



COINDESK RESEARCH NOTE

EBANG IPO: Dude, where's my revenue?

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How does a company go from having over \$300 million in revenues for the first half of the year to having revenues of essentially \$0 in the second half? A company once accused of sales fraud and inflating revenue figures has now walked back on a significant portion of its revenue, to which the amount is unknown. A company once touted to be one of the leaders in the industry, seems to have fallen off the map. This is the mysterious story of China-based bitcoin mining manufacturer, Ebang.

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INTRODUCTION

Following a failed IPO attempt on the Hong Kong Stock Exchange in which it was rumored to be seeking \$1 billion, the company now seeks to raise \$100 million from an IPO in the U.S. After reading the U.S. prospectus, which was filed in [April](#), we were left with even more questions as Ebang highlights red flags for which the context is rather vague.

However, we were able to come to some interesting discoveries after incorporating information from Ebang's now redacted Hong Kong IPO application.

BUSINESS

Founded in 2010 by former college professor, Dong Hu, Ebang started out as a telecommunications business developing communications access network devices. The company began exploring the blockchain industry in early 2014 and has since prioritized those efforts to become one of the largest bitcoin mining hardware manufacturers in the world.

Revenue breakdown

(YE 31-Dec, \$USDm)	2015Y	2016Y	2017Y	2018Y	2019Y
Product sales - Bitcoin mining machines & accessories	4.3	7.7	132.8	307.1	89.9
Product sales - Telecommunications	9.3	10.2	7.9	3.7	3.3
Service - Management and maintenance	--	--	4.3	8.2	15.8
Total revenue	13.7	17.9	145.0	319.0	109.1
YoY growth (%)		31%	710%	120%	-66%

Source: Ebang, FactSet, CoinDesk

Over the past few years, the vast majority of its revenue has come from its bitcoin mining hardware sales with only small contributions coming from its legacy telecommunications business. Ebang's hosting segment, in which the company houses and manages its customers' mining equipment for a fee, has grown steadily to 14% of total revenues as of 2019.

Market position

Ebang competes with a handful of bitcoin mining hardware manufacturers who all reside in China. Bitmain and MicroBT are widely speculated to be the dominant players, controlling most of the market share between the two. Other notable players include Innosilicon and Canaan.

Outside of Canaan, all of these manufacturers are private companies. However, we can get a more detailed sense of Ebang's market position by gathering the information that is accessible via public filings such as Bitmain's expired [Hong Kong IPO application](#) from 2018, Canaan's [20-F annual filing](#), and now Ebang's U.S. IPO [prospectus](#).

Sales comparison

	2016Y	2017Y	2018Y	2019Y
Hardware sales (\$USDm)				
Bitmain	214.7	2,263.2	n/a	n/a
Canaan	n/a	193.1	399.8	200.1
Ebang	7.7	132.8	307.1	89.9
Units sold ('000)				
Bitmain	262	1,622	n/a	n/a
Canaan	n/a	295	559	487
Ebang	20	159	416	290

Source: Bitmain, Canaan, Ebang, FactSet, CoinDesk

Of these three companies, Bitmain has historically been by far the dominant player with 17x the revenue of Ebang in 2017.

Customer base

Customer information

	2016Y	2017Y	2018Y	2019Y
Revenue contributions from domestic sales (%)				
Bitmain	49%	48%	n/a	n/a
Canaan	n/a	92%	76%	75%
Ebang	98%	96%	91%	88%
Revenue contributions from single largest customer (%)				
Bitmain	5%	3%	n/a	n/a
Ebang	21%	12%	n/a	n/a
Revenue contributions from 3 largest customers (%)				
Ebang	52%	18%	34%	34%
Revenue contributions from 10 largest customers (%)				
Ebang	n/a	n/a	57%	58%

Source: Bitmain, Canaan, Ebang, FactSet, CoinDesk

Unlike Bitmain who has a large customer base spread out globally, Ebang has a customer base heavily concentrated in a small group of large buyers in China. Sales generated from its 10 largest customers made up 57% and 58% of Ebang's total revenues in 2018 and 2019, respectively.

Of the company's \$109 million in sales from 2019, only \$1.4 million (1.3% of total sales) came from customers in the U.S.

HONG KONG IPO APPLICATION

To get a better understanding of Ebang's past, let's take a look at its old Hong Kong IPO application from June 2018. The filing has since been redacted, but CoinDesk was able to receive a saved copy via FactSet.

The application details three years of annual financials (2015-2017) as well as financials for the first half of 2018.

Income statement

(YE 31-Dec, \$USDm)	2015Y	2016Y	2017Y	1H18
Revenue				
Product sales - Bitcoin mining machines & accessories	4.3	7.7	132.8	313.4
Average selling price per unit (\$)	\$258	\$393	\$836	\$1,014
# of units sold ('000)	17	20	159	309
Product sales - Telecommunications	9.3	10.2	7.9	2.2
Service - Management and maintenance	--	--	4.3	1.3
Total revenue	13.7	17.9	145.0	316.8
YoY growth (%)		31%	710%	
Cost of revenue	6.2	9.3	66.9	146.3
Impairment of inventory	--	--	0.3	7.6
Average cost per unit sold excluding impairment (\$)		\$281	\$372	\$468
Gross profit	7.5	8.5	78.1	170.6
Gross margin (%)	55%	48%	54%	54%
Operating expenses				
Selling expenses	1.0	1.7	1.8	1.1
General and administrative expenses	3.1	6.0	13.8	20.1
Total expenditures	4.1	7.7	15.6	21.2
Operating income (loss)	3.4	0.8	62.5	149.4
Other comprehensive income	0.7	0.8	2.8	12.3
Loss before income taxes provision	4.1	1.6	65.3	161.7
Income tax provision	0.5	(0.0)	8.2	23.6
Net income	3.6	1.7	57.0	138.0
Net margin (%)	26%	9%	39%	44%
Less: Net income attributable to non-controlling interest	--	(0.2)	1.1	2.1
Net income attributable to Ebang International Holding	3.6	1.8	56.0	135.9

Source: Ebang, FactSet, CoinDesk

From 2015 to 2017, revenue of Ebang's bitcoin mining hardware sales grew by 30x to \$133 million as demand for miners drastically increased due to bitcoin's price skyrocketing to all-time highs. Net margin for 2017 grew to an impressive 39% as the company achieved greater economies of scale (i.e. bulk order discounts on wafer supplies).

Even as bitcoin's price began to plummet in 2018, Ebang's sales continued their upward trajectory to \$313 million in the first half of 2018.

These sales figures, however, were heavily bolstered by the pent-up demand from the previous year as the company, at the time, typically required full prepayment on equipment from its customers.

Balance sheet

(YE 31-Dec, \$USDm)	2015Y	2016Y	2017Y	1H18
Assets				
Current assets				
Cash & cash equivalents	13.3	6.4	125.3	20.3
Restricted cash, current	0.2	3.9	2.7	19.6
Accounts receivable, net	8.9	15.2	13.2	73.2
Advances to suppliers	0.1	3.6	112.1	15.8
Inventories, net	2.2	7.3	44.3	192.0
VAT recoverables	--	0.4	3.7	10.8
Prepayments	0.1	0.1	0.7	4.2
Other current assets, net	0.1	0.0	0.0	30.0
Total current assets	24.8	36.8	302.0	365.9
Non-current assets	3.5	10.9	18.4	25.5
Total assets	28.3	47.7	320.5	391.4
Liabilities				
Current liabilities				
Accounts payable	1.8	2.0	9.5	48.9
Notes payable	0.3	1.8	5.5	15.0
Accrued liabilities and other payables	0.5	0.3	8.3	30.7
Loans due within one year, less issuance costs	--	10.0	--	16.2
Operating lease liabilities, current	0.7	0.9	3.1	3.6
Operating lease liabilities - related party, current	--	--	--	--
Income taxes payable	1.1	0.6	11.6	16.5
Due to related party	--	0.0	--	0.0
Advances from customers	0.1	0.1	179.8	31.8
Total current liabilities	4.5	15.6	217.8	162.7
Non-current liabilities	0.0	0.7	0.6	0.5
Total liabilities	4.5	16.3	218.5	163.1

Source: Ebang, FactSet, CoinDesk

Looking at the balance sheet, we can see that advances from customers (customer prepayment orders) were \$180 million at the end of 2017 and subsequently declined by \$148 million by the end of June 2018 as the company delivered the miners to its prepaying customers and recognized the revenue on said orders in 1H18.

1H18 sales figures were further aided by a change in the company's sales policy on mining equipment. Rather than requiring full prepayment before shipping, Ebang started allowing several large customers to pay up to one year after shipping. As a result, net accounts receivable shot up by \$60 million between December 2017 and June 2018 to \$73 million.

In [December 2018](#), Ebang submitted an updated draft application to the Hong Kong Stock Exchange indicating that the company had “experienced significant decreases in revenue and gross profit” for 3Q18, but did not release full financial details. In June 2019, the application expired.

U.S. PROSPECTUS

In April 2020, Ebang once again tried its luck at going public, but this time in the U.S. This prospectus only provided two years of annual financial statements, but there were four items from the filing that were noteworthy:

- Disputes with its largest customers
- Inventory and revenue write-downs negatively impacting 2018 results
- Significant sales decline in 2019
- Material weaknesses and changes to management

Disputes with its largest customers

Within the prospectus, Ebang discloses several contingencies related to disputes with some of its largest customers, many customers claiming failure of delivery and less-than-advertised performance of its miners.

The prospectus does not name the counterparties involved, but one is very likely to be the app developer Beijing Cailiang, whose fallout with Ebang has been [widely publicized](#). Cailiang had purchased 100,000 units of Ebang's Ebit E9+ mining machines back in March 2018 for about \$80 million (Ebang's Hong Kong IPO application describes Cailiang as its largest customer in 1H18 accounting for 17.7% of sales). Ebang argues that Cailiang failed to pay the full amount owed on the equipment while Cailiang claims that it has yet to receive 35,000 units from its purchase order.

Cailiang later filed a police report accusing Ebang of sales fraud by recognizing revenue on the 35,000 missing miners before completion of delivery to inflate sales figures for its Hong Kong IPO. Ebang responded by saying that this was just a malicious attempt by Cailiang to play the victim.

Inventory and revenue write-downs negatively impacting 2018 results

Looking at Ebang's 2018 results, we can see that sales increased 120% from the year prior to \$307 million. Net margins, on the other hand, pulled back significantly from 39% in 2017 to negative 4% in 2018.

However, if you recall, Ebang reported sales of \$313 million and net margin of 44% for 1H18 in its Hong Kong IPO application. What happened in the following six months to have such a negative impact on earnings?

Income statement

(YE 31-Dec, \$USDm)	2016Y	2017Y	2018Y	2019Y
Revenue				
Product sales - Bitcoin mining machines & accessories	7.7	132.8	307.1	89.9
Average selling price per unit (\$)	\$393	\$836	\$737	\$304
# of units sold ('000)	20	159	416	290
Product sales - Telecommunications	10.2	7.9	3.7	3.3
Service - Management and maintenance	--	4.3	8.2	15.8
Total revenue	17.9	145.0	319.0	109.1
YoY growth (%)	31%	710%	120%	-66%
Cost of revenue	9.3	66.9	294.6	139.6
Impairment of inventory	--	0.3	61.8	6.3
Average cost per unit sold excluding impairment (\$)	\$281	\$372	\$534	\$404
Gross profit	8.5	78.1	24.4	(30.6)
Gross margin (%)	48%	54%	8%	-28%
Operating expenses				
Selling expenses	1.7	1.8	4.1	1.2
General and administrative expenses	6.0	13.8	51.4	18.9
Total expenditures	7.7	15.6	55.5	20.1
Operating income (loss)	0.8	62.5	(31.1)	(50.6)
Other comprehensive income	0.8	2.8	20.1	10.0
Loss before income taxes provision	1.6	65.3	(10.9)	(40.7)
Income tax provision	(0.0)	8.2	0.9	0.4
Net income	1.7	57.0	(11.8)	(41.1)
Net margin (%)	9%	39%	-4%	-38%
Less: Net income attributable to non-controlling interest	(0.2)	1.1	0.5	1.3
Net income attributable to Ebang International Holding	1.8	56.0	(12.3)	(42.4)

Source: Ebang, FactSet, CoinDesk

The U.S. prospectus notes that it recognized significant inventory impairments and revenue write-downs in the wake of bitcoin's price crash in 2018. Ebang disclosed its inventory impairments to be \$62 million for 2018, but the company does not clearly state the amount of revenue write-downs outside of \$12.1 million in price concessions.

Thankfully, we can back into Ebang's 2H18 financials (2H18 figures = 2018Y figures – 1H18 figures) to get a better indication of how much revenue write-downs were recorded.

2H18 financials

(YE 31-Dec, \$USDm)	1H18	2H18	2018Y
Revenue			
Product sales - Bitcoin mining machines and related accessories	313.4	(6.3)	307.1
Average selling price per unit (\$)	\$1,014	-\$63	\$737
# of units sold ('000)	309	107	416
Product sales - Telecommunications	2.2	1.6	3.7
Service - Management and maintenance	1.3	6.9	8.2
Total revenue	316.8	2.2	319.0
Cost of revenue	146.3	148.3	294.6
Impairment of inventory	7.6	54.2	61.8
Average cost per unit sold excluding impairment (\$)	\$468	\$724	\$534
Gross profit	170.6	(146.1)	24.4
Gross margin (%)	54%	-6577%	8%

Source: Ebang, FactSet, CoinDesk

From the calculations, we can see that Ebang earned essentially no revenue in 2H18 despite recognizing \$148 million in cost of goods sold (\$94 million when excluding the \$54 million from inventory impairments).

Units sold ('000)

	2017Y	1H18	2H18	2018Y	2019Y
Ebit E9+	141	162	(22)	140	2
Ebit E9 series	18	102	129	231	151
Ebit E10 series	--	45	(0)	45	87
Ebit E12	--	--	--	--	49
Total	159	309	107	416	290

Source: Ebang, FactSet, CoinDesk

Digging deeper, we can also back into the number of units sold, segmented by Ebang's different ASIC models. The results indicate Ebang had returns (net of any sales) of 22,000 Ebit E9+ while the company recognized essentially no revenue on the distribution of 129,000 Ebit E9 machines.

Given the lack of clarity within the prospectus, it's unclear what exactly happened. It's possible the large retraction on Ebit E9+ sales are related to the 35,000 units Cailiang claims were never delivered, but the U.S. prospectus does not specify. Either way, it appears that the revenue write-downs in the second half of 2018 were quite substantial.

Significant sales decline in 2019

Ebang's revenue in 2019 declined by 66% year-over-year to \$109 million. This was dictated by a large drop in its bitcoin hardware sales which the company mostly attributed to lower demand from customers caused by suppressed bitcoin prices in 2018/early 2019.

What's also noteworthy, however, is that the bitcoin mining manufacturing business is extremely competitive with companies constantly releasing new and more efficient products. As new generations of miners get released, older and less-efficient models become less desirable to its customers which leads to manufacturers reducing prices on its existing equipment.

Revenue generated vs. cost to produce

	2016Y	2017Y	2018Y	2019Y
Avg. selling price per unit (\$)				
Ebit E9+	--	873	721	102
Ebit E9 series	608	549	178	74
Ebit E10 series	--	--	3,676	341
Ebit E12	--	--	--	948
Total	393	836	737	304
Avg. cost per unit (\$)	281	372	534	404

Source: Ebang, FactSet, CoinDesk

In 2019, Ebang reduced the pricing of its old generation models between 60% to 90% from the year prior. Overall, Ebang's average selling price declined to \$304 per unit, which was well below its average cost to produce of \$404 per unit. This resulted in gross margin of negative 28% for the year.

Days sales of inventory

	2016Y	2017Y	1H18	2H18	2019Y
Inventories (\$USDm)					
Raw materials	1.8	9.4	58.4	15.2	3.0
Work in progress	5.0	31.2	118.4	88.1	48.2
Finished goods	0.4	4.0	23.1	25.1	18.1
Total	7.3	44.6	199.9	128.4	69.3
Inventory write-down		0.3	7.6	54.2	6.3
COGS (excluding write-downs or service related COGS)	9.3	66.6	138.7	94.2	119.6
Days sales of inventory	185 days	142 days	160 days	321 days	302 days

*days sales of inventory = (average inventory / COGS) x (# of days in the time period)

Source: Ebang, FactSet, CoinDesk

Despite the company drastically reducing its prices, however, it still struggled to sell its inventory. Days sales of inventory (which indicates the number of days it takes for a company to turn its inventory into sales) increased dramatically in 2H18 and remained elevated in 2019.

Material weaknesses and changes to management

Within the U.S. prospectus, the company notes that its public accounting firm had identified two material weaknesses in the company's internal control over financial reporting:

1. Lack of sufficient controls in place to manage main raw materials purchase which led to significant inventory write-down
2. Lack of well-established credit policy for customers in place which led to significant accounts receivable and revenue write-offs

Ebang follows it up by listing several measures it intends to make in order to address the material weaknesses such as hiring more qualified personal with U.S. GAAP and SEC reporting experience as well as establishing effective oversight of reporting procedures.

By comparing the U.S. and Hong Kong filings, it appears the company has already quietly made some adjustments to its senior management team. Li Li, who previously showed up as Ebang’s finance director on the Hong Kong IPO application, no longer appears on the list of executive officers in the U.S. prospectus.

Executive Officers listed within the U.S. prospectus

Directors and Executive Officers	Age	Position/Title
Dong Hu	46	Chairman of the Board and Chief Executive Officer
Chunjuan Peng	43	Director and Deputy General Manager
Sufeng Wang	42	Director and Deputy General Manager
Tingjie Lyu	64	Independent Director Appointee*
Ken He	39	Independent Director Appointee*
Lei Chen	39	Chief Financial Officer
Huazhen Xu	26	Financial Controller

Source: Ebang

In her place, the company lists its new CFO, Lei Chen, who Ebang hired in April. Chen, not new to controversy, previously was the CFO of Hailiang Education Group starting in 2014 before abruptly [leaving](#) in late 2016. Shortly after his departure, Hailiang Education [disclosed](#) that it had done an internal evaluation related to material weaknesses previously identified by its accounting firm. Based off the findings from the evaluation, the company concluded that its “internal control over financial reporting and disclosure controls and procedures were not effective as of June 30, 2016.”

Also new to Ebang’s management is 26-year old Huazhen Xu who Ebang hired in April as their financial controller. According to the prospectus, Xu previously worked as a senior auditor at Ernst & Young for three years after completing her undergrad in 2016.

LOOKING AHEAD

Going forward, Ebang faces significant headwinds with its current product offering quickly becoming outdated.

Competition within the industry has been fierce with manufacturers typically releasing a new generation of bitcoin ASIC miners every year. Ebang, in that sense, has fallen behind the curve, with its latest model, the Ebit E12 (which was released back in May 2019) being outclassed by the last two generations of ASICs from Bitmain and MicroBT.

Mining hardware models

Manufacturer	Model	Release Date	Chip Size	Hashrate	Consumption	Efficiency
Ebang	Ebit E12	May-19	10nm	44TH/s	2500W	57 J/TH
MicroBT	Whatsminer M20S	Aug-19	12nm	68TH/s	3360W	49 J/TH
Canaan	Avalon 1166	Sep-19	8nm	68TH/s	3196W	47 J/TH
Bitmain	Antminer S17	Apr-19	7nm	56TH/s	2520W	45 J/TH
MicroBT	Whatsminer M30S	Apr-20	8nm	86TH/s	3268W	38 J/TH
Bitmain	Antminer S19	May-20	7nm	95TH/s	3250W	34 J/TH

Source: [AsicMinerValue.com](#), Ebang, Canaan, CoinDesk

From an efficiency standpoint, Ebang's Ebit E12 model requires significantly more energy per terahash (57 J/TH) compared to Bitmain's Antminer S19 model (34 J/TH) and MicroBT's Whatsminer M30S model (38 J/TH). As a result, it's likely that Ebang will face further decline in sales for 2020.

Ebang's prospectus hints that the company is capable of releasing a more competitive miner with its completed bitcoin ASIC design utilizing 8 nm chips. However, it's unclear why the company has yet to mass-produce the design as Ebang says it will only do so "when market conditions become suitable."

It's possible the roadblock is a lack of capital as the company notes that producing new designs requires high initial setup costs, in which case the \$100 million the company hopes to raise via its U.S. IPO could help significantly.

However, Ebang may face difficulty raising that amount as IPOs of Chinese companies in the U.S. have lately been met with waning interest and [increased scrutiny](#) from investors, leading to slashed valuations and reduced funding. If you recall, Canaan had hoped to raise \$400 million from its Nasdaq IPO but ultimately only raised [\\$90 million](#).

Ebang may even have a tough time getting its IPO approved as Nasdaq has also been rumored to be tightening its [listing rules](#) due to concerns of lack of accounting transparency and weak corporate governance from several Chinese IPOs.

CONCLUSION

Following a failed IPO attempt in Hong Kong, Ebang now seeks a second attempt at going public, but this time in the U.S. On the surface, Ebang's prospectus describes a company facing hardships caused by industry volatility. However, upon further inspection, Ebang's problems run deeper than that.

The company achieved extraordinary sales growth in 2017 as bitcoin prices skyrocketed, but since then has struggled significantly as bitcoin prices have pulled back. Losses have hit even harder due to material weaknesses of inventory mismanagement and a lack of a well-established-credit policy.

The IPO prospectus cites significant revenue write-offs but fails to give the needed information to understand the scale of their impact. This, coupled with past allegations of sales fraud and a list of disputes from its largest customers, gives significant reason for concern.

Ebang's current equipment offering is uncompetitive which has largely contributed to the company's sharp decrease in revenue. Despite the company reducing its sales prices below its cost to produce, Ebang has struggled to get inventory off the shelves.

A successful IPO in the U.S. would give the company much-needed capital as well as improve its somewhat rocky reputation, while failure could potentially be devastating.

APPENDIX

Financial Statements

Income statement

(YE 31-Dec, \$USDM)	2015Y	2016Y	2017Y	1H18	2H18	2018Y	2019Y
Revenue							
Product sales - Bitcoin mining machines & accessories	4.3	7.7	132.8	313.4	(6.3)	307.1	89.9
Average selling price per unit (\$)	\$258	\$393	\$836	\$1,014	-\$63	\$737	\$304
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Total revenue	13.7	17.9	145.0	316.8	2.2	319.0	109.1
YoY growth (%)		31%	710%			120%	-66%
Cost of revenue	6.2	9.3	66.9	146.3	148.3	294.6	139.6
Impairment of inventory	--	--	0.3	7.6	54.2	61.8	6.3
Average cost per unit sold excluding impairment (\$)		\$281	\$372	\$468	\$724	\$534	\$404
Gross profit	7.5	8.5	78.1	170.6	(146.1)	24.4	(30.6)
Gross margin (%)	55%	48%	54%	54%	-6577%	8%	-28%
Operating expenses							
Selling expenses	1.0	1.7	1.8	1.1	3.0	4.1	1.2
General and administrative expenses	3.1	6.0	13.8	20.1	31.3	51.4	18.9
Total expenditures	4.1	7.7	15.6	21.2	34.3	55.5	20.1
Operating income (loss)	3.4	0.8	62.5	149.4	(180.4)	(31.1)	(50.6)
Other comprehensive income	0.7	0.8	2.8	12.3	7.9	20.1	10.0
Loss before income taxes provision	4.1	1.6	65.3	161.7	(172.6)	(10.9)	(40.7)
Income tax provision	0.5	(0.0)	8.2	23.6	(22.7)	0.9	0.4
Net income	3.6	1.7	57.0	138.0	(149.8)	(11.8)	(41.1)
Net margin (%)	26%	9%	39%	44%	-6745%	-4%	-38%
Less: Net income attributable to non-controlling interest	--	(0.2)	1.1	2.1	(1.6)	0.5	1.3
Net income attributable to Ebang International Holding	3.6	1.8	56.0	135.9	(148.2)	(12.3)	(42.4)

Balance sheet

(YE 31-Dec, \$USDM)	2015Y	2016Y	2017Y	1H18	2H18	2018Y	2019Y
Assets							
Current assets							
Cash & cash equivalents	13.3	6.4	125.3	20.3	10.0	10.0	3.5
Restricted cash, current	0.2	3.9	2.7	19.6	7.3	7.3	2.3
Accounts receivable, net	8.9	15.2	13.2	73.2	21.6	21.6	8.1
Advances to suppliers	0.1	3.6	112.1	15.8	2.6	2.6	1.1
Inventories, net	2.2	7.3	44.3	192.0	66.3	66.3	13.1
VAT recoverables	--	0.4	3.7	10.8	16.1	16.1	22.0
Prepayments	0.1	0.1	0.7	4.2	0.8	0.8	13.3
Other current assets, net	0.1	0.0	0.0	30.0	0.4	0.4	0.2
Total current assets	24.8	36.8	302.0	365.9	125.0	125.0	63.5
Non-current assets	3.5	10.9	18.4	25.5	24.4	24.4	19.1
Total assets	28.3	47.7	320.5	391.4	149.5	149.5	82.6
Liabilities							
Current liabilities							
Accounts payable	1.8	2.0	9.5	48.9	43.6	43.6	11.8
Notes payable	0.3	1.8	5.5	15.0	7.7	7.7	--
Accrued liabilities and other payables	0.5	0.3	8.3	30.7	8.3	8.3	13.7
Loans due within one year, less issuance costs	--	10.0	--	16.2	15.3	15.3	4.9
Operating lease liabilities, current	0.7	0.9	3.1	3.6	--	--	0.8
Operating lease liabilities - related party, current	--	--	--	--	--	--	0.0
Income taxes payable	1.1	0.6	11.6	16.5	0.0	0.0	0.5
Due to related party	--	0.0	--	0.0	--	--	6.2
Advances from customers	0.1	0.1	179.8	31.8	2.0	2.0	1.0
Total current liabilities	4.5	15.6	217.8	162.7	77.0	77.0	39.0
Non-current liabilities	0.0	0.7	0.6	0.5	4.6	4.6	18.0
Total liabilities	4.5	16.3	218.5	163.1	81.6	81.6	57.0
Shareholders equity							
Total Ebang International Holdings shareholders equity	23.8	24.4	94.2	218.8	61.6	61.6	18.0
Non-controlling interest	--	7.0	7.8	9.5	6.3	6.3	7.6
Total liabilities & shareholders equity	28.3	47.7	320.5	391.4	149.5	149.5	82.6
Working Capital	20.3	21.2	84.2	203.2	48.0	48.0	24.4

Key operating data

	2017Y	1H18	2H18	2018Y	2019Y
Units sold ('000)					
Ebit E9+	141	162	(22)	140	2
Ebit E9 series	18	102	129	231	151
Ebit E10 series	--	45	(0)	45	87
Ebit E12	--	--	--	--	49
Total	159	309	107	416	290
Avg. selling price per unit (\$)					
Ebit E9+	873	644	157	721	102
Ebit E9 series	549	669	(210)	178	74
Ebit E10 series	--	3,122	(80,791)	3,676	341
Ebit E12	--	--	--	--	948
Total	836	1,014	(63)	737	304
Avg. cost per unit (\$)	372	468	724	534	404
Sales contribution (\$USDm)					
Ebit E9+	122.9	104.2	(3.4)	100.8	0.2
Ebit E9 series	9.9	68.4	(27.2)	41.2	11.1
Ebit E10 series	--	140.8	23.9	164.7	29.8
Ebit E12	--	--	--	--	46.9
Total	132.8	313.4	(6.7)	306.7	88.0
Total computing power sold (TH/s)					
Ebit E9+	1,266,471	1,455,102	(197,226)	1,257,876	18,000
Ebit E9 series	113,898	1,227,120	1,769,593	2,996,713	2,015,935
Ebit E10 series	--	811,998	(5,328)	806,670	1,763,727
Ebit E12	--	--	--	--	2,174,788
Total	1,380,369	3,494,220	1,567,039	5,061,259	5,972,450
Avg. selling price per TH (\$)					
Ebit E9+	97	72	17	80	11
Ebit E9 series	87	56	(15)	14	6
Ebit E10 series	--	173	(4,488)	204	17
Ebit E12	--	--	--	--	22
Total	96	90	(4)	61	15
Avg. cost per TH (\$)	43	41	49	44	20

Competitive landscape

	2016Y	2017Y	2018Y	2019Y
Hardware sales (\$USDm)				
Bitmain	214.7	2,263.2	n/a	n/a
Canaan	n/a	193.1	399.8	200.1
Ebang	7.7	132.8	307.1	89.9
Units sold ('000)				
Bitmain	262	1,622	n/a	n/a
Canaan	n/a	295	559	487
Ebang	20	159	416	290
Revenue contributions from domestic sales (%)				
Bitmain	49%	48%	n/a	n/a
Canaan	n/a	92%	76%	75%
Ebang	98%	96%	91%	88%
Revenue contributions from single largest customer (%)				
Bitmain	5%	3%	n/a	n/a
Ebang	21%	12%	n/a	n/a
Revenue contributions from 3 largest customers (%)				
Ebang	52%	18%	34%	34%
Revenue contributions from 10 largest customers (%)				
Ebang	n/a	n/a	57%	58%