Disruption | Fund

10 Oct 2020

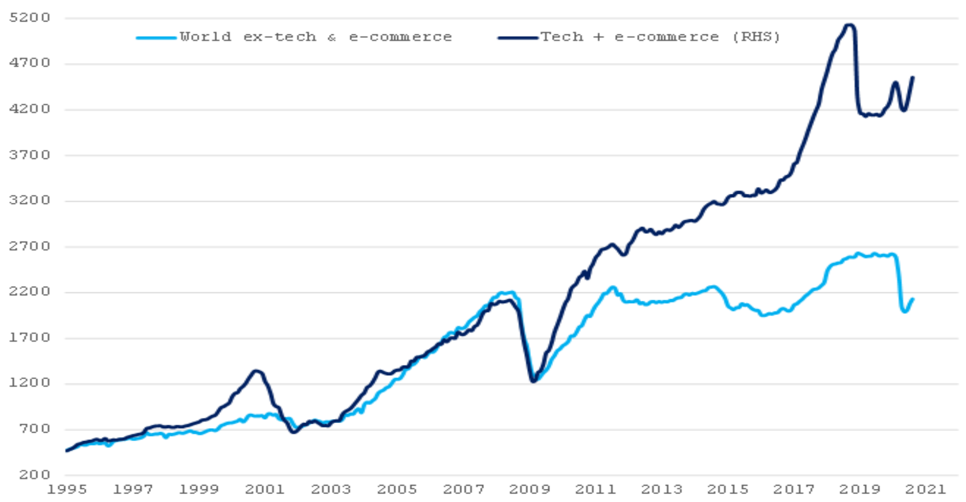
"The gale of creative destruction is the process of industrial mutation that continuously revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one."
—Joseph Schumpeter

The letter shape

Are we in a recovery or in a slump? Are we growing or contracting? Do we need more stimulus or are we feeding a bubble? Try asking experts. As a picture is worth a thousand words, economists love letter-shaped curves. Since March they have been forecasting with letters: V-shape for the snap-back bulls, L-shape for the deflationist bears, U-shape for the wait-and-see crowd, and the very popular W-shape for the legion of second-chance-to-buy-the-dip hopefuls. A stopped clock will be on time twice a day, but we think differently.

We see a 20 year K

Global Earnings Revisions Index (Source: BoA Global Research)



From the perspective of disruptive innovation, every recovery is K-shaped.

True to form, it started like a V. From late February to late June everything looked on track for a classic V-shape, and it was: foot traffic, consumer spending, even industrial production bounced vigorously, with credit growth, both public and private, immensely supportive of a quick recovery. This has been visible in employment and GDP data. But it is only half the story. For us, the defining moment came in August when the Software sector reported another leg of acceleration.

Since then, the recovery has been decidedly K-shaped. Disruptive innovation companies have reached escape velocity, while cyclical companies are stuttering in the deflationist quagmire. **We think this second phase of bifurcation between the Digital and the Physical spheres is entering a long runway of secular and transformational disruptions.**

As we reassess the longer term view, we have chosen to redefine our own investment themes beyond Covid's near term impact and to merge segments with common underlying disruptions and opportunities.

- **Cloud Infrastructure & SaaS Apps**
  The Cloud is the physical space of the Digital world. Its infrastructure houses the assets behind the digital experience. Increasingly, developing, deploying and servicing apps is intertwined with operating and monitoring these assets. We are merging SaaS Apps and Cloud Infrastructure, including CyberSec, Infrastructure Software, AI, Semis and 5G. The backbone of Fintech such as cryptocurrencies and blockchain belong here as well.
- **eCommerce & Payments**
  As eCommerce and Digital Entertainment becomes the primary venue for most consumer spending, it appears increasingly evident that they are intimately linked with payment services. We are grouping together consumer facing digital services: eCommerce, Streaming Media, Games, Social Networks, Telemedicine and Digital Wallets.
- **Clean Tech & Mobility**
  Renewable energy and energy storage have both reached cost curves that allow for the electrification of transport to reach price parity with hydrocarbon fuels. Combined with advances in Cloud reliability from AI, IoT, 5G and Security, autonomous machines of all shapes will soon enable robotaxis, drones and other bots to offer Transportation-as-a-Service (TaaS), last mile logistics, robotic manufacturing, 3D printing and more. These disruptive technologies are key to resource optimization, energy efficiency, and climate change policy. We bring together Energy and Robotics in this theme.
- **Life Sciences & Personalized Medicine**
  As the cost of mapping a whole human genome breaks below the $100 mark, the prospects for AI assisted computational biology combined with low cost gene editing tools like CRISPR suggest personalised gene therapy, including even reversing cell death and ageing, are achievable milestones in our liefetime. Food Tech and low resource farming belong here as well. We bring together genomic tools, gene editing and gene therapy companies in this theme.

There are numerous investments in play but we continue to focus on those with mass market volumes, high velocity adoption, and margin expansion from scale. Below are some highlights.

Cloud Apps & Services

Just as Covid-19 drags on, so Work-From-Anywhere takes hold. Recently Microsoft employees were offered the option of a permanent WFH; many Tech giants have offered the same. WFH is still in its infancy, with many collateral issues to be addressed. Still, we continue to invest in Cloud infrastructure, AI semiconductors and WFH enabling apps. **Recently Software Infrastructure performance has tested our valuation parameters and we have reduced some of the SaaS Apps.** Following the egregiously valued Snowflake IPO (100x EV/Sales'2020), we have decided to **focus more on software & services that touch users directly**, limiting infrastructure plays to the so-called "edge".

DF owns Cloud Infrastructure and Cloud App companies, grouped here across all verticals, office, education, healthcare

- SaaS : ***Adobe, Zoom Video, Twilio, Crowdstrike, Zscaler, Nvidia, Teladoc, Veeva, Chegg;*** recently added ***Kahoot!*** Semis : ***Nvidia, ams AG***
- Watch list: ***Agora, Bill.com, BigCommerce, Salesforce, Splunk, Elastic, Asana, Anaplan, Paycom, MongoDB, nCino, Lemonade, Sprout Social, Amwell, AMD***
- We sold ***Okta, DocuSign, Inphi***

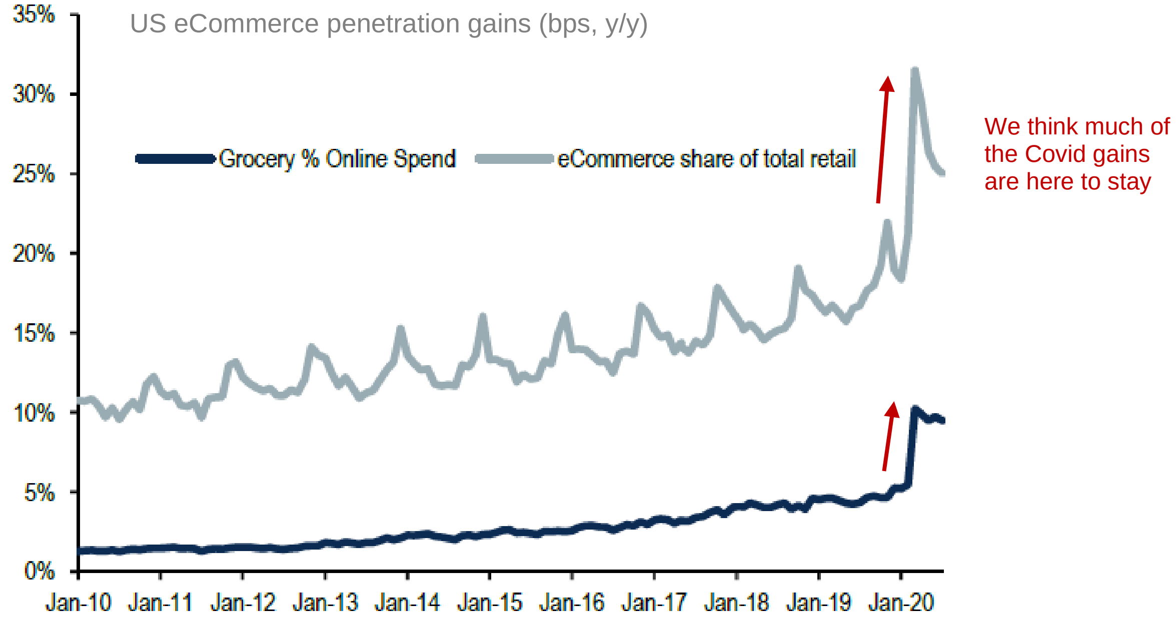
eCommerce platforms

The 2020 eCommerce acceleration is well documented. The coming holiday season is likely to be a high note for digital sales, further boosted by the Covid second wave, but again, it's worth re-iterating that we believe the post-Covid acceleration will lead us far beyond Christmas.

Recent Bank of America **estimates point to a 2 to 4 year pull forward of physical to digital transition.** The below growth rates each represent an acceleration:

- ✓ Global eCommerce to grow from 13.2% to 20.3% of total Retail by 2024
- ✓ US eCommerce to leap from 14.8% to 24.3% of total Retail by 2024
- ✓ Online Grocery to double from 5% to 10% share by 2025
- ✓ Apparel & Footwear to double from 20% to 40% by 2025
- ✓ Food takeaway is set to treble by 2025, a 4 year CAGR of 33%

Global eCommerce and eGrocery penetration



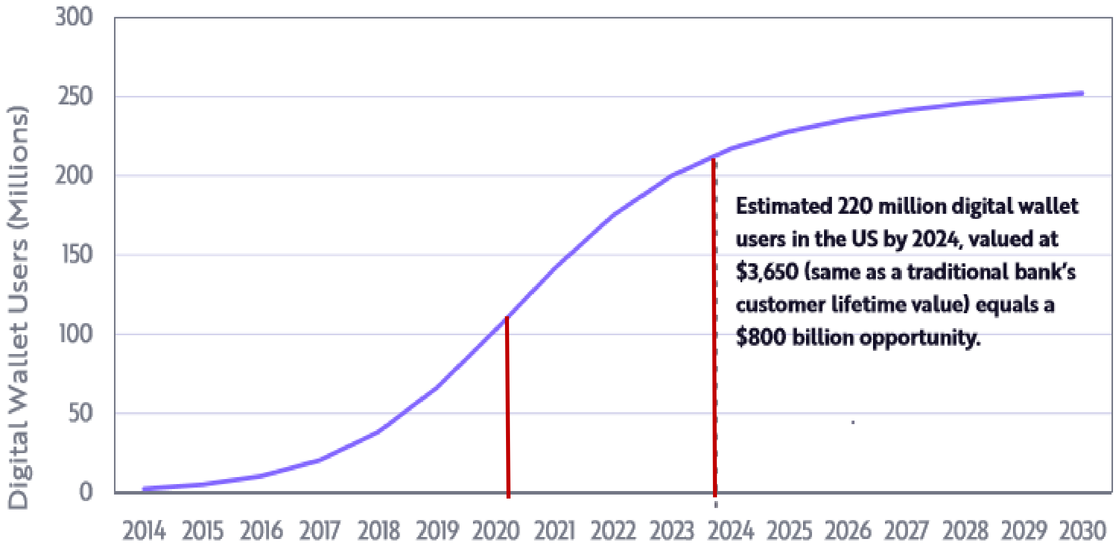
Source: BoA Global Research

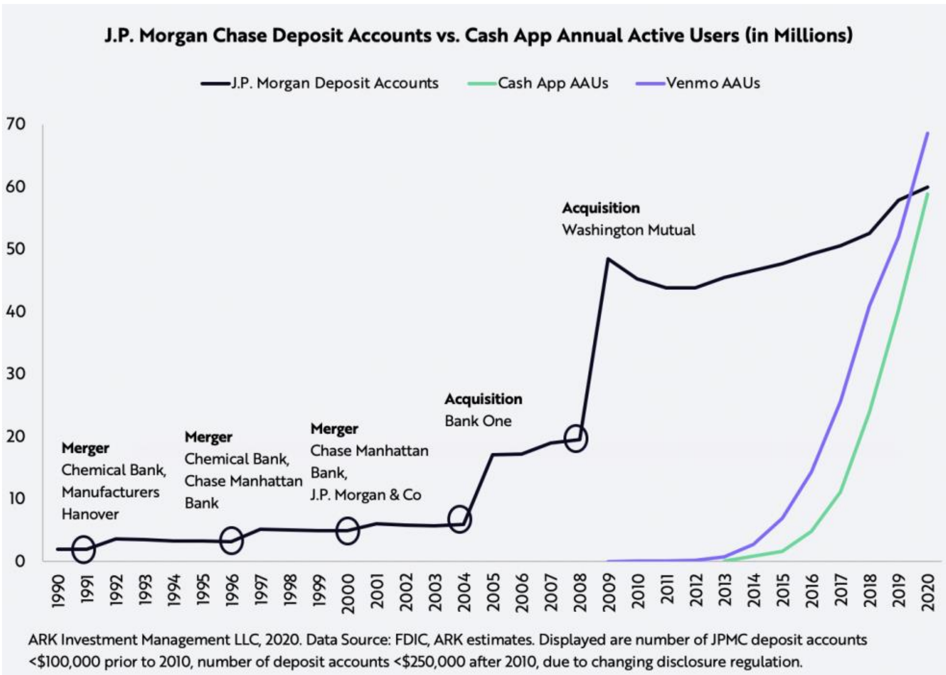
DF owns a combination of last mile e-logistics plays and integrated marketplace/fintech enablers, to capture this growth:

- ➢ ***Delivery Hero, Just Eat Takeaway, Mercadolibre, Sea Ltd, Shopify, PayPal, Square, Amazon, Adyen, Zillow, LightspeedPOS***
- ➢ Watch list : ***Uber, Zalando, Ocado, Alibaba/Ant, StoneCo, Jumia***

Digital wallets

Behind the eCommerce acceleration lurks the Digital Wallet boom. We particularly like this segment of Fintech as it benefits from both low touch points and network effects. Indeed, **we think digital wallets at Square/CashApp and PayPal/Venmo are in an adoption curve reminiscent of the early years at Facebook.** This is a space where winner takes all. Looking out 2-3 years, we think PayPal and Square customer acquisition strategy will significantly dent the business model of banks, from payments and credit to bundled e-brokerage, e-lending and e-insurance offerings. It took six years since PayPal acquired Braintree/Venmo for them to have more customer accounts than JPMorgan Chase. Dividing market cap by number of accounts, **buy-side research firm ARK estimates that 220m digital wallets in 2024 could be worth $800b. In the chart below, Square and PayPal together are already half-way there.**





Source: ARK Investment Research

DF owns Digital Wallet companies:

- ***PayPal, Square***
- Watch list : ***Alibaba/Ant Financial, Facebook/WhatsApp India, PagSeguro Digital***

Clean Tech & Mobility

- For many years Clean Tech was a government subsidy story. The plot has now changed.

  - **Technology**
    - ✓ Tesla is producing EVs at scale, bringing down battery costs.
    - ✓ Renewable electricity generates excess supply, allowing for green hydrogen.

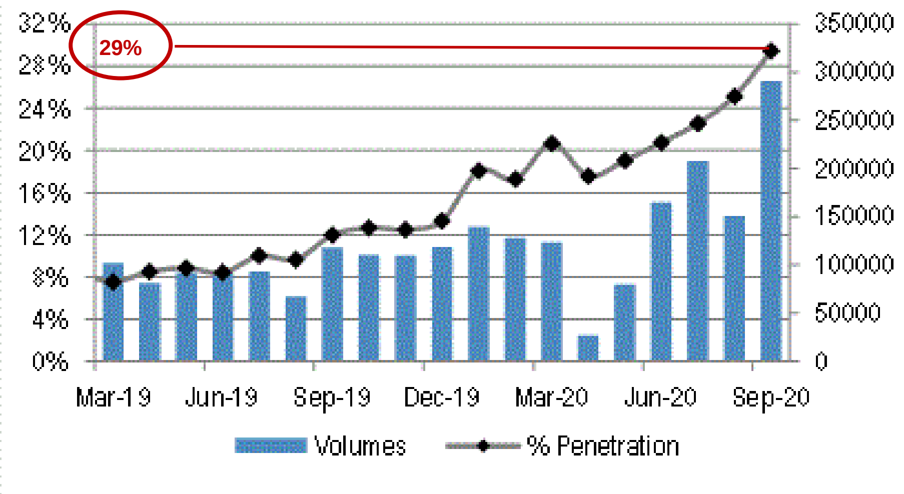
  - **Politics**
    - ✓ Consumer awareness and voter pressure is have prompted massive government support for decarbonizing technologies.
    - ✓ A Biden win in the US election is widely supportive of Clean Tech in general, with a likely Green New Deal initiative.

  - **EVs and Green Energy are the new European Tech theme**, with significant capital allocations going to :
    - ✓ Offshore wind utilities
    - ✓ Hydrogen infrastructure
    - ✓ Transport electrification

Europe Electrified mix – BEV, PHEV & Hybrid

EU5 Electrified volumes reached 29% of new car sales in Sept 2020

% share (Left), Volumes (Right)



Source: J.P. Morgan Research

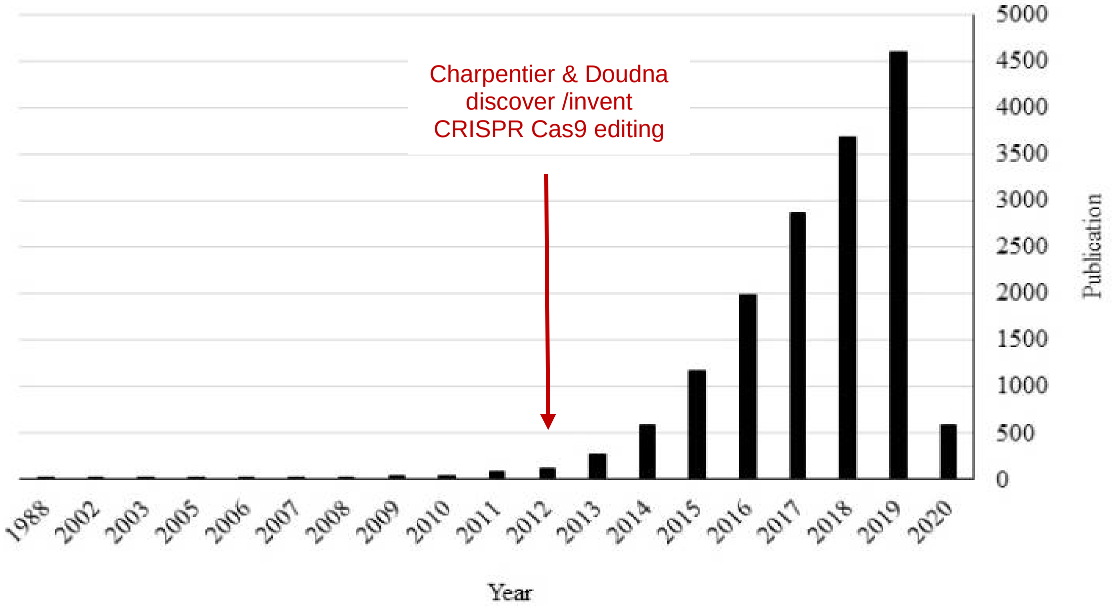
DF owns EV and Clean Tech companies:

- ➢ ***Ballard Power, NIO Inc., Tesla,*** recently added ***McPhy Energy, Carbios, Ehang***
- ➢ Watch list: ***Ceres Power, ITM Power, Plug Power, XL Fleet (PIC), Solar Edge, Lordstown Motors (DPHC), Fuel Cell Energy, Bloom Energy, Kalray, Electrovaya, Contemporary Amperex Tech, Doosan Fuel Cell, QuantumScape (KCAC), Blink Charging, XPeng, Li Auto, Cree, STMicro, Valeo.***
- ➢ We sold ***Workhorse*** and ***Enphase*** recently

Gene Editing & Medicine

In 2012, France's **Emmanuelle Charpentier et America's Jennifer Doudna co-discovered/invented the CRISPR-Cas9 genome editing "tool".** On October 7th, they were awarded the **Nobel Prize** in Chemistry. This extraordinary achievement and recognition are no surprise to us. The ability to edit DNA in plants, animals and of course humans with a relatively simple and low-cost technology is transformational for agriculture and of course medicine. The ethical challenges loom large but so does the potential to develop fully curative therapies for diseases, including even perhaps, ageing.

Number of CRISPR publications per year



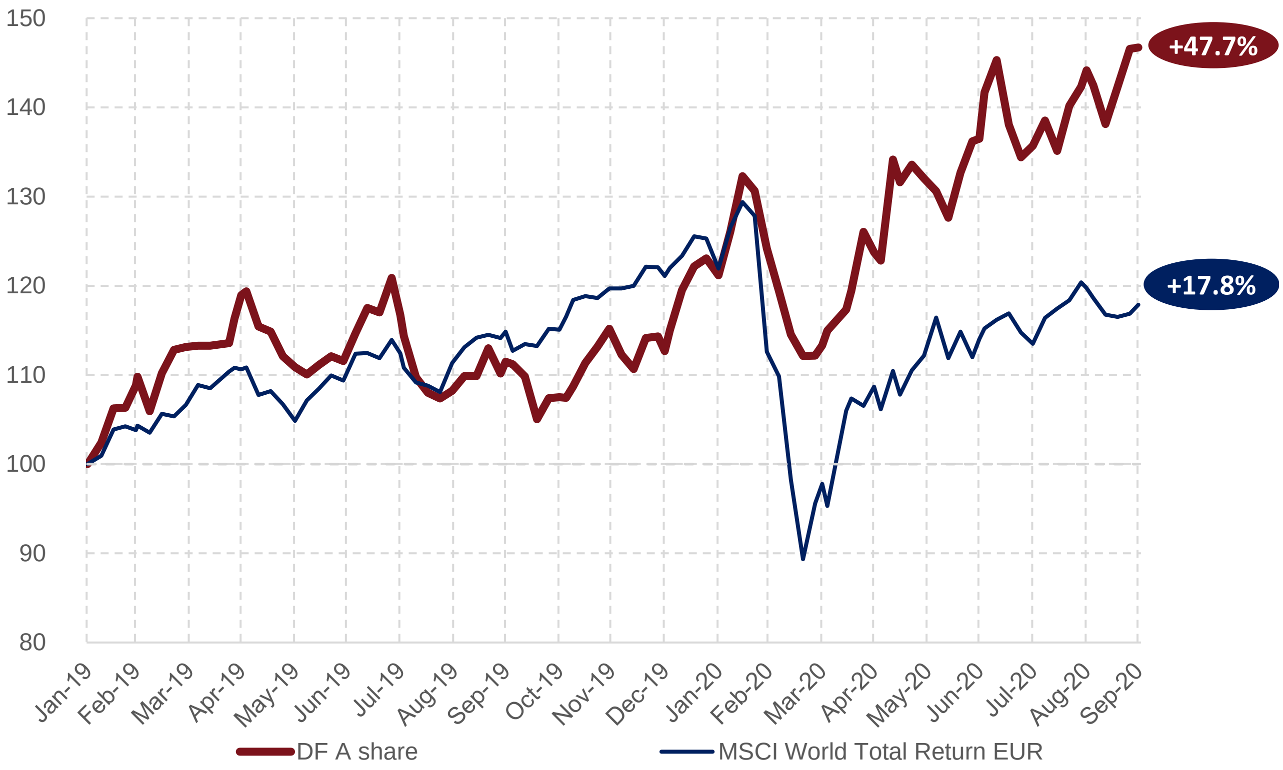
Source : www.ncbi.nlm.nih.gov/pmc/articles

DF owns CRISPR and AI driven molecular research companies:

- ***CRISPR Therapeutics, Editas Medicine, Intellia, Bioxcel Therapeutics***
- Watch list: ***Schrodinger, Fate Therapeutics, Invitae, Illumina, 10X Genomics, ToolGen, Cellectis, Themo Fisher, Personalis, Exact Sciences, Cerus, Adaptive Bio, Natera, Accelerate Diagnostics, T2 Bio, Exagen.***
- Private company watch: ***Caribou Bioscience, Casebia Therpaeutics***

Disruption Fund Performance

	YTD 02/10/20	Since 31/01/19
Disruption Fund (A share)	+31,1%	+47,7%
MSCI World Total Return EUR	- 2,7%	+17.8%



Note: Data range = 31/01/2019 → 02/10/2020. Jan 31, 2019 marks the start of the new fund management team, including name change and new prospectus. Past performance is not indicative of future returns. Please consult your investment advisor for suitability. NAV performance shown here is for A-shares, net of fees.

As of Oct 9, 2020, the top positions of the Disruption Fund were as follows:

- *Adyen NV*
- *ams AG*
- *Twilio Inc*
- *MercadoLibre Inc*
- *Adobe Inc*
- *Just Eat Takeaway.com NV*
- *Sea Ltd*
- *Kahoot! AS*
- *Bioxcel Therapeutics*
- *Shopify Inc*
- *Teladoc Health Inc*
- *Delivery Hero AG*
- *Zur Rose Group AG*
- *Zillow Group Inc*
- *Stratasys Ltd*
- *Peloton Interactive Inc*
- *CD Projekt SA*
- *NIO Inc*
- *Chegg Inc*
- *Square Inc*
- *CRISPR Therapeutics AG*
- *Lightspeed POS Inc*
- *Amazon.com Inc*
- *Zscaler Inc*

We hope you find our letter useful and look forward to continuing this discussion next month.

Jean-Edwin Rhea
10 Oct 2020

Legal Information:

Disruption Fund is a French UCITS, (A share: FR0012770154 / B share: FR0012770162) invested primarily in global equities, with a recommended holding period of 5 years. Broadly speaking, the Fund seeks to invest in innovative technology businesses. More specifically, the fund seeks out sectors and companies undergoing structural or technological disruption. The fund manager seeks leading disruptive companies, growing fast, with visionary management teams. All historical data provided is for A-shares, currently closed to new investors.

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The MSCI World Net Total Return Euro Index (Bloomberg : MSDEWIN) is calculated net dividends reinvested and is published by MSCI.