2020 1H Investor Letter:

Our gross return for 1H/2020 was 2.25%, above the S&P 500's return (including dividends) of -3.1 %. Since inception, our annualized return has been 13.5%, which is greater than the S&P 500's 11.0%.

	1Q	2Q	3Q	4Q	Full year	S&P 500 (including dividends)
2015	NA	NA	-4.42%	9.51%	4.67%	1.40%
2016	0.39%	-0.07%	1.95%	10.03%	13.87%	11.96%
2017	3.82%	5.45%	6.32%	9.75%	27.77%	21.87%
2018	-0.58%	5.08%	1.05%	-10.05%	-4.54%	-4.39%
2019	12.86%	1.36%	0.01%	10.65%	26.6%	31.49%
2020	-11.78%	15.90%	*22.60% (QTD as of 08/28)*		2.25% (1st half)	-3.08%
Total Return					88.3%	68.6%
Annualized Return					13.5%	11.0%

Our 1H/2020 results have been mixed. We sold our position in Broadcom and Wells Fargo in early 2020 and redeployed the proceeds to Berkshire Hathaway and several technology stocks. While our technology holdings performed well, Berkshire and Bank of America have significantly trailed the market due to the COVID-19 pandemic, which largely offset our gains in technology stocks. The table below provides a snapshot of our fund's main contributors and detractors during 1H/2020.

Contributor	**Detractor:**
Amazon: 7.56%	Berkshire Hathaway: -4.67%
Microsoft: 1.43%	Bank of America: - 2.96%
Salesforce: 1.10%	
Alphabet: 0.89%	
Workday: 0.86%	

Some of our portfolio laggers, including Alibaba/Berkshire Hathaway, have started to outperform the broader market recently as the main street economic outlook has started to brighten. Our two core software holdings, Salesforce and Workday, saw their shares rally after reporting strong 2Q/21FY results. Our new position in AMD also went up materially after AMD's competitor Intel delayed its 7nm roadmap.

As usual, in this letter, we selectively highlight business developments in both our existing and new holdings. We also share our observations regarding technology trends.

<u>Existing Positions:</u>

- **Financial Holdings:**

Berkshire Hathaway
Berkshire's share prices declined 21.2% in 1H/2020. Making matters worse, we added our position ***before*** the pandemic at an average price of $211 on the thesis we laid out in our 2019 letter. The underperformance of Berkshire stock has significantly hurt our short-term performance.

During 1H/2020, investor sentiment regarding Berkshire hit an all-time low for several reasons: a) Berkshire's equities holdings such as banks and airlines were badly impacted by COVID-19; b) the economic shut down substantially impacted several of Berkshire's fully owned businesses, including those in the manufacturing and retail sectors; and c) Buffett was reluctant to deploy excess capital during the March market self-off.

Despite heavy hits to bank and airline shares, Berkshire's equity holding held up well during 1H/2020, thanks to the run-away success of its investment in Apple. Buffet's Apple bet has arguably been one of the best investments ever, more than tripling in value from $35 billion to well over $105 billion. On the operating business side, COVID-19's impacts on Berkshire's three largest standalone businesses (Insurance, Railroad, and Utilities) have not been as severe as on its collections of manufacturing and retailing companies.

On the capital allocation side, we are seeing positive signs that Buffett is finally starting to deploy some of Berkshire's massive cash pile. In early July, Berkshire spent $9.4B on a deal to acquire Dominion's natural gas pipeline and storage assets, which are widely regarded as undervalued in the distressed energy sector. This purchase gives Berkshire Hathaway Energy (BHE) control of 18% of all interstate natural gas transmission in the United States. With more than $100 billion worth of energy projects in the pipeline, BHE is well-positioned to be a major winner in the electronic infrastructure boom. More recently, we have also seen Berkshire accumulate more Bank of America shares.

Most importantly, Buffett started to ramp up Berkshire's buybacks program in 2Q/20, repurchasing $5.1 billion worth of its own shares. While Berkshire's intrinsic value certainly took a hit during the pandemic, at 1.1 times price/book value as of the end of 2Q/20, Buffett's aggressive buybacks program is a no-brainer means of making money for shareholders.

Bank of America (BAC):
BAC significantly underperformed the market during 1H/2020, with a share price decline of 31.5%. We kept our shares stable throughout this extraordinarily turbulent period, which saw prices drop as much as 50% during the March selloff. The near-term challenge all banks faced is clear to investors: a) large loan provision expenses, b) a prolonged low-interest environment, and c) an uncertain economic recovery.

Given all the challenges of this period, we believe BAC was among the best-performing money centers. Banking is an "essential service" for society. BAC has pledged not to layoff employees during the COVID-19 pandemic and has in fact hired thousands of new staff members and raised its minimum wage to $20 an hour to meet surging demand from businesses. These actions are in sharp contrast to the 2008 financial crisis, when BAC was forced to lay off more than thirty thousand employees.

BAC's business has actually expanded during the pandemic. From the end of 2019 through 2Q/2020, BAC's total deposits rose by $284 billion, second only to JP Morgan. BAC's total loans also rose by $16 billion. In 1H/2020, BAC booked $9.9 billion in provisions (estimated future loan losses), or 54% of its pre-tax pre-provision profit (PPTP). Its net charge-offs (actual loan losses) for 1H/2020 amounted to $2.3 billion, or 0.43%. Both BAC's provisions and net charge-offs ratios were the lowest among its peer institutions, reflecting years of prudent credit management. Digital engagement has also risen dramatically across BAC's many business lines including consumer (Erica/Zelle), commercial (CashPro), and wealth management (Webex).

BAC's ability to manage and scale its business during the pandemic testifies to the improvements it has made in **cost control, credit management,** and **digital transformation** over the past decade. We believe the street has greatly mispriced BAC. Other than an interest rate play, we view BAC as a collection of diversified financial services with strong recurring revenue. Prudent credit management also allow BAC to profitable even in the worst economic distress scenarios. Depending on the economic recovery, there is a decent chance that BAC will be able to release its loan loss reserves in the future. Meanwhile, BAC's earnings and multiples both have ample room to appreciate.

- **Technology Holdings:**

Amazon:
We continue to aggressively add Amazon at an average price of $1913 in 1H/2020. Our long-term thesis layout in 2019—a) that Prime one-day would accelerate the growth of Amazon's high margin growth businesses (third-party services/subscription/advertising) and b) that AWS would continue to prosper amid intense competition—have proven correct in a very short period.

Various statistical measures indicate that the US eCommerce penetration rate has risen from 50% to 100% during the pandemic, with Amazon fully participating in that growth. Amazon has handled its eCommerce business marvelously well during the crisis, including adding 175K new employees to meet surging demand and spending billions on employee-related safety. The success of Amazon's online stores has also helped its high margin businesses prosper. Its third-party services revenue increased a staggering 52% YoY to $19.1 billion in 2Q/2020. Meanwhile, Amazon subscriptions and advertising—great sources of profitability—have also continued to follow a hypergrowth model. In fact, despite spending $4 billion on employee protection, Amazon posted its biggest quarterly profit ever.

On the public cloud side, the shift to the cloud has become the default mind-set of enterprise customers. In the near term, AWS's revenue growth rate has slowed a bit due to the pandemic. However, ***AWS's back blog (RPO), a more important metric in our view,*** grew tremendously in

2Q/2020, at 63% YoY to $41 billion, a strong signal that enterprises are committed to cloud transformation in the long term. The pandemic has made the benefits of the public cloud clear: a) allowing enterprises to run critical business functions without disruptions, b) serving ecosystem partners (CRM/WDAY) coherently and enabling top SaaS companies to rapid deploy of new functions to meet emerging customer demands, and c) facilitating the dynamic scaling of popular software such as Zoom by leveraging microservices architecture.

While competition from Microsoft/GCP has been as intense as ever, AWS continues to focus relentlessly on innovation. In 2Q/2020 alone, AWS rolled out several milestone tech products across different technology stacks: chips (AWS Graviton), hardware (AWS Wavelength), and software (Amazon Honey Code). Again, our view is that innovation will enable AWS to continue its long-term growth despite competition.

Alibaba: (BABA)
We largely kept our position in BABA stable in 1H/2020. BABA's share price lagged behind those of its peers during 1H/2020 for several reasons: a) PDD/JD took some of the eCommerce market share as BABA's logistics operations were forced to shut down during the Feb–Mar period; b) Alibaba's foray into local services to battle Meituan has proved tougher than management originally expected; and c) US/China tensions escalated beyond the trade war.

Nonetheless, Alibaba's core business, "eCommerce" and "cloud", remain in solid shape. In the latest quarter, as China's economy has recovered and logistics operations have stabilized, ***BABA's eCommerce business has experienced a V-shape recover***y. The company's advertising/commission revenue grew 23%/17% YoY in the most recent quater, compared with 3%/-2% during the pandemic. New monetization tools such as the recommendation feed and live streaming, which Alibaba pioneered, have also started to pay off. Meanwhile, Alicloud maintained its hypergrowth profile throughout 1H/2020. Alicloud has now reached $7.1 billion in annual run-rate business, with a growth rate of 60%. Notably, AWS's profitability shot up exponentially after it reached a $7 billion run rate in 2015. Today, China's cloud market is only 1/8th the size of that of the US, and we believe Alicloud has a long runway to expand beyond IAAS offerings to improve its profitability.

The second half of 2020 will also be a transitional period for Alibaba. Ant Group, BABA's fintech affiliate, recently announced that it would seek IPOs in both Shanghai and Hong Kong. It is worth noting that Ant Group will go public in Shanghai's STAR market, where most tech companies are highly valued relative to western standards. Recent news suggests the IPO proceeds will be $30 billion with a valuation of $225 billion.

While investors mostly know Ant Financial as a consumer payment/credit service (ToC), the company has successfully expanded into the enterprise fintech market in recent years (ToB). It renamed itself Ant Technology in June/2020 and has been an early pioneer in database and blockchain technologies, both of which have large addressable markets in our view.

For example, "Oceanbase", which has been developed internally for Alipay since 2010, is a financial-grade distributed relational database that is gaining mainstream adoption among major Chinese financial institutions. Alibaba and Ant together have also invested heavily in blockchain

services for both large enterprises and SMB. For example, Ant recently struck blockchain deals with the state-owned companies Cosco Shipping and China Merchants Port. Worldwide ocean freight alone is a $4 trillion market that is relatively lacking in digitization compared to many other industries. On the SMB side, Ant launched Antchain, which helps solve an array of problems including IT leasing, digital copyrights, and medical insurance claim processing.

- **Other Existing Holdings:**

We increased our Microsoft position by a third at an average price of $158.5 during 1H/20. Microsoft's cloud solutions including IAAS (Azure), PaaS (Power Platform), and SaaS (Office, Teams, Dynamic 365) have been firing on all cylinders during the pandemic as customers shift IT spending to the cloud. Microsoft is aggressively expanding partnerships with top SaaS companies to lock in customer budget increases. In the past year alone, Microsoft has formed or enhanced partnerships with Adobe, Oracle, ServiceNow, Salesforce, SAP, SAS, and Workday. Telco cloud is another big area of focus for the software giant. Microsoft recently acquired Affirmed Networks and Metaswitch Networks to expand its relationships with telecom companies. It also formed alliances with AT&T, SK Telecom, and Telefónica to jointly develop 5G cloud solutions. We expect many more Microsoft/telco partnerships to come.

We aggressively added shares in Workday in 2Q/2020 at an average price of $154.8, and we have continued to build our position into 3Q/20. We believe investors were overly worried about the pandemic's near-term impacts on a) enterprise layoffs and b) Workday's reliance on the direct sales model for large deals. While Workday's short-term results may fluctuate, the pandemic has made large enterprises recognize the benefit of running "critical functions" (financial/planning) on the cloud for the sake of business continuity. We think Workday is well-positioned to expand into higher-growth areas outside its core HCM products, with industry-leading products such as Workday Financial, Adaptive Planning, Prism Analytics, and Scout RFP.

We kept our shares stable in Alphabet (GOOG) and Salesforce (CRM) during 1H/20. Even after the recent equity run-up, both companies' valuations are still favorable compared to their peers. Moreover, we believe GOOG and CRM will show much stronger results when the economy eventually returns to normal.

We exited our positions in Broadcom and Wells Fargo at an average price of $318 and $53.4 in Jan/2020 for fundamental reasons. In addition, we recently exited our position in Elastic NV at $88.9, because we see more attractive ideas in the software space.

New Positions:

- **AMD:**

We initiated a mid-size position in AMD at $54.5 in 2Q/2020. As we continued increasing our position in AMD through mid-July, AMD's main competitor Intel made a surprise announcement that it was delaying its 7nm roadmap. Following this announcement, AMD's stock has surged more than 50%.

To put things in perspective, AMD's foundry partner TSMC surpassed Intel in chip manufacturing in 2018 by mass-producing 7nm processors for Apple. Intel currently projects that it will start constructing 7nm processors at the end of 2022. By then, **TSMC will already have its 3nm in volume production**. Simply put, TSMC is probably two nodes ahead of Intel.

AMD does not take its success for granted. While TSMC has certainly helped AMD achieve "**processor leadership**" (by nanometer), AMD's **"architecture leadership**" (by microarchitecture) is a result of many years of hard work. In 2016, under the leadership of Lisa Su, AMD introduced its "Zen architecture", a new SoC microarchitecture designed for both the PC(Ryzen) and the server market (Epyc). AMD's Zen-based products have achieved enormous success and gradually taken a share of the market from Intel. AMD has also invested in GPU architectures including RNDA for gaming GPUs and CDNA for data center GPUs.

While AMD's current valuation is not low, we think the company is far from realizing its full potential. From 2H/2020 to 2021, AMD will release many new promising products, including third generation Zen-based PC CPU (Ryzen 4000), new server CPU (Eypc Milan), RDNA 7nm gaming GPU(Big Navi), and next-gen SOCs for PlayStation 5G and Xbox X series consoles. We think AMD's combination of "processor leadership" and "architecture leadership" will allow the company to massively improved its scalability and margin profile in the coming years. Strong cash flow will also allow AMD to invest more aggressively in its data center GPU and AI software, a large market currently dominated by Nvidia.

- **Meituan:**

We initiated a small position in Meituan in May/June at an average price of HKD $132 in 2Q/2020. As we continue to aggressively build our position into 3Q/2020, we expect that the average price paid for Meituan will be materially higher.

Nicknamed by investors the "Amazon for local services" in China, Meituan is the indisputable leader in both "food delivery" and "in-store/hotel services". Through strong execution, Meituan's "food delivery business" has consistently taken market shares from its rivals. Its larger scale enabled it to improve its unit economics, with food delivery unit operating margin at 8.8% in the most recent quarter, substantially higher than the operating margins of all of its rivals. Meituan's advertising plus commission model makes its "in-store/hotel" a high-profit margin business.

While COVID-19 significantly impacted Meituan in 1Q/20, the company has emerged much stronger after the pandemic. We observed that the pandemic caused **a structural shift in customer behaviors, leading them to more frequently order food/services online**. Many high-end restaurant chains also joined Meituan's food delivery after the pandemic and the company completed an average of 24.5 million daily food delivery transactions in 2Q/20.

To support this vast number of deliveries, Meituan has spent a decade building an efficient on-demand delivery network that has become a critical part of Chinese social infrastructure. The network seamlessly connects 1 million daily active riders, 6.3 million active merchants, and 457 million customers. During the pandemic, Meituan helped absorbed many unemployed workers from the industries that COVID-19 hit the hardest. In a recently published report, Meituan noted

that it had 2.95 million income-earning riders on its platform during 1H/2020. By comparison, there are only around 3 million couriers (express delivery) in all of China.

With armies of riders, an efficient on-demand network, and a sky-high customer reputation, Meituan is now aggressively expanding into several large verticals with their own unique advantages: a) grocery deliveries, b) consumer finance, and c) eCommerce:

a. Grocery deliveries are in hypergrowth globally, with growth rates several times greater than overall eCommerce growth rates. Meituan has already established itself as a front-runner by delivering goods to consumers in less than 30 minutes through both marketplace and self-operated models.

b. Alibaba and Tencent have traditionally dominated consumer finance. Meituan recently rolled out "monthly payment", a consumer loan service similar to Ant's Huabei. Consumer credit is a highly lucrative business. By providing credit services, we believe Meituan will simplify user experience, improve user conversion, and eventually make profits.

c. On the eCommerce side, Meituan launched "Youxuan", a product focused on community group buying. Our offline channel check suggests that Meituan is on track to launch an eCommerce platform featuring its private-label brands in the FMCG (fast-moving consumer goods) category, with a particular focus on aesthetic and beauty products.

To summarize, Meituan today is one of the very few super apps that Chinese consumers cannot live without in their daily lives. Millions of offline merchants also rely on Meituan's platform for their day-to-day operations. In the next few years, we expect that Meituan will grow its delivery services revenue >30% CAGR, in-store/hotel businesses will eventually rebound, and as the company undertakes several new expansions with vast potential that the market currently underestimates. We expect Meituan to be a long-term holding for us.

Updates on the Technology Landscape

Since establishing Bogaya Capital five years ago, we have consistently talked about the convergence of several technology trends (5G, semiconductors, the public cloud, and new software stacks) that will dramatically shift our world to a digital-enabled society. The ongoing COVID-19 pandemic has just accelerated the adoption of these trends, with years' worth of digitization compressed into months. Below, we touch on three areas where we are seeing most profound changes: semiconductors, the edge cloud, and consumer services.

- **Semiconductor: Silicon Wars**

The semiconductor market has not been this dynamic for years. Multiple silicon wars are heating up simultaneously. In consumer devices, OEMs like Apple and Google are increasingly relying on internally designed processors for differentiation. Examples include the newly announced Apple A-series Mac Arm chip and Google's "Pixel Visual Core". We see a similar trend in the server market, with Amazon (Graviton), Google (TPU), and Alibaba (Huaguang) aggressively investing in self-designed server CPUs and AI chips.

Traditional semiconductor companies are not standing idle either. The fight between Intel and AMD has intensified. Nvidia raised the bar on machine learning with the introduction of Ampere Architecture. And Qualcomm has pushed into the RF space.

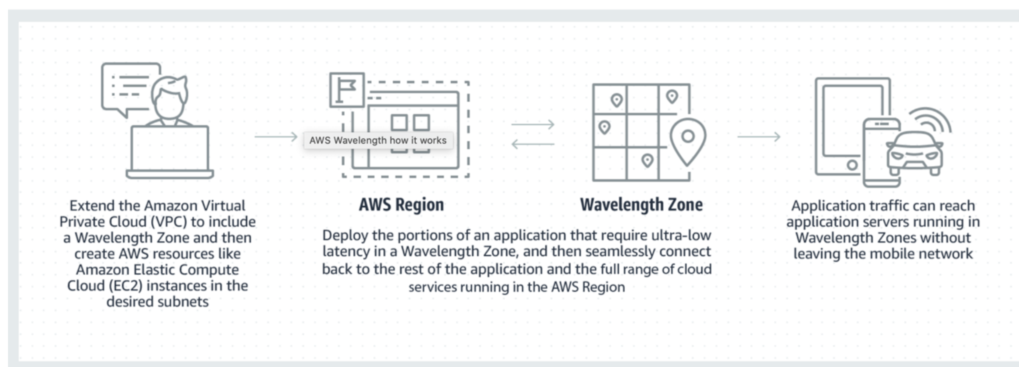
The biggest war of all is, of course, the ongoing battle between the U.S. and China. China has prioritized self-sufficiency in the semiconductor sector. Chinese companies like Tsinghua Unigroup and Loongson technology have recently unveiled memory and CPU products that have significantly narrowed the the gap between them and global leaders. On the other hand, the U.S under the Trump administration is now pushing both US semiconductor companies and global leaders like Samsung/TSMC to limit their supply to China, while issuing a total ban against Huawei. This tech cold war, which some have called the **"Silicon Curtain"**, could last for years.

Historically, we have limited our exposure in semiconductors due to the cyclicality of the sector. We have partnered with Esoterica Capital to launch an ETF product, ticker "WUGI", to invest mostly in semiconductor- and digital transformation-related software/consumer companies. Detailed information can be found at https://www.esotericacap.com/our-solutions/exchange-traded-funds/wugi.

- **Public Cloud: Convergence of the Edge Cloud and AI**

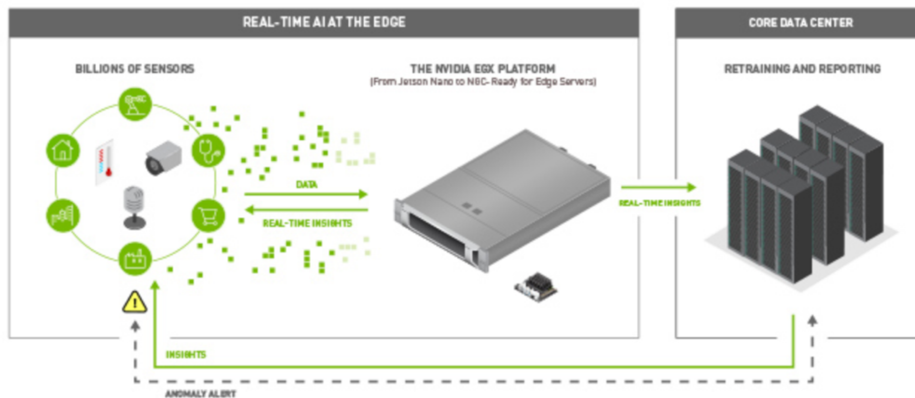
On the technology roadmap, the edge cloud and serverless computing continue to gain mainstream attention as we pointed out in our 2019 investor letter. There is a great deal of hype regarding edge computing. For example, the shares of several edge computing-related companies, including Fastly and Cloudflare, have recently gone up several-fold.

It is important to acknowledge that the build-out of the "5G edge cloud platform" is just getting started. For example, AWS partnered with Verizon in 2019 to establish "AWS wavelength" throughout key US cities. AWS wavelength, **a mobile edge cloud (MEC)**, will allow developers to build ultra-low latency applications within the same AWS software stack (Figure 1). These edge platforms require numerous technological breakthroughs and expensive city-level local data center build-outs. So far, the services have been made available in only two US cities (Boston and San Francisco), and are project to be in 10 US cities by the end of 2020. We strongly recommend that interested readers explore AWS's wavelength architecture:



(Figure 1: AWS Wavelength, a city-level mobile edge cloud)

Tech leaders are also innovating heavily in on-premises "micro data centers". Nvidia recently unveiled EDG A100 (Figure 2), an on-premises, **single stack edge server** that can run real-time AI applications at the edge. Such on-premises edge servers will be distributed all over the place to serve trillions of IoT devices in the coming years. However, edge server devices are expensive, and we believe mass deployment will require significant cost reductions.



(Figure 2: Nvidia EGX, a AI power edge server for on-premises data analytics)

Nonetheless, **the convergence of the edge cloud and AI is inevitable**. Today, most AI training models have very large datasets and can only be processed in centralized data centers. By connecting MEC/edge server/IoT devices, edge cloud platforms can leverage millions of computing nodes for AI training in real-time through serverless and container software technologies, among others. Today, iPhone unlock is a classic example of an edge AI application. As the 5G edge cloud infrastructure is gradually built-out, we believe smart manufacturing, autonomous driving, and real-time ML-assisted diagnostics will be broadly available in the next few years. Another profound benefit of the Edge/AI convergence will be "Distributed AI", which will help ensure privacy by putting data in users' hands rather than in central clouds. One of our main focuses in the fund is finding companies that will facilitate or benefit from the edge cloud/AI convergence trend.

- **Consumer Services: Accelerate Adoption of Ecommerce and Digital Payment**

While we have studied and invested in Ecommerce and fintech for a long time, this investment has mostly occurred through our exposure in tech giants. We are actively exploring ideas in these two areas because we have observed structural adoption trends.

a. Accelerated adoption of eCommerce:

The Chinese market is probably the first to prove that eCommerce adoption will be structural post-coronavirus. Although eCommerce (physical goods) as a percentage of total retail sales was already high in China at 20.2% in 2019, all three major Chinese eCommerce giants (BABA/JD/PDD) showed robust results in 2Q/2020, with BABA/JD seeing eCommerce revenue growth ***re-accelerating***.

US eCommerce accounted for 11.0% of retail sales in 2019, a much smaller share than in China before the pandemic. Due to the prolonged COVID-19 situation, however, the US eCommerce share is widely expected to exceed 20% by the end of 2020, ***compressing a decade of growth into just one year***. While the obvious winners such as pure online eCommerce/software solution companies (AMZN/ETSY/SHOP) have already seen their prices skyrocketing, we believe there will be ample growth in adjacent verticals such as a) traditional retailers benefiting from the direct-to-consumer trend and b) eCommerce logistics providers. In our view, similar opportunities in eCommerce or adjacent verticals can be found in other countries as well.

b. Rise of digital payment supported by fintech innovation:

Strong digital payment growth is a natural result of accelerated eCommerce adoption. But digital payment growth does not benefit from eCommerce alone. As PayPal CEO Daniel Schulman pointed out after the company recently recorded its strongest quarter on record, "***Multiple industries are embracing the rise of digital payment".*** For example, omnichannel digital checkout and contactless payment (QR code/NFC) are now widely adopted by all forms of merchants, including previously hard-to-address categories such as groceries and pharmacy.

The rapid modernization of fintech infrastructure has fueled the rise of digital payment. Both traditional financial service providers and start-ups are adopting cloud infrastructure to compete more effectively. For example, Standard Chartered partnered with Azure in August, shortly after HSBC team up with AWS in July. Meanwhile, Global Payment (GPN), a leading merchant acquirer from the consolidation of GPN/Heartland/TSYS, recently partnered with AWS to create a cloud-based processing platform for card issuers.

While 1H/2020 was a busy period for fintech M&As, with Intuit purchasing Credit Karma for $7.1 billion and Visa acquiring Plaid for $5.3 billion, 2H/2020 will be a blockbuster time for fintech IPOs. The list includes the confirmed IPOs of Ant Financial valued at $225 billion and Affirm Inc (a POS lender) at $10 billion, and the possible IPO of Stripe at more than $ 36 billion. We are actively exploring ideas in the payment industry, but so far valuation concerns have kept us on the sidelines.

Conclusion

Our conservative approach to portfolio management certainly has both benefits and drawbacks. Our maximum drawdown (YTD) during the March sell-off was around -17.8%, considerably better than all indexes. However, our results lagged tech stocks as the market recovered, due to our exposure in the financial sector. Some of our holdings have outpaced the market recently and we believe the overall risk/reward of our portfolio companies remains favorable.

Going into 2H/2020, we must contend with a variety of uncertain factors, including the US election, Fed monetary policies, vaccine results, the pace of economic recovery, the US/China trade war, etc. We are not macro-level experts and will not waste time figuring out how to time the market. While we have spent more time researching technology trends and building tech-related positions, investors can count on the fact that we will not participate in speculative or

expensive tech names. Preservation of capital will always be the number one goal of our fund, and we look forward to reporting back to you at year's end.