IPO ANALYSIS

Research on upcoming IPOs for selected candidate companies.

CrowdStrike

Fiverr

GSX Techedu

June 2019

VentureDeal

CrowdStrike Readies Plans For \$378 Million IPO

Quick Take

CrowdStrike (OTC:CRWD) has filed to raise \$378 million in an IPO of Class A common stock, per an amended registration statement.

The company provides AI-powered cloud endpoint security services to enterprises and other medium and large organizations.

Given the large and growing market opportunity, CRWD's growth trajectory and ultra-high dollar-based net retention rate, my opinion on the IPO is a positive at the proposed price range.

Company & Technology

Sunnyvale, California-based CrowdStrike was founded in 2011 to provide cloud-based endpoint security solutions that protect virtual, on-premise, and cloud environments on a variety of endpoints, including desktops, servers, laptops, Internet of Things [IoT] devices, and virtual machines.

Management is headed by Co-Founder, Director, and CEO <u>George Kurtz</u>, who has previously served in various positions at McAfee, including WW Chief Technology Officer and EVP.

CrowdStrike has developed the Falcon platform that enables the company to provide cloud subscription-based endpoint security services.

Below is a brief overview video of the Falcon platform's offerings:

Source: CrowdStrike

The platform works by tightly integrating CRWD's intelligent lightweight agent and a 'cloud-based, dynamic graph database' named Threat Graph.

The intelligent light agent's task is to offloads computationally-intensive tasks to the cloud while keeping detection and prevention capabilities local as they are necessary on the endpoint.

Using AI algorithms and graph analytics to the data streamed from endpoints, the Threat Graph technology continuously looks for malicious activity - it "processes, correlates, and analyzes over one trillion endpoint-related events per week in real time and maintains an index of these events for future use."

Investors in CrowdStrike have included March Capital Partners, Accel, CapitalG, Institutional Venture Partners, General Atlantic, InstantScale Ventures, Telstra Ventures, Cloud Apps Capital Partners, and Warburg Pincus among others. Source: <u>Crunchbase</u>

Customer Acquisition

The firm primarily markets its products through a direct sales team that leverages the company's established network of channel partners to scale and maximize effectiveness.

CRWD recently announced a strategic technology and go-to-market partnership with Dell that would allow the tech giant's customers to easily integrate the Falcon platform into their purchase of Dell hardware.

The company believes it also strengthens its market position through its 'technology alliance partners' that have permission to embed, deliver, or build applications with analytics and data from CrowdStrike's Falcon platform.

Sales and marketing expenses as a percentage of revenue have been dropping significantly, per the table below:

Sales & Marketing Expenses vs. Revenue

| Period | Percentage |
|------------------|------------|
| FYE Jan 31, 2019 | 69.1% |
| FYE Jan 31, 2018 | 87.8% |
| FYE Jan 31, 2017 | 101.9% |

Sources: Company registration statement and IPO Edge

The sales efficiency rate, defined as how many dollars of additional new revenue are generated by each dollar of sales & marketing spend in the previous period, was a strong 1.3x in the most recent year, as shown in the table below:

Sales & Marketing Efficiency Rate

| Period | Multiple |
|------------------|----------|
| FYE Jan 31, 2019 | 1.3 |
| FYE Jan 31, 2018 | 1.2 |

Sources: Company registration statement and IPO Edge

Average Revenue per Customer has been uneven, per the table below:

Average Revenue Per Customer

| Period | ARPC | Variance |
|------------------|-----------|----------|
| FYE Jan 31, 2019 | \$99,294 | 3.8% |
| FYE Jan 31, 2018 | \$95,614 | -18.4% |
| FYE Jan 31, 2017 | \$117,211 | |

Sources: Company registration statement and IPO Edge

CRWD has produced a high and growing dollar-based net revenue retention rate:

2017: 104%2018: 119%2019: 147%

The FYE 2019 rate of 147% is one of the highest net retention rates I've seen and indicates the company's services are producing customer satisfaction and that the sales team is expanding its revenue share within the same cohort of customers.

Market & Competition

According to a 2019 market research report by Market Study Report, the global endpoint security market is projected to reach \$7.5 billion by 2024, growing at a CAGR of 7% between 2017 and 2024.

"Endpoints are considered to be the weakest links in network security; hence, securing them plays a critical role in effectively strengthening the overall network."

Additionally, growing in number and increasingly complex malware attacks force antivirus/antimalware solutions providers to constantly update their detection tools with the latest security patches.

Major competitors that provide or are developing endpoint security solutions include:

- McAfee
- Symantec Corporation (<u>SYMC</u>)
- Cylance (BB)
- Carbon Black (CBLK)
- Palo Alto Networks (<u>PANW</u>)
- FireEye (FEYE)
- F-Secure (DTV.F)
- Webroot (CARB)

Source: <u>Sentieo</u>

CrowdStrike believes its solution "benefits from crowdsourcing and economies of scale, which we [CRWD] believe enables our AI algorithms to be uniquely effective."

Financial Performance

CrowdStrike's recent financial results can be summarized as follows:

- Strong topline revenue growth
- Increasing gross profit and gross margin
- Increasing operating losses
- Decreasing cash used in operations

Below are relevant financial metrics derived from the firm's registration statement:

| Total Revenue | | |
|-------------------------|-------------------------|-------------------------|
| Period | Total Revenue | % Variance vs. Prior |
| FYE Jan 31, 2019 | \$ 249,824,000 | 110.4% |
| FYE Jan 31, 2018 | \$ 118,752,000 | 125.1% |
| FYE Jan 31, 2017 | \$ 52,745,000 | |
| Gross Profit (Loss) | | |
| Period | Gross Profit (Loss) | % Variance vs. Prior |
| FYE Jan 31, 2019 | \$ 162,586,000 | 153.0% |
| FYE Jan 31, 2018 | \$ 64,266,000 | 243.0% |
| FYE Jan 31, 2017 | \$ 18,739,000 | |
| Gross Margin | | |
| Period | Gross Margin | |
| FYE Jan 31, 2019 | 65.08% | |
| FYE Jan 31, 2018 | 54.12% | |
| FYE Jan 31, 2017 | 35.53% | |
| Operating Profit (Loss) | | |
| Period | Operating Profit (Loss) | Operating Margin |
| FYE Jan 31, 2019 | \$ (136,864,000) | -54.8% |
| FYE Jan 31, 2018 | \$ (131,440,000) | -110.7% |
| FYE Jan 31, 2017 | \$ (90,556,000) | -171.7% |
| Net Income (Loss) | | |
| Period | Net Income (Loss) | |
| FYE Jan 31, 2019 | \$ (140,077,000) | |
| FYE Jan 31, 2018 | \$ (141,343,000) | |

FYE Jan 31, 2017 \$ (108,352,000)

Cash Flow From Operations

| Period | | | Cash Flow From Operations | |
|--------|----|------|---------------------------|--|
| E\/E | 24 | 2212 | A (00 000 000) | |

FYE Jan 31, 2019 \$ (22,968,000) FYE Jan 31, 2018 \$ (58,766,000) FYE Jan 31, 2017 \$ (51,998,000)

Sources: Company registration statement and IPO Edge

As of January 31, 2019, the company had \$191.7 million in cash and \$358.6 million in total liabilities.

Free cash flow during the twelve months ended January 31, 2019, was a negative (\$58.8 million).

IPO Details

CRWD intends to sell 18 million shares of Class A common stock at a midpoint price of \$21.00 per share for gross proceeds of approximately \$378 million, not including the sale of customary underwriter options.

Class B shareholders will be entitled to ten votes per share vs. one vote per share for Class A shareholders.

This is a way for founders or existing investors to maintain voting control even after losing economic control.

The S&P 500 Index no longer admits firms with multiple share classes into its index.

Assuming a successful IPO at the midpoint of the proposed price range, the company's enterprise value at IPO would approximate \$3.9 billion.

Excluding effects of underwriter options and private placement shares or restricted stock, if any, the float to outstanding shares ratio will be approximately 9.15%.

Per the firm's most recent regulatory filing, it plans to use the net proceeds as follows:

We intend to use the net proceeds we receive from this offering for general corporate purposes, including working capital, sales and marketing activities, research and development, general and administrative matters, and capital expenditures. We may also use a portion of the net proceeds for the acquisition of, or investment in, technologies, solutions, products, or businesses that complement our business, although we have no present commitments or agreements to enter into any such acquisitions or investments.

Management's presentation of the company roadshow is available here.

Listed underwriters of the IPO are Goldman Sachs, J.P. Morgan, BofA Merrill Lynch, Barclays, and 13 other firms.

Valuation Metrics

Below is a table of relevant capitalization and valuation metrics:

| Measure [TTM] | Amount |
|---------------------------------------|-----------------|
| Market Capitalization at IPO | \$4,130,468,391 |
| Enterprise Value | \$3,938,813,391 |
| Price / Sales | 16.53 |
| EV / Revenue | 15.77 |
| EV / EBITDA | -28.78 |
| Earnings Per Share | -\$0.70 |
| Total Debt To Equity | 4.80 |
| Float To Outstanding Shares Ratio | 9.15% |
| Proposed IPO Midpoint Price per Share | \$21.00 |
| Net Free Cash Flow | -\$58,819,000 |
| Revenue Growth Rate | 110.37% |

Sources: Company Prospectus and IPO Edge

As a reference, CRWD's clearest public comparable would be Carbon Black (<u>CBLK</u>); shown below is a comparison of their primary valuation metrics:

| Metric | Carbon Black (CBLK |) CrowdStrike (<u>OTC:CRWD</u> |) Variance |
|---------------------|--------------------|---------------------------------|------------|
| Price / Sales | 5.22 | 16.53 | 216.7% |
| EV / Revenue | 4.61 | 15.77 | 242.1% |
| EV / EBITDA | -14.55 | -28.78 | 97.8% |
| Earnings Per Share | -\$3.81 | -\$0.70 | -81.6% |
| Revenue Growth Rate | e 26.88% | 110.4% | 310.6% |

Sources: Company Prospectus and IPO Edge and Sentieo

Commentary

I previously wrote about CrowdStrike's IPO prospects in my analysis, <u>First Look | CrowdStrike</u> Begins U.S. IPO Process.

In that piece, I highlighted the firm's impressive growth and sales & marketing metrics. I also pointed out that the firm's dollar-based net retention rate is quite high and growing.

For a subscription software company, the dollar-based net retention rate is one of the most important indicators of success in the market as well as a validation of the firm's marketing strategy.

However, CRWD's other financial results are more challenging, especially its increasing operating losses.

The market opportunity for endpoint security solutions is quite large and seemingly evergrowing, as cybersecurity threats proliferate and security software providers always must stay one step ahead of the attackers.

Goldman Sachs is the lead left underwriter and IPOs led by the firm over the last 12-month period have generated an average return of 48.8% since their IPO. This is a top-tier performance for all major underwriters during the period.

As to valuation, compared to publicly held competitor Carbon Black, CRWD's IPO pricing appears highly valued, although CRWD is growing topline revenue at a significantly higher rate and the firm is closer to earnings breakeven.

Expected IPO Pricing Date: June 11, 2019.

Fiverr Files For \$100 Million IPO

Quick Take

Fiverr International (<u>FVRR</u>) has filed to raise gross proceeds of \$100 million from a U.S. IPO, according to an <u>F-1 registration statement</u>.

The firm operates an online platform for hiring freelance workers.

FVRR has grown quickly but so has sales & marketing spend and cash burn.

I'll provide an update when we learn more IPO details from management.

Company & Technology

Tel Aviv, Israel-based Fiverr was founded in 2010 to connect freelance workers with people and organizations looking for them through an online marketplace.

Management is headed by Co-Founder, CEO and Director Micha Kaufman, who is also a contributor at WIRED and Forbes.

Fiverr's platform was developed with the goal of making the purchase of services from individuals as simple as an e-commerce transaction, something the company refers to as Service-as-a-Products [SaaP] model.

Using machine learning and its database of over 830,000 workers, the company helps reduce the inefficiencies associated with the search for, contracting and collaborating with freelancers, such as the reliance on intermediaries.

On the Fiverr platform, buyers can browse over 200 categories of productized service listings, which Fiverr refers to as Gigs.

For the 12 months ended March 31, 2019, the company served about 2.1 million active users looking to hire freelance workers and about 255,000 active freelancers, or sellers, offering their services through the Fiverr platform.

Investors in Fiverr included Bessemer Venture Partners, Square Peg Capital, Qumra Capital, Accel, GC Capital, Lightbank, and Cubit Investments among others. Source: <u>Crunchbase</u>

Customer/User Acquisition

Using organic growth, performance marketing and brand-building campaigns that drive awareness, Fiverr works to acquire new buyers.

Sales and marketing expenses as a percentage of revenue have been relatively stable, per the table below:

Sales & Marketing Expenses vs. Revenue

Period Percentage

To March 31, 2019 64.7% 2018 65.9% 2017 64.8%

Sources: Company registration statement and IPO Edge

The sales efficiency rate, defined as how many dollars of additional new revenue are generated by each dollar of sales & marketing spend, was stable at 0.5x in the most recent year, as shown in the table below:

Sales & Marketing Efficiency Rate

Period Multiple

To March 31, 2019 0.5 2018 0.5

Sources: Company registration statement and IPO Edge

Average Spend per Buyer has been increasing, although at a decelerating rate, per the table below:

Average Spend Per Active Buyer

| Period | ASPB | Variance |
|-------------------|----------|----------|
| To March 31, 2019 | \$150.00 | 3.4% |
| 2018 | \$145.00 | 21.8% |
| 2017 | \$119.00 | |

Sources: Company registration statement and IPO Edge

Market & Competition

According to a <u>2017 market research report</u> by Ask Wonder, the total number of freelancers available in 2017 was about 154 million people worldwide.

The main factors driving market growth are the need to escape corporate environment demands and the rise of digitization, such as smartphone apps that have made it easy for workers to find jobs, whether full-time or part-time.

North America accounted for 77 million freelancers in 2017, more than half of the workforce in the same year.

Major competitors that operate platforms for workforce recruitment:

- Freelancer (FLN.AX)
- Freelance.com (ALFRE.PA)
- The Adecco Group
- Randstad (RAND.AS)
- LinkedIn
- GitHub
- PayPal (PYPL)
- Upwork (<u>UPWK</u>)

Financial Performance

FVRR's recent financial results can be summarized as follows:

- Strong growth in topline revenue
- Increasing gross profit and gross margin
- Decreased operating losses and negative operating margin
- Significant net losses
- Reduced cash used in operations

Below are relevant financial metrics derived from the firm's registration statement:

| Total I | Revenue |
|---------|---------|
|---------|---------|

| Period | Total Revenue | % Variance vs. Prior |
|-------------------|---------------|----------------------|
| To March 31, 2019 | \$ 23,763,000 | 41.9% |
| 2018 | \$ 75,503,000 | 44.9% |
| 2017 | \$ 52,112,000 | |

Gross Profit (Loss)

| Period | Gross Profit (Loss) | % Variance vs. Prior |
|-------------------|---------------------|----------------------|
| To March 31, 2019 | \$ 18,827,000 | 45.8% |
| 2018 | \$ 59,882,000 | 54.5% |
| 2017 | \$ 38,750,000 | |

Gross Margin

| Period | Gross Margin |
|-------------------|--------------|
| To March 31, 2019 | 79.23% |
| 2018 | 79.31% |
| 2017 | 74.36% |

Operating Profit (Loss)

| Period | Operating Profit (Loss) | Operating Margin |
|-------------------|-------------------------|-------------------------|
| To March 31, 2019 | \$ (8,521,000) | -35.9% |
| 2018 | \$ (36,469,000) | -48.3% |
| 2017 | \$ (19,253,000) | -36.9% |

Net Income (Loss)

| Net income (2033) | | | |
|-------------------|-------------------|--|--|
| Period | Net Income (Loss) | | |
| To March 31, 2019 | \$ (8,945,000) | | |
| 2018 | \$ (36,061,000) | | |
| 2017 | \$ (19,030,000) | | |

Cash Flow From Operations

| Period | Cash Flow From Operations |
|-------------------|----------------------------------|
| To March 31, 2019 | \$ (4,997,000) |
| 2018 | \$ (51,676,000) |

Sources: Company registration statement and IPO Edge

As of March 31, 2019, the company had \$34.6 million in cash and \$73.7 million in total liabilities. (Unaudited, interim)

Free cash flow during the twelve months ended March 31, 2019, was a negative (\$58.1 million).

IPO Details

FVRR intends to raise \$100 million in gross proceeds from an IPO of its common stock, not including customary underwriter options.

Per the firm's latest filing, it plans to use the net proceeds from the IPO as follows:

The principal purposes of this offering are to obtain additional working capital and to create a public market for our ordinary shares. We intend to use the net proceeds from this offering for working capital, to fund growth and for other general corporate purposes.

Management's presentation of the company roadshow isn't available yet.

Listed underwriters of the IPO are J.P. Morgan, Citigroup, BofA Merrill Lynch, UBS Investment Bank, JMP Securities, Needham & Company, and Oppenheimer & Co.

Commentary

FVRR is attempting to tap U.S. capital markets at a choppy time given the overall market's volatility.

The firm's financial results show strong growth metrics, stable user acquisition costs and spend per buyer (Q1 2019 vs 2018).

However, while FVRR has high and growing gross profit, the company's operating losses remain high, with no apparent path to profitability.

Additionally, although management has sharply reduced cash burn in Q1 2019, likely in advance of the IPO, it remains very high as the firm spends a tremendous amount on sales & marketing.

Given a sales efficiency multiple of 0.5 and a flattening spend per buyer at \$150, I have significant concern as to management's ability to generate incremental revenue growth without high sales & marketing spend.

The market opportunity for online freelance marketplaces is enticing, but there are numerous significant players with more entering the space. Fiverr's place at the apparent low end of the market may provide it with some downside protection, but my concern is related to its ability to generate meaningful growth at a reasonable spend.

J.P. Morgan is the lead left underwriter and IPOs led by the firm over the last 12-month period have generated an average return of 28.8% since their IPO. This is a top-tier performance for all major underwriters during the period.

I'll be interested to learn management's pricing and valuation assumptions, as they will be critical to the IPO's potential for investment.

Expected IPO Pricing Date: To be announced.

GSX Techedu Files Updated U.S. IPO Terms

Quick Take

GSX Techedu (GSX) has filed to raise \$208 million from the sale of ADSs in a U.S. IPO, according to an amended registration statement.

The company has developed a live broadcasting platform to deliver after-school supplementary education to K-12 students in China.

GSX has grown quickly and produced enviable financial results, but the IPO is excessively priced. Interested investors may want to place GSX on a watchlist for a potentially lower entry point post-IPO.

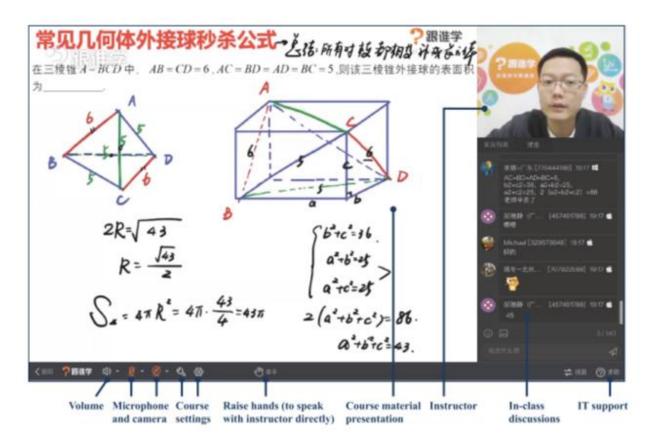
Company & Technology

Beijing, China-based GSX Techedu was founded in 2014 to provide online after-school K-12 courses that inspire students' genuine interest and in-depth interactions through its proprietary live broadcasting platform in China.

Management is headed by Founder, Chairman of the Board and CEO Larry Xiangdong Chen, who was previously executive president of New Oriental Education & Technology Group.

GSX delivers its courses online through a large-class, after-school model which it believes to be the most effective in and scalable solution to spread scarce high-quality tutoring resources to students in China.

Below is an overview image of the GSX' website student interface:



Source: Company registration statement

Management states that GSX Techedu is the "third largest online K-12 large-class after-school tutoring service provider in China in terms of gross billings in 2018, according to Frost & Sullivan."

The company's K-12 courses cover all primary and secondary grades, both of which accounted for 73% and 75% of GSX' total revenue in 2018 and for the three months ended March 31st, 2019.

Management reports its enrollment rate increased from 79,632 in 2017 to 767,102 in 2018 and from 70,845 for the three months ended March 31st, 2018 to 211,002 for the three months ended March 31st, 2019.

GSX has adopted a dual-teacher model - "staffing each class with an instructor and multiple tutors well trained in the relevant subjects or curriculum" - to instill discipline, improve efficiency and create an engaging learning environment under the large-class format.

The firm highlights its rigorous tutor selection process, which it claims to have less than 2% pass rate for the 15 months ended March 31st, 2019.

Customer Acquisition

GSX Techedu sells its services through word-of-mouth and social media marketing on Chinese digital platforms.

Selling expenses as a percentage of revenue have fluctuated but have been trending lower, per the table below:

Selling Expenses vs. Revenue

Period Percentage

To March 31, 2019 37.0% 2018 30.6% 2017 77.2%

Sources: Company registration statement and IPO Edge

The sales efficiency rate, defined as how many dollars of additional new revenue are generated by each dollar of selling expense, was a strong 2.2x in the most recent year, as shown in the table below:

Selling Efficiency Rate

Period Multiple

To March 31, 2019 2.2 2018 2.5

Sources: Company registration statement and IPO Edge

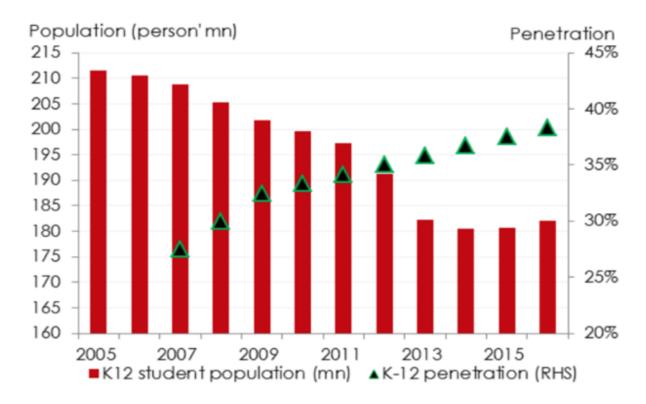
Market & Competition

According to a <u>recent market research report</u> by Frost & Sullivan, the Chinese after-school K-12 education market was valued at \$51.8 billion in 2016 and is projected to reach \$82.6 billion by 2021, growing at a CAGR of 10% between 2016 and 2021.

The main factors driving market growth are China's large population and the dearth of high-quality tutoring resources.

The country's competitive job market and low admission rate for tertiary education, estimated at 37% in 2017, is also expected to drive industry growth as it has put the emphasis on examination results which enforce parents' anxiety over their children's academic achievements.

The population of school-age children - between 6 and 18 years - has decreased from just over 210 million in 2005 to 181 million in 2014 due to China's previous one-child policy, as shown by the graphic below:



Source: NBS, Frost & Sullivan, UBS Research

After the relaxation of China's one-child policy in June 2016, the number of newborn babies increased from 16.6 million in 2015 to 17.9 million in 2016.

According to another 2019 market research report by Zion Market Research, the global private tutoring market was valued at \$96.2 billion in 2017 and is projected to reach \$177.6 billion by 2026, growing at a CAGR of 7.1% between 2018 and 2026.

The market is projected to grow due to the increase in competition among students enrolling at renowned colleges that is fueled by rising household income.

Major competitors that provide online K-12 education services in China include:

- TAL Education (TAL)
- New Oriental Education (EDU)
- ChinaEdu (<u>CEDU</u>)
- China Distance Education (DL)
- Talkweb Information Systems (002261:Shenzhen)
- Xueda Education Group (XUE)

Source: <u>Sentieo</u>

Financial Performance

GSX's recent financial results can be summarized as follows:

- Growing topline revenue at an accelerating rate
- Increased gross profit and gross margin
- Swing to positive EBITDA and comprehensive income
- Positive and significant cash flow from operations

Below are relevant financial metrics derived from the firm's registration statement:

Total Revenue

2018

| Period | Total Revenue | % Variance vs. Prior |
|---------------------|---------------------|----------------------|
| To March 31, 2019 | \$ 40,105,000 | 464.2% |
| 2018 | \$ 59,200,000 | 300.4% |
| 2017 | \$ 14,784,848 | |
| Gross Profit (Loss) | | |
| Period | Gross Profit (Loss) | % Variance vs. Prior |
| To March 31, 2019 | \$ 27,880,000 | 601.7% |
| 2018 | \$ 37,929,000 | 245.0% |
| 2017 | \$ 10,993,485 | |
| Gross Margin | | |
| Period | Gross Margin | |
| To March 31, 2019 | 69.52% | |
| 2018 | 64.07% | |
| 2017 | 74.36% | |
| EBITDA | | |
| Period | EBITDA | EBITDA Margin |
| To March 31, 2019 | \$ 6,611,000 | 16.5% |

\$ 3,188,000

5.4%

2017 \$ (13,841,515) -93.6%

Comprehensive Income (Loss)

Period Comprehensive Income (Loss)

To March 31, 2019 \$ 2,637,000 2018 \$ (2,874,000) 2017 \$ (19,073,485)

Cash Flow From Operations

Period Cash Flow From Operations

To March 31, 2019 \$ 9,627,000 2018 \$ 36,040,000 2017 \$ (7,521,667)

Sources: Company registration statement and IPO Edge

As of March 31, 2019, the company had \$43.8 million in cash and \$68.9 million in total liabilities. (Unaudited, interim)

Free cash flow during the twelve months ended March 31, 2019, was \$43.3 million.

IPO Details

GSX intends to sell 19.8 million shares of ADSs representing underlying Class A shares at a midpoint price of \$10.50 per share for gross proceeds of approximately \$208 million, not including the sale of customary underwriter options.

Class A shareholders will be entitled to one vote per share and Class B shareholders, who are senior management, will be entitled to ten votes per share.

Multiple share classes are a common way for management to retain voting control of the company even after losing economic control.

The S&P 500 Index no longer admits firms with multiple share classes into its index.

Assuming a successful IPO at the midpoint of the proposed price range, the company's enterprise value at IPO would approximate \$2.4 billion.

Excluding effects of underwriter options and private placement shares or restricted stock, if any, the float to outstanding shares ratio will be approximately 8.43%.

Per the firm's most recent regulatory filing, it plans to use the net proceeds as follows:

approximately 30% for improving students' learning experience and educational content development;

approximately 20% for recruiting high quality teaching staff;

approximately 20% for improving our technology infrastructure;

approximately 20% for marketing and brand promotions; and

the balance to fund working capital and for other general corporate purposes.

Management's presentation of the company roadshow is not available.

Listed underwriters of the IPO are Credit Suisse, Deutsche Bank Securities, Barclays, and CLSA.

Valuation Metrics

Below is a table of relevant capitalization and valuation metrics:

| Measure [TTM] | Amount |
|---------------------------------------|-----------------|
| Market Capitalization at IPO | \$2,467,237,500 |
| Enterprise Value | \$2,423,404,500 |
| Price / Sales | 26.76 |
| EV / Revenue | 26.28 |
| EV / EBITDA | 232.90 |
| Earnings Per Share | \$0.01 |
| Total Debt To Equity | 39.70 |
| Float To Outstanding Shares Ratio | 8.43% |
| Proposed IPO Midpoint Price per Share | \$10.50 |
| Net Free Cash Flow | \$43,321,333 |
| Revenue Growth Rate | 464.25% |

Sources: Company Prospectus and IPO Edge

As a reference, GSX' clearest public comparable would be TAL Education (<u>TAL</u>); shown below is a comparison of their primary valuation metrics:

| Metric | Tal Education (TA | <u>L</u>) GSX Techedu (<u>GSX</u> | () Variance |
|---------------|-------------------|-------------------------------------|-------------|
| Price / Sales | 7.85 | 26.76 | 241.1% |
| EV / Revenue | 7.36 | 26.28 | 257.3% |
| EV / EBITDA | 43.80 | 232.90 | 431.7% |

Earnings Per Share \$0.61 \$0.01 -98.8% Revenue Growth Rate 49.44% 464.25% 839.01%

Sources: Company Prospectus and IPO Edge and Sentieo

Commentary

GSX is seeking U.S. public capital investment as the firm's topline revenue growth is high and accelerating.

The company's financials show strong growth across all major metrics and a swing to positive net income and cash flow from operations, an impressive result. GSX has produced enviable customer acquisition results as well.

The market opportunity for K-12 supplementary education is large and growing. Although the Chinese economy is going through a rough time from a macro growth perspective, parents continue to prioritize investing in educational resources for their children to give them every opportunity for social mobility.

Unfortunately, there is significant competition and the private education industry has reeled from a number of scandals and regulatory crackdowns in recent years.

On the legal side, like many Chinese firms seeking to tap U.S. markets, the firm operates within a VIE structure or Variable Interest Entity.U.S. investors would only have an interest in an offshore firm with contractual rights to the firm's operational results but would not own the underlying assets.

This is a legal gray area that brings the risk of management changing the terms of the contractual agreement or the Chinese government altering the legality of such arrangements. Prospective investors in the IPO would need to factor in this important structural uncertainty.

Credit Suisse is the lead left underwriter and IPOs led by the firm over the last 12-month period have generated an average return of a negative 10.8%% since their IPO. This is a lower-tier performance for all major underwriters during the period.

As to valuation, this is where the picture for GSX becomes problematic. Management is asking for investors to pay such a premium at IPO, over 26x EV / Revenue, that it appears to be priced for perfection.

While the firm is growing quickly, the proposed valuation at IPO is excessive.

Expected IPO Pricing Date: June 5, 2019.