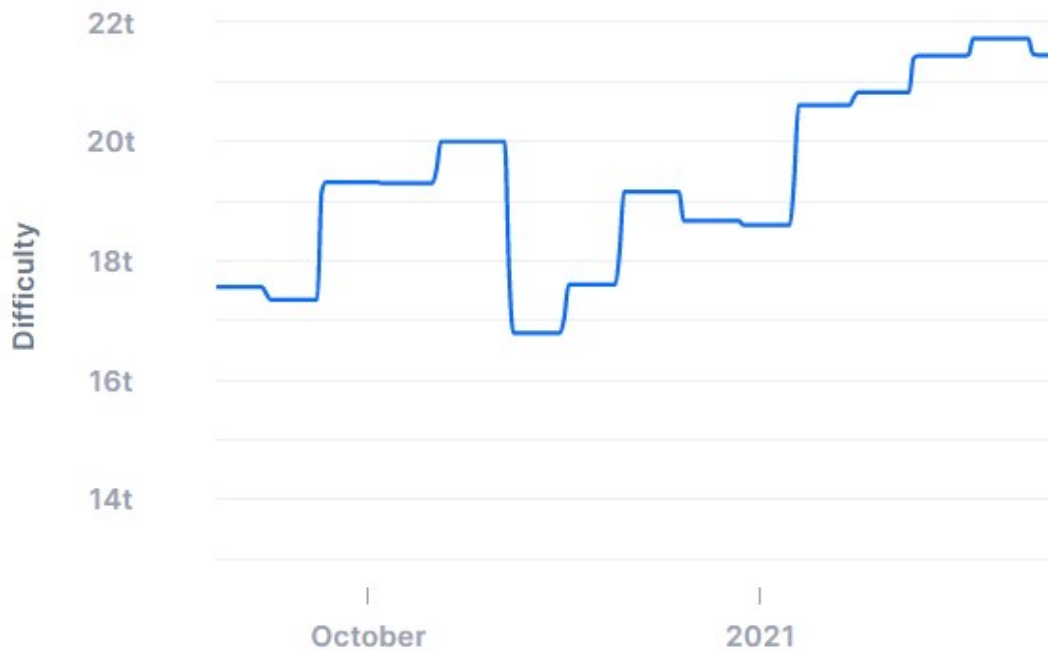
Helping to drive the BTC price has been increased interest from investors in a near zero interest rate environment, along with large institutions and payment service providers starting to more widely accept cryptocurrencies. Recent events of note include Tesla buying \$1.5 billion of BTC using its cash reserves and saying it will start accepting Bitcoin as a payment for its electric cars. Elsewhere, US bank BNY Mellon will start holding and transferring cryptocurrencies for asset management clients and payment giant Mastercard has said it will soon support select cryptocurrencies on its network.



Bitcoin price change 26<sup>th</sup> November 2020 to present. Source: Blockchain.com

## Difficulty rates

Bitcoin difficulty rates have unexpectedly risen also, albeit not as fast as the price as machine capacity remains limited. Difficulty has risen from 17.041 Th/s at the time of our last note to 21.448 Th/s at present.



Bitcoin difficulty rates – last six months. Source: <https://www.blockchain.com/en/charts/difficulty>

ZCash difficulty rates meanwhile have risen from around 63 million h/s since our last update to 77.60 million h/s.



ZCash difficulty rates – last six months Source: <https://www.coinwarz.com/mining/ZCash/difficulty-chart>

## Forecasts update

Once again we have reviewed and updated our financial model for Argo taking into account recent corporate developments, changes in cryptocurrency prices and difficulty rates. While crypto prices have moved substantially in Argo's favour since our last update, other factors have had a modest negative effect, including the pound strengthening against the US dollar (which means Argo gets fewer pounds on translation from dollars), with difficulty rates having advanced slightly ahead of our previous expectations (meaning fewer coins are mined compared to previous expectations). As well as including actual revenue figures for 2020 and January/February 2021 we update our 2021 assumptions and initiate forecasts for 2022. At this stage we do not include any data from the Texas land deal – discussed in more detail below.

Our key updates to the model include.

### 2020

2020 revenue and mining margin figures are actual. In line with the company's November share capital reduction we reduce the share premium to zero and transfer the amount to reserves.

### 2021

**Machines in production** – We add in the recent machine purchases, making assumptions regarding when they become fully operational in line with management guidance. By June we expect the mining estate to comprise of just under 25,000 machines, with no further additions expected for the rest of the year at this stage. Revenues and mining costs for these new machines have been forecast using standard specifications, with a small reduction in hash power (5%) marked in for downtime.

**Difficulty rates** - Bitcoin/ZCash price and difficulty figures have been reset in March 2021 using current levels as a base. As before, the BTC difficulty level is assumed to rise by 5% a month over the forecast period. ZCash difficulty is assumed to rise by 2% a month.

**New funds raised** – to the balance sheet we add in the combined £49.2 million raised from the two fundraisings, less a 5% broker fee. We allocate £14.4 million (\$20 million) of this to capex for the new machines we assume are bought from part of the proceeds, along with the funds used to invest in Pluto.

**Exchange rates** – we assume a flat GBP:USD exchange rate of 1.3895 for the forecast period.

### 2022

All our assumptions for 2021 are carried through to 2022 to generate our maiden forecasts for the year.

## Analysis

Given the volatility of the Bitcoin price we have come up with various scenarios to illustrate a fair value price for Argo. The scenarios alter two main variables - changes in the growth of the Bitcoin price to the end of 2022 and valuations at various earnings multiples. The Bitcoin price is fixed at \$50,000 beginning in March 2021, then grows in line with our assumptions. All other variables in the model are fixed as discussed above, with ZCash assumed to be flat at \$150.



The matrix below shows the valuation outputs of our model for each of the various scenarios, with the valuation being based on the 2022 earnings figure plus forecast net cash and crypto assets at the period end. The valuations range from a low of 86.16p to a high of 680.81p.

	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
<b>8</b>	86.16	104.41	125.45	149.70	177.64	209.85	246.96	289.73	339.02	395.79
<b>9</b>	93.33	113.54	136.83	163.69	194.65	230.33	271.47	318.89	373.54	436.51
<b>10</b>	100.51	122.67	148.22	177.68	211.65	250.82	295.99	348.05	408.06	477.23
<b>11</b>	107.68	131.79	159.60	191.67	228.65	271.31	320.50	377.21	442.59	517.94
<b>12</b>	114.86	140.92	170.98	205.66	245.66	291.80	345.01	406.37	477.11	558.66
<b>13</b>	122.03	150.04	182.36	219.65	262.66	312.29	369.52	435.53	511.64	599.38
<b>14</b>	129.21	159.17	193.74	233.64	279.67	332.77	394.03	464.69	546.16	640.09
<b>15</b>	136.38	168.29	205.13	247.63	296.67	353.26	418.55	493.85	580.69	680.81

Table – Argo fair value price (p) at various PE ratios and BTC growth rates. Source: Align Research

The matrix suggests that at current levels of 240p the markets are expecting further strong long-term growth in the Bitcoin price. To justify the current valuation at a multiple of say 12 times forecast 2022 earnings would require 6% monthly growth in the BTC price. At 15 times, monthly Bitcoin growth of c.4% would need to be seen. **Given recent trends these are not completely unreasonable expectations but we must point out that there is always the potential for the Bitcoin price to fall below current levels.** As such, any sustained fall in the BTC price, at fixed assumed difficulty increases, could justify a valuation lower than the lowest case scenario presented above.

That said, the model assumes zero contribution from the new Texas facility once up and running, and we believe that contribution could be many multiples of our current 2022 forecast earnings given its scale. Argo has now got to the stage where instead of paying a third-party for power and hosting services, it has become financially viable to build its own facility to enjoy the associated economies of scale. **The planned 200MW facility represents almost 7 times the capacity Argo currently has, with the 800MW available being some 27 times higher.** Of course, there are multiple challenges associated with building the facility and getting it up and running, not least finalising the agreement, constructing the property and then filling it with adequate infrastructure, some of which is currently in high demand and has inadequate supply.

### Conclusion

Argo’s decision to mine crypto for its own book back in early 2019 and take advantage of the then low mining machine prices now looks like a masterstroke. Over the past two years the company has built up its infrastructure to become one of the largest crypto miners in the world and is now riding high on the wave of excitement over Bitcoin. To that end, it is no surprise that the shares have reacted like they have.

As ever, the main risk to our forecasts being met is changes in the Bitcoin price. Bitcoin remains a highly volatile asset which can and has seen large swings in value on a sometimes hourly basis. On balance, while the potential for downside is apparent, given the potential for further rises in the Bitcoin price, along with the huge opportunities presented by the planned Texas facility, we feel that we can justify a stance of **Speculative Buy**.

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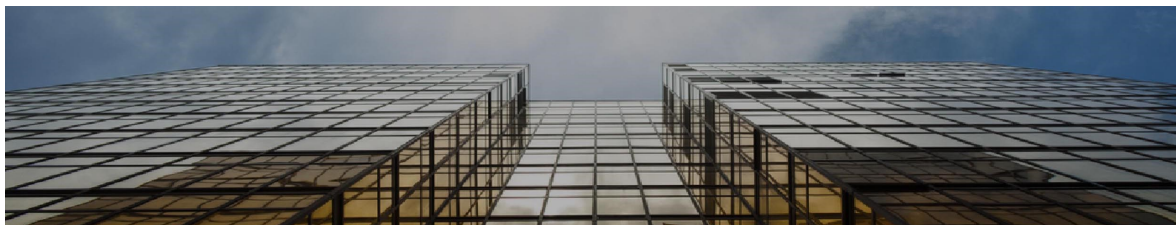
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