

Investment Memo

Date: July 24, 2019 To: Investment Committee – Race Capital Deal Team: Chris McCann and Edith Yeung Company Contact(s): Sam Bankman-Fried (CEO) and Darren Wong (CMO) Subject: Proposed investment in FTX

Executive Summary

Sector: Exchange Financing Round: Seed Round Valuation: Status: Product is live in private beta Lead Investor: N/A – No lead Total round size: \$8M Proposed investment: Terms: Other Notes: FTX is a spinout of Alameda Research, one of the top quantitative hedge funds in the crypto space.

Company Description

FTX is a cryptocurrency futures and derivatives exchange. To create a new top exchange is no small feat, and since its soft launch on June 1st, 2019 it has already achieved daily volumes in excess of \$150M per day on FTX. FTX's products include the typical Bitcoin and other top crypto futures products, and also new innovative products like altcoin indices, index futures, up to 101x leveraged products, etc. On top of that they have internally developed an advanced liquidation engine that significantly reduces the risk of clawbacks or socialized losses, which are the main hesitations for traders using existing products.

Key Metrics

Employees: 10 people in total Traction:

\$50M in trading volume on 6/11,

\$150M in trading volume on 6/22,

\$250M in trading volume on 7/4,

\$300M in trading volume on 7/5

Revenue: *(the exchange is officially launching on July 29th)* Geographies of users: Primarily Asia (China, HK, Singapore, Vietnam, Japan, Korea), Russia, and Europe.

Traction

The FTX team is one of the highest execution-oriented teams we have met in the crypto space, and their update log demonstrates this fact:

- 7/21: **New Feature** - Spot Markets
- 7/21: **New Feature** - Reduce Only Orders
- 7/19: **New Feature** - Launched ftx.com/leaderboard
- 7/17: **New Product** - Midcap Crypto Index Futures + Leveraged Tokens
- 7/17: **New Feature** - 101x Leverage
- 7/12: **New Feature** - Separate passwords for fund administrators and accounting teams
- 7/9: **New Product** - Altcoin Index Futures + Leveraged Tokens
- 7/5: **Milestone** - Hit 300 mil in trading volume for the first time
- 7/5: **New Product** - BSV Futures + Leveraged Tokens
- 7/4: **Milestone** - Hit 250 mil in trading volume for the first time
- 7/4: **New Feature** - BTC or USDT collateral
- 7/2: **New Feature** - Global Crypto Volume Report <https://ftx.com/volume-report>
- 6/30: **New Product** - LTC Futures + Leveraged Tokens
- 6/23: **New Product** - ALGO Futures + Leveraged Tokens
- 6/22: **Milestone** - Hit 150 mil in trading volume for the first time
- 6/22: **New Product** - Sell BTC → USD on ftx.com/wallet
- 6/21: **New Feature** - Separate passwords for logging in and withdrawing funds
- 6/17: **New Feature** - 2FA system (built in-house to replace Auth0 2FA)
- 6/11: **Milestone** - Hit 50 mil in trading volume for the first time
- 6/9: **New Product** - Leo Futures + Leveraged Tokens
- 5/26: **New Feature** - FIX API
- 5/10: **New Product** - BNB and TRX Futures + Leveraged Tokens
- 5/1: **New Feature** - Subaccounts

From the team's internal milestones

Investment Highlight

In a very short timeframe FTX has launched and achieved significant early traction for derivatives trading. Their aim is to be the #1 derivatives venue in the world supplanting Bitmex, Huobi, and OKEx.

Deep Trading Expertise

The FTX team has this level of traction, in large part due to their deep experience running Alameda Research, one of the top crypto quant funds. Alameda Research was founded in October 2017, manages over \$100 million in digital assets, and trades between \$600M-\$1.5B per day across thousands of products. This includes all the major cryptocurrencies as well as their derivatives. The FTX team created and built the exchange they would have wished existed, and it's already resonating with the crypto ecosystem.

Founder product fit

The founder and CEO of FTX, Sam Bankman-Fried, **loves trading**. Sam has a large following of people who watch him live trade, trading is all Sam talks about, and Sam is constantly engaging with new traders in all of the community forms of FTX. Similar to Vitalik Buterin, the founder of Ethereum, we love to see when the founder has a deep and passionate love for the thing they are building. It is clear that both Sam and the team are traders at heart, and it shows in all of the products and messaging they do.

Massive market

While much of the emphasis is placed on the spot markets (Coinbase & Binance) the futures market is as equally large as the spot market. On July 25th, 2019 the total spot market volume was \$10B per day and the total futures market was \$11B per day. However in the futures market there are many fewer players with the top three (Bitmex, Huobi, OKEx) regularly driving 3x more trading volume vs. their spot market equivalents. In addition to this, currently there are no futures exchanges with their own native exchange tokens. Binance, the spot market crypto exchange, has one of the most valuable tokens on the market (\$4.5B market cap) and we expect there to exist comparable token in the futures market (FTT).

Race Capital Fund Thesis

One of our core thesis areas for Race Capital is financial infrastructure. Exchanges are currently the main driver of financial activity within the cryptocurrency ecosystem today, and futures exchanges drive comparable levels of volume to spot market exchanges. Because of FTX's trading expertise, founder market fit, and early traction – FTX has a chance to become the #1 derivatives exchange in the world for the crypto market.

Market Size / Industry Landscape

There is a much smaller subset of futures exchanges vs. spot market exchanges in the market today. The full list of cryptocurrency futures exchanges, stack ranked by volume, are below:

Futures Exchange	Daily Trading Volume	Trading Pairs	Fees	Comments
OKEx	\$3,600,000,000	36	0.05%	
BitMEX	\$3,200,000,000	11	0.06%	
Huobi	\$2,600,000,000	21	0.04%	
Bitflyer	\$700,000,000	4	0.07%	
Deribit	\$200,000,000	2	0.05%	
FTX	\$100,000,000	15	0.03%	Exchange launched on June 1, 2019
Kraken	\$68,000,000	15	0.04%	
Gate	\$50,000,000	22	0.04%	

Dydx	\$1,500,000	3	NA	Decentralized futures exchange.
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Data is from July 25th, 2019

Volumes shift on a monthly basis but the undeniable leader in the crypto derivatives market is BitMEX. BitMEX has only done one angel round in 2015 (Estimated \$200K) during the whole lifetime of the company so there is very little public information about the company. However from the few data points we can gather BitMEX is estimated to be **valued at \$3.6B**, the exchange generated **\$83M in revenue in 2017**, and BitMEX's office is located in the **most expensive office space** in Hong Kong (*45th floor of the Cheung Kong Center*). At a conservative figure we estimate that BitMEX is currently doing ~\$500M in revenue per year (based on volume and fees). In the derivatives market liquidity begets liquidity so one of the biggest questions was how FTX would gain a foothold on this market. In addition to the FTX team's experience and background, from a market landscape perspective BitMEX is currently **under investigation** and because of this there has been a spike in **net-outflow of capital** from the exchange. We believe this has led to an opening in the market right now, just as FTX is preparing for their official launch on June 29th, 2019. If FTX can supplant BitMEX as the major futures exchange, a massive amount of value will accrue to the FTX platform.

Team

After spending time with the FTX team in San Francisco and Hong Kong, we believe FTX has assembled one of the best technical and trading oriented teams in crypto, hailing from Jane Street, Google, Huobi PayPal, Blackstone, Facebook and SIG. The organization was built from the group up with engineers and product leads who have experience building large scale trading & exchange systems.

Sam Bankman-Fried, CEO

Before founding Alameda, Sam was a trader on Jane Street Capital's international ETF desk. He traded a variety of ETFs, futures, currencies, and equities, and designed their automated OTC trading system.

Gary Wang, CTO

Gary was a software developer at Google, where he developed price aggregation and serving systems for Google Flights. He graduated from MIT, majoring in Mathematics and Computer Science.

Constance Wang, COO

Constance worked on private banking AML/KYC and risk controls in Credit Suisse before joining Huobi Global as a business development manager. There she focused on expanding institutional business and managing strategic partnerships in APAC for their crypto exchange.

Darren Wong, CMO

Darren was an early software engineer at Simility, a ML fraud detection startup which got acquired by PayPal. He audited smart contracts for projects like Wabi and was an early investor in dozens of ICOs. He graduated from Johns Hopkins, majoring in Applied Mathematics and Economics.

Jennifer Chan, CFO

Jen has had 10 years experience in private equity and fund operations. She was previously director of investment accounting at Blackstone Group and AVP at Deutsche. She graduated from HKUST with an accounting major.

Nishad Singh, VP of Eng

Nishad was a software engineer on the Applied Machine Learning team at Facebook. He graduated Summa cum laude from Berkeley with a degree in Electrical Engineering and Computer Science.

Andrew Croghan, Head of Business Development

Andy led operations for Susquehanna International Group's crypto desk, helping it become one of the first big institutions to enter the space. He worked on SIG's floor operations for Options trading for 5 years.

Investment considerations

Unique positioning

FTX was built by traders for traders, and has shot at becoming the #1 crypto future trading exchange in the world. They have great early traction, reaching over \$300M in trading volume in less than 30 days, and their products are resonating with the crypto trading communities.

Meaningful growth opportunities

We believe that FTX has 3 major growth drivers:

Full suite of futures products

Legacy futures exchanges were largely focused on Bitcoin derivatives. As an example, 90% of BitMEX's volume consists of just bitcoin (Perpetual, 60 day, and 30 day swaps). FTX are taking these same concepts and applying them to the long-tail of crypto assets including:

Midcap Index Futures – Futures products built on the entire mid-cap of crypto-assets

Stablecoin Futures – People love speculating on stablecoins (Especially tether in both directions) and FTX already created an instrument to trade

Shitcoin Index Futures – This funny named product is a collection of all the very long-tail cryptocurrencies (aka "shitcoins") that people love to

Exchange Token Futures – An index of all the exchange tokens in the market, a category that traders love to

All of these products are uniquely created by FTX and all things traders love. Because of the strong founder-market-fit they are able to create these products that traders love to trade.

Unique Market Infrastructure

There are a handful of these "exchange as a service" providers, however the FTX team decided to build their exchange from scratch from the ground up. A few of the key considerations on why they decided to do this include:

Real-time – The exchange has to be able to handle trades in real time at a significant

Multiple collateral types – Unlike BitMEX, FTX wants to allow traders to be able to use margin of any asset type (e.g. Bitcoin, Ethereum, Stablecoins, etc)

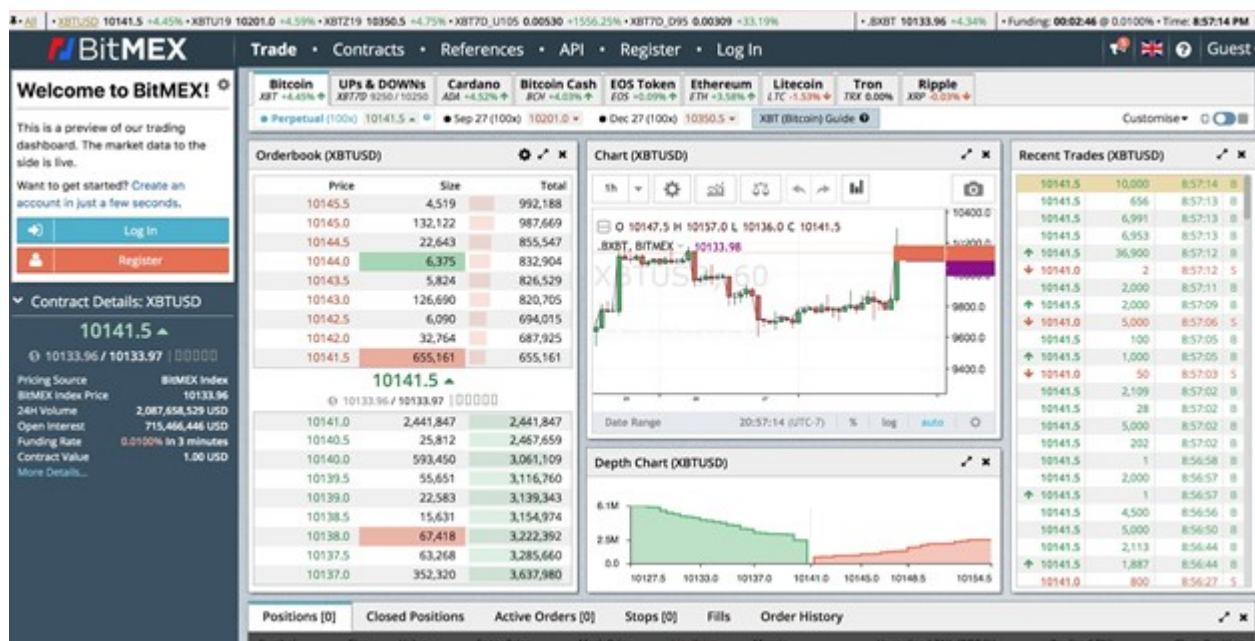
API – FTX is building an API gateway into the exchange to be used by professional and prosumer

Simplified tech stack – FTX has already built an internal OTC desk to handle large orders and will not have to rely on external service providers to execute

The FTX motto is by traders and for traders and their underlying technical infrastructure reflects this as well.

Expanding TAM of future traders

Futures are typically regarded as complicated financial instruments, which are more difficult for retail traders to understand. Therefore futures have historically always been confined to a smaller subset of more advanced traders and trading firms. FTX has been able to abstract away a lot of the complexity in creating futures products, and deliver products in a way that is intuitive for the majority of traders in the crypto ecosystem. Therefore we hypothesize that not only will FTX eat into the existing futures exchange market (e.g Bitmex) but also expand the TAM of traders these exchanges cater to. As an example see the interface from BitMEX vs. FTX below:



BitMEX's trading interface



FTX's 3x Long Binance Token (BNB) product

Expansion into Asia

FTX is locating a large majority of their internal team in Hong Kong and is focused on attracting large traders and trading firms in Asia onto the exchange. Asia is the main trading hub of worldwide crypto volume and the vast majority of top exchanges are based in Asia. FTX is already seeing meaningful traction in these regions and is doubling down to win traders from this region onto the platform.

Risk Factors

Alameda FTX

It is unclear how much of the time Sam will dedicate to Alameda FTX. Given the speed of execution we believe there will be dedication to FTX, however it remains to be seen.

Trading on their own exchange

An exchange needs a market maker to get it off the ground and Alameda will be the initial market maker for FTX. The team intends to bring on more market makers over time however this is a major risk. We have talked to other quantitative hedge funds who are hesitant to trade on FTX for this reason.

Other derivatives platform issues their own exchange token

If one of the current top derivatives exchanges (ex. BitMEX) launched their own platform token, then it will take momentum away from

Regulatory Risk

Similar to BitMEX, FTX has to be careful with their KYC, AML, and compliance practices as they accept new customers. Fortunately KYC has become more standardized for exchanges and there are outside service providers who will support in this capacity, however it's a major risk if done

Other large spot market exchanges offer derivatives products

If Binance or Coinbase launch their own futures products, that would put more competitive pressure on the derivatives market. As of now the futures & derivatives market and spot markets are largely separate, but we do not believe this will last

The large incumbents do not lose market share

If BitMEX, Huobi, and OKEx continue to dominate the futures market, then this will put pressure on FTX to only grow with net new

DEX's become the main form factor for trading

If decentralized exchanges (DEX) become the main form of trading, then decentralized derivative products like DYDX might take the lion's share of the market volume in the future. So far there is no indication of this happening, however it is worth monitoring the DEX

Major hack or security incident

If FTX incurs a major hack or loss of funds, then traders will lose faith in the platform and be less willing to try a new

Investment Terms

We are investing before their public launch date on July 29th, 2019. The terms of investment are as follows:

Exit Strategy

Our best case for FTX, is that it will become as large (in terms of trading volume) as BitMEX is today. This coupled with the fact that FTX has a native exchange token, would bring meaningful market cap appreciation from where FTX is at today. Currently BitMEX last estimated value is to be **around \$3.6B** (July 2018) and FTX.