VanEck®

DECEMBER 2020

Harnessing Growth

The Disruption of Fintech Across Emerging Markets

Angus Shillington, Deputy Portfolio Manager

David Semple, Portfolio Manager

Oksana Miller, Product Manager

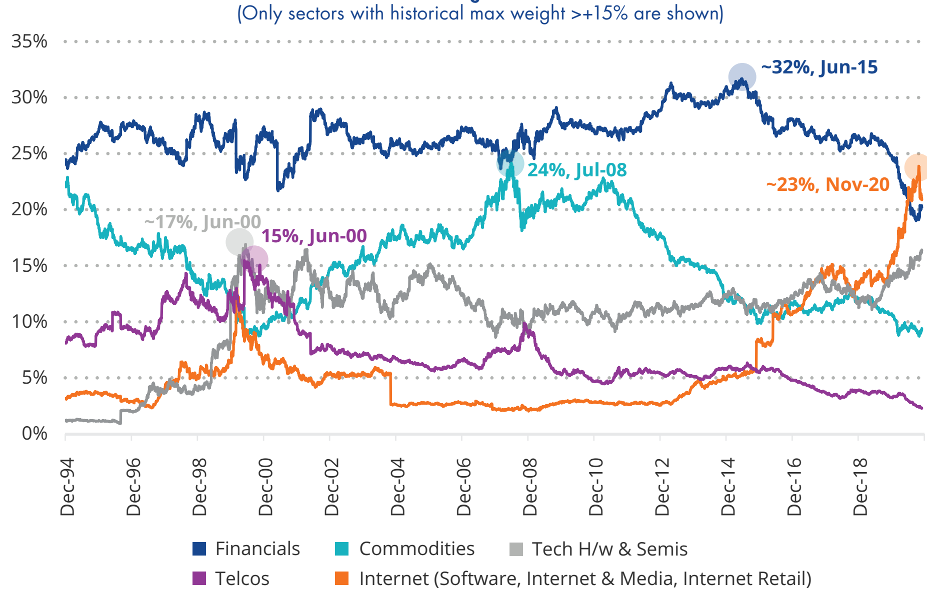
An in-depth look at the investment case for fintech.

Growth of Digitization in Emerging Markets: Its Emergence & Sustainability in the Post-COVID World

As we have previously written about, digitization in emerging markets (EM) has lagged that in developed markets (DM). This has prevented mass adoption of foundational technologies like smartphones and data spectrum. In recent years, however, this has changed rapidly—accelerated by COVID-19 consumer needs and behaviors—and has opened up exciting opportunities for entrepreneurs, consumers, small business owners and EM investors alike.

Digitization was already sweeping the developing world as we entered 2020. With the emergence of COVID-19, we saw an unprecedented step up in the pace of new adoption and integration, as the need to communicate and conduct business digitally became an imperative rather than simply a choice. As the year unfolded, we began to see digital growth at levels we had originally forecast only several years out. This included a decisive, swift transition to fintech (i.e., online payments and digital banking), e-commerce, food delivery, telemedicine, video gaming, etc. The chart below shows market capitalization changes in Asia that indicate where equity investors have begun to anticipate stronger growth than forecast. This is changing and will continue to change the construction of indices away from a heavy reliance on banks (mostly state owned) and commodity-related businesses towards exciting new technology and digital winners. Our strategy is forward looking and aims to anticipate these changes, positioning ourselves to where indices are going rather than where they have come from and/or where they are now.[1]

Sector Weight in MXAPJ
(Only sectors with historical max weight >+15% are shown)



Source: Goldman Sachs, FactSet and MSCI. Data as of July 25, 2020. Past performance is not a guarantee of future results. Chart is for illustrative purposes only. Please see important disclosures and definitions at the end of this white paper.

> *"Over 50% of Uber rides countrywide are paid in cash. There is irony in the fact that riders are able to hail a car to their exact location using a smartphone, but subsequently need to transact in cash because ~60% of the population lacks a bank account."*
>
> *-Sergio Romero,*
> *Uber's Legal Director in Mexico*

[1] The MSCI AC Asia Pacific ex Japan Index captures large and mid cap representation across 4 of 5 Developed Markets countries*(excluding Japan) and 9 Emerging Markets countries* in the Asia Pacific region. With 1,255 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

In 2020, COVID-19 Accelerates Digital Engine – Fintech Is the Driver, Disruption Is Material

The global pandemic has resulted in higher online penetration globally. Consequently, we would expect an approximately $2 trillion transfer in value, affecting many industries around the world, with fintech leading the way.[2] The chart below demonstrates the value transfer between different industries in the U.S. as offline industries move online. We believe that emerging markets will follow similar trends.

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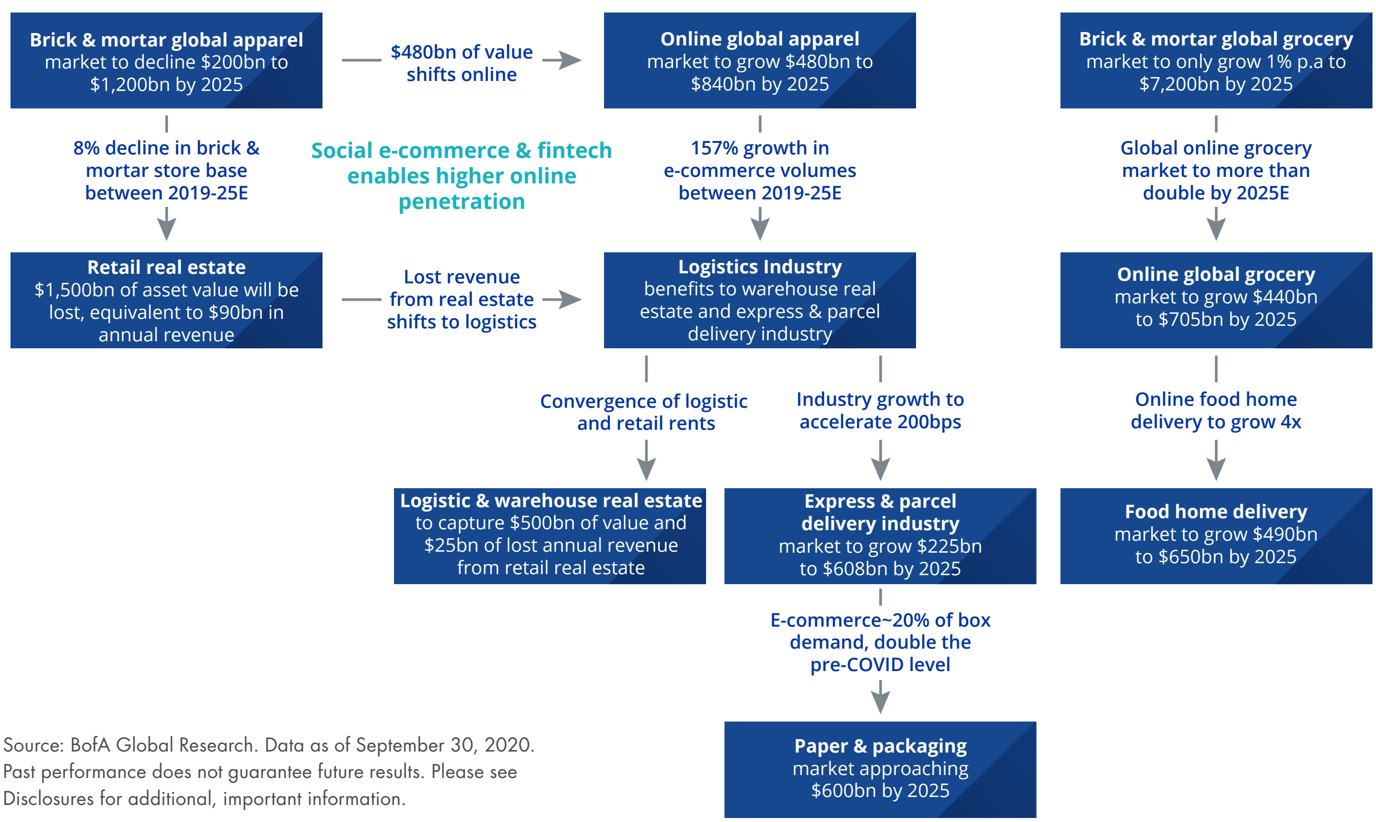
Fintech usually sits in the middle of this mass trend of disruption—it is, if you like, the "facilitator" of all change. Once consumers can transact without friction online, then this quickly shifts basic analog, communications and relationships online as well. Our thinking around COVID-19 being a catalyst is: whatever was going to happen in the future will be brought forward—fast. For example, such industries as bricks and mortar global apparel, retail real estate, bricks and mortar global grocery, etc. – all of them will be brought online, with the strongest use cases, similar to DM, being price and convenience. All of this will result in permanent behavioral change that will result in material new investment opportunities and, at the same time, improve outcomes for consumers. One of our investment team's key differentiators from sitting in the U.S. and investing in emerging markets countries is that we typically find that if it has happened here, it is most likely also going to happen in developing countries.

Additionally, over the next 10 years or so, fintech should have materially positive social impact, likely helping to lift tens of millions of people out of poverty, creating jobs, providing access to credit and introducing basic savings and investment to the rural poor. And this will be with little or no negative impact on the environment.

As a result of higher online penetration, nearly $2 trillion (in USD) of value is estimated to be transferred from offline to online, further solidifying the connectivity across sectors, as well as the role of fintech in the future of global growth.



Source: BofA Global Research. Data as of September 30, 2020. Past performance does not guarantee future results. Please see Disclosures for additional, important information.

[2] Source: BofA Global Research. Data as of September 30, 2020.

Improving the Plumbing - Thinking about Fintech in Developing Countries

Until relatively recently, cash transactions have been ubiquitous in developing countries. This is because a majority of impoverished households and small businesses had no bank account—largely since these customer segments present little or no economic value to any banking institution.

- **For individual households**, this excludes them from mortgages, credit, formal savings and investment products that pay interest and protect them from inflation, as well as any means to protect themselves from risk through life or health insurance.
- **For small business owners**, operating with only cash can be pretty onerous, not least because of the lack of access to credit and proximity constraints. In a cash-only ecosystem, a business owner has no formal access to credit to finance working capital or to invest in growing a business. In addition, in most cases in a cash economy, transactions may only be conducted with the customer standing in the business' premises. All this is deeply inefficient, and essentially limits any material business scale, speed, price discovery, etc. The inefficiencies are startling, and in cities like Mumbai and Nairobi, for example, the cost of a banana can be similar to what it would be in, say, London or New York.

In EM, we should think first of fintech as payments, the plumbing of practically every digital enterprise (think PayPal and eBay)—empowering business owners to procure and pay for products from further away than a cash economy and requiring increasingly complex logistics to meet the need for moving products around. Networks, efficiency and scale economies quickly emerge, delivering lower prices to customers and better margins to innovative business owners. Generally speaking, super poor (i.e., Sub-Saharan Africa) households spend over half of what they earn on food. Once the "plumbing" improves (as we have already seen during China's swift digitization), the percentage of household income required for food can fall to around 20-25%. This means that a person or household sees a material improvement in their disposable income and, therefore, discretionary spend or savings—further driving economic growth.

If Fintech Starts with Payments, What's Next

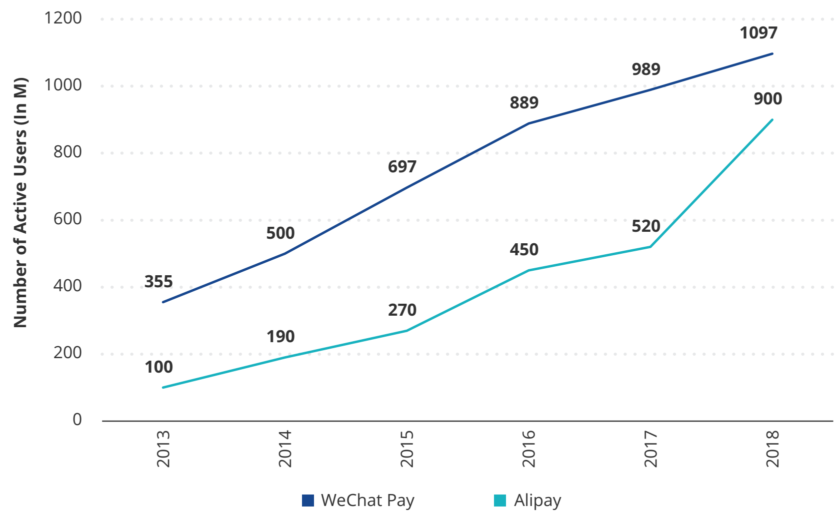
The ability to quickly—and at little or no cost—transfer money begins to break down inefficiencies and corruption, so digital payments help address many EM problems:

- **Cheap remittances:** allow a household wage earner to work further away from home—for example, in a city, where pay is better—and send (relatively more) money back to his/her family electronically.
- **Digital banking:** reduces individual costs per customer (banks the unbanked) and opens up credit/lending products to the bottom of the social pyramid—a critical tool for any small enterprise.
- **Fiscal capabilities at the government level:** enhanced, as it is doubtful that anybody pays tax on cash transactions, which keeps government incomes suppressed and investment in critical infrastructure low. Once cash starts to move digitally, transactions become "trackable" and this can result in higher tax compliance and increased revenues. This should result in more funds for infrastructure investment and social programs, both of which have a multiplier effect on GDP growth.
- **Power e-commerce and m-commerce:** lowering prices and driving greater agricultural efficiencies. EM have generally leapfrogged e-commerce as we know it and have gone straight to m-commerce on mobile devices. Platforms favored in EM tend towards third-party (3P) market places where small businesses are brought together to meet large platform communities, democratizing the new retail opportunity in a way not seen in DM and which is very positive for the seller and buyer alike.
- **Wealth management:** along with the "financialization" of assets. Two-thirds of the population in developing markets countries do not own a bank account, because they are not "economically viable." Savings tend toward "cash under the mattress" techniques and therefore do not pay interest, nor are they protected against inflation. The scale advantages of digitization take these basic tools to the very bottom of the social pyramid in EM.
- **Insuretech:** a part of fintech with material social impact benefits. Again, its foundation lies in the ability to take AI/big data and frictionless payments to originate low-cost development and distribution of financial services products that facilitate basic protection, such as life and medical insurance to poor and tragically underserved parts of the developing world.

Why Are Emerging Markets So Fintech Fertile?

As previously highlighted, affordability has been the bottleneck to mass adoption and explains why the developing world ranks way behind developed countries in digital transformation. We believe that fact alone creates one of the most exciting investment opportunities going forward as bottlenecks are resolved in each country by local entrepreneurs. China was first on this road and, we would argue, has now leapfrogged the U.S. in many areas. As illustration of this, consider the following data from the Ant Financial[3] prospectus last month: The group had disbursed approximately $300 billion in new consumer loans in the preceding 12 months. This represented, across China, 16 individual new loans per second. This was made possible through "machine learning" of data collected from the Alibaba ecosystem over the preceding 10 or so years.

China's Two Primary Fintech Platforms, by Monthly Active Users (MAU)

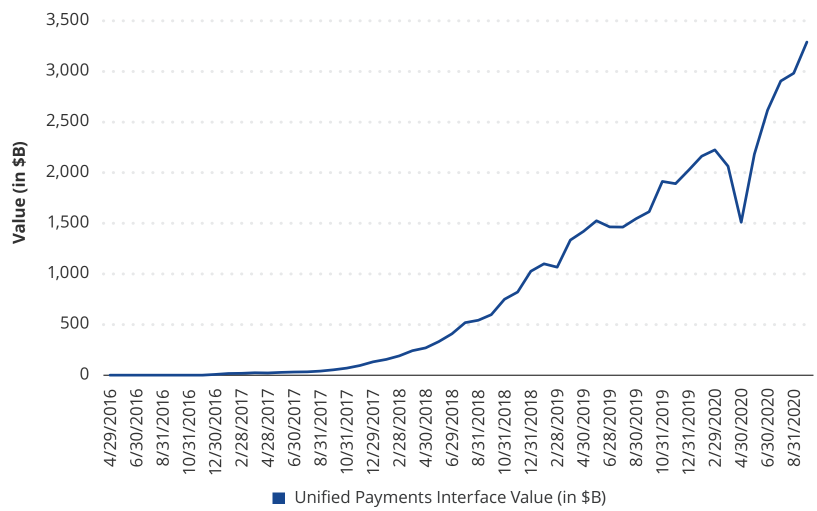


Source: Statista, Xinhua, China Plus, Tech in Asia. Data as of December 31, 2018. WeChat is owned by Tencent (6.44% of Strategy assets) and Alipay is owned by Alibaba (7.38% of Strategy assets) as of November 30, 2020. Past performance does not guarantee future results. Not intended as a recommendation to buy or to sell any of the securities mentioned herein. Please see Disclosures for additional, important information.

The Main Bottleneck: Cracking the Affordability Code

In most countries now, the toughest code has been cracked – i.e.: innovating and rolling out EM scaled affordable smartphones and data access to facilitate mass adoption. For example, one of our portfolio holdings, Reliance Industries, figured out how to build and scale a nationwide, profitable 4G network that can deliver unlimited data at US$0.80 per user. In India, fintech has facilitated a digital, software platform named Delhivery that can deliver a package from any part of the country to another for US$1. This has all happened in a little over three years, which is beyond impressive.

India – Total Transaction Value of $48B (in USD) Demonstrates Pace of Fintech Adoption



Source: NPCI, VanEck. Data as of September 30, 2020. Past performance does not guarantee future results. Please see Disclosures for additional, important information.

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What Happens Once Most Households Own a Smartphone?

The following table shows that smartphone penetration in EM trails that seen in the U.S. and other developed economies. This further highlights the vast growth opportunity since over time, as smartphone penetration grows, usage of apps and digitized versions of familiar analog businesses, such as banking, will follow.

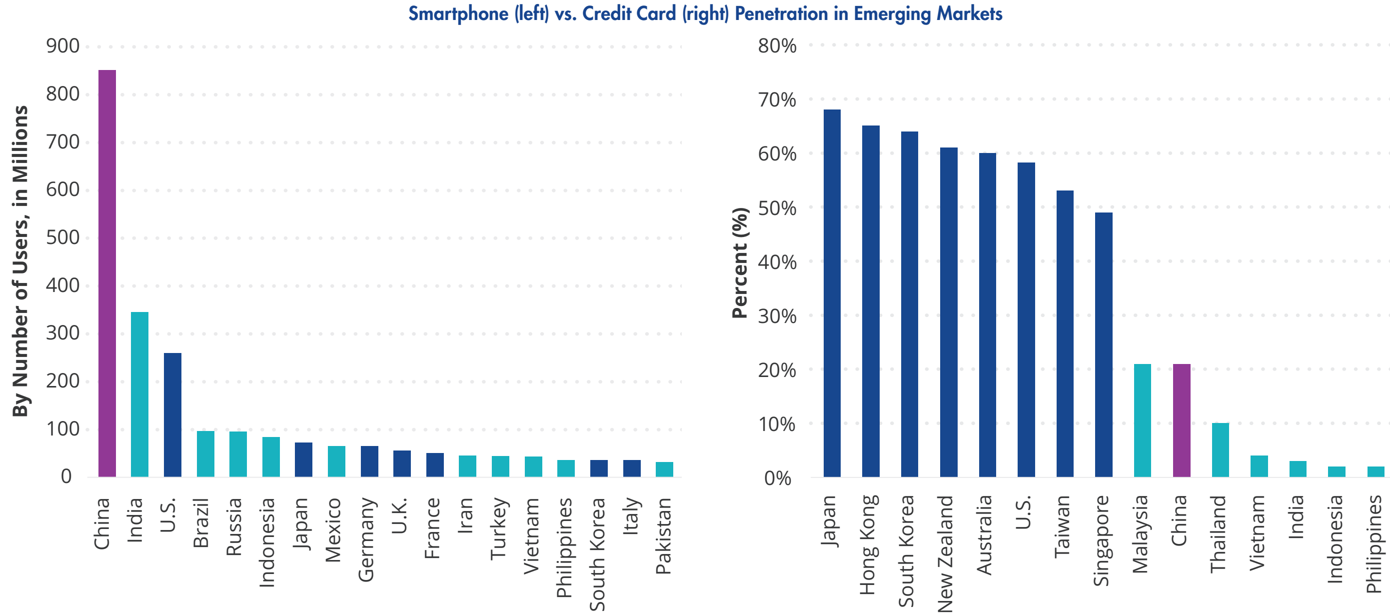
"Over 50% of Uber rides in Mexico, countrywide are paid for in cash. There is huge irony in the fact that riders are able to hail a car to their exact location using a smartphone, but subsequently need to transact in cash because approximately 60% of the population lacks a bank account". Sergio Romero, Uber's Legal Director in Mexico, noted. The irony is simply explained in the fact that a globally established company such as Uber can reach a new smartphone owner—anywhere in the world—faster than a brick and mortar native financial institution can drop costs to match the economics of the (previously economically unviable) un-banked citizen.

Rank	Country/Region	Total Population	Smartphone penetration	Smartphone users
9	China	1,420.1M	59.9%	851.2M
18	India	1,368.7M	36.69%	502.2M
3	United States	329.1M	79.1%	276.0M
14	Brazil	212.4M	45.6%	96.9M
7	Russia	143.9M	66.3%	95.4M
17	Indonesia	269.5M	31.1%	83.9M
10	Japan	126.9M	57.2%	72.6M
2	Germany	82.4M	79.9%	65.9M
13	Mexico	132.3M	49.5%	65.6M
1	United Kingdom	67.0M	82.9%	55.5M
4	France	65.5M	77.5%	50.7M
11	Iran	82.8M	54.8%	45.4M
12	Turkey	83.0M	54.0%	44.8M
15	Vietnam	97.4M	44.9%	43.7M
16	Philippines	108.1M	33.6%	36.3M
6	South Korea	51.3M	70.4%	36.1M
8	Italy	59.2M	60.8%	36.0M
5	Spain	46.4M	74.3%	34.5M
20	Pakistan	204.6M	15.9%	32.5M
19	Bangladesh	168.1M	18.5%	31.0M

Source: World Bank. Data as of September 30, 2020. Past performance does not guarantee future results. Please see Disclosures for additional, important information.

With a smartphone in most consumers' hands, service deficits and needs can be quickly addressed.

Smartphone (left) vs. Credit Card (right) Penetration in Emerging Markets



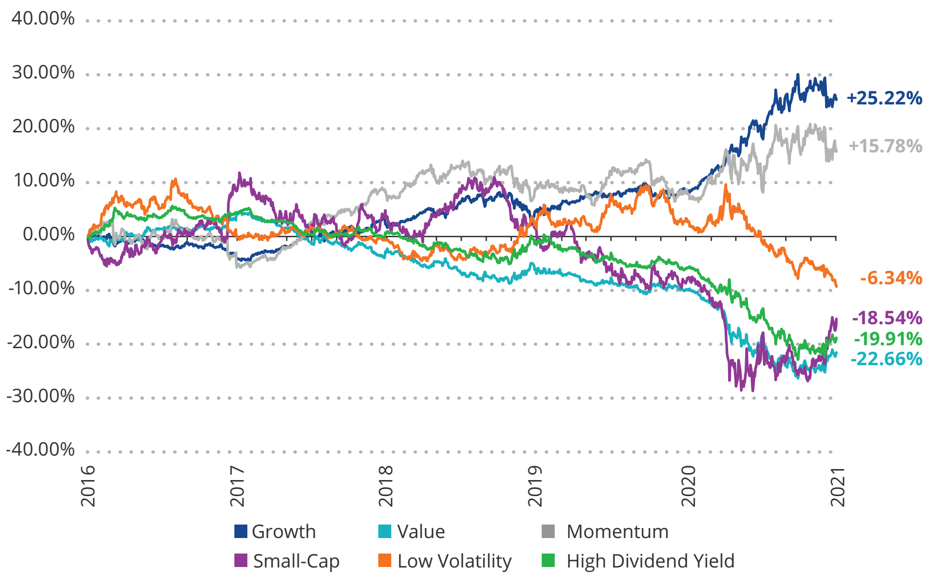
Source: Statista. Smartphone penetration data as of 2019 and credit card penetration data as of 2020.

Market Outlook: Growth Outperformance in Perspective

Trend acceleration has been quite positive for the VanEck Emerging Markets Equity Strategy. Our focus on many of these structural growth areas enabled us to invest in digitization names across sectors and regions in emerging markets around the world in 2020. As we approach the end of 2020 and look into 2021 and beyond, we expect a stronger finish to the year and a more optimistic one-year outlook, once a vaccine is available and its distribution schedule is in place, the U.S. election is over and global investors feel more confident in the outlook for emerging markets.

> *A key driver of our outlook for the end of 2020 and beyond is an expectation of global growth recovery, driven primarily by a vaccine announcement, its availability and distribution schedule.*

While the DM growth (including the U.S.) is expected to be weaker in the near term, there is a strong possibility that sustainable growth out of EM will push global growth forward, resulting in global real GDP growth of ~6%.[4]



Source: Koyfin. Data as of November 13, 2020.
Past performance is not a guarantee of future results. See disclaimers and index descriptions at the end of this presentation.
Returns are as follows: Growth=IWF/SPY, Value=IWD/SPY, Momentum=MTUM/SPY, Small-Cap=IJR/SPY, Low Volatility=USMV/SPY, High Dividend Yield=VYM/SPY

[4] Source: Goldman Sachs Global Investment Research. Data as of November 13, 2020.

How Do We Invest in Fintech across Emerging Markets?

The VanEck Emerging Markets Equity Strategy invests in leading fintech innovators and disruptors across emerging markets. Our portfolio companies include names such as ***Tencent Holdings Ltd., MercadoLibre, Ping An Insurance (Group) Company of China, Sea Ltd., Alibaba Group Holding Ltd., Locaweb, Safaricom (M-PESA), HDFC Bank*** and ***Reliance Industries,*** among others.

1. **Tencent Holdings Ltd.** | *Communication Services / China / 6.44% of Strategy assets*[5]
   A longtime holding of the Strategy since 2008, Tencent is a leading Internet company in China with the largest online community, focusing on social networking, chat and online gaming. It has the payments platform built under its gaming and e-commerce platforms.
   - In China, the internet is a structural growth theme with extensive untapped potential, and it continues to increase in demand from current users.
   - Anchored on its strong customer base, Tencent is well positioned to monetize its enormous number of users through value-add advertising and cloud and payment management services.
   - In 2020, the company benefited from the increased usage of its gaming assets and saw some potential stabilization of its market share in digital advertising, together with an easier environment around the gaming approval process.

2. **MercadoLibre** | *Consumer Discretionary / Brazil / 0.95% of Strategy assets*
   MELI is Brazil's leading e-commerce 3P marketplace model[6] and digital payments operator, with a presence in 20 countries and user base of 37 million unique buyers.
   - The 3P model is estimated to expand even further vs. the 1P model[7] and MELI is well positioned to benefit from the 3P growth through continuous consolidation of its market share (currently at 63%) in Brazil within the e-commerce and digital payments space.
   - In addition, diversified digital payments are viewed as a long-term value driver for this business.

3. **Ping An Insurance (Group) Company of China** | *Financials / China / 3.42% of Strategy assets*
   Ping An is one of the world's largest financial institutions and China's second largest insurance company with businesses spanning life insurance, casualty business and banking.
   - The company's structural growth thesis is in part driven by the host of disruptive and technology-driven business lines that Ping An is developing, beyond its core life insurance business. Its tech business includes an AI-driven healthcare platform, an online distributor of retail investments and a private cloud for SMEs.
   - In addition, the company collects and compiles highly relevant financial and medical data primarily from its ancillary businesses, Lufax and Ping An Good Doctor, which are impressive businesses in their own right, but also serve as highly effective customer acquisition funnels to Ping An's core insurance business.
   - In 2020, Ping An benefited from a better appreciation in the market of the underlying value proposition of the company's core life insurance business. In addition, capitalizing on its position in the field of info tech, there was good execution by other businesses within the group, e.g., consumer banking.

4. **Sea Ltd.** | *Communication Services / Taiwan / 1.27% of Strategy assets*
   Sea is the largest internet company in ASEAN[8] with three main business lines: gaming, e-commerce and financial services.
   - Digital entertainment/gaming (56% of revenue)—Garena is a game developer and publisher. Garena's first self-developed game, Free Fire, is the top grossing game in its core markets (ASEAN and LATAM). Garena monetizes games through in-app purchases.
   - E-commerce (34% of revenue)—Shopee is present in seven countries in ASEAN + Taiwan. Shopee operates three main marketplaces: Shopee (C2C marketplace), Shopee Mall (B2C marketplace) and the cross-border marketplace. Monetization is still in early stages and is mainly through ads, commission fees and handling fees.
   - Financial services (9% of revenue)—Sea is in the early stages of driving adoption of its payments business. We expect Sea to broaden its offerings in online lending and distribute financial products.

[5] Holdings detail represents ending weight as of November 30, 2020.
[6] 3P model means that the company operates platforms for other businesses to sell its inventory.
[7] 1P model means that the company sells its own inventory.
[8] Association of Southeast Asian Nations.

5. **Alibaba Group Holding Ltd.** | *Consumer Discretionary / China / 7.38% of Strategy assets*
   A longtime holding of the Strategy, Alibaba is one of the largest digital platform enterprises in China.
   - Through its original and dominant B2C and B2B e-commerce platforms, Alibaba has successfully built Ant Financial and has helped establish leadership in many other internet-enabled businesses, such as cloud and entertainment.
   - The company continues to execute well and "fire on all cylinders." This includes not only its payment operations, but also its offline businesses such as logistics.
   - As a relative laggard amongst internet stocks, we believe investors are beginning to appreciate the value and long-term "moatiness" of its core e-commerce business.

6. **Locaweb** | *Information Technology / Brazil / 0.65% of Strategy assets*
   (LWSA) is another leading digitization name out of Brazil that the Strategy current holds. The company operates across three innovative lines of business: e-commerce, Saas and web-hosting.
   - The company is the dominant player in Brazil with 21% market share. It derives a significant amount of value from its 300,000 strong customer base, which it cross-sells and upsells to, as well as its strong network of approximately 19K web developers, which they have built over the last 20 years.
   - It stands to benefit from the highest increase in tech spending commitment in the post-COVID environment, strong interest and level of engagement from small and medium business enterprises (SMEs) and solid potential for margin expansion.

7. **Fawry** | *Information Technology / Egypt / 0.31% of Strategy assets*
   Founded in 2008, Fawry is the first and largest e-payments company in Egypt, with 500 employees, annual revenues of over $50 million (as of end of 2019) and a market cap of approximately $1 billion.
   - We saw a structural growth opportunity in the company's positioning in the space and its advantageous scale compared to other players in digital payments.
   - In Egypt, banking penetration remains low at only 32%, with consumers heavily cash reliant and digital payments penetration still nearly at half of the global average.
   - A combination of recent regulatory incentives and widespread point of sale (POS) rollout could translate into a massive investment opportunity in Egypt's economic digitization and we believe that Fawry is well positioned to capture it.

8. **Safaricom** | *Communication Services / Kenya / 0.70% of Strategy assets*
   Safaricom is Kenya's leading mobile operator by active subscriber market share (currently at 71%).
   - We like Safaricom's best-in-class service quality, which makes it the partner of choice across various sectors, especially for mobile data, as Kenya's economy transitions towards digitization.
   - In addition to the strong volume pickup of its mobile data segment in recent months, the other most exciting part of the business and the key driver of the structural growth story is Safaricom's mobile money platform, M-PESA (approximately 34% of revenues).
   - M-PESA has emerged as one of the most successful financial inclusion case studies globally. In a country where banking infrastructure is lacking and many people are considered "un-bankable," M-PESA is changing the lives of millions of Kenyans in urban and rural areas by providing basic financial services and essential transactions across Kenya.

9. **HDFC Bank** | *Financials / India / 4.81% of Strategy assets*
   HDFC Bank is our top three fintech business – a high quality consumer bank that leverages the structurally growing and emerging consumer with massive visible runway to growth in India. HDFC has been a high conviction name in the portfolio since 2016.
   - Secured and unsecured consumer lending tends to be less risky and grows structurally in emerging markets (e.g. mortgages, credit cards, etc.).
   - HDFC is good at both lending money and, more importantly, getting it back. Credit costs are structurally low.
   - As India formalizes and digitizes, use of formal banking products is expected to grow substantially. Technology, product and pricing advantages should ensure HDFC achieves its structural target of growing its customer number from 20 million today to 50 million in five years.

10. Reliance Industries | *Energy / India / 1.66% of Strategy assets*

Reliance is a Fortune 500 company and the largest private sector corporation in India.

- The company has evolved from being a textiles and polyester business to an integrated player across innovation-led digital services, entertainment, retail, materials and energy.
- 2020 was a very strong year for Reliance. After a series of transactions to raise capital for its digital services and retail platforms, the company attracted buyers like Facebook, TPG and Silverlake Capital.
- The benefits are threefold: they bring the net debt for the group to below zero; and they backfill knowledge deficits and bring validation from industry participants of Reliance Industries' digital and retail ambitions.

Reliance Industries | Cross-Fertilization of DM Capital & Knowledge – Access to Global Capital & IP

	Digital Platforms		Retail	
PE / Investment Firm	**% Holding**	**Investment (in $B)**	**% Holding**	**Investment (in $B)**
Silverlake	1.2%	0.8	2.1%	1.2
KKR	2.3%	1.5	1.3%	0.7
General Atlantic	1.3%	0.9	0.8%	0.5
Mubadala	1.9%	1.2	1.4%	0.8
TPG	1.9%	1.3	1.4%	0.8
GIC			1.2%	0.7

Source: BofA Global Research. Data as of September 30, 2020.
The mention of a specific security is not a recommendation to buy, or solicitation to sell such security.
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Reliance Industries | Last Mover Advantage – It only took Reliance 18 months to build this…

RIL'S FINTECH INITIATIVES

Business	**Wallets (B2C)**	**Merchants (B2B)**	**Lending**		**Payment Bank**
Product/ Service	**JioMoney**	**Merchant PoS**	**Merchants**	**Consumers**	**70:30 JV with SBI**
Brief info	▪ Me-too product ▪ Low loyalty	One-stop POS (GST bills) + Printer + Inventory alert	Based on real-time data of merchants & credit score of users		▪ Merchant payment back-end ▪ No standalone business case
Competitors	Google Pay, PayTM, PhonePe	Ezetap, Mswipe, Traditional	Capital Float, Lendingkart		PayTM bank, Airtel bank
Economics	▪ Hygiene product ▪ Not make money ▪ 'Investing' a model for future	▪ No MDR below Rs 2k on debit card ▪ 0.4% charge above Rs 2k	▪ 1% fee on origination ▪ Tying up with NBFC's ▪ No balance sheet risk		Negative EBITDA model

Source: BofA Global Research. Data as of September 30, 2020.
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DISCLOSURES

All asset percentages are as of November 30, 2020.

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Emerging Market securities are subject to greater risks than U.S. domestic investments. These additional risks may include exchange rate fluctuations and exchange controls; less publicly available information; more volatile or less liquid securities markets; and the possibility of arbitrary action by foreign governments, or political, economic or social instability.

All investing is subject to risk, including the possible loss of the money you invest. As with any investment strategy, there is no guarantee that investment objectives will be met and investors may lose money. Diversification does not ensure a profit or protect against a loss in a declining market. Past performance is no guarantee of future results.

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Van Eck Associates Corporation
666 Third Avenue | New York, NY 10017
vaneck.com | 800.826.2333