2020 Q2 Cryptocurrency Mining Industry Report

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Executive Summary

1. Turbulence In the first half of the year, the Bitcoin market experienced severe volatility. The outbreak of the COVID-19 pandemic in the first quarter and the sharp drop in global stock markets caused the market to experience a "Black Thursday" on March 12.In the other hand, the third halving of Bitcoin mining reward happened in the second quarter once again stirred the market, its impact on market hash rate was particularly significant.

2. Second in history On March 26, the Bitcoin network experienced the second largest difficulty reduction in history after its sharp drop, with a proportion of 15.95%. The difficulty adjustment period is also increase as long as 17 days, far exceeding the average 14 days.

3. 800 seconds The average Bitcoin block time dropped to around 800 seconds after the March crash and the halving.

4. The decline The number of addresses holding coins between 100-1000 BTC is the only group showing a downward trend, with a decrease of 0.81% in half a year.

5. Sharply Drop The percentage of transaction fees in the total income of miners dropped sharply after climbing to a peak of 21% on May 20. The average transaction fee percentage in June was 4.3%, which was near to the average of 4.1% before the halving in May.

6. 27% Among the current 93 models, the mining machines launched by Bitmain accounted for the highest proportion, with 27%, followed by MicroBT and Canaan.

7. 17.9% In the first half of 2020, the average hash rate of new mining machines is 81T, and the average unit power consumption is 42W/T. Compared with the first quarter, the hash rate of the new machines in the second quarter increased by 17.9%, and the unit power consumption decreased by 11%.

8. Strong development momentum Lubian mining pool have sprung up after being launched in April, and their hash rate once exceeded 5% among the industry. Besides, Binance has developed a strong momentum after entering the mining pool field this year, and has occupied 5% of hash rate as of the end of June.

9. Impact China's mining pools suffered a greater impact in the first half of the year, mainly due to the delay in the supply chain of mining machines caused by the COVID-19 pandemic and internal disputes among mining machine manufacturers, these reason cause the inability of miners to update new mining machines on a large scale and the extended delivery time.

10. Financialization The popularity of mining in the traditional financial market means that the professional requirements for mining are also become higher, and the financialization of mining industry has been driven by the general trend.

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Content

INDUSTRY DYNAMIC

① Canada technology company DMG announced the termination of the joint mining project with Bitmain.

② As of January, Argo Blockchain has installed 17,000 mining machines.

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① There were multiple double-spending attacks on the BTG network, but they were all countered by miners and failed.

② Argo Blockchain's board of directors granted 11.4 million common stock options as incentives.

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① The price of Bitcoin has experienced a rare plunge, and many mainstream mining machines have reached the shutting price.

② Bitmain's new mining machines S19Pro and S19 went on sale;

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① After Bitmain updates the Antminer E3 firmware, its mining period can be extended to October.

② With the impact of the COVID-19 pandemic, North American cryptocurrency mining giant Bitfarms was forced to lay off employees and reduce costs.

③ Binance's mining pool brand "Binance Mining Pool" is officially launched.

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① Turkish mining company iMiner obtained an Iranian license to deploy 6000 ASIC mining machines in Iran.

② VBit DC has completed the seed round financing and will establish a Bitcoin mining center.

③ Antminer stopped providing maintenance services for S9 series models.

④ The "Lubian" mining pool suddenly appeared in the mining pool rankings of the BTC.com browser, once ranking fifth with a hash rate exceeding 6000P.

⑤ Bitfury launched a Bitcoin mining investment project for institutional investors;

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① On June 10th and 11th, two consecutive abnormal transfers with a transaction fee of up to 10668 ETH occurred on the Ethereum chain;

② Babel's Ethereum mining pool 'Babelpool' is officially launched;

③ Ebang Communications, a Bitcoin mining company, is listed on NASDAQ in the United States under the stock code "EBON".

INDUSTRY DYNAMIC

Bitcoin Market and Network Hash Rate

" *After experienced ups and downs, the Bitcoin market has gradually stabilized since early June*

In the first half of 2020, the Bitcoin market experienced severe volatility. The outbreak of the COVID-19 pandemic in the first quarter and the sharp drop in global stock markets caused the market to experience a "Black Thursday" on March 12; and the third halving of Bitcoin in the second quarter once again stirred the market, its impact on the market's hash rate was particularly significant.

As shown in the figure below, in the first half of 2020, the whole network's hash rate fluctuates in the range of 76EH/s-136EH/s. Hash rate reached the highest value of 136EH/s on March 1 before the market crash in the first quarter, and May 10 before the halving in the second quarter. Besides, the hash rate reached 76EH/s on March 25 in the first half of the year, the lowest value, then the hash rate rebounded in turbulence, but fell again after the halving, the network hash rate reached its low of 82EH/s in the second quarter.

Bitcoin prices have also experienced turbulence. The market panic selling on March 12 brought the price of Bitcoin to around US$4,100, the lowest price since the second half of 2019. However, the price gradually climbed back to the level before the market crash and broke through US$10,000 again in early June. After that, the price was relatively stable, fluctuating between US$9,000 and US$10,000.

▸ Bitcoin price and network hash rate
Source: TokenInsight

— Price (left)　　　 HashRate (right)
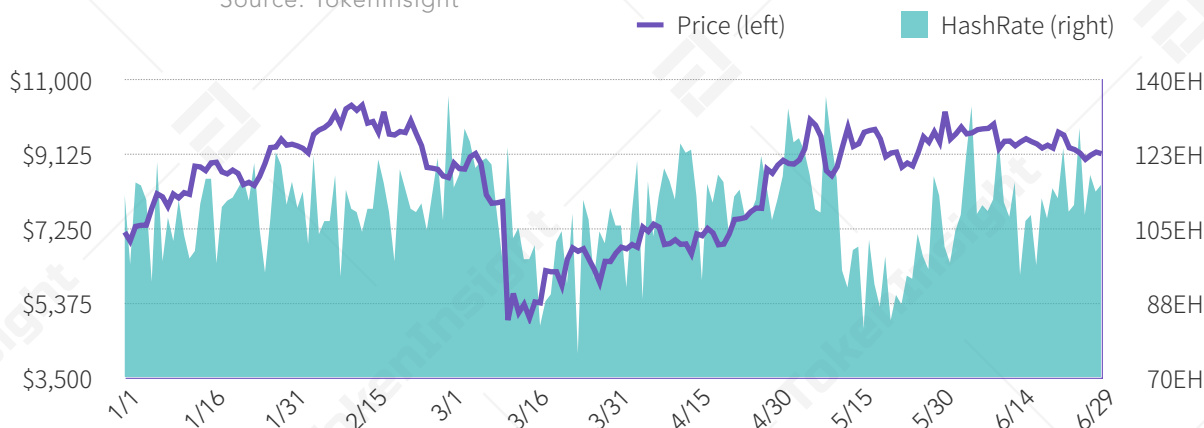
The change of miners' income is similar to the trend of the whole network's hash rate TokenInsight uses Hashprice as a measure of the value of hashrate. This indicator represents the fee paid by the mining pool to purchase units of hash rate from miners in the market at a specific time.

The market crash on March 12 and the halving on May 11 both caused a significant drop in miners' income. However, unlike the gradual adjustment and recovery of hash rate after the halving, Hashprice has not rebounded since June. Compared with the average in January, Hashprice fell by 42% in June, indicating that the Bitcoin halving has caused a substantial change in the value of hash rate and miners' earnings. After the halving, it is necessary to have a higher Bitcoin price to bring the value of the unit hash rate back to its original level.

▸ Hashprice and network hash rate
Source: HashrateIndex.com, TokenInsight

— Hashprice (Revenue per TH) (left)   ▇ Hashrate (right)
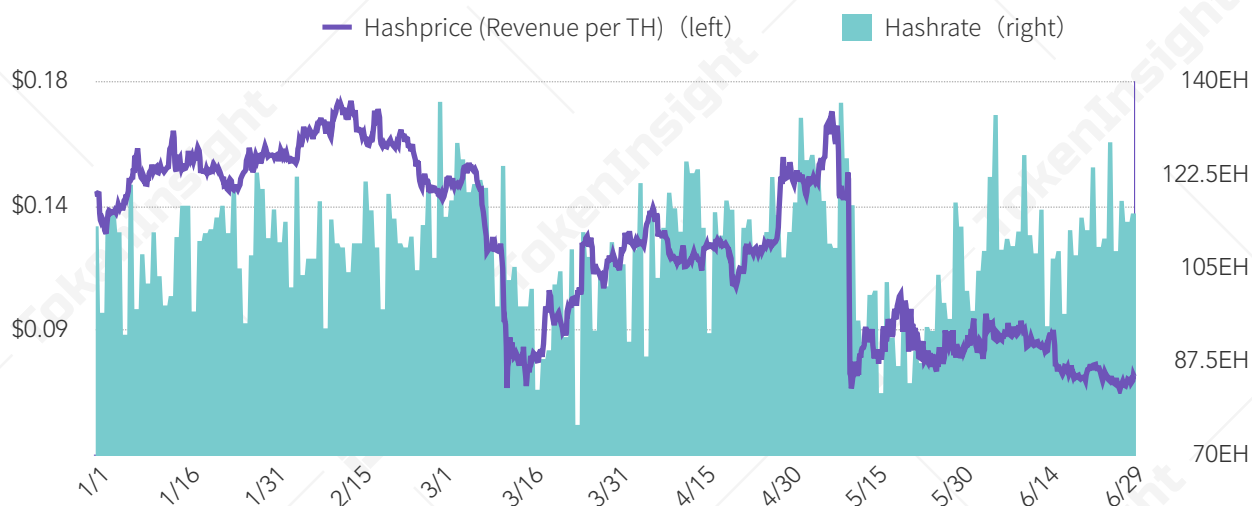
In addition, as the ratio of market value to actual value, MVRV provides a good basis for measuring the market situation. The MVRV trend is consistent with the Bitcoin price trend. The sharp drop on March 12 caused MVRV to fall below 1, indicating that the market value of Bitcoin at this stage is less than its actual value. In the rest of the time, the market value of Bitcoin is greater than its actual value.

▸ Bitcoin's MVRV
Source: CQ.Live, TokenInsight

— Price (left)   ▇ MVRV (right)
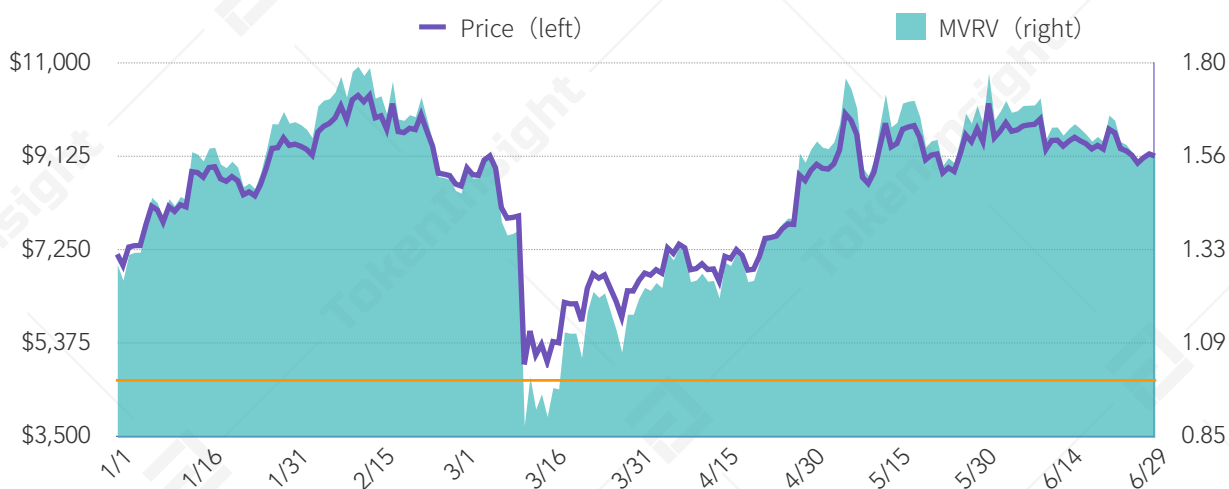
# Bitcoin Network Difficulty

> *"*
> *After the halving, the network difficulty drops by 6%,*
> *and the average block time varies greatly*

The difficulty of Bitcoin's entire network fluctuated significantly in the first half of the year. On March 26, the Bitcoin network experienced the second largest difficulty reduction in its history after the sharp drop, with a difficulty reduction of 15.95%. The difficulty adjustment period is also as long as 17 days, far exceeding the average 14 days. On May 20 and June 4, the Bitcoin mining difficulty dropped by 6% and 9.29% respectively post halving.

After the market adjusted the impact of the halving, the network difficulty broke to a new high, once breaking through 17T, reaching a maximum of 17.35T.

▸ Changes in difficulty

Source: Glassnode; TokenInsight — Difficulty ▮ Price
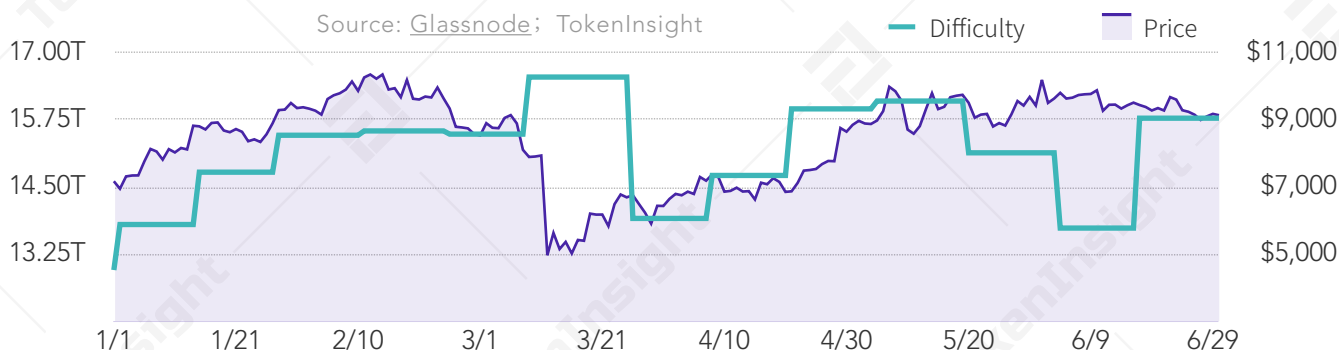
In terms of time, the average block time of Bitcoin in 2020 fluctuated up and down 600 seconds before March, during March, the average block time showed a big change, reaching 800 seconds after the sharp drop in March. With the increase in the price of Bitcoin, the block time has returned to around 500 seconds. After the halving, it has dropped to around 800 seconds again.

In June, with the end of the market adjustment, the average Bitcoin block time remained around 600 seconds.

▸ Average block time

Source: Glassnode; TokenInsight ▮ Average block time — Price
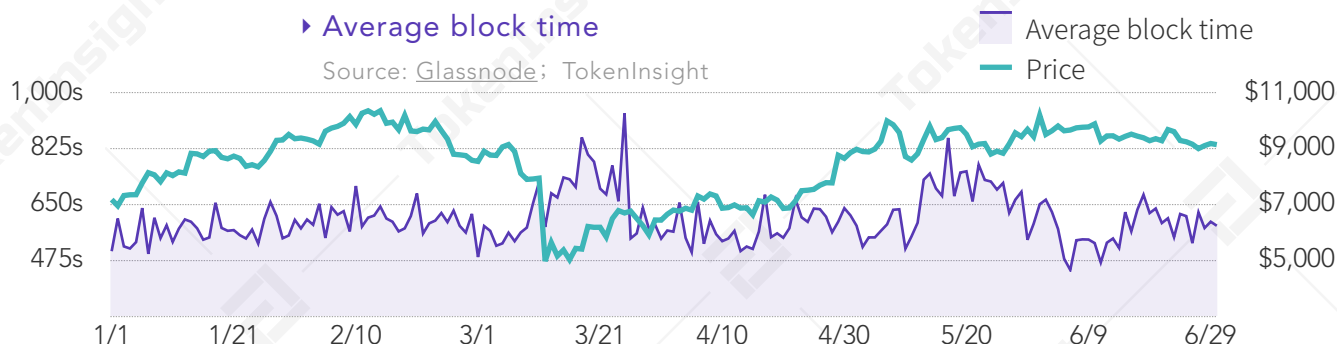
"
Under market volatility, the Bitcoin consensus has been strengthened again, and the number of coin holding addresses has maintained a steady growth momentum

In usual, we regard the growth of addresses balances as an increase in the maturity and recognition of the Bitcoin market. In the first half of the year, despite the market downturn and extreme market conditions, the addresses balances maintained a steady growth momentum. The number of addresses holding coins between 0.1 and 1 BTC increased by 8.19%, between 0.01 and 0.1 BTC. The increase in between was 8.19%.

▸ Change in the addresses balances (logarithmic index)
Source: Glassnode；TokenInsight
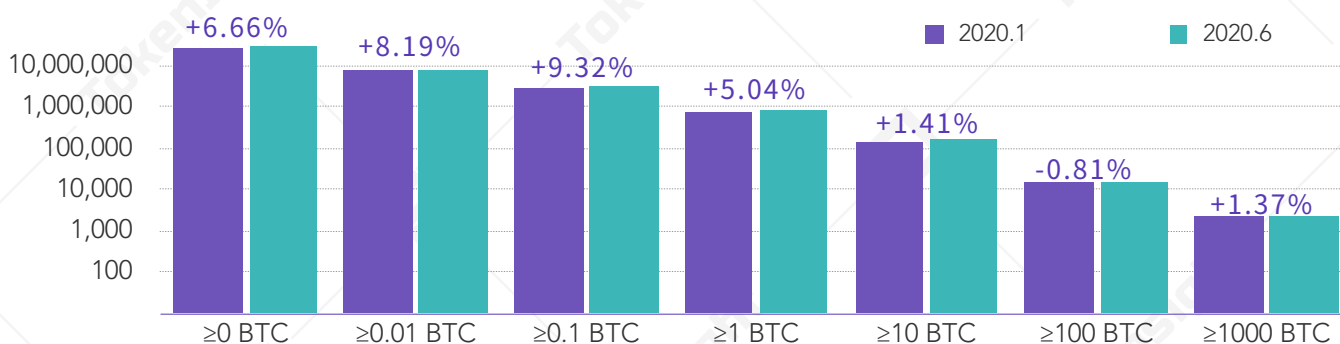
In summary, the number of non-zero addresses on chain grew faster in Q1, but slowed down in Q2. The number of addresses holding coins below 10 BTC grew faster in the first half of the year.

The number of Bitcoin whale addresses exceeding 1,000 BTC increased by 1.37% in the first half of the year, and the number of addresses holding coins between 100-1,000 BTC was the only group showing a downward trend, with a decrease of 0.81% in half a year. TokenInsight Research believes that this phenomenon is mainly affected by extreme market conditions.
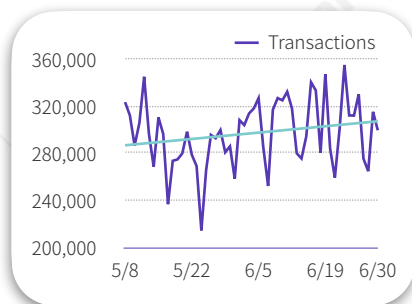
▸ Change in the number of coin holding addresses
Source: Glassnode；TokenInsight
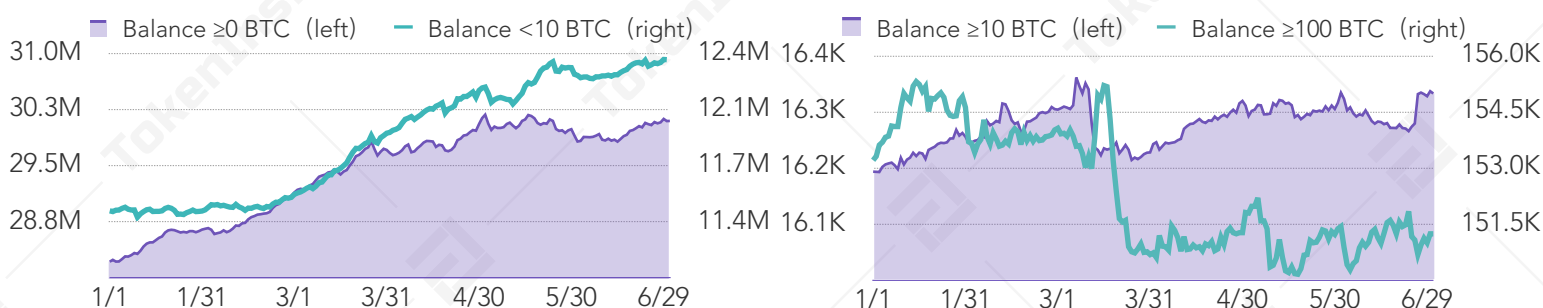
Bitcoin Third Halving

" *The market is gradually digesting the impact of the halving*

Since the halving in May, the market has adjusted its own hash rate and has returned to the level before the halving. Similarly, the number of transactions on the chain also showed a trend of rising in shock after the halving, but there is still a gap compared with the activity before the market crash in the first quarter; compared with the 312 market before the market crash, the chain in June The average number of transactions in the previous day fell by 4%.

▸ Number of on-chain transactions
Source: TokenInsight
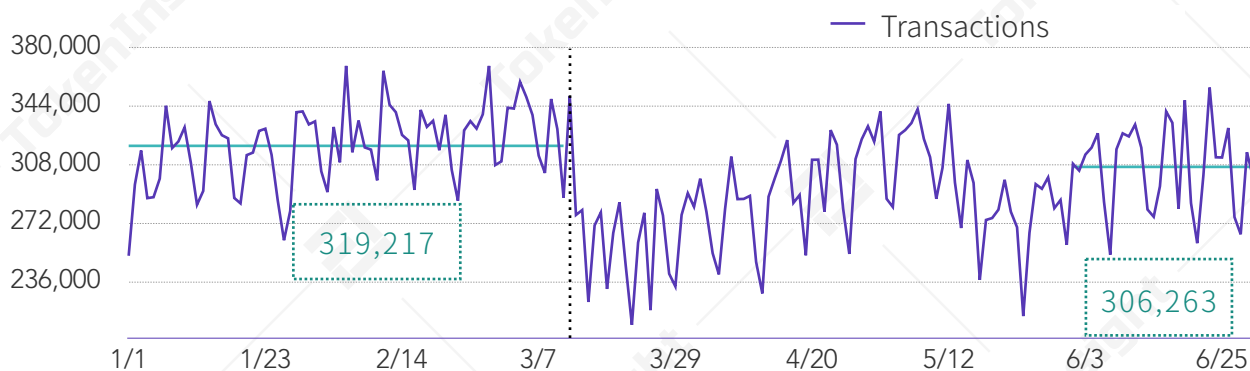
The halving has caused a sharp increase in transaction fees and its ratio among the total income of miners. However, transaction fees have fallen sharply since May 20 and have basically returned to the level before the halving in June. Correspondingly, the proportion of transaction fees in the total income of miners climbed to the highest value of 21% on May 20, then dropped quickly. The average transaction fee percentage in June was 4.3%. It is not much different from the 4.1% average before the halving in May.

▸ Transaction fees
Source: TokenInsight
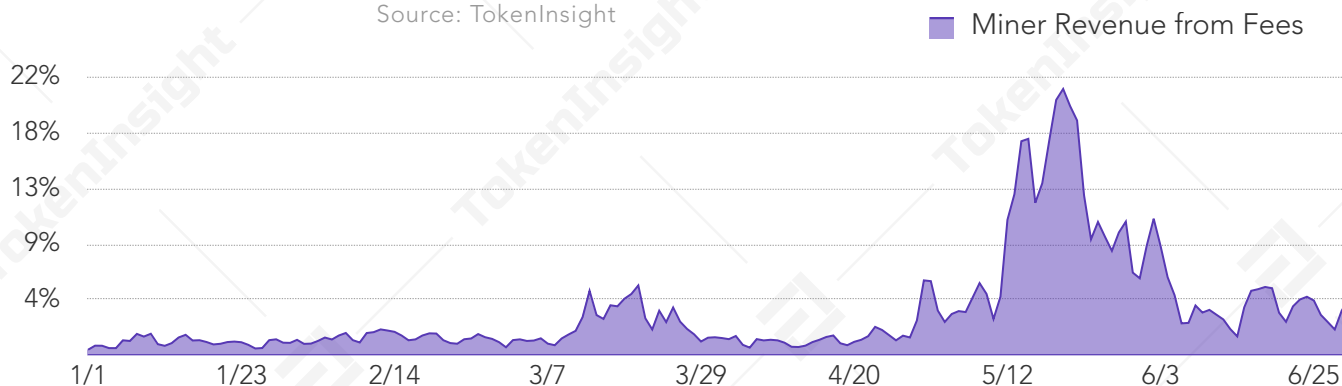
MINING MACHINE

Market Overview

" *The number of new mining machines launched in the first half of 2020 is average, and Bitmain is the most active company in the race of new machines releasing.*

TokenInsight conducted a statistical analysis of the mining machines shown on the F2Pool website that have not been eliminated by the market. A total of 11 new mining machines were launched in the first half of 2020, of which 7 were released in the first quarter, the highest year-on-year in three years; and the new models launched in the second quarter Less, the lowest year-on-year in three years. Generally speaking, compared with the history, the number of new mining machines launched in the first half of 2020 is at a low-middle level.

▸ Time chart of the number of Bitcoin mining machine models (vertical axis unit: 1 machine)
Source: F2Pool, TokenInsight
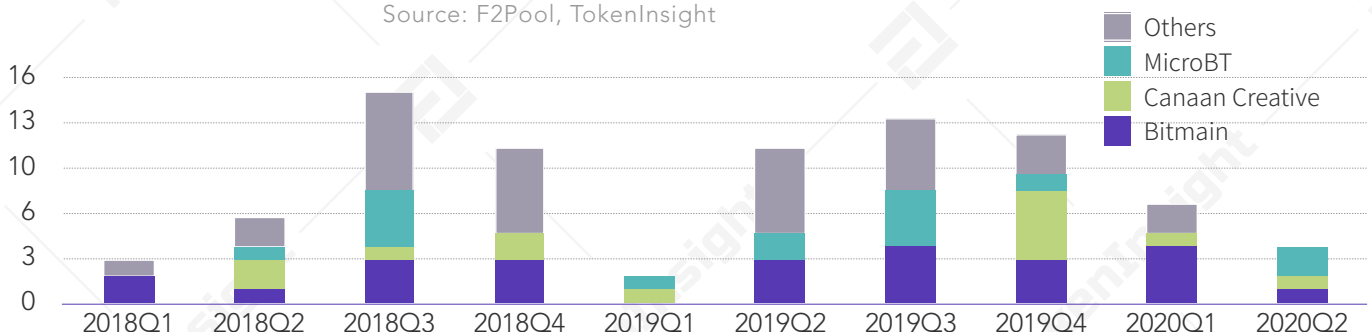
In term of manufacturer, among the current 93 models, the mining machine launched by Bitmain accounts for the highest proportion, at 27%, followed by MicroBT and Canaan. In the first half of 2020, Bitmain was also the most active in the release of new models, while the only other manufacturers that launched new phones in the first half of the year were BitMicro, Canaan Creative and Zhichen, and all three launched two new models.

Affected by the launch of new mining machines, among the most popular mining machines in the first half of the year, the prices of S17s and M20s showed a slight downward trend, while the prices of S19s have increased.
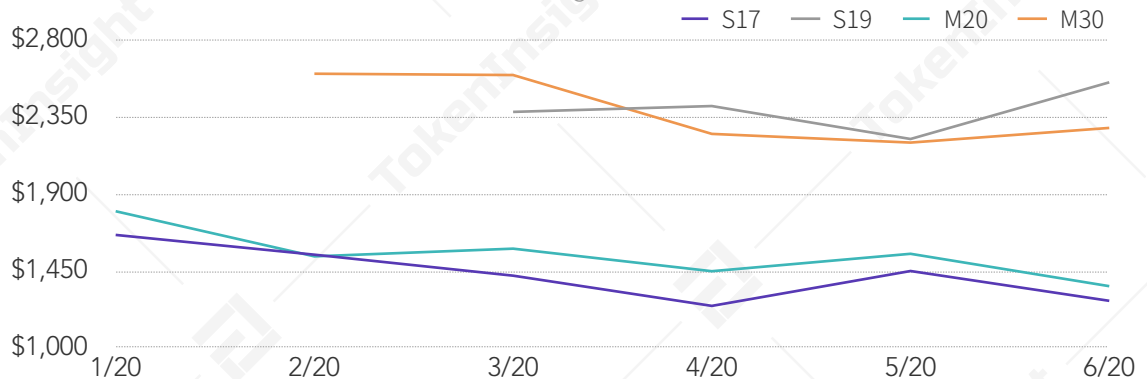
▸ **Distribution of Bitcoin mining machine model manufacturers**
Source: F2Pool, TokenInsight
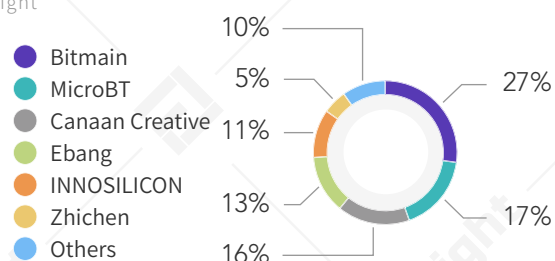
- Bitmain
- MicroBT
- Canaan Creative
- Ebang
- INNOSILICON
- Zhichen
- Others

New Mining Machine Model Analysis

TokenInsight Research analyzed the new machines released in the first half of 2020. For the basic information and payback period analysis of the 7 models launched in the first quarter, please refer to the "2020Q1 Blockchain Mining Research Report" released by TokenInisght. There are four new models in the second quarter, all of which support the SHA256d algorithm. The basic information is shown in the following table:

▸ 2020 Q2 New Machines

Source：Official website of Bitmain, Canaan, Cynosure; TokenInsight

Manufacturer	Model	Consumption (W)	Hash rate(T)	Power consumption per unit(W/T)	Price ($)
MicroBT	WhatsMiner M30S++	3472	112	31	3900
	WhatsMiner M30S+	3400	100	34	2740
Bitmain	Antminer T19	3150	84	37.5	1749
Canaan	AvalonMiner 1146 Pro	3276	63	52	—

Compared with the new mining machines released in the fourth quarter of 2019, the hash rate of the new mining machines released in the first half of 2020 has increased significantly, while the unit power consumption has decreased. As shown in the left figure, the average hash rate of new mining machines in the first half of 2020 is 81T, and the average unit power consumption is 42W/T. In the second quarter, the hash rate of the new machines in the second quarter increased by 17.9%, and the unit power consumption decreased by 11%. However, the increase in hash rate and the decrease in unit power consumption were smaller than the change in the first quarter compared with the fourth quarter of 2019. Data shows that the performance of new mining machines will continue to improve in 2020, but the improvement space is gradually shrinking.

▸ **Quarterly comparison of average hash rate and per unit power consumption of Bitcoin mining machine models**
Source: F2Pool, TokenInsight
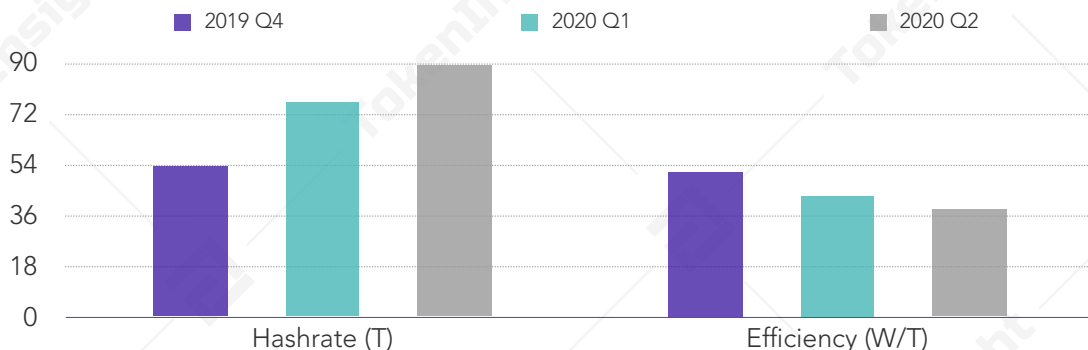
Marginal Production Cost and Marginal Revenue

TokenInsight Research analyzes the income of miners when using different mining machines by introducing two indicators, namely Miner's Profit Margin and Marginal Cost of Creation. The calculation formula for the marginal production cost of miners is as follows:

$$\frac{1}{Block\ Reward + Transaction\ Fees} * Hashrate * Power\ Efficiency/1000 * Electricity * 24h * (1 + Operation\ Costs)$$

Among them, $Block\ Reward$ represents the daily block reward generated by the Bitcoin network (expressed in the number of Bitcoins, this value is 1800 before the halving, and 900 after the halving, but it will vary according to the situation);$Transaction\ Fees$ represents daily Bitcoin network transaction fee；$Hashrate$ represents Bitcoin network hashrate；$Power\ Efficiency$ represents the power consumption per unit W；$Electricity$ is the electricity price；$Operation\ Costs$ is operation costs. This formula shows the cost of mining 1 Bitcoin. The marginal revenue of miners is the ratio of Bitcoin price deducting production costs to Bitcoin current price.

The following figure shows the changes in the marginal production cost and marginal revenue of new mining machines in 2020. The power consumption of the new mining machines is the average value of the new mining machines's power consumption in 2020, and the electricity price suppose to be US$0.04/kw.

It can be seen from the figure that the marginal revenue of Bitcoin experienced two sharp drops in the first half of 2020. The sharp drop in the price of Bitcoin on March 12 reduced the marginal revenue by 34%; the halving in May led to a significant increase in the marginal production cost of miners. Marginal revenue is reduced by 35%. However, even under the influence of extreme market conditions and the 3rd halving, the marginal revenue of new mining machines in the first half of 2020 can still be maintained at more than 20%, indicating that the new mining machines generally perform well and can adapt to the changing market environment.

▸ Bitcoin's marginal production cost and marginal revenue
Source: TokenInsight

Bitcoin Price (Left Axis)　　Marginal Cost of Creation (Left Axis)　　Marginal Revenue (Right Axis)
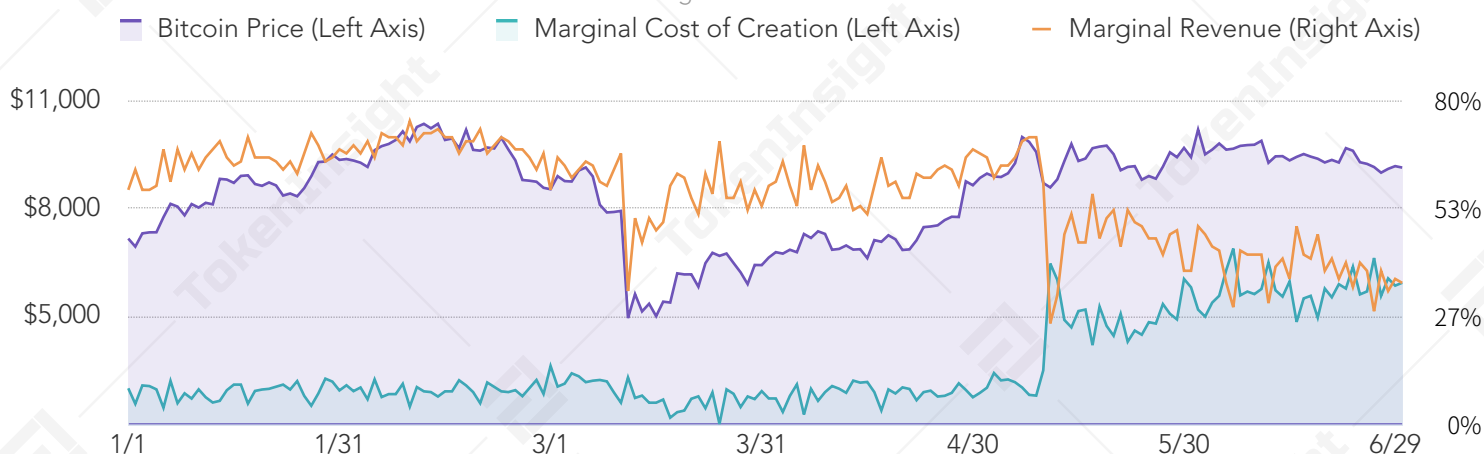
The marginal revenue changes of 6 new models released before the sharp drop on 3/12 and 9 new models released before the halving under the influence of extreme market and halving are shown in the chart below respectively. Among them, AvalonMiner 1066Pro's marginal income fell below 0 under the influence of the halving, which is the largest change of all new mining machines.

▸ Changes in the marginal revenue of new mining machines during the 3/12 crash and the halving
Source: TokenInsight

Pre Black Thursday　　Post Black Thursday

Pre Black Thursday　　Post Black Thursday
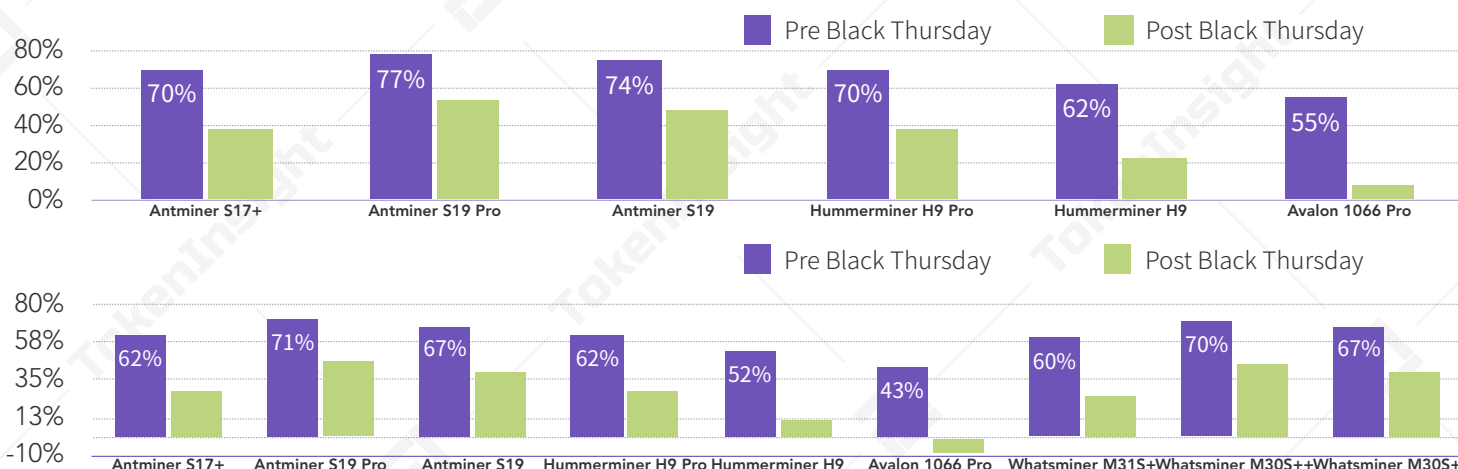
Manufacturers

" *The industry welcomes newly listed companies in 2020, and new manufacturers are gaining momentum are strong*

In June 2020, Ebang Communications was listed on Nasdaq and became the second mining machine manufacturer to be listed after Canaan. Canaan officially named Canaan Technology (CAN) in November 2019 Landed on Nasdaq. Bitmain, as the largest player in the mining machine manufacturing industry, has not made any progress in listing again after its listing failure in 2018. In addition, MicroBT is also a major player in the industry, while Cynosure is a cutting-edge company that entered the Bitcoin mining machine manufacturing industry in 2019. Currently, there are fewer mining machine models, but they are gaining momentum.

▸ Estimated market share of each manufacturer
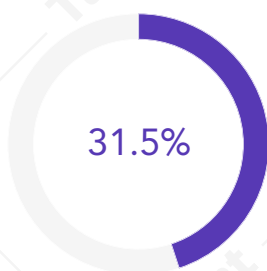
Source: BitMEX Research，TokenInsight
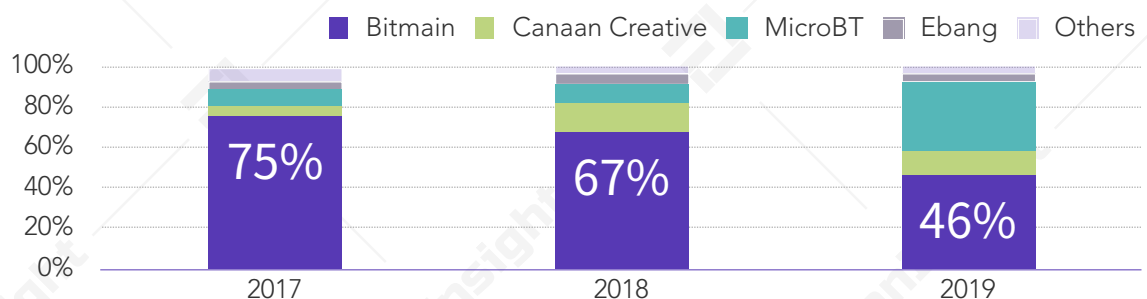
The outbreak of the pandemic in the first quarter of 2020 will have an important impact on the sales and delivery of mining machines. Canaan had previously lowered its first quarter revenue expectations. According to Canaan's financial statements for the first quarter of 2020, benefiting from the increase in the total hash rate sold and the average price of hash rate, the company's revenue in the first quarter of 2020 reached 9.64 million US dollars, and its loss was reduced by 31.5% compared with the fourth quarter of 2019. , Is 5.64 million US dollars.

▸ 2020Q1 Canaan net loss change

Source: Canaan's Financial Report

31.5%

Although manufacturers were affected by the pandemic in the first half of 2020 and industry revenues were generally poor, industry players including Bitmain, MicroBT, and Canaan all indicated that the volume of orders is gradually increasing. At the same time, more and more inquiries about large-scale orders indicate that the dominant position of major customers and major customers in the sales of mining machines is gradually strengthening.

MINING POOL

" *While the status of the top mining pools remained the same, Binance pool and Lubian mining pool rose strongly in the first half of this year*
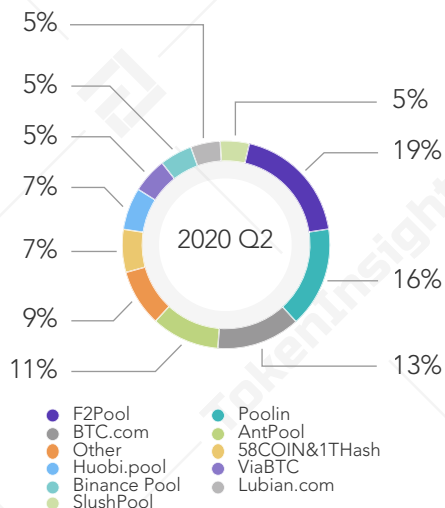
As of the second quarter of 2020, the top 4 mining pools (F2Pool, Poolin, BTC.com, AntPool) accounted for 58% of the total network hash rate in the market, basically unchanged compare with the first quarter and the end of 2019.

Among the top mining pools, F2Pool performed relatively strongly in the first half of 2020, with the proportion of hash rate increased by nearly 3%; while the proportion of Poolin and BTC.com hash rate declined slightly. It is worth noting that since March 2020, the share of small mining pools ranked after the top 10 in hash rate has dropped sharply, from more than 20% to less than 10%.

In addition, Lubian mining pool has sprung up after being launched in April, and the percentage of hash rate once exceeded 5%.
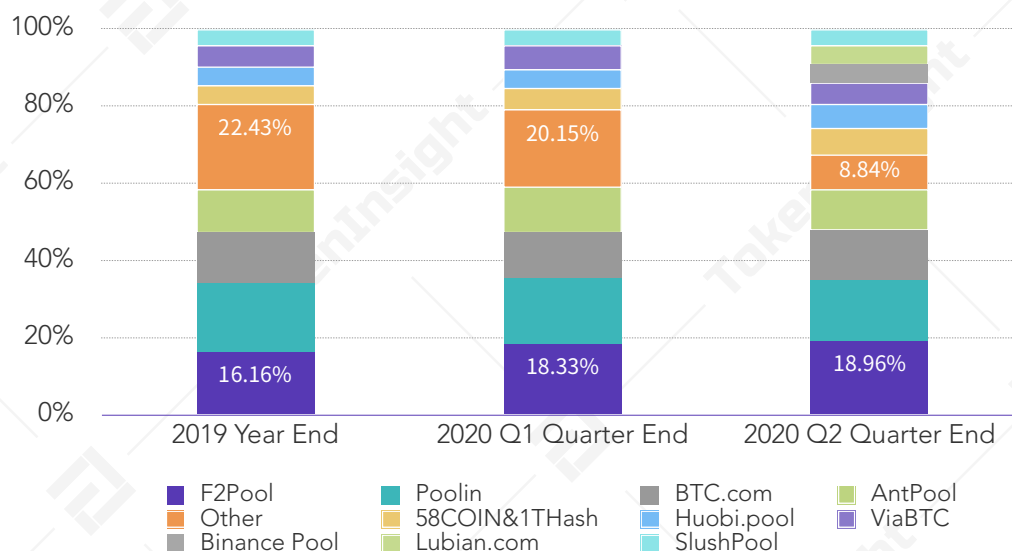
▸ Q2 2020 Hashrate Distribution

Source：BTC.com, TokenInsight

Legend:
- F2Pool
- BTC.com
- Other
- Huobi.pool
- Binance Pool
- SlushPool
- Poolin
- AntPool
- 58COIN&1THash
- ViaBTC
- Lubian.com

▸ Change in hash rate distribution

Source: BTC.com, TokenInsight

Legend:
- F2Pool
- Other
- Binance Pool
- Poolin
- 58COIN&1THash
- Lubian.com
- BTC.com
- Huobi.pool
- SlushPool
- AntPool
- ViaBTC

After entering the mining pool sector this year, Binance has developed in a strong momentum. As of the end of June, it has occupied 5% of the hash rate. The development of Binance mining pool benefited from the launch of its smart mining pool in June. The service automatically converts hash rate to support mining different currencies with the same algorithm.

Differ from the clear background and publicly disclosed development strategy of Binance mining pool, the background of Lubian mining pool is more mysterious. At present, the most common speculation in the industry about the origin of Lubian mining pools is that they are formed by several large miners, so Lubian mining pools can gather more than 5% of the hash rate in a relatively short period of time.

Since the development of the mining industry, it has gradually entered a period of orderly competition in industrialization, and the innovation in the industry has begun to be reflected in giving more autonomy to miners. Among them, the launch of the Stratum V2 protocol represents an attempt to promote the decentralization of hash rate and prevent excessive concentration of mining pool rights, and provides a certain imagination for future changes in the production relationship between mining pools and miners.

MINING FARM

"   *In the first half of the year, the pandemic, the halving and the internal fighting of the mining machine manufacturers dealt a greater impact on the mining industry*

Chinese mining farms have a dominant position in the global mining ecosystem due to low domestic electricity prices, networks, sufficient market liquidity for ASIC mining machines, and close ties with the mining community, while North American mines enjoy a standardized operating framework, Adequate investment capital and favorable regulatory environment and other advantages. Due to the differences in the above-mentioned various factors, the mining operations strategies of the East and West countries also have their own merits.

As all known, Sichuan is the province with the richest hydropower resources in my country, and June to November is the wet season in Sichuan. At that time, electricity costs were relatively low, so miners would choose to migrate mining machines to save mining costs.

▸ Bitcoin price and the trend of the whole network's hash rate in the wet season
Source: TokenInsight

— Price (Left Axis)   ▮ HashRate (Right Axis)
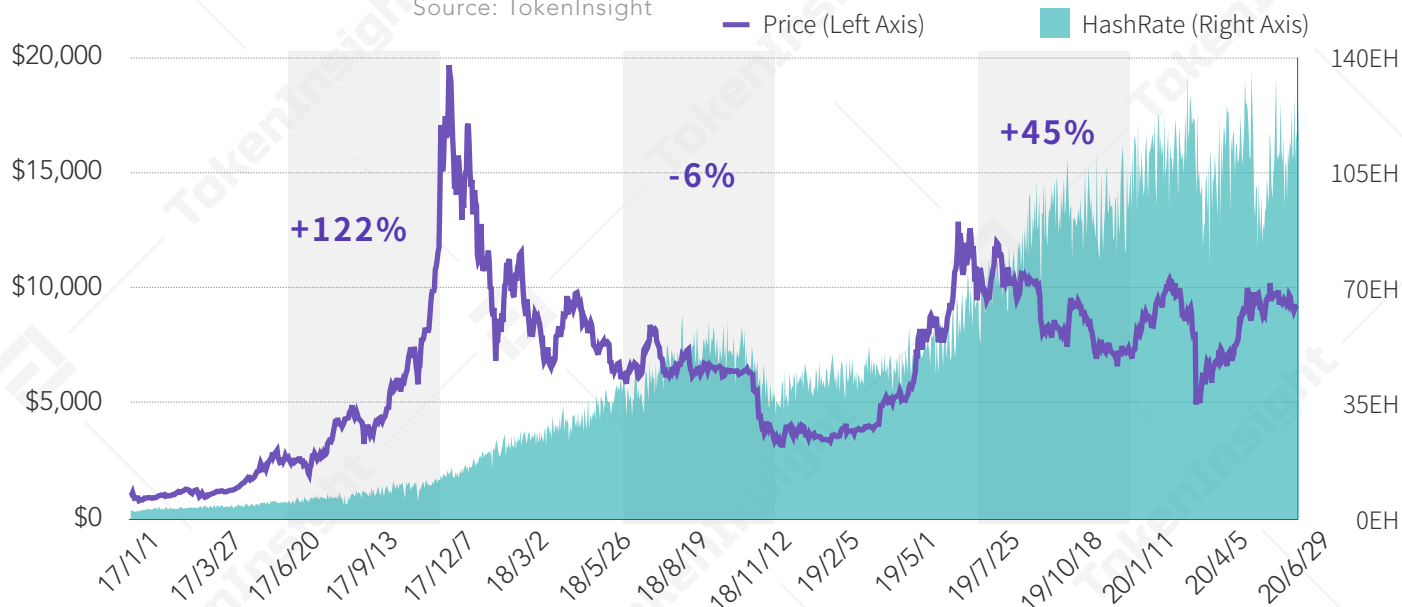
TokenInsight Research found through research and analysis of mines in China that in the first half of 2020, China's mines suffered a greater impact in the first half of the year, mainly due to: 1. Mining machines caused by the COVID-19 pandemic and internal disputes among mining machine manufacturers. The supply chain is delayed, new mining machines cannot be updated on a large scale and the delivery time is prolonged; 2. Bitcoin halving leads to reduced revenue and increased mining costs; 3. Mining policy changes in Sichuan.

In 2018, Sichuan suffered continuous precipitation, which caused some mines to be flooded. After flooding, the hash rate decreased in a short period of time. This year's situation is even worse, but according to TokenInsight Research, this year's flood situation has relatively less impact on the mine. The main reason is that the mine owner has absorbed the previous experience and considered the impact of the surrounding environment during the site selection phase of the mine, choosing a relatively high terrain and close to the power station. In addition, the mine is currently equipped with daily equipment Waterproof and drainage facilities, etc.

From the perspective of mining policy, Sichuan has adopted many policies for mines this year, both negative and positive, but the overall trend is to release compliance companies and supervise non-compliant small companies.

FINANCIAL PRODUCTS

" *The financial product business is further expanding and a one-stop service ecosystem is formed for miners*

Financial products can mainly solve the three major problems currently faced by miners, that is, hedging, staking/lending and enhancing returns.

In the first half of the year, in order to increase the user viscosity of miners, both mining pools, financial service providers and exchanges were working to expand their business boundaries, and businesses around miners began to merge.

According to data obtained by TokenInsight Research through interviews, as of July 23, the Babel Ethereum mining pool has mined 7,200 Ether. At present,Babel Finance's Ethereum mining pool has completed its first deployment as a beta test phase, with about 1.5% of the entire network's hash rate, maintaining the uncle rate and packaging rate that can only be achieved by large mining pools simultaneously.

‣ Financial product business launched in the first half of 2020
  Source: TokenInsight

Company	Category	Products	Introductions
Coin Metrics	*Data Analysis*	*CMBI(Coin Metrics Bletchley Indexes)*	*Provides more accurate hash rate indicators than 24-hour backtracking*
FTX	*Exchange*	*Hashrates Futures*	*Hedging the risk exposure of mining business by trading hash rate derivatives*
Babel Finance	*Financial Services*	*Ethereum Mining Pool*	*Expanding from financial services to mining pools*

In the first half of 2020, the financial product business in the market began to expand further. TokenInsight Research believes that the main reasons for this phenomenon are: 1. The digital asset market encountered a "black swan" in March, which has made miners pay more attention on financial product for hedging risks, and it is necessary to hedge their risk exposures through hedging and other means. 2. The Bitcoin halving in the first half of the year poses new challenges to the configuration of mining machines. The iteration of mining machines and the advance preparation of the high water period have resulted in stronger borrowing demand for miners。

Miners are increasingly demanding financial products, but the structured financial products that exist in the market have higher entry barriers. TokenInsight Research believes that from the current perspective, financial products will have a more diverse and simpler trend for miners in the future, and the linkage effect between various sub-industries will be further strengthened.

ALTCOIN MINING

" *Filecoin Mainnet Launching Postponed 5 times, FIL futures over-issued*

Unlike Bitcoin's PoW mining, Filecoin miners not only need to provide provide GPUs to support mining operation, but also obtain FIL rewards based on storage space. In the first half of the year, Filecoin was in the spotlight, but its mainnet launch time has been delayed. The latest official launch time is August.

As shown in the figure below, in May 2020, the second phase of the Filecoin testnet was launched, but after the launch, miners used bugs to accelerate unfair mining, causing the testnet to suspend block production and the official website showed no data status. In June, as Filecoin officially announced the start of the testnet rewards, market investment sentiment increased, and the price of FIL futures rose all the way, reaching a maximum of $14.

▸ Filecoin（FIL）Futures Price — Price ■ Trading Volume
Source: TokenInsight
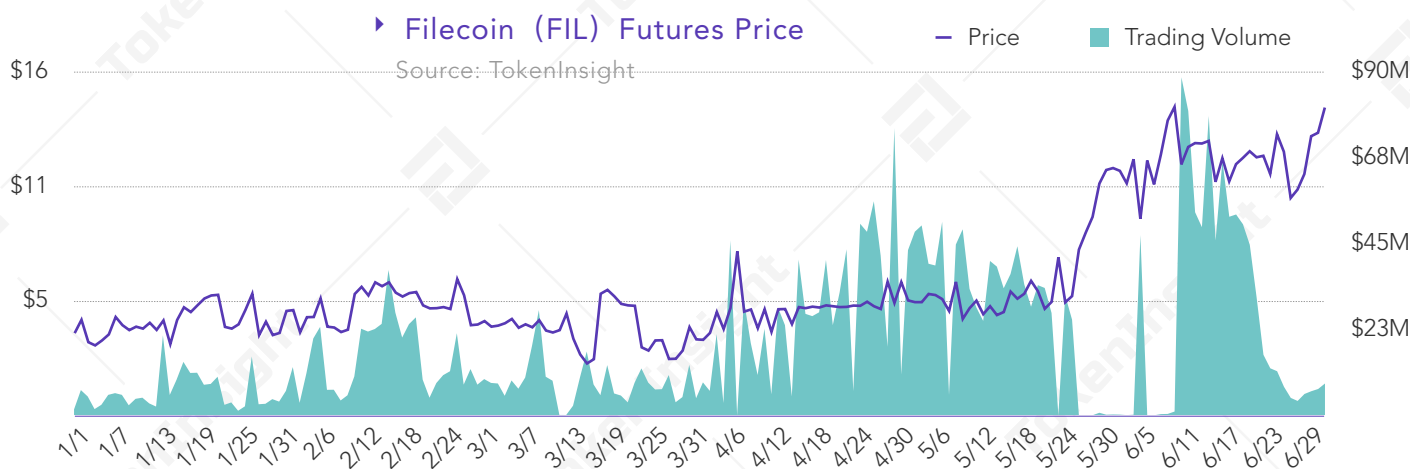
Filecoin Implied Risk

Although Filecoin has become a phenomenal project, but its risk is relatively high. TokenInsight Research conducted an in-depth analysis of this and summarized the following points: 1. Filecoin's current market information transparency is low, program-related mining machines and cloud hash rate products in the market still have unstable quality; 2. Up to now, more than 50 exchanges have launched FIL futures, but the price difference between them is large. At the same time, the Filecoin main network has not been launched, and FIL futures have been seriously over-issued, medium exchanges have greater time risk and redemption. risk; 3. It remains to be seen whether Filecoin has massive commercial storage demand as long-term value support.

REGULATORY DYNAMIC

Jan
- Uzbekistan announced the establishment of a "national mining pool".
- The Quebec Hydropower Agency of Canada agreed to provide 300 MW of electricity for blockchain miners.

Feb
- Ukraine claims that the Bitcoin protocol is sufficient to regulate on-chain activities and that mining does not require government supervision and intervention.

Mar
- Missoula County, Montana, USA, has added new regulations for blockchain miners.

Apr
- Kyrgyzstan plans to increase electricity prices for digital asset mining companies.

May
- The Acting Minister of Energy of Ukraine proposes that the country's nuclear power plants conduct encrypted mining to alleviate the problem of excessive power generation.
- Sichuan announced the first batch of "Hydropower Consumption Demonstration Enterprises", and many mining companies are listed.
- Kazakhstan is formulating new laws involving encryption, blockchain, and mining.
- South Korea plans to amend the current income tax law to impose taxes on digital assets, blockchain mining and ICOs.

Jun
- The new Russian draft bill prohibits private digital asset circulation, mining and advertising.
- The Parliament of Kyrgyzstan plans to tax and supervise digital asset miners.

FUTURE TREND

" *Mining hardware is facing an accelerated iteration period, and the field of AI chips will become a battleground*

Bitcoin has gradually entered the 'stock market' situation, and the growth rate of stock assets is bound to diminish marginally. Under the trend of market maturity and specialization, institutions that are deeply involved in the mining sector will stand out. After the Bitcoin halving, the mining costs of the old generation of mining machines have risen sharply, and revenues are at stake, which makes high-performance mining machines an important player in the current mining market.

In terms of the mining machine manufacturing sector, new players are eager to enter the field, and the old overlords are also trying their best to update the technology to manufacture leading products in the market. In the first half of 2020, new generation mining machines including Bitmain's S19 and S19 Pro, WhatsMiner M30 series, and Canaan's A1146 Pro and A1166 Pro have been launched one after another. From the data published by several manufacturers, the new generation of mining machines has been greatly optimized and improved in terms of performance and power consumption.

Chip research and development is the core competitiveness of mining machine manufacturers. At the current chip research and development level, Samsung and TSMC have deployed 3nm chips, and both plan to mass produce 3nm in 2022. Although 3nm is said to be a node approaching the physical limit, TSMC has already planned for 2nm and is conducting research and development with mass production in 2024.

From the perspective of technological research in the frontier field, mining machine manufacturers such as Bitmain, Canaan, and Ebang Communications have turned their attention to the field of AI chips. The TokenInsight Research team believes that AI chips have broad prospects and that they have a high degree of overlap with mining machine chips in terms of design and manufacturing. Mining machine manufacturers' experience in mining machine chips can also be quickly transplanted to the field of AI chips. As a result, AI chips are bound to become a battleground for mining machine head manufacturers.

" *The mining ecosystem will be further expanded, and financialization will become the trend*

In 2020, the blockchain mining industry gave birth to more subdivisions and further expand the scope of services. From a long-term perspective, blockchain mining has changed from its original high-yield state to deterministic and stable returns. As the market continues to mature, upstream and downstream mining will transform and seek various financial mechanisms to hedge their risk exposure.

On the other hand, according to the regulatory documents submitted to OSC, the fund management agency Fidelity International holds approximately 10.6% of the shares of Bitcoin mining company Hut 8, becoming its largest public offering investor. In the future, with the stability and popularity of mining revenue, mining will continue to be favored by the traditional financial market, which also means that the professional requirements for mining are also higher, and the financial upgrade has been driven by the trend. Hash rate will be capitalized and financialized in the future.

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