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FALL 2021

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INFLATION OR PROSPERITY?



FINTECH

EMERGING MARKETS

REAL ASSETS

MACRO STRATEGY

COMMODITIES

PRACTICE MANAGEMENT

PORTFOLIO CONSTRUCTION

ALTERNATIVE ASSETS

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Inflation or Prosperity?

I am very pleased to present to you our latest edition of *The European Investment Journal*.

As autumn closes out and the promise of 2021 falters, we are still left with many challenges of the 2020 & 2021 years as we move to the final COVID-19 phase — living with it!

Four important issues compete for our attention as the new year approaches. First, COVID-19 continues to persist despite rising vaccination rates while vaccination mandates and focused restrictions continue to challenge our notion of liberty. Will 2022 bring the normalcy we desire? The winter cold may bring us this answer. Second, inflation reared its ugly head again in a manner that we have not seen since the 1970s. Is it merely transitory or systemic in the economy? Will it delay our return to economic prosperity or be contained? Third, global supply chains began to unravel causing inflation and shortages. After shutting down the world economy, the complexity of restarting these supply chains proved to be challenging. Fourth, climate change and energy fought a see-saw battle for supremacy. A mini-energy crisis renewed calls for a re-think of traditional energy including nuclear while the COP26 Climate Summit in Glasgow called for urgent action to speed up our transition away from a fossil fuel world.

These issues will have an impact on the investment markets but we know that the industry is resilient and innovative to meet these challenges. With this spirit in mind, this edition looks at these salient topics:

- Market Volatility as a driver of Financial Innovation, and Framing the Future of Wealth Management under our Fintech section,
- Macro Strategy — Macro Update/Outlook & Mega Trends, and Using Cycles as the Key to Market Timing,
- Portfolio Construction - Gold and Bitcoin in Combination,
- Under Emerging Markets — CSI China Internet Market Volatility,
- Commodities — Bitcoin: The Continuous Institutional Adoption,
- Alternative Assets — A Chorus of Hedge Funds,
- Real Assets — REITS in the U.K. and Changing Values, and
- Practice Management — How Artificial Intelligence will free Advisors.

I hope that you will peruse through this journal for your topics of interest in between getting your holiday gifts and some festive cheer. I wish you and your family a wonderful holiday season, and a prosperous 2022.

Regards,

Keith F Costello
Publisher & CEO
Radius Europe GmbH



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MARKET VOLATILITY AS A DRIVER OF FINANCIAL INNOVATION



Allan Lane
Co-Founder
Algo-Chain

The SEC ushers in the next phase of Financial Engineering

The date is October 28th, 2020, and the location is Washington D.C. During the second wave of the global coronavirus pandemic The Securities and Exchange Commission (SEC) quietly releases a press release that in its own way will also find its way around the globe, but in this instance, it might take much longer for its full impact to be felt. Under the formal title of "SEC Adopts Modernized Regulatory Framework for Derivatives Use by Registered Funds and Business Development Companies", the SEC broke the news that under new legislation ETF issuers could include derivatives in their portfolios provided the fund manager instigates a Derivatives Risk Management Program and maintains the level of leverage, as measured on a Value-At-Risk basis, against a pre-agreed reference portfolio.

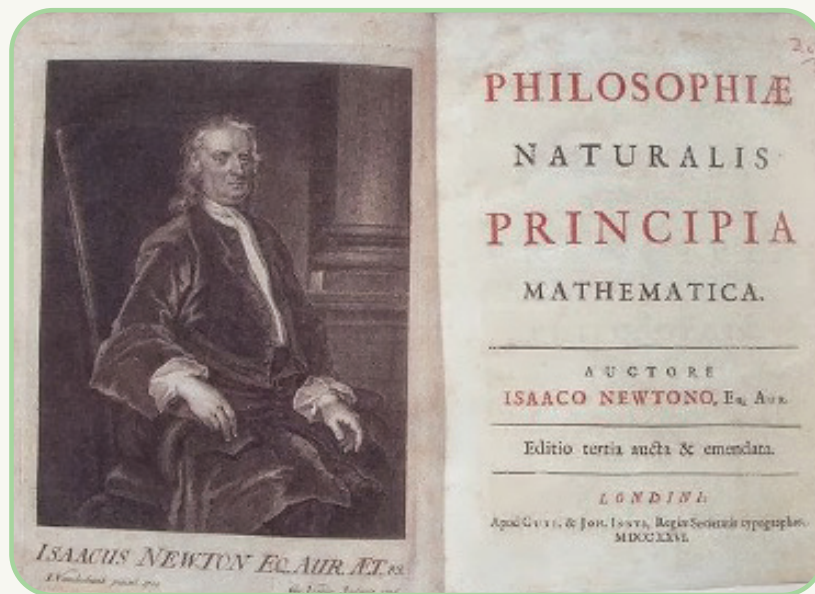
For many years, albeit with some exceptions, ETFs were invariably seen as Delta-1 products, and if they were not, as was the case with inverse and leveraged ETFs, then many an advisor would not touch them with a barge pole. Yet this latest regulation from the SEC continues the democratization of the investment management industry by opening the door to investment strategies that were once the preserve of the Hedge Fund industry. While some commentators may think this opens the wrong door by offering leverage, early indications suggest that it will be the market's insatiable quest for increased yield that may well drive this growth story.

The boom and bust years for the Structured Notes industry

The history of innovation within the financial services industry is wide and far, but one will be hard pressed to find a topic that has been such a key driver of that innovation than the topic of market volatility.

When it comes to dreaming up schemes to get rich as the saying goes, there's not so queer as folk, which might be the best explanation why Sir Isaac Newton, the Founder of The Royal Mint in the UK, became obsessed with alchemy as he strived to turn base metals into gold in the late 1600s.

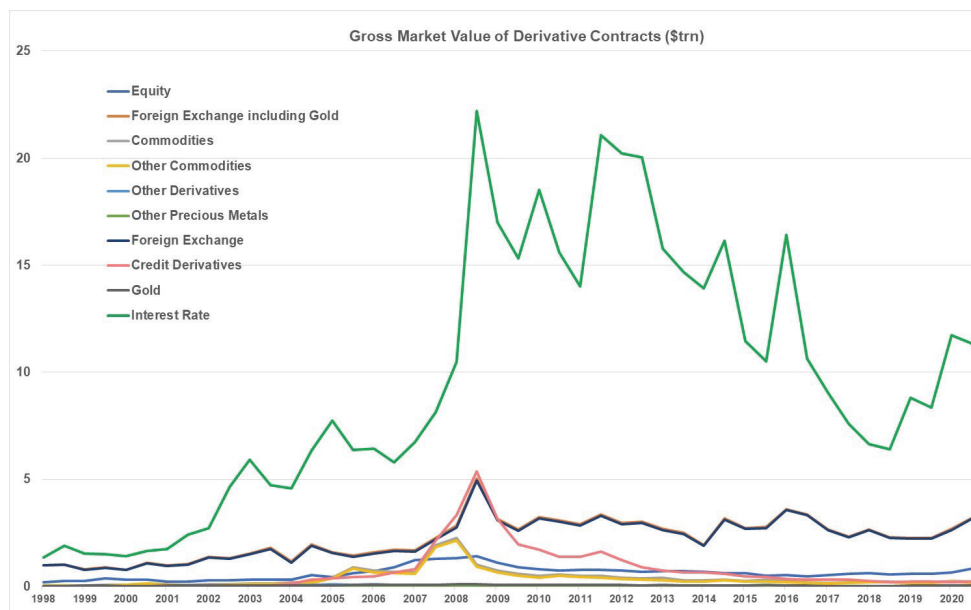
Nearly four hundred years later and the quest to create the perfect financial product continues unabated. It was always one of the more idiosyncratic footnotes of history that Barclays Global Investors, once the world's largest fund manager before it was bought by Blackrock, would locate its European headquarters in The Royal Mint adjacent to the Tower of London. And yes, it also practiced its own form of modern-day alchemy in its quest to deliver the perfect research driven quant strategies, which much like Newton's quest did not always work out for the better.



Was Sir Isaac Newton the World's first quant?

The literature on the topic of volatility is quite vast and with that comes a level of sophistication that makes it quite inaccessible for most investors, but it's influence over the 'Buy' and 'Sell' sides of the industry is there for all to see. Over time, modern finance was to be dominated by the research of Harry Markowitz in the 1950s for his groundbreaking work on Modern Portfolio Theory, providing the bedrock from which the buy-side operates to this day. Whereas in parallel, the Black-Scholes Equation was to become the lightning rod that ushered in a whole new paradigm by which capital markets would function. As the sell-side peppered their counterparts on the buy-side with the most elaborate options-based contracts that they could dream up, it was never going to be dull.

What is central to both movements is the role that the concept of volatility played. Markowitz's insight was to notice that when constructing a portfolio of stocks, even if one sticks with the same selection of stocks, one can improve the portfolio's future risk adjusted returns by simply optimizing the chosen weights of the stocks in a way that factors in their relative riskiness and correlation. At its most basic, riskiness was represented by the co-variance characteristics of the stocks in the portfolio, but once Michael Lewis published his best seller Liar's Poker in 1989, the genie was well and truly out of the bottle. On Wall Street, being a bond salesman with a team of quants to hand, became the new cool.



The Derivatives Bubble Years 2000 to 2008 – Source: <https://www.bis.org>

With the lure of large salaries and even larger bonuses, one cannot underestimate what the impact was as an army of scientific PhDs jumped ship from academia to Wall Street. What is more, the intellectual challenge and relevance could even match that found in any university's research department. Prior to 2008, financial innovation invariably equated to new derivative products that often provided leverage with investor outcomes that would be directly impacted by market volatility. Who can forget those savings products that were offered to the UK's retail investors by Building Societies where the coupons depended on the prices of the CAC, Dax or FTSE 100 indices? If not, what about the hypercomplex products Power Reverse Dual-Currency notes that had proven popular in the early 2000s which had a payoff formula that essentially offered the investor a strip of digital currency options embedded in the structured note?

When genius failed, not once but multiple times

If the cult of John Merriweather was based on his leading role as the uber Bond Salesman in "Liar's Poker", then that counted for nothing when in 1998 Long Term Capital Management showed the limitations of letting quant strategies rule the roost. Who would have thought that combined the brilliant minds of Myron Scholes & Merton Miller with the street smarts of John Meriwether could fail, well fail it did, and in many ways the concerted action by the World's Central Banks & Regulators authorities which managed to contain the collateral damage, could be seen as a dry run for the Global Financial crisis of 2008?

Although the next generation of equity or fixed income products was far more exotic than mere straight forward savings accounts, it would be the role that derivatives played in the credit markets that brought down the world's largest investment banks, including Lehman Brothers who filed for Chapter 11 on Monday 15th September 2008. In 1996 working as a quant at JP Morgan, I was first introduced to Credit Default Swaps, which at the time had become the first derivative product that looked to emulate the success of what interest rate swaps had garnered. This was financial innovation at its best, but before long one new product idea after another pushed the envelope too far when in a surprisingly large number of cases, trading desks and sometimes trading firms, incurred unsustainable trading losses which put them out of business.

The common denominator to most of these dramas was an underestimation of the risks involved, which during times of market calm did not entirely manifest itself, but when it mattered the most, seemingly out of the blue, many exotic products suffered from what might be described as model mis-specification. This itself would be a big enough problem to deal with, but you add in the observation that this often went hand in hand with miss-selling, then the scope for systemic losses went out of control. It is now part of folklore to cite the role that Collateralized Debt Obligations, CDOs, played in the downfall of Lehman Brothers, AIG and other leading investment banks, yet look closer in the rubble of history and it is purported that during that same collapse, in their allocation to Power Reverse Dual-Currency notes, Japanese retail investors lost more than \$50bn.

In the chart displayed above, which shows the notional exposure of derivative contracts on an asset-by-asset class basis, as published by the Bank for International Settlements, the decline post 2008 shows how dramatic the drop in volume of business was across the derivatives industry. Since 2008, one can not help but make the observation that the ETF industry has gone from strength to strength, as indeed has the emergence of the Crypto Currency industry. In fairness, one should add that the shakeup of the Structured Notes industry over the last ten years has seen it clean up its act having pared down the range of products to those with a much more amenable set of payoff features.

What lies ahead for the Portfolio Management industry – new tools & old techniques

Let's face it, ETFs have made life easier for many investment managers. Yet for all their success, as tools ETFs can at times be very crude, and not surprisingly many active managers remain confident in being able to outperform their passive counterparts. The techniques used across the active asset management industry, however, are light years away from those used across the Structured Notes industry. Not surprisingly, it is the structural problems of the Fixed Income markets that have defined and subsequently highlighted the limitations of what ETFs can offer the investor. While very low and negative bond rates continue to outstay their welcome, it remains a challenge for managers to deliver sufficiently high levels of income when restricted to passive investments.

The SEC's policy change will almost certainly usher in the next generation of investment innovation, a progression that will be welcomed by many. Chief among those old ideas, albeit presented in a new wrapper, will be the many new products offering portfolio protection. It might be considered churlish at this point to remind everyone that it was an overabundance of Constant Proportion Portfolio Insurance strategies that drove the market to ruin when the S&P 500 gapped down 20% on Black Monday in October 1987. Yet as the Nasdaq, Dow & S&P 500 continue to reach record highs, is it so surprising that \$5bn has already been allocated to the next generation of ETFs offering such protection features?

The challenge for a portfolio manager to deliver income has proven elusive since 2008, and with Crypto Currencies not paying any dividend or coupons, these do not particularly help on that front. On a positive note, Germany and Switzerland have embraced listed funds that offer exposure to Bitcoin and Ethereum, and there is every reason to believe that the list of countries offering similar listed funds will only grow. While not helping provide income, until recently Bitcoin's returns have been not very correlated with the returns of the stocks and the bond markets.

At Algo-Chain, we have looked into the benefits of including a very small 3% satellite position to a multi-asset growth portfolio built entirely using ETFs. Re-setting the allocation to Bitcoin to 3% on a monthly basis offers a very basic but highly effective risk management procedure capable of dealing with what is a volatile asset class. Admittedly Bitcoin, although it has been around for more than 10 years, was only tradeable with very high levels of bid/offer spreads, and these costs have not been included in our analysis. On paper at least, the analysis shows a pronounced increase in returns with only a minor increase in volatility.

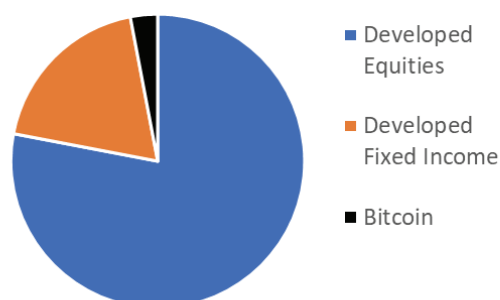
Buyer beware though, as the correlation to more traditional asset classes is not set in stone, there is every reason to believe that as these digital asset classes get adopted by the mainstream, this diversification benefit may well reverse.

Somewhat serendipitously Bitcoin, in a peculiar way, brings us back to Sir Isaac Newton, and his love for all things mathematical. The cryptology models on which digital currencies are based on makes much use of the study of Elliptic Curves, a topic first started by Newton then extended by many mathematicians since then. For that reason alone, it seems unlikely that the world's first quant could have avoided the lure of Crypto Currencies.

Portfolio Analytics

	0% Bitcoin	3% Bitcoin
3Y Return	35.6%	45.4%
5Y Return	70.7%	100.6%
10Y Return	213.1%	375.8%
Annualised Return	12.1%	16.9%
1Y Volatility	8.8%	9.3%
10Y Volatility	11.0%	11.4%
10Y Sharpe Ratio	1.1	1.5

Growth Portfolio with 3% Bitcoin Allocation



Analytics as of 9th Sept 2021, Source: Algo-Chain

FRAMING THE FUTURE OF WEALTH MANAGEMENT: TECHNOLOGY TOUCHES EVERYTHING



Leighton Hughes
Vice President Sales,
Centre for Study
of Financial Innovation

A structural shift is taking place; advisors and wealth managers are facing increasing competition from robo-advisors, online retail investing platforms, and personal financial management apps. Incumbents need to work better with technology; otherwise, they will lose opportunities to faster digital (and hybrid) FinTech alternatives. This will become more acute as the client base expects better digital engagement. WealthTech software tools are part of the solution. Technology is also at the heart of the facilitation of more sustainable investment, and innovation in thematic Exchange Traded-Funds (ETFs). Future disruption of the sector is also on the horizon with a likely role for Big Tech.

The immediate Covid impact in perspective

European asset managers weathered the Covid maelstrom, ending the year with a record €25.2t in assets under management (AUM) - up 5% YoY. Markets experienced intense stresses toward the end of March 2020, and European investors looked for safer assets, withdrawing more than €100b in Q1/20. However, markets quickly recovered, and so too did net flows into longer-term investment. €750b in net flows across all asset classes increased European managers' AUM by 3.2% for all of 2020, the third highest annual net flow effect over the preceding 13 years.¹

There is an ongoing structural impact on the wealth management sector. A recent Bank of England survey showed that half of banks headquartered or operating in the UK reported an increase in the importance of machine learning and data science as a result of the pandemic.² Wealth management businesses have had the urgent need to identify how they can better realize their business goals. Much of this revolves around firms' and clients' responses to the suspension of a core component of the traditional model: face-to-face client meetings. Many firms found themselves switching to digital forms of engagement almost overnight. Customers have had a chance to step back and assess their objectives, as well as the role that a wealth management professional can take in this. Despite all of this, recent Refinitiv research shows that just 37% of investors gave their wealth providers top scores for their digital experiences.³

CSFI

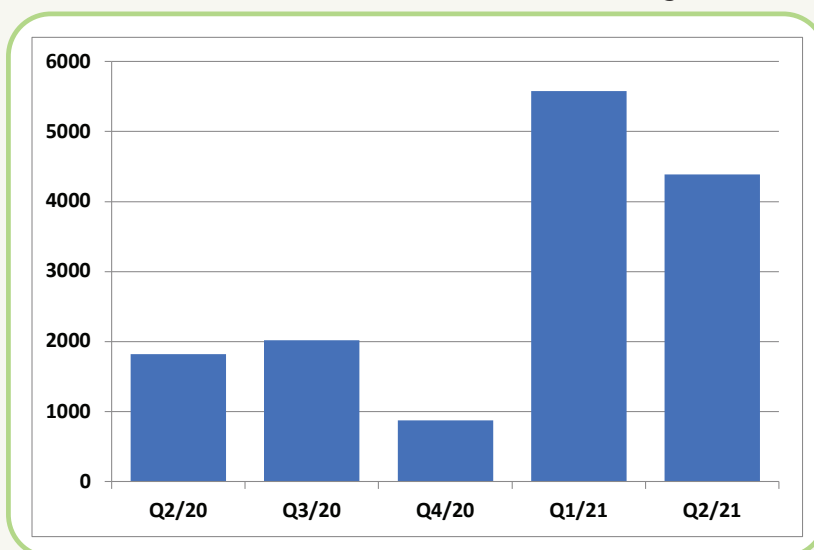
Centre for the Study of
Financial Innovation

¹ <https://www.mckinsey.com/industries/financial-services/our-insights/european-asset-management-after-an-unprecedented-year>

² <https://www.bankofengland.co.uk/quarterly-bulletin/2020/2020-q4/the-impact-of-covid-on-machine-learning-and-data-science-in-uk-banking>

³ <https://www.refinitiv.com/en/resources/special-report/the-race-for-digital-differentiation>

Chart 1: Global VC-backed WealthTech funding (\$m)



Sources: CB Insights, CSFI

The 'WealthTech' dynamic

WealthTech encompasses personal finance tools, investment and wealth management platforms, and analytics tools. WealthTech start-ups have attracted customers with low fees and accessible, mobile-friendly platforms. The WealthTech space has gained investor momentum. Chart 1 shows the high venture capital (VC) investment activity in the WealthTech space. H1/21 surpasses the entirety of 2020 funding by \$4.4b, boosted by large deals over \$50m. The Q2/21 YoY growth figure is an impressive 117.4%.

Robo-advisors have tried to bridge the gap with affordable online platforms to guide investing decisions. Robo-advisors have grown to capture a 19% share of customers in the direct-to-customer investment market but only account for 3% of assets. Global AUM by robo-advisors were \$1.1t in 2020, and expect to grow at an annual rate of 25.6%, according to Statista⁴. The global wealth management platform market is projected to grow at a compound annual growth rate of 13.4% to reach a value of \$3.2b by 2022, according to Markets and Markets.

One of Europe's leading challengers is Trade Republic, a Germany-based mobile-only and commission-free broker, which was the world's top FinTech deal of Q2/21. It raised \$900M. Another leader is Germany-based Scalable Capital, "an online wealth manager and neo-broker that helps with long-term systematic wealth creation", which raised a further \$183m. UK-based Freetrade, another leader in the space, raised a further \$69m in Q1/21.

While there are doubts whether app download data represent active and potential long-term customers, at least 3.2m UK consumers have downloaded a wealth app since March 2020. There was a spike following the Gamestop/Reddit saga in January 2021. According to App Radar, Plum and Freetrade are the most downloaded apps over the past year with 381,000 and 320,000 downloads respectively. The growth has also been robust with around 80% growth in downloads for these app since March 2020. These firms have lowered the bar to entry by removing commission fees for the consumer and running on a more cost-effective technology stack. The size of the potential prize is best shown by the successful IPOs of Robinhood and Coinbase in the US; however, the nature of these FinTech start-ups is one of survival: facing 'cash-burn', delivering scale, and having the time to achieve profitability.

The challenger - incumbent interface

Some incumbents – instead of acquiring - are *partnering* with these start-ups to stay competitive, improve customer service, and reach new markets or demographics. There is a serious incentive for incumbents to partner and collaborate with start-ups. Partnerships can provide cheaper and more rapid alternatives to acquiring or building technology in-house, as well as a way to innovate and stay ahead of emerging trends. Banks usually partner to develop digital capabilities, acquire AI-driven data, and achieve scale. There are innate challenges, however. The distinct mindset of a start-up may not square with a more process-led incumbent. There is also the factor that any start-up may not be able to navigate the future sustainably. Finally, the start-up will need to satisfy enterprise grade cyber-security.

⁴ <https://www.statista.com/outlook/dmo/fintech/personal-finance/robo-advisors/worldwide#assets-under-management>

There are incentives for WealthTechs to partner with incumbents. Getting scale is the challenge now for WealthTechs. They will not only need to retain the loyalty of customers, but also drive a sustainable business model. That will involve not only masses of users, but also charge standard fees or introduce a subscription. Some robo-advisors have also added human contact to their processes, but many of these companies have struggled to become profitable given the high cost of attracting new customers. Through partnerships, WealthTech start-ups are able to expand their product offerings, grow their brand, and receive an additional source of income. These start-ups most frequently partner with retail and investment banks. For example, Goldman Sachs partnered with bond trading platform Trumid to offer more liquidity to institutional clients. In return, Trumid will leverage Goldman's input on long-term product development, and Goldman also became a member of Trumid's advisory committee.

One of the key questions, therefore, is does one disrupt from within, or will you be disrupted from outside? One of the most high-profile deals in 2021 to-date is JP Morgan's \$1b acquisition of Nutmeg in Q2/21. Nutmeg is a digital wealth management company with \$4.9b AUM (70% growth in AUM YoY); Nutmeg automates Know Your Customer (KYC) and risk profile, and allows the customer to take advantage of ETFs for a diversified portfolio. Alternatively, while Goldman Sachs has given wealth advice to high-net-worth customers, it is now pushing into lower market segments by adding its own robo-advisor to its digital consumer bank, Marcus.

One final form of 'partnership' is taking a stake. In Q1/21, Goldman Sachs backed Berlin-based WealthTech Elinvar in its \$30.4m funding round. Elinvar aims to "connect the ecosystem" via a platform for banks, portfolio managers and third-party providers. JP Morgan also advanced its WealthTech drive by leading a raise in investment analytics FinTech Aumni, which aims to digitally enhance capital markets investing. It allows clients, including funds and family offices, to access deeper insights into their private market investments. JP Morgan also led a raise in Tifin, a holding company that operates WealthTech subsidiaries.

The 'Great Wealth Transfer'

Forbes predicts that by 2030, millennials (people born 1980 - 1996) will hold five times the wealth they have today and be the richest generation in history⁵. This represents a potentially huge opportunity for wealth managers. Millennials (and the even younger Generation Z) typically have high expectations

relating to digital engagement. Inexpensive, online advice could be a gateway service for customers who might use more wealth services in the future. This is often called 'democratization of finance'. It is possible that these people would otherwise be excluded from wealth management services, as they could not afford or have easy access to alternatives. Only 8% of adults take formal financial advice, according to the UK's Financial Conduct Authority (FCA).

Revolut, a UK-based neo-bank also with commission-free equity and crypto-trading functions, currently gains 15,000 customers each day across the globe. Individuals can manage financial affairs in the app in a nimbler way with fewer or no fees. The traditional pricing model for wealth management and advice imposes an annual fee on clients' assets and sets a minimum threshold of about £100,000/£250,000 in investable funds. What do firms offer those clients who can't meet these minimum thresholds?

There is a clear attempt to target the mass affluent population that is consistent with broader WealthTech themes of self-administered investment. Charles Stanley, M&G Wealth, and Tilney Smith & Williamson now offer, for one-time fees ranging in the hundreds of pounds, customers access to an online module covering a particular financial topic, such as inheritance or retirement planning, and can talk to a financial advisor over a video call. In April 2021, Vanguard also imported a version of its low-cost financial advice product to the UK in April 2021. According to a McKinsey report from June 2015, 40-45% of affluent consumers who changed their primary wealth management firm in the previous two years moved to a digitally-led firm. Furthermore, 72% of investors under the age of 40 said they would be comfortable working with a virtual financial advisor.⁶

A sustainable future

Funds having environment, social, and governance (ESG)-mandated assets already have more than tripled since 2015, and will reportedly grow three times compared to non-ESG-mandated assets to reach \$34.5t by 2025, comprising half of all managed investments.

The increasing use of AI and alternative data has boosted the identification of ESG-based portfolios. In Q2/21, JP Morgan acquired California-based OpenInvest, an impact investing services provider, for an undisclosed amount. Companies like Clim8, a UK-based climate-focused investing app that allows users to invest in a sustainable portfolio of companies, and Tickr, a UK-based impact investment app that allows people

⁵ <https://www.forbes.com/sites/jackkelly/2019/10/26/millennials-will-become-richest-generation-in-american-history-as-baby-boomers-transfer-over-their-wealth/?sh=537dbf6c4b90>

⁶ <https://www.mckinsey.com/~/media/McKinsey/Industries/Financial%20Services/Our%20Insights/The%20virtual%20financial%20advisor/The-virtual-financial-advisor.ashx>

to invest in businesses focused on social change are capturing a shift in investor outlook. In Q2/21, Clim8 raised \$8m and Tickr raised \$3.4m. These companies provide opportunities to invest in products that do not just mitigate climate risk, but actively invest in CleanTech solutions.

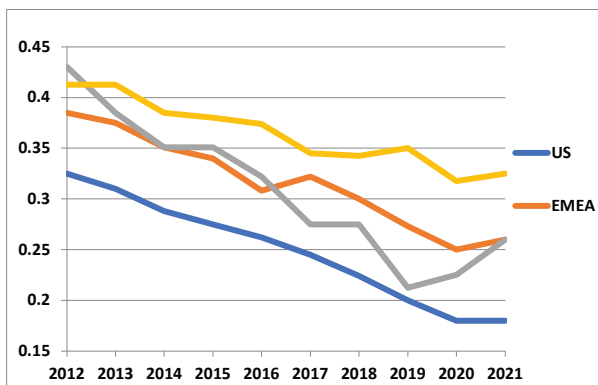
Refinitiv research reveals that millennials are nearly twice as likely as other generations to invest in sustainable financial products. Impact investing is the next big area for the 'Revolut generation'. Those wealth managers that are able to deliver accurate personalised experiences for each customer are likely to reap significant rewards. The next generation of investors want a combination of three things: impact, yield and new ideas.

There are, however, existential challenges. Despite the interest and the surge in AUM inflow, ESG data currently remain a fundamental challenge because they are deficient in quantity, consistency, and quality.⁷ An economic theory to understand and eventually model qualitative growth is needed⁸ to ensure that data is clearly defined, of the right quality, and consistent over a long period of time.

The ETF is a FinTech disruptor

The ETF is one of the most successful financial innovations of the past few decades. ETFs are on track for another record year; the low cost, mostly index-tracking, funds attracted \$659b of inflows in H1/21 compared with \$767b in the whole of 2020. As Chart 2 shows, fees have declined across all major jurisdictions – and remain low. Investors have saved in aggregate millions in fees.

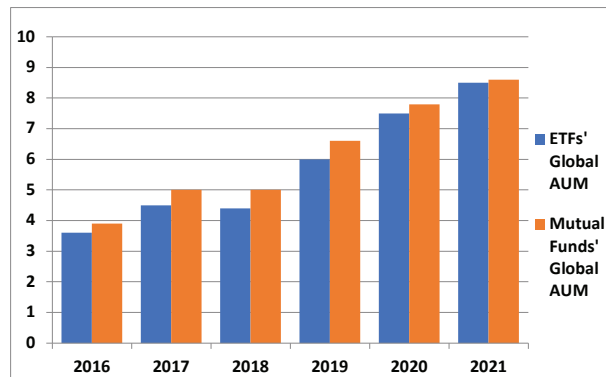
Chart 2: Asset-weighted ETF fee average by region (in percentage points) funding (\$m)



Sources: JP Morgan, CSFI

ETFs will reign supreme in passive investing. Global AUM of passive, index-tracking ETFs hit a record \$8.66t at the end of June, according to Morningstar data. The next interesting phase in the story of the ETF is when it might overtake the mutual fund as a vehicle for active investment. Given ETFs' expansion beyond passive into active investment, the Financial Times' Robin Wigglesworth's declared "the age of the ETF is looming."⁹

Chart 3: Global assets under management (\$t)



Sources: Morningstar, CSFI 2021 data, as of end of Q2/21

According to Morningstar data, the total level of assets in thematic funds reached \$32.4b across Europe in Q2/21. Listings of total thematic ETFs doubled to 758 from the end of 2018 to the end of May 2021. In Q3/21, AssetCo, a London-listed asset management acquisition group chaired by Martin Gilbert, has paid £16.5m for a 63% stake in Rize ETF. This is to have a position in the expanding European ETF market generally, but also to have exposure to the thematic ETF market specifically.

In a Centre for the Study of Innovation (CSFI) interview on 25 May 2021¹⁰ Chair of AssetCo (and Revolut), Martin Gilbert said that the strategy is to "take advantage of disruption in wealth management. Performance doesn't sell itself; it needs to be sold... There is a place for a heavy hitter, like Vanguard or Blackrock, and a boutique." The former has the economies of scale which should bring a downward pressure on fees. However, you may not be able to get the desired performance from the juggernauts. Some investors seem to like specialised expertise – whether on exposure to the technology sector, ESG and impact credentials, or whatever might be the next innovation.

⁷ <https://jpm.pm-research.com/content/early/2021/08/06/jpm.2021.1.281> The Journal of Portfolio Management November 2021

⁸ <https://jpm.pm-research.com/content/47/9/141> The Journal of Portfolio Management Novel Risks 2021

⁹ <https://www.ft.com/content/55ce5e82-55db-484b-ad6d-0b90b13970d9>

¹⁰ <https://www.youtube.com/watch?v=tQS00A-EqrY>

Conclusion

The move to working remotely as a response to the pandemic Covid has been an indicator of the next wave of technological disruption. Incumbent banks and wealth managers will need to go further to compete. This will mean upgrading legacy systems and processes, migrating to cloud, and developing new bespoke digital financial products. An increasingly popular route will be for incumbents to acquire or partner with specialised FinTechs.

You will not lose that need to speak to a client directly about issues like long-term saving, and following ISA rules. Presently, a good manager or advisor will pick up on things that are said and probe more deeply. However, there are global datasets that can synthesise information in ways that could not be done before. Value for money remains the key concept for a wealth manager and their clients though. The rich will likely still favour face-to-face wealth managers, but the mass-affluent will use face-to-face advisors with an attractive digital offering, probably from banks and investment houses. The mass-market will either do nothing or only use robo-advice – something that was once not available at all.

"Inexpensive, good for the world, and probably ETF", Martin Gilbert told the CSFI. This is an attractive proposition for the future of wealth management. The core to this will be good service online and in-person (as and when required). Clients are just much less tolerant of expensive, out-of-date services, and need bespoke solutions that match their own profile. Both new entrants and established wealth managers will be able to use big data and advanced technologies to create these bespoke products to a far broader range of clients than today.

Epilogue - The 'Big Tech' factor

Facebook, Amazon, Apple and Google all have the technical capabilities, and resources to advance and deepen a financial offering in wealth management. It seems a matter of when, not if.

The key new development is the abundance of nonfinancial data, including from digital footprints, which can be used in financial services provision. Thanks to large volumes, these data can be analysed using machine learning and AI, "which gives rise to economies of scale in data usage and thus benefits large technology firms and other platform intermediaries."¹¹ This allows for Big Tech provision of a highly customised user experience at low costs.

Big Tech's global, rapid and persistent movements in the payments space should be formative to others in all sub-sectors of Finance. Within only a few years, Apple Pay and Google Pay were able to more than double their market share in the US ecommerce market. Apple Card already offers spending summaries, effectively acting as a financial coach. In Q2/21 alone, Facebook-owned WhatsApp launched P2P money transfers in India and Brazil to increase its market share in digital payments in emerging markets. Facebook's crypto project, 'Diem,' announced Silvergate Capital as the exclusive issuer of the Diem US-Dollar stable-coin. Apple introduced its Family Card to help families manage shared finances in a single app, including money management services. Google launched Plex, a mobile bank account. They also partnered with Shopify to give its merchants access to consumers, and partnered with Western Union and Wise to offer transfer services in India and Singapore. Meanwhile, Amazon shared plans to scale its contactless checkout system to Whole Foods in Washington State, and led a \$10m funding round to the India-based trade receivables FinTech M1xchange.

Data from 2021 Global Wealth Managers Survey shows that 87% of wealth managers in the US perceive Big Tech companies as a key threat¹² in the current policy and regulation framework. If they were to arrange new investments, 8% of respondents in the US would prefer to use a Big Tech company to do so – among Generation Z this proportion rises to 11%. Meanwhile 7% of consumers globally would opt for one of the Big Tech firms (Facebook, Google, Amazon and Apple).

¹¹ <https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2438~d0d447b9b6.en.pdf>

¹² <https://www.privatebankerinternational.com/opinion/big-tech-to-shake-up-wealth-management/>

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USING CYCLES AS THE KEY TO MARKET TIMING



Charles Nenner
Founder & CEO,
Charles Nenner
Research LLC

Financial markets do not move in random. Charles Nenner, founder and CEO of Charles Nenner Research uses a system of cycle analysis and pattern recognition to accurately predict moves in all asset classes. This system of market timing highlights the fact that it is not the news itself, but rather how investors react to the news what truly drives the market.

Q: Everything in nature and history moves in cycles. Charles, you have been forecasting market movements with your cycle work for more than 30 years. What is the heart of the methodology, and why do you think it works?

Charles Nenner: The heart of the methodology is based on the fact that there's not much free choice of things and events happening in the world. If you think that total free will is ruling the world, and there is no way of forecasting anything, then firstly, we have to adopt the idea that there is no free will. Secondly, we have to try to understand that accordingly behaviour will be based on "no free will". A finding of the research I did on many fields was that certain things happen at certain times.

Well, I got into this business when I was a medical doctor. At that time I joined a group that wanted to know if people got psychotic at the same time all over the world - which they actually did, and then, how many times there was a difference. By now we've already got used to the fact that women give birth early when it's the morning of a full moon, but nobody really understands why. So a doctor learns how to deal with these issues - even if he doesn't understand if the red pill helps better than the blue pill. If you don't understand it, you give a red pill.

The difference between me and economically schooled analysts is that I don't care why something happens. Fundamentally I understand a lot, but I don't look much into it because usually facts happen in cycles, as I will explain later. Our methodology is based on the fact that certain things happen at certain times or, in other words, in certain cycles. And these cycles have a certain length, so let's say something happens every year, every 60 months, every two weeks. We even have intraday cycles which means something happens every hour, and that's fixed. And that 'something' does not depend on what's happening in the news, or what's happening in the financial markets.

Q: One of your recent research notes explained the difference between the move of markets or assets and the facts which might come to light only later. Can you come back to the example of Boeing in 2019 and show us the corresponding cycle? And what do you think of Boeing today?

Charles Nenner: There is something, and I don't want to make it too complicated, about the collective consciousness, or maybe unconsciousness. Freud wrote about the consciousness that we all have as a group together. And like animals, we feel when something dangerous is going to happen. We don't know exactly why it's going to happen, and what's going to happen. But we feel it, when cycles are turning down.

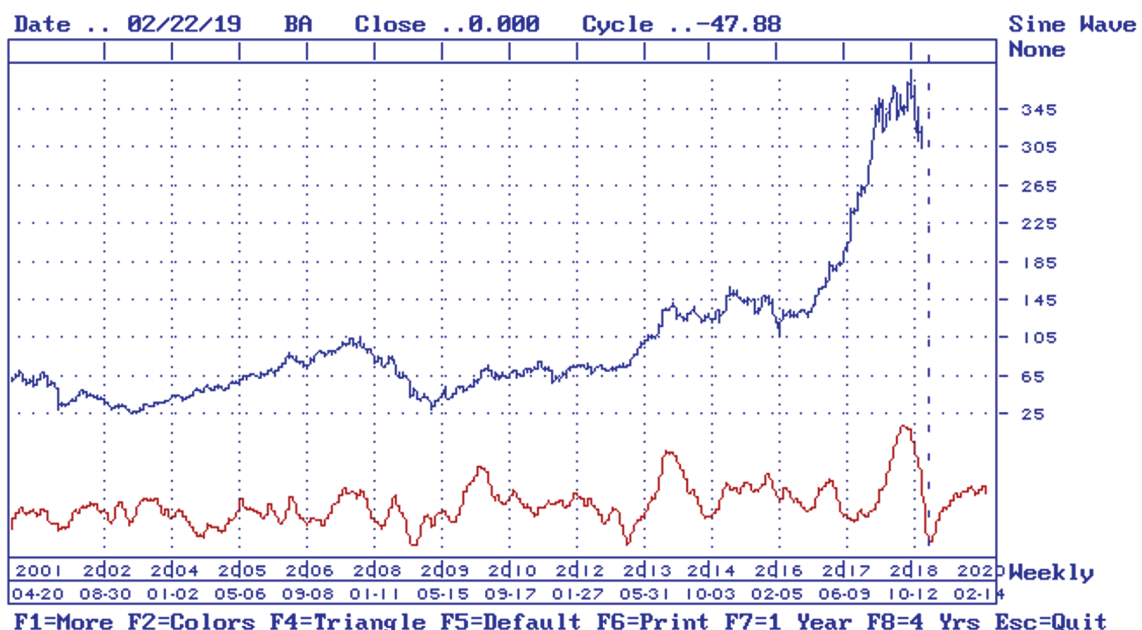
There are two situations why a market or asset class can go down. The first reason is that the news that has been circulating among us already for a long time is finally getting a negative interpretation because the cycle is down. Our interpretation of the same facts that we haven't taken into

consideration for a couple of months has changed and starts to worry us. So, the facts haven't changed, but their interpretation has. The second reason is that the cycle is based on the aforementioned collective consciousness that investors can feel. It's hard to explain why, but they can definitely feel that something is coming up.

I have two examples for that phenomenon. The first one is an interesting situation in Boeing. We had a long-term chart of Boeing that showed that the cycle had been down for a long time, but we didn't know why. Then, just after the cycle had bottomed, there was this big crash of Boeing, and they stranded all the airplanes.

News that came out about the grounding of Boeing planes...

The Boeing 737 MAX passenger airliner was grounded worldwide between March 2019 and December 2020 – longer in many jurisdictions – after 346 people died in two crashes, Lion Air Flight 610 on October 29, 2018, and Ethiopian Airlines Flight 302 on March 10, 2019. The U.S. Federal Aviation Administration (FAA) resisted grounding the aircraft until March 13, 2019, when it received evidence of accident similarities. By then, 51 other regulators had already grounded the plane,[2] and by March 18, 2019, all 387 aircraft in service were grounded. (https://en.wikipedia.org/wiki/Boeing_737_MAX_groundings)

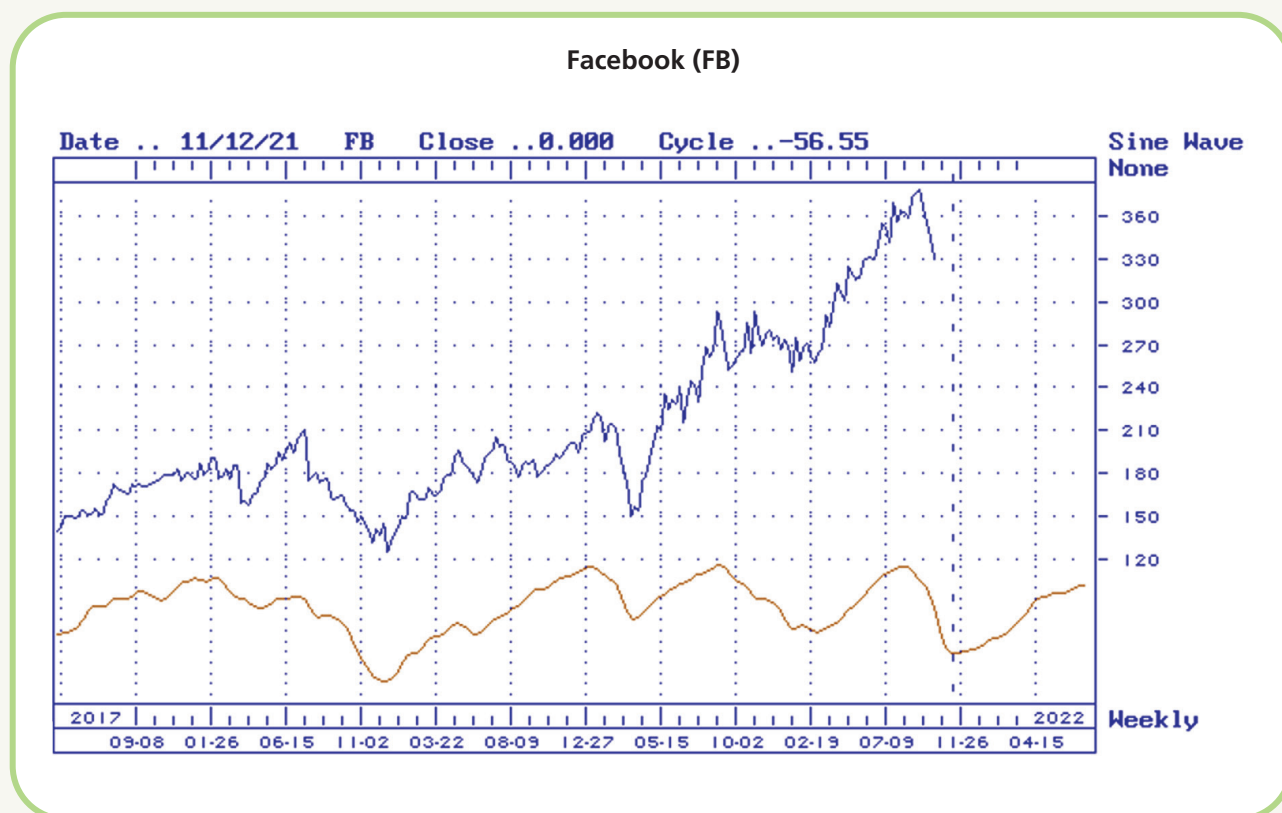


Weekly cycles that correctly projected the last high, now project a tradable low again by late FEB.
© Copyright Charles Nenner Research Center Sunday, January 6, 2019

Boeing lost a lot of money. Now there is this saying on Wall Street that you buy on the interpretation or anticipation of the news. And you sell, when the news is there. It is very interesting to see that there was an anticipation of something that was likely to happen to Boeing, but that nobody knew. Once it happened we saw the low, and then Boeing didn't trade lower. So, how is it possible that the market and cycles knew that only half a year later or so there would be crashes – there is no plausible explanation for it.

Let's look at Facebook with its most recent price action:

Cycles were down, and now we know why.



Source: Charles Nenner Research, 12. October 2021

And now the other example I have - which is also very interesting.

Q: Let's leave the other example for later, and tell us instead what you think of buying Boeing today?

Charles Nenner: We looked at Boeing a while ago, and we've been waiting for cycles to bottom for quite some time which will still take a couple of weeks to happen. Even now I think Boeing is a good buy, though – according to cycles – it's too early.

Q: Choosing the right time horizon is important for financial investors. How can you manage trends or, on the other side of the spectrum, shorter-term investment decisions within an asset allocation?

Charles Nenner: We work with longer-term cycles, short-term cycles, even intra-day cycles. If you are a long-term investor, you can buy something and keep it as long as long-term cycles are up. If you have a somewhat shorter time horizon, you can play in between, i.e. when the short-term cycle tops you sell, when the bottom is reached you buy, just moving up along the long-term cycle that could be up for a year or so.

How do you determine when an asset switches to a buy or sell mode? Is e.g. the rate of change important or do you combine different technical methods?

Charles Nenner: We have two major indicators that we look at: one is price targets, and one is cycles. Our idea has actually been proven, so let me give an example. If IBM goes up with a certain momentum, then you can calculate how high IBM will go. We know when a price target is reached, and we know when a cycle is going to turn up or down. If you want to go long, you need the cycle to be bottoming, and the price target on the downside should have been reached. If we have no lower price targets, there'll be no risk, and then we go long on the stock.

Q: Why, on rare occasions, does a cycle flip, i.e. the price action does exactly the opposite of what the original cycle has suggested?

Well I've been doing this for many years now, and I cannot remember that I have ever seen something like that happening. I know that there are Elliott wave analysts that take the difference from one low to another low, or one high to another high, and relate it to a Fibonacci number. By waiting for these thresholds to be reached they come up with a buy or sell signal. We don't work like that because we don't have to wait and see what the Fibonacci number will do. We just have to wait until the cycle turns up or turns down. I've never seen a flip in cycles, i.e. that things go against a cycle, with our approach.

Q: The future development of interest rates and FED policy attract an extensive attention among investors. What chances do you see for bonds, and are there interesting developments?

Charles Nenner: We have been out of bonds for a long time now. We are looking for an entry level, I think it will probably come in late November. That is another chance to go long once again. I know most markets don't anticipate that because they expect inflation to bring interest rates up. But according to my cycles, later in the year there will be a buying opportunity for bonds.

Q: Cryptocurrencies have come to the fore of a lot of investors. You calculate cycles for Bitcoin and Ethereum. Do they behave differently from stocks?

Charles Nenner: No, cycles are cycles. But it is interesting to see that BTC and ETH are the easiest assets to predict because we're not bothered by any interference, or anything coming up even during the day. Actually, there is no fundamental news, so everything that happens in those cryptocurrencies

is emotional, and it is fortunate for us that our cycles predict emotions of people. That's how we can predict the movements of the crypto currencies.

Q: What do you think are the perspectives on cryptocurrencies for the next three to six months?

Charles Nenner: Well, Ethereum doesn't look that promising at the moment. Bitcoin can still go up for a couple of weeks into year end.

Q: You once mentioned that you calculate cycles for almost anything. What are your most intriguing examples? How about the interdependence between sunspot cycles and the stock market?

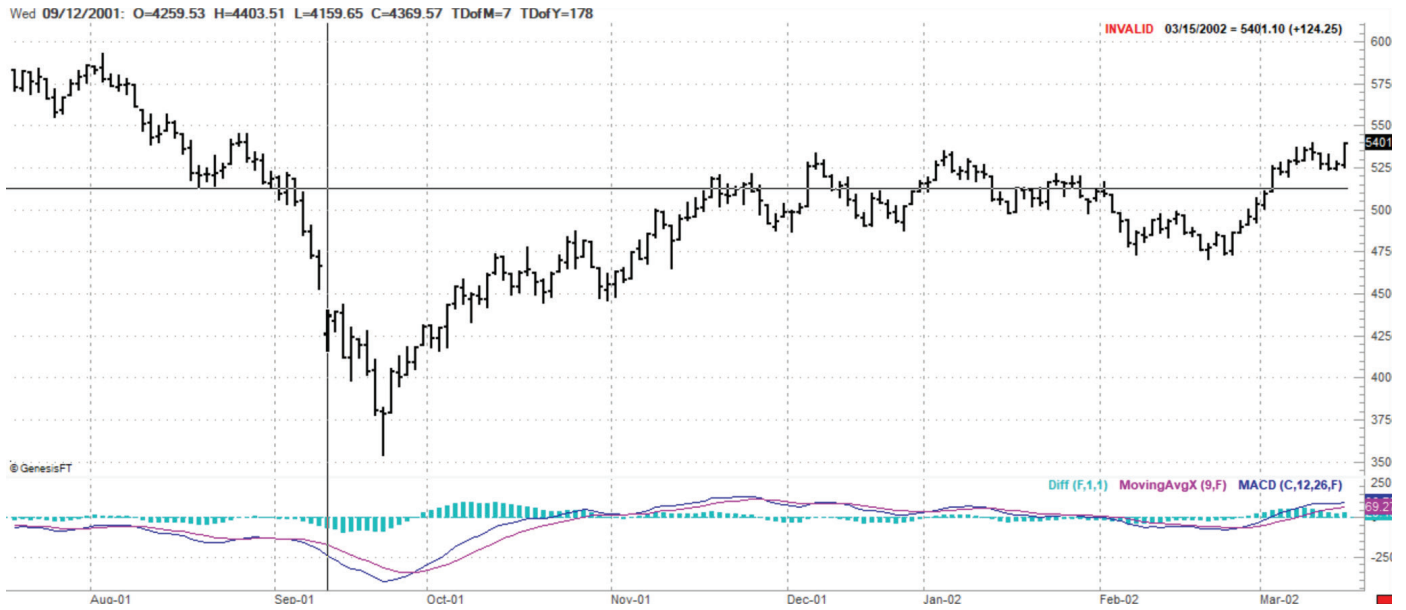
Charles Nenner: Well, I did some research on sunspots because in the end you want to know how cycles work. So I read a lot of research done by other experts on this topic. We have been able to calculate sunspot cycles which show the varying degree of intensity of sunspots in different phases of the cycles. Every so many years there is a high intensity of sunspots and a low intensity of sunspots. You can go to the website of NASA as they can predict what is going to be a couple of weeks ahead. Interestingly, if you do an overlay of the Dow Jones and sunspot intensity, you get a very high correlation, almost 95%.

There seems to be a valid connection. Then I saw some Japanese research that came up with the following: the sunspot intensity creates an electromagnetic field down here in the world. There is always an electric magnetic field, but intensity differs based on the sunspot activity. Being a doctor I took a leap forward: our brains are 80% water, and water crystallizes differently based on the electromagnetic fields down in this world. Again, that is how our thoughts are being built because our brains are 80% water. You clearly get a physical representation of why this cycle should work.

Q: Well, earlier you wanted to give a second example showing that cycles are based on a collective consciousness. Can we come back to that now, please?

Charles Nenner: Yes, of course. The crash of 9/11 is the second interesting example I had in mind. If you look at European markets, they had already been down very strongly, I mean, like 25%, maybe 30% in the months before 9/11, whereas after 9/11 they even went up for a couple of days. Then, however, they went down again for a couple of days until they made the low, and then they took off for a long period. So the question is, did 9/11 cause the market crash?

The DAX (German Stock Index) around 9/11:



THE FTSE around 9/11:



Well, it didn't do that because in Europe the markets had already been down for six or eight weeks with those 25% - 30%. And after the crash happened? There we were again! The same thing has happened with Boeing: The news was out, so people started covering their shorts. Boeing went up for a couple of days, went down for a couple of days and then never looked back, going up for a couple of years.

All these relationships that are being brought out don't really exist. And if they exist, they don't help us because six years before, six weeks before we didn't know why the market was going down. Actually, all fundamentals or whatever is going on in the media don't give us a clue about how markets are going to react.

Q: Prices represent human behaviour in markets. You always stress the utmost importance of capital preservation for investors. How do you implement that in your recommendations?

Charles Nenner: There was a very famous analyst that I actually know, Marty Zweig. Marty used to say: "Don't fight the FED". We say: Don't fight the cycles. If you take a look at our longer-term cycles and you invest with the longer-term

cycles, you protect whatever you have. Short-term, cycles can go a little bit against you if you don't want to go short. But you will always be saved by the cycles. So, if we think the gold market cycles are up for a couple of years, then that's how you can accomplish the preservation of your capital. If you are not a short-term investor, you just stay long as long as the cycle is up.

Q: With this in mind, where does the danger for investors lie in the next 6 to 12 months, and where do you see opportunities?

Charles Nenner: My cycles on the stock market don't look that great. I think there's a lot of risk in the markets. When I was saying this, the S&P 500 was around 4.400, and we are totally out of the market. The opportunities are in the bond market. That's going to put in a nice low in a couple of months, and we still think that metals will go higher for the next couple of years.

Q: Thank you, Charles.



MACRO OUTLOOK AND MEGA TRENDS 2. HJ 2021



Antonio Curia
Executive Director
Wimmer Financial LLP

Where we are (H2.2021 update):

2020 was the year of the virus: COVID-19 destroyed countless lives and economic livelihoods; the global economy plunged into its worst recession since World War II. While China was the growth engine of the world economy in 2020 (actually the only big economy that grew at all), the US will take over this role in 2021. Global GDP is expected to rebound by +5.1% in 2021, with more than one fourth of the recovery being driven by the US. The over-expansionary stance of the global policy mix explains this rebound in 2021 and 2022, compared with the contraction of -3.6% in 2020. In the US and Europe, on the other hand, policy normalization will proceed at a gradual pace. Strong growth is expected for the global economic development in 2021, consequence of the reopening of US, UK and Europe due to the successful vaccination campaign;

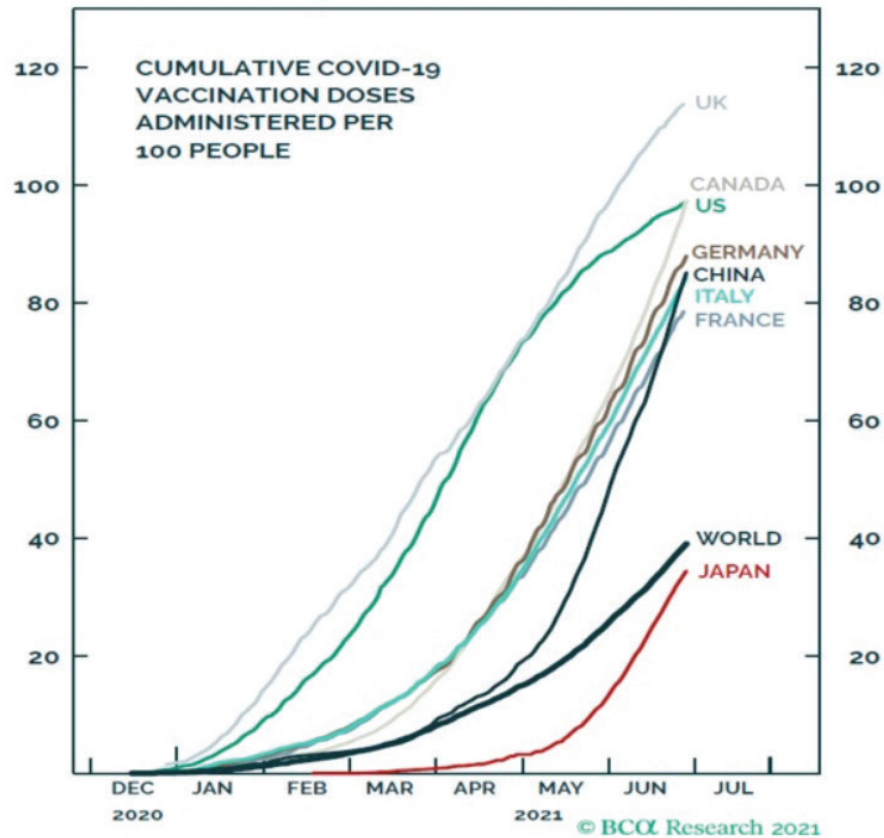
China has remained relatively resilient, having successfully adapted to or suppressed the virus. By contrast, a return to economic normality in the West is almost wholly dependent on vaccines. While we are seeing rapid progress with vaccinations in the United States and the United Kingdom, Europe remains behind amid continued lockdowns and economic stagnation.

On the monetary policies, most central banks will continue with their expansionary measures in 2021, with the notable exception of China, where the policy stance already started to tighten in Q4 2020.

COVID-19 vaccine rollouts in the US and UK have continued to proceed well, with 60% and 70% of their respective populations now having received at least one dose, allowing for what looks like the start of a sustained reopening of their economies. In continental Europe, it's been encouraging to see that, after a difficult start of the vaccine campaign, the pace of vaccination has accelerated significantly. Prospects for vaccine supply have improved, and by the end of May, the daily rate of vaccinations in major euro area member states had reached between 0.6% and 0.8% of the total population.

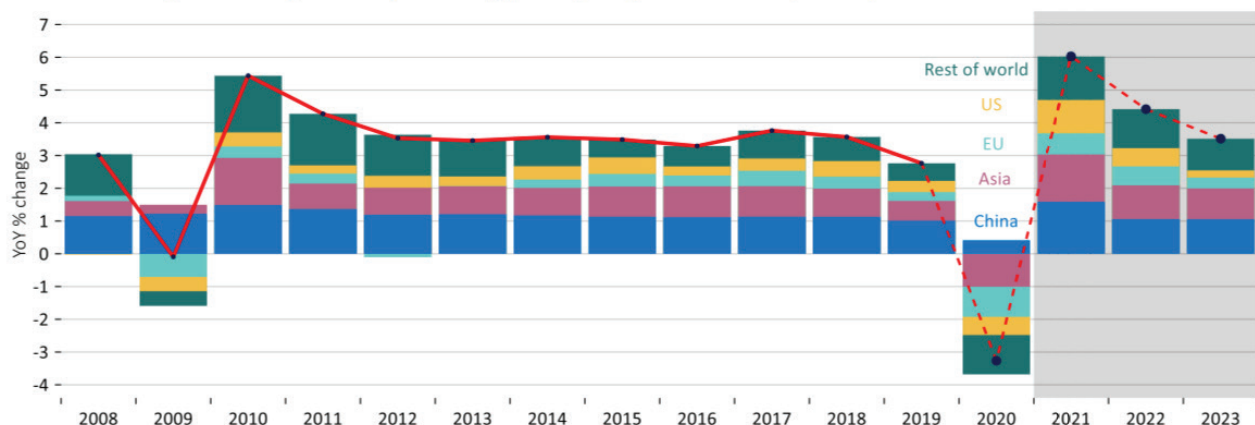


The Vaccination Campaign Is Progressing Well In Most Developed Economies



Global Growth Outlook

Contribution to global GDP growth at purchasing-power parity, IMF forecasts (shaded)



Since March 2020, world governments have spent \$16 trillion in fiscal support, while global central banks have increased their balance sheets by a combined £7.5 trillion.

IMF, July 2021

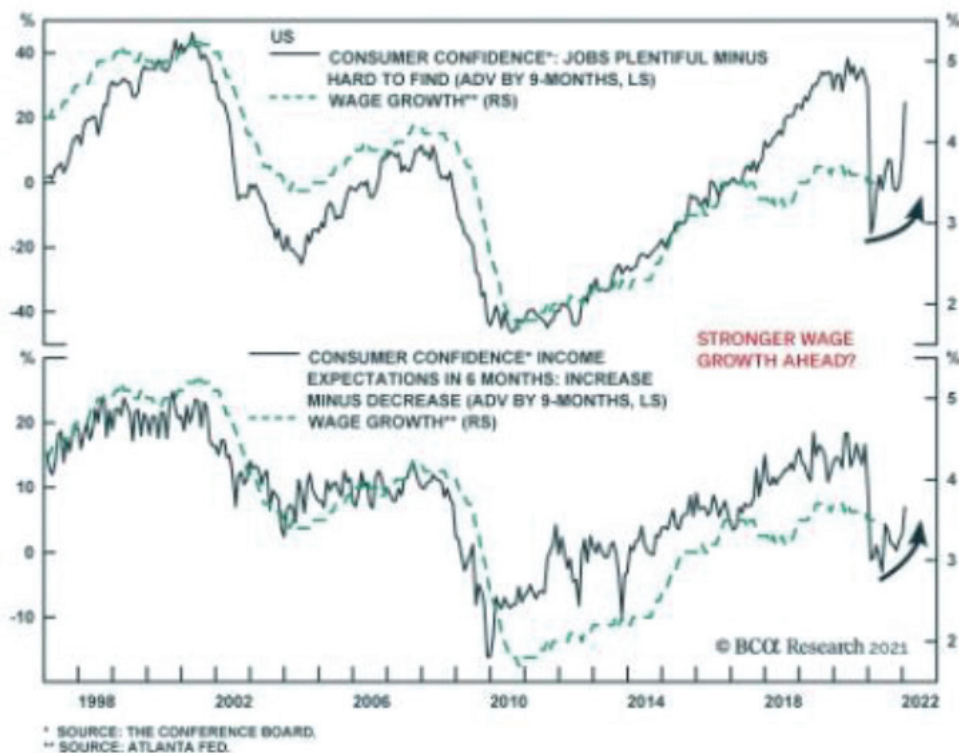
A closer look at ...

USA

Investors are focused on a post-vaccine US economy, where consumer spending rebounds and strong fiscal stimulus boosts the pace of recovery over 2021 and beyond; we believe that US inflation will rise in 2021 to moderately above Federal Reserve target levels but not to disruptive levels; high levels of unemployment and spare capacity in many business sectors will keep wage growth and other aggregate inflationary pressures in check over the medium term in our view.

The successful passing of the budget resolution bill in early February paved the way for Democrats to pass the long-anticipated \$1.9 trillion COVID relief bill. The stimulus bill represents the first of two major initiatives President Biden is aiming to pass in the first few months of his term. The second is his infrastructure plan recently approved at the Senate. President Biden is broadly aiming to invest an estimated \$2 trillion into rebuilding and improving America's infrastructure with the goal of achieving NetZero emissions by 2050. Some critics who have pushed back on President Biden's plan have highlighted the potential inflationary effects of the massive proposal.

The bigger opportunity of the bill comes in the form of job creation and advancement of the renewable energy space. President Biden's plan promises to create millions of jobs helping to rebuild America's infrastructure, transitioning to clean, American-made electricity, upgrading buildings and housing, and many other fields. This would clearly have a positive impact on economic growth especially at unemployment levels that are still elevated due to the COVID-19 pandemic. Additionally, a large portion of Biden's bill is focused on building modern, sustainable infrastructure to meet climate change goals and position the US to build a clean energy economy. The passing of the bill could drive growth and development in emerging industries like renewable energy and electric vehicles by potentially injecting capital directly, in the form of grants, subsidies, or tax incentives.

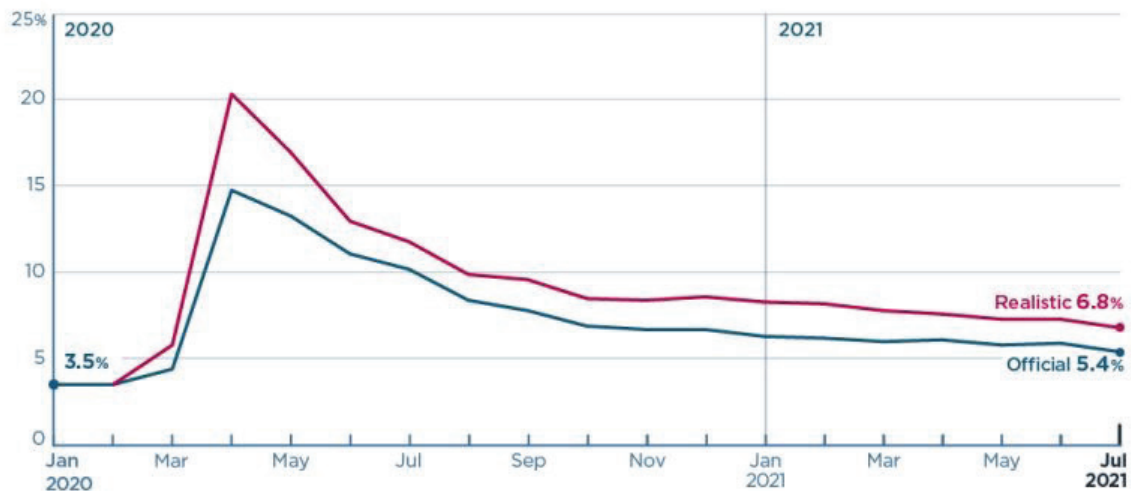


*Source: The Conference Board

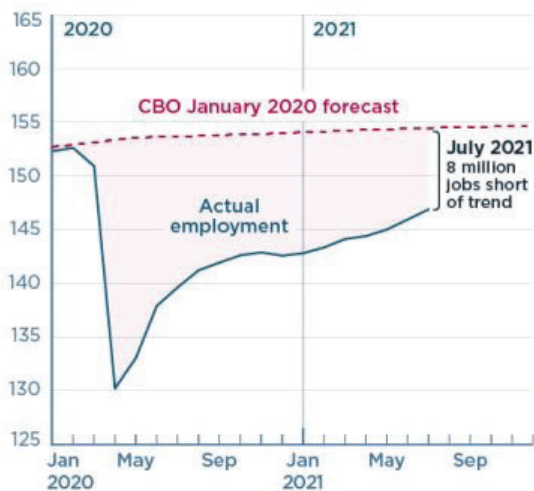
**Source: Atlanta Fed.

US labor market recovery picks up in July, but jobs remain well short of normal

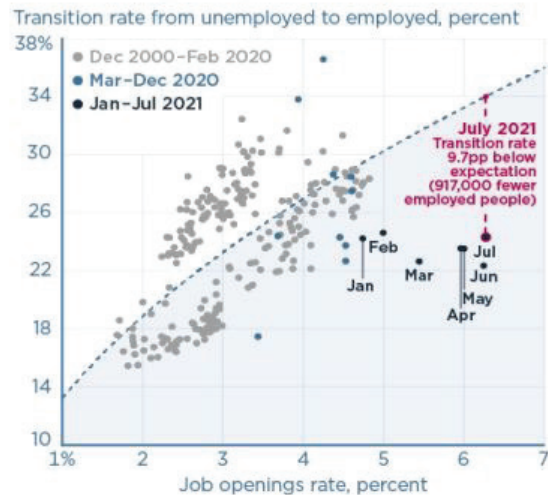
a. Alternative measures of unemployment rate



b. Actual employment vs. projected employment, millions of jobs



c. Transition rate from unemployed to employed vs. job openings rate



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CBO = Congressional Budget Office; pp = percentage point

Note: Realistic unemployment rate in panel a refers to the adjusted unemployment rate for the unusual circumstances of a pandemic labor market. Employment in panel b is nonfarm payroll employment, which excludes proprietors, self-employed, unpaid family or volunteer workers, farm workers, and domestic workers. Job openings rate in panel c is job openings as a percent of total employment plus job openings. Transition rate from unemployed to employed is percent of unemployed in prior month who are employed in the current month. Job openings for June and July 2021 are estimated based on growth in Indeed Hiring Lab job postings. Dotted blue line is log-log trend line for December 2000 through February 2020.

Source: Jason Furman and Wilson Powell III's blog post, "Pace of US job growth picks up as signs point to tight labor market."

Europe

Europe remains the recovery laggard compared with other economic heavyweights. However, after the grand reopening in Q2 2021, consumer confidence has soared well above pre-crisis levels (+21%) in Belgium but also in Italy (+8%) and Germany (+4). In Spain and France, the indicator only returned to its pre-COVID-19 levels, signaling a more moderate boost to consumption. In 2021, we expect the European economy to race at a rapid pace through the entire economic cycle, from a double-dip recession at the start of the year – due to renewed lockdowns – to a consumption-led catch-up growth spurt in the second half of the year, when progress on the vaccination front should allow for an economic reopening. More importantly, the current break in correlation between COVID-19 cases and hospitalization rates is good news that may prevent a significant tightening of restrictive measures in exposed sectors.

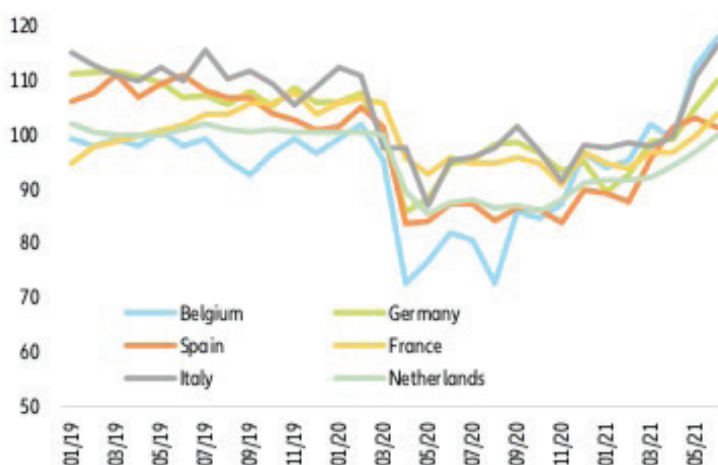
Thankfully, strong export demand – driven by the on-going Chinese recovery and super-charged, stimulus induced US GDP growth – will extend a helping hand to European economies in 2021, in turn exacerbating the divergence between manufacturing and services. At the same time, policymakers will continue to do "whatever it takes" to safeguard the recovery and shore up public support ahead of key elections in Germany (Sept. 2021) and France (April 2022). All in all, we expect Eurozone GDP to expand by +4.0% in both 2021 and 2022. That means that the Eurozone economy is set to recover to pre-crisis GDP levels only in H1.2022, almost a full year after the US.

Euro-area Economic confidence indicator and real GDP growth



Source: Pictet Asset Management, EU Commission, Refinitiv Datastream. As of July 2021

Figure 1 – Consumer confidence indicator



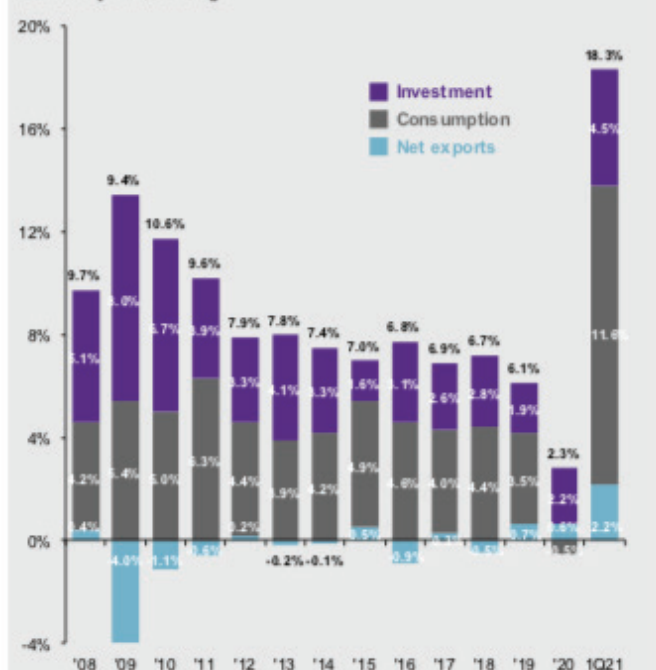
Source: Euler Hermes, Allianz Research, Eurostat

China

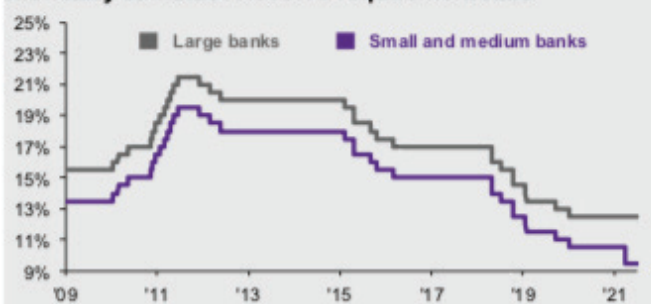
In China, the post-COVID-19 recovery is well underway, and 2021 will focus on policy normalization. This was paired with greater emphasis on environmental and social reforms and new clean technologies – a ‘greening’ of the economy. These measures signal the government’s broader push to a more sustainable and higher quality of growth for the long term. The 2020 rebound was mostly a story of policy-driven areas, such as the real estate and infrastructure sectors. In 2021, household consumption and business investment could become the growth drivers. China’s fiscal and monetary stimulus during the pandemic was far more measured than in the West; previous periods of overheating in real estate and shadow lending have driven an innate caution. Accordingly, we are now seeing a greater balance in China between economic recovery and policy leeway – a ‘Goldilocks’ environment in which the government has greater flexibility to respond to economic developments. With any slowing of the economy, we wouldn’t be surprised to see policy loosening.

The external environment will continue to be supportive as many of China’s trading partners are still battling the pandemic and their policies are in full easing mode. We expect the Chinese economy to grow by +8.2% in 2021 (after +2.3% in 2020) and +5.4% in 2022. This means that the official target of ‘above 6%’ will be relatively easy to achieve, allowing policymakers to shift their focus away from short term stimulus to financial vulnerabilities and asset price bubbles (in real estate and capital markets). We believe we’ve passed the nadir in China-US relations, though tensions will remain elevated.

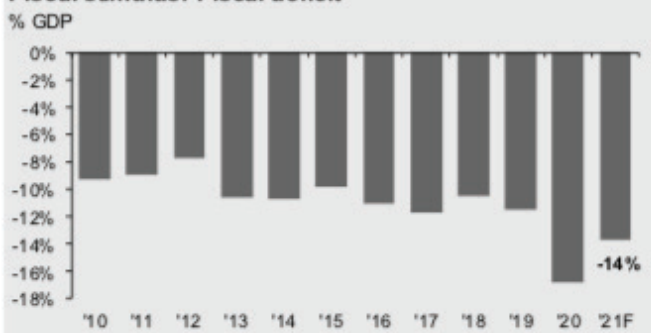
China real GDP contribution
Year-over-year % change



Monetary stimulus: Reserve requirement ratio



Fiscal stimulus: Fiscal deficit*

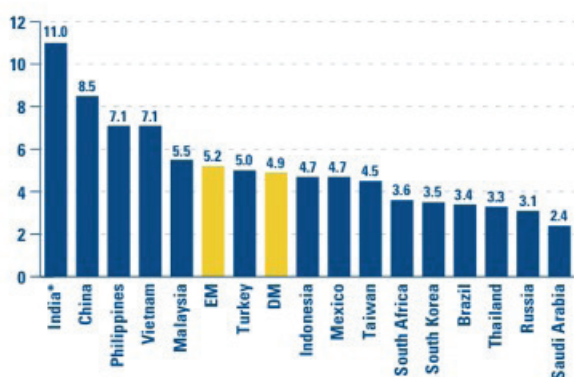


Source: FactSet, J.P. Morgan Asset Management: (Left) GEIG; (Top right) People's Bank of China; (Bottom right) China Agriculture Development Bank, China Development Bank.

Emerging markets (Ex. China)

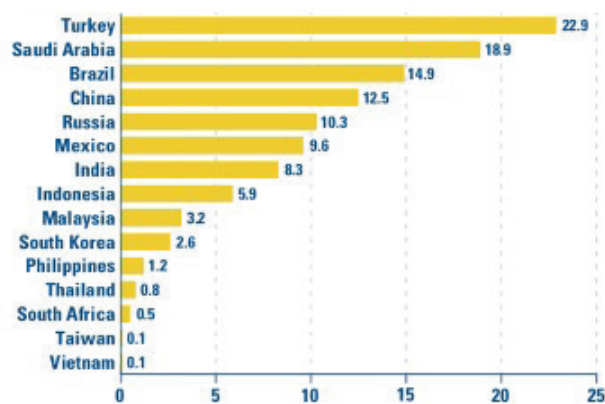
Despite a global rollout of several COVID-19 vaccines, progress in the majority of emerging markets (EM) is woefully inadequate. This constrains mobility and, by implication, economic growth. Rising global yields and a strengthening USD add further headwinds. Finally, fiscal room is narrowing and some countries have had to hike domestic rates, further constraining the recovery.

Chart 1: Consensus Forecasts for 2021 Real GDP Growth, %



*Fiscal year estimates (12M to end-March 2022)

Chart 3: EM Vaccinations, Doses Administered Per 100 People*

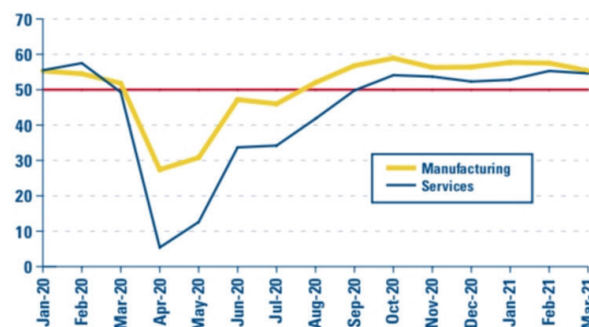


*Note that this is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime as several available COVID vaccines require multiple doses.

Source: (left) Bloomberg; (right) Our World in Data

India

A second wave of COVID-19 infections in India led to the implementation of new restrictions including lockdowns (at a regional state level rather than nationwide) to contain the outbreak. While this second wave is expected to impact the country's economic recovery in the short term, it expects the economy to bounce back as the government accelerates vaccine roll-out and lockdowns are lifted. In the longer-term, expectations are India's economic recovery to continue as economic activity gradually improves. The overarching drivers underpinning the Indian market also include low interest rates, high liquidity and fiscal incentives, all of which currently remain intact. However, risks are elevated, including the on-going virus pandemic, regional and global geopolitical relations and the path of the recovery and infection rates in other regions globally.



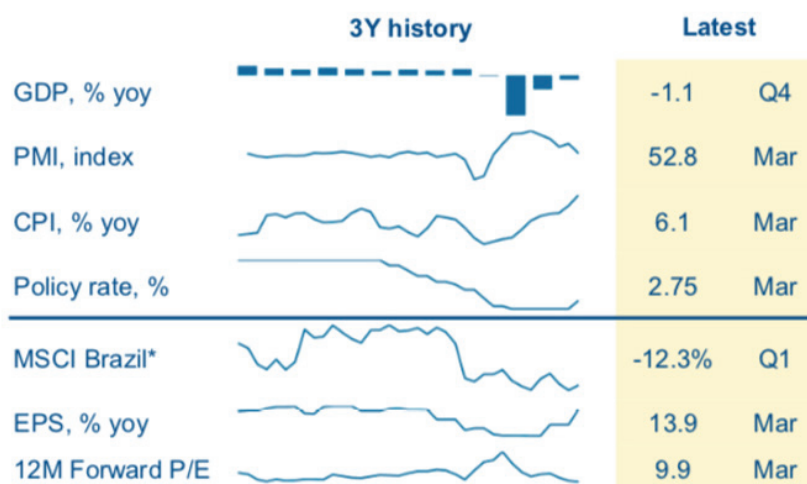
Source: Markit, Bloomberg

LatAm

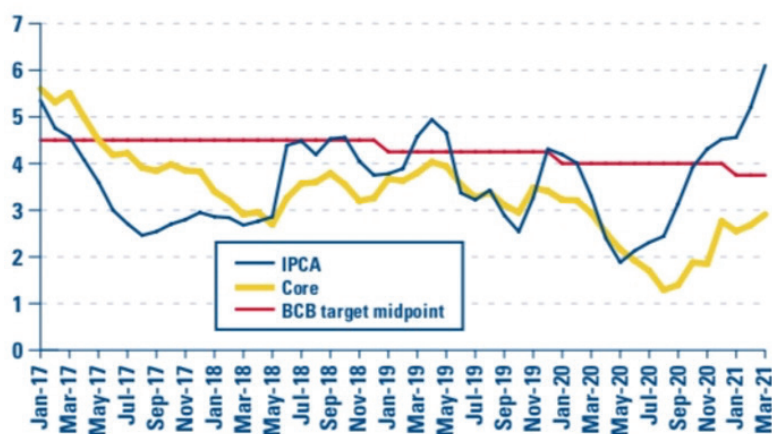
Brazil is experiencing one of the worst COVID-19 pandemics among EMs: its prolonged first wave between April and October 2020 is now succeeded by a bigger and ever increasing second wave, which began in November of last year and has continued unabated. Brazil has recorded over 500,000 COVID-19 related deaths to date and its health system is said to be close to collapse (ICU occupancy rates are at over 90% in the majority of states). This reflects both a botched government response to the outbreak and a lagging vaccination campaign (local sites have stopped production for lack of ingredients).

Inflation in Brazil has continued to rise since mid-2020 and reached a more than four-year high of 6.1% year over year (YoY) in March. IPCA readings (Brazilian Inflation Index) are expected to rise to over 7% by mid-year before beginning to decelerate. However, even if the central bank's year-end forecast of 4.4% 'YoY' materialized, inflation would still exceed its central target of 3.75%. Against this backdrop, the BCB surprised markets with a 75bps rate hike in March, bringing the Selic rate to 2.75%.

Three interlocking issues dominate the outlook: a deepening COVID-19 crisis, a rise in political turbulence and the emergence of binding fiscal constraints.



*US\$ total return relative to MSCI EM.



Microeconomy

Inflation: During the decade following the Great Financial Crisis, the Fed persistently fell short of its 2% inflation target. Markets adopted a defensive tone as worries about an underlying deflation risk refused to go away. In a world where growth, inflation and interest rates were all historically low, investors paid a premium for growth stocks and income. Today, the Fed has shifted course, trying to overshoot its inflation objective, changing the investment environment. There is, however, a simpler narrative that explains the shortfall of inflation over the past decade. Money-supply growth was not strong enough to create a 2% inflation rate. From this perspective, policy has been too tight, keeping inflation below stated targets. Even in Japan, where the problem goes back to the 1990s, conventional wisdom believes policy has been easy with interest rates near zero for decades. However, money growth has not been adequate to support nominal growth or inflation. Where it's fallen short, money supply growth has been below historical averages.

Importantly, the starting point out of this recession is very different from that of 2008. First, this is a huge temporary shock that will be followed by a sharp reversal with less permanent consequences than a financial crisis. Second, the high levels of liquidity in the system, higher personal income and savings, and the strong wealth effect will likely unleash pent-up demand: a cocktail that could further fuel inflation. Third, there is a risk that central banks will continue in their plan of low interest rates and accommodative policies to restore economic conditions and tackle strategic social themes.

The explosion of monetary and fiscal stimulus has put the US and world economies on a much faster growth track than that prevailing before the pandemic. This means the near-term rise in nominal GDP, corporate revenues and household incomes is much bigger. In short, while inflation is heating up in the material world of commodities and goods output as well as in the labour market for near-term services, technology deflation is likely to continue.

Inflation expectations are closely linked to realised inflation

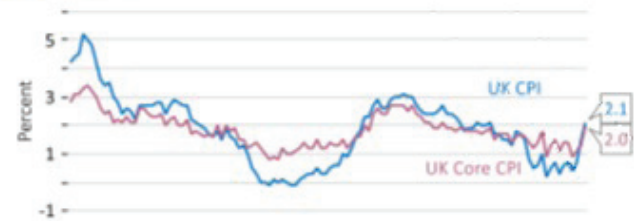


Source: Bloomberg, Haver Analytics, Goldman Sachs Global Investment Research

Inflationary Indicators



UK inflation



US inflation



Source: Macrobond, 09.07.21

Outlook

It has been more than a year since the initial outbreak of COVID-19, but the global pandemic continues to challenge economies and their health care systems. While new variants of the virus have spread just as countries start to roll out vaccines, US and UK are much more in an advanced path followed by Eurozone. While recovery in economic growth could remain muted this year in many markets, we expect more normalization in 2022. Globally, the strong growth should continue in subsequent years. There are several reasons for this: better growth prospects, thanks to the

pandemic-related innovation boost and more (public) investment as a result of the pivot to sustainability; heightened risk awareness after the pandemic; accelerated demographic change and the further rise of Emerging Markets.

Three main supports for H2.2021 Outlook: Consumer, Vaccines and Policy. The confluence of these factors underpins my outlook view – and while certainly not our base case, I've included some potential upsets to each pick.

Economic growth expectations

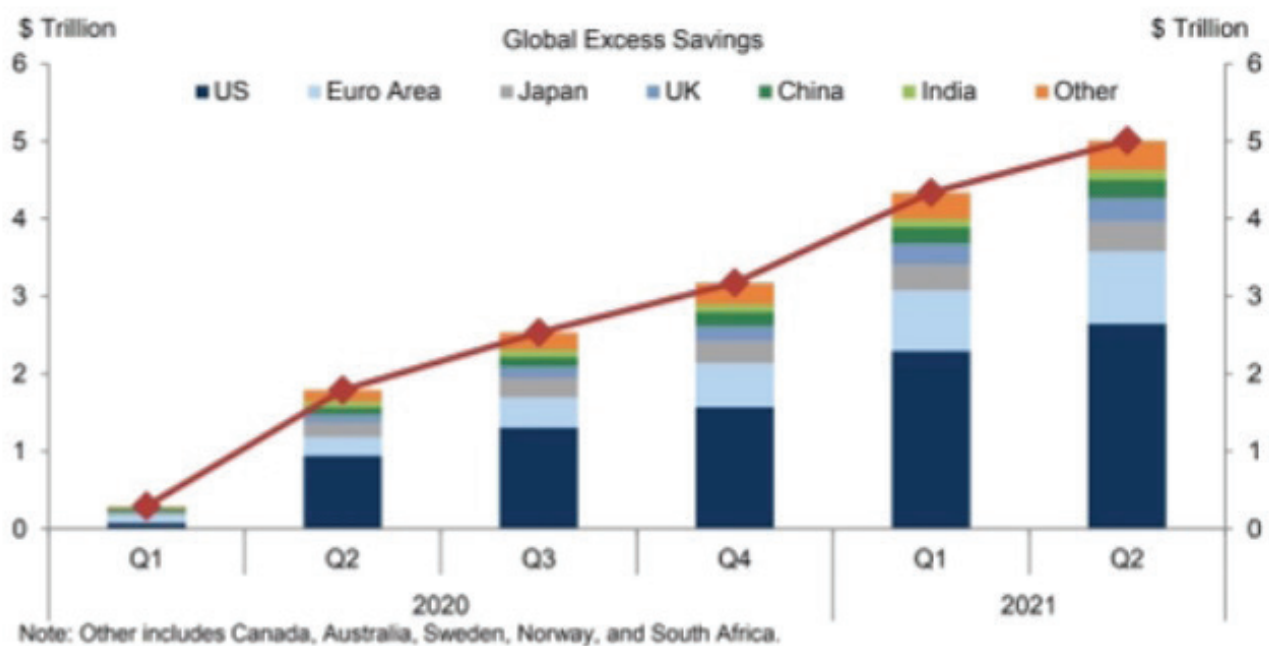


1. Consumer recovery

Backing the consumer is a historically high rate of personal savings (13.6% for the month of February), a rebound in wage and salary income, healthy household balance sheets, improving employment data, and a housing and equity market boom, lifting consumer net worth to all-time highs. We expect households' balance sheets (across income levels) to continue to rise in 2021 on the back of government transfer payments and tax refund checks, helping to fuel consumer spending and underpin the pent-up demand cycle we see unfolding this year. Unprecedented levels of household net worth will likely drive spending for discretionary goods and services among high-income households, while government transfer payments and improving job prospects will support spending among lower-income households. The numbers speak for themselves. While disposable income in 2020 was 7% higher than in 2019 (impressive for a recession), the

value of American's assets minus liabilities, or household net worth, reached an all-time high in the fourth quarter of 2020, swelling to \$130 trillion (an increase of 10% over the same time last year) and up from \$118 trillion at the end of 2019.

Spending will continue to remain strong for a variety of reasons but we highlight Relief, Revenge and Reunion spending: 1. Relief spending, in the form of dining out or returning to in-person shopping; 2. Revenge spending, or taking the time off employees never took in 2020 for vacations – think hotel and leisure; and 3. Reunion spending – spending on planes and trains to see friends and family (encouraging to see Transportation Security Administration (TSA) screened 1.36 million travellers – a level last seen in mid-March of 2020, against a low of 875,000 in April).



Source: Haver Analytics, Goldman Sachs Global Investment Research

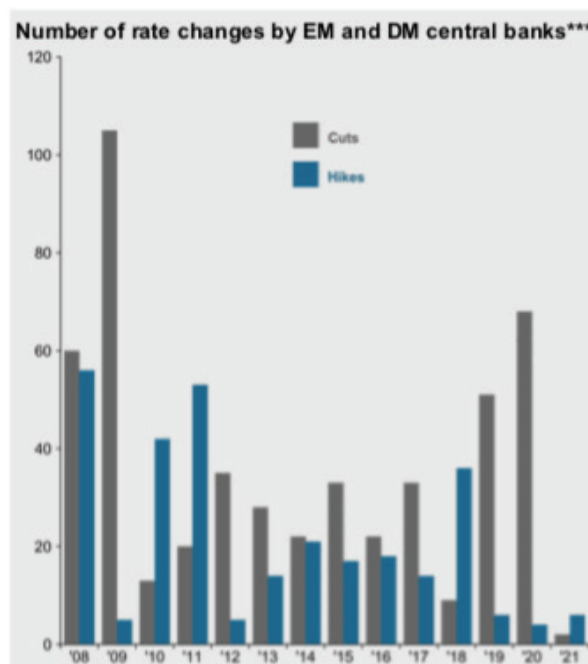
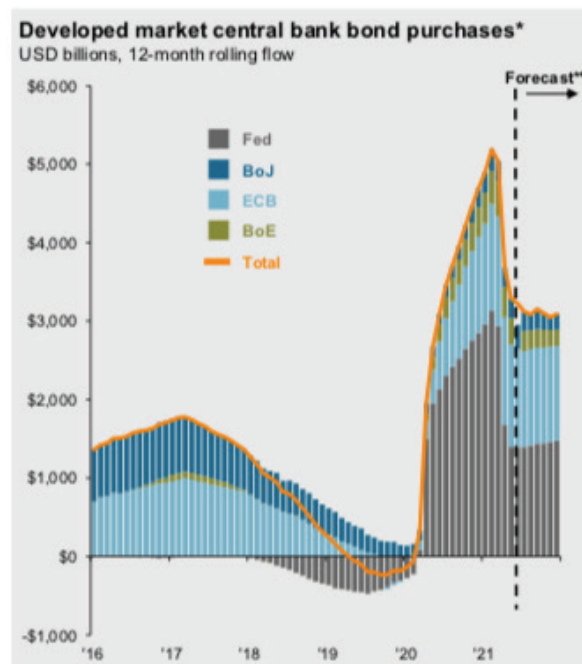
Source: Haver Analytics, Goldman Sachs Global Investment Research

2. Coronavirus vaccine rollout

While early best-case estimates put the vaccine rollout somewhere late in 2021, the first shots were developed and approved before the end of 2020 – a stunningly fast timeline. This success is thanks to private sector innovation around vaccine development and distribution, and generous government spending on finding a vaccine at "warp speed." End to end, it can take years – if not decades or ever – to develop effective vaccines with the public-private partnership accelerating the cycle this time. As this rollout churns forward, the US has successfully administered over 150 million doses with 40% of the US population (18 years of age or over) vaccinated with one dose and another 17.9% fully vaccinated, according to the Centers for Disease Control and Prevention. The rates are even better for more vulnerable individuals, with 45%+ of Americans over the age of 65 fully vaccinated. Running at a clip of 2.5 million-plus a day leaves most countries trailing, with wide variations in the speed of vaccinations around the world.

3. Policy support

'One for the ages' is the only way to describe the pandemic policy response from Washington, with both the Fed and Congress going big and fast over the past year. The recently signed \$1.9 trillion – American Rescue Plan Act of 2021 – stimulus plan is in addition to the \$3 trillion in fiscal spending last year and another \$2 trillion infrastructure bill underway. Thus far, lawmakers have enacted six major bills, costing about \$5.3 trillion, roughly 25% of GDP. The Fed's balance sheet, meanwhile, has blown out to nearly \$8 trillion, up sharply from roughly \$4 trillion pre-pandemic. All of the above has stoked concerns of rising inflation, although the Fed's Summary of Economic Projections for March showed most Fed officials do not expect rate hikes this year or next with four of 18 officials forecasting a possible rate increase in 2022. And while market observers have been obsessing over the 10-year's recent rebound in yields, even after the recent move higher, yields are still very low from a historical perspective. By year end, BofA Global Research targets the 10-year yield at 2.15% and expects rates to move in this higher uptrend but at a slower pace than to date. Until then, the massive spending in combating the pandemic will help generate US real GDP growth in excess of 7% this year, one of the strongest levels of annual growth in decades.

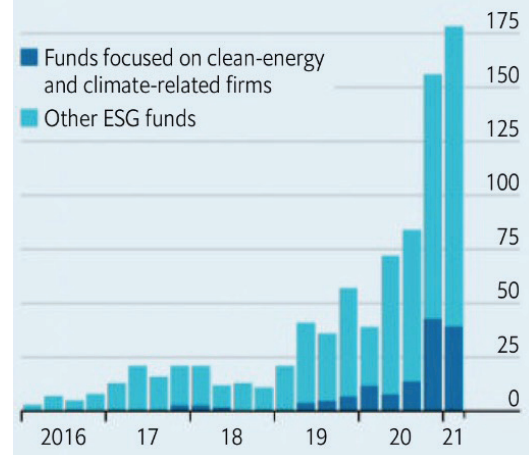


Source: J.P. Morgan Asset Management: (top) Bank of England, Bank of Japan, European Central Bank, FactSet, Federal Reserve System, J.P. Morgan Global

Mega Trends as drivers for recovery

Sustainability: this encompasses three important topics: a. Climate: I firmly believe 2021 will prove to be a significant year for the climate transition, with the 26th UN Climate Change Conference of the Parties (COP26) due to take place in November. b. Inclusive growth: At the same time, the moral imperative to include diverse perspectives, races, and life experiences in all spheres of society, including the professional, has been highlighted in 2020. It is also a financial imperative. My hope is that inclusion will become a material influence on investors' choices. c. Stewardship: in order to manage these imperatives, the need for better practices by governments, regulators, corporates, asset managers, and asset owners is clear and growing.

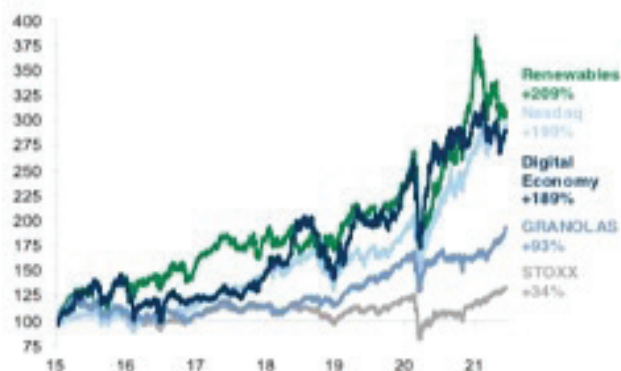
Global inflows into ESG* funds, \$bn



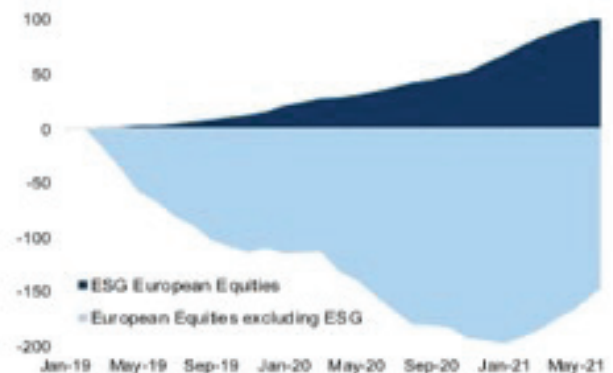
Source: Morningstar

* Focused on environmental, social and governance factors

Impressive growth and where to find it in Europe
Price performance

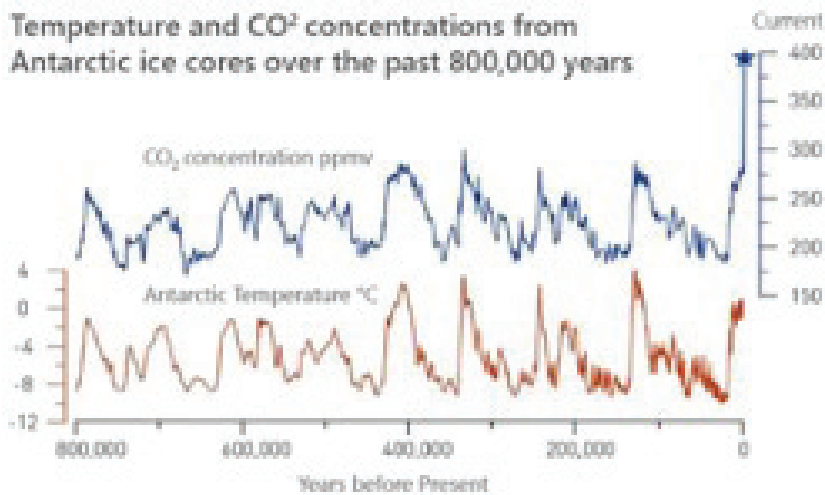


Flows from ESG funds are growing steadily
USD bn



The humanitarian and economic catastrophe unleashed by COVID-19 in 2020 revealed investors' vulnerability to nonlinear risks with unpredictable timing that are not easily accounted for in standard risk modelling. Climate change is the next slow-burning crisis that will radically reshape investors' risks and opportunities over the next decade. Climate change is no longer a hypothetical risk. Though policymakers, businesses, and activists may disagree on many aspects of climate change, there is one indisputable fact: the air and water on our planet are warming – and this global warming is accelerating. One of the most tangible effects of climate change is already well underway – the surge in extreme weather.

Extreme temperatures: climate change has led to a rise in extreme heat waves. In India, one of the countries hit hardest, the number of officially recorded heat waves reached 484 in 2018, more than 10 times the number during the entire decade of the 1970s. Similarly, Africa experienced 24 extreme heat waves annually in the period between 2006 and 2015 – double the pace for the 25-year period preceding it. Turkey and Greece are hit by huge wildfires. Even in the Siberian Arctic, a heat wave in June 2020 saw summer temperatures break 100° F (38° C) for the first time in recorded history.



Source: EC Perspective: Accounting for 800,000 years of climate change

Conclusion

In summary, the recession of 2008/2009 was 'internally driven' as deregulation, the issuance of excessive mortgage credit, insufficient bank capital, and the collapse in housing prices caused bank failures, consumer bankruptcies, and a stock market collapse. The COVID recession of 2020 was exogenous, as an unprepared world suffered a pandemic. The market plunged 34% from mid-February to late March 2020, but rapid government actions including both fiscal stimulus and monetary actions were able to 'bridge' the crisis. Though the trajectory of earnings is comparable to those of 2010, the recovery is far faster. As we look at Q1 2021 earnings results, they have already exceeded Q1 2019 levels by 13% and also the Q2 are seen positive results so far.

The developed world looks well on the path to recovery and the coming months should see spectacular economic data. All eyes will be on the degree to which inflationary pressures are as transitory as central bankers are flagging, or whether the growth impetus leads to more persistent price increases. Policymakers have worked tirelessly to provide enormous support to financial markets over the last year. The challenge now for central banks is to convince markets that they will continue to provide support, even when the global economy is booming.

In this macroeconomic environment 'Risky Assets' are being considered favorable and alternatives will continue to play an important role, in terms of diversification, to try to find better returns. At the same time the focus on quality assets will be adequate and mindful since the consensus is going towards the mid cycle positioning.

BITCOIN & GOLD – OUR MULTI-ASSET INVESTMENT STRATEGY IN PRACTICE



Mark Valek
Partner,
Incrementum AG

“By combining them, investors benefit from the low correlation of the assets. In addition, they can use the volatility of Bitcoin to their advantage through rule-based rebalancing and thus reap the rebalancing bonus.”

In Gold We Trust report, 2019, p. 261

Key takeaways

- We remain committed to our long-standing view that Bitcoin and gold are complementary assets.
- Although we believe that the role of digital stores of value will increase further, we do not expect Bitcoin to replace gold as a store of value.
- The live track record of our investment strategy consisting of Bitcoin and gold, has so far delivered outstanding investment results, meeting our high expectations.
- In our view, it is most effective to define a certain strategic allocation of cryptocurrencies and rebalance them regularly. This dampens the drawdown potential of cryptocurrencies within a portfolio and uses the volatility to the investors' advantage.
- A combined crypto-gold portfolio seems to be particularly suitable for this purpose due to their relatively low correlation and the high volatility differential.



Back in 2015, we first included the topic of cryptocurrencies in our In Gold We Trust report. Since then, we have dealt intensively with this important topic in all its facets, devoting a separate chapter to it since 2016.¹ We will continue the tradition this year. In our opinion, the increasing prevalence of cryptocurrencies in general and Bitcoin in particular has come about as a direct consequence of monetary climate change.

Over the years, we have analyzed and reviewed a number of different aspects related to digital gold in our In Gold We Trust reports:

*"Bitcoin and other cryptocurrencies are still in their infancy, and it is very exciting to follow these developments. Time will tell whether other alternative currencies can establish themselves alongside gold in the long term, or whether cryptocurrencies will even usher in a new era with a revolutionized monetary system."*²

Many of our views on future developments eventually came to pass:

*"Although Bitcoin and the underlying blockchain were originally designed to replicate the traits of gold that make it uniquely suited to be money, Bitcoin represents a unique asset class and can be an integral part of wealth management from the perspective of portfolio diversification."*³

Recently, the advantages and disadvantages of gold and Bitcoin have once again been discussed among investors and in various debates.⁴ However, we do not want to compare gold with Bitcoin again this year, as we have already dealt with this topic in detail in the past. If you are interested in our thoughts, we would like to refer you to the chapter "Cryptos: Friend or Foe?"⁵ in the In Gold We Trust report 2018, an analysis that has lost none of its topicality:

*"...as we have tried to show in this chapter, gold and cryptocurrencies do not have to be viewed as opposites at all. Of course, each has its advantages and disadvantages. However, they complement each other and there is no reason to play one off against the other."*⁶

We remain committed to our long-standing view that Bitcoin and gold are complementary assets. Although we believe that the role of digital stores of value will tend to increase further, we do not expect Bitcoin to replace gold as a store of value.

In times of monetary climate change, the market for liquid, noninflationary assets is continuously growing.

In the coming years, more and more capital will be looking for easily investable, quantitatively limited stores of value. In particular, rising price inflation rates and thus even lower real interest rates will further fuel the hunger for these value-preserving assets. In our view, being bullish on both assets is not a contradiction. On the contrary, a combined portfolio of digital and physical gold makes sense for many reasons. We expect these types of combined portfolios to be increasingly used, similar to how multi-asset portfolios now combine equity and bond asset classes. Here, too, a wide variety of combinations are conceivable, each of which can reflect a wide range of risk/return potentials.

Based on our conviction that portfolios consisting of precious metals and cryptocurrencies have an extremely promising risk/return potential, we have already launched two such investment strategies with different risk/return characteristics as investable mutual funds.⁷

Gold & Bitcoin – stronger together?

In this context, we would like to remind you of our contribution from the In Gold We Trust report 2019. In the chapter "Gold & Bitcoin - stronger together?" we pointed out in detail the advantages of a combined investment strategy of gold and Bitcoin.⁸ Our suggestion was to combine the two assets in one portfolio and in case of strong deviations from the strategic asset allocation to return countercyclically to the initial positioning via an event-based rebalancing. For the rebalancing process, options can also play an important role to buy the underweighted assets by writing short puts and still achieve significant premium gains.⁹ Analogously, covered calls can be written on the existing positions, which would have to be reduced anyway due to the overweighting.

¹ See "Gold-Backed Tokens in 2020 – A Glimpse into The Future?", In Gold We Trust report 2020, "Gold vs. Bitcoin vs. Stablecoins", In Gold We Trust report 2019, "Gold and Bitcoin: Stronger Together?", In Gold We Trust report 2019, "Crypto: Friend or Foe?", In Gold We Trust report 2018, "In Bitcoin We Trust?", In Gold We Trust report 2017, "Past, Present, and Future of the Monetary Order", In Gold We Trust report 2015

² "Financial Repression: When the Grasping Hand of the State Runs Rampant", In Gold We Trust report 2016, p. 111

³ "In Bitcoin We Trust?", In Gold We Trust report 2017, p. 114

⁴ We also participated in a debate in this context and discussed with Saïfedean Ammous, author of the book The Bitcoin Standard. The video of this conversation can be found here.

⁵ See "Crypto: Friend or Foe?", In Gold We Trust report 2018

⁶ See "Crypto: Friend or Foe?", In Gold We Trust report 2018, p. 186

⁷ See "The fruit of our labour – Our investment funds", Inrementum

⁸ See "Gold and Bitcoin: Stronger Together?", In Gold We Trust report 2019

⁹ When writing a put option, the writer commits himself to buy an asset at a defined price at a certain point in time and receives an option premium for it. Since an additional purchase is planned anyway in the case of an underweighting, a premium can be generated via the writing for a transaction which one intends to carry out anyway in the case of falling prices

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The most important arguments for a rule-based, combined investment strategy at a glance:

- Reduction of volatility or of maximum drawdowns against cryptocurrencies
- Diversification effects and thus improved risk/return characteristics
- Maintaining an asymmetric payoff profile (right-skewed returns)
- Return optimization through systematic rebalancing (rebalancing bonus)¹⁰
- Significant cash flow income via an option writing overlay

To substantiate these theses, we analyzed a quantitative back-of-the-envelope calculation of a combined portfolio in 2019. We came to the following conclusion:

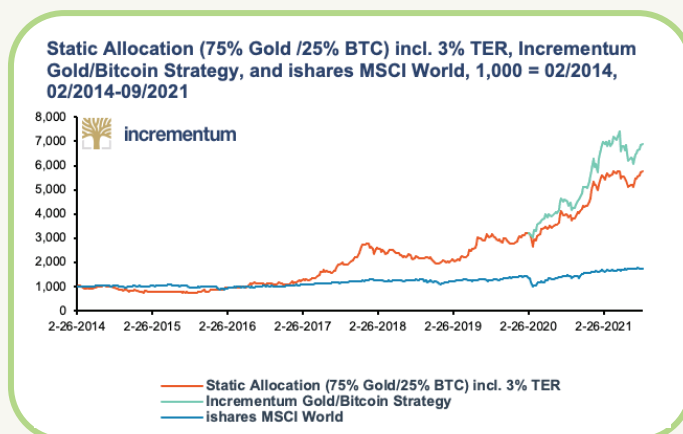
"By combining both assets, the investor benefits on the one hand from the low correlation of both assets; on the other hand he can use the volatility of Bitcoin to his advantage through a rule-based rebalancing. In addition, option strategies are also applicable, which generate an interesting return by collecting the option premiums and further lower the volatility."

Theoretical backtests should always be taken with a grain of salt when it comes to portfolio strategies. However, in the meantime, we have put the investment strategy into practice and have well over a year's worth of data available for analysis. The task is to find out whether the combination of the two assets has also delivered in practice, i.e. after deduction of all fees and any implementation discrepancies due to the liquidity situation, etc., that we had expected ex-ante.

For the first investment strategy of this kind managed by us, we have chosen 25% Bitcoin and 75% gold as our strategic asset allocation.¹² When evaluating performance, we analyze all common risk/return ratios that allow risk-adjusted comparability of the price performance of the different investments. To ensure the best possible comparability, all ratios are based on logarithmic risk/return data.

Returns

Let's start with returns. We look at the historical returns of our strategic asset allocation compared to the returns of global equity markets. Additionally, we have seen the returns of the live track record of our strategy since the strategy's launch on February 26, 2020.

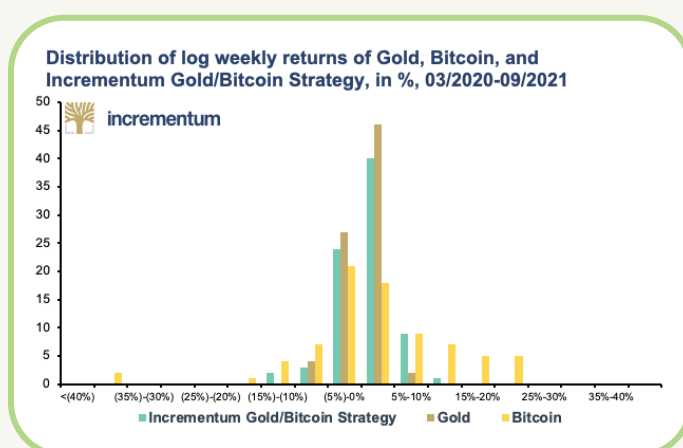


Source: Reuters Elkon, Incrementum AG

According to the diagram, our strategy shows a return of 115.5%, Gold a gain of 10.6% over the same period, Bitcoin of 450.2%. Our strategy was able to outperform the strategic asset allocation by 28.6 percentage points after deducting all costs.¹³

Distribution of returns

When it comes to the distribution of the returns, on the one hand one can observe that the strategies return distribution is similar to that of gold, except that it reflects the right-skewed nature of Bitcoin.



Source: Reuters Elkon, Incrementum AG

¹⁰ See Bernstein, William: "The Rebalancing Bonus: Theory and Practice", 1996

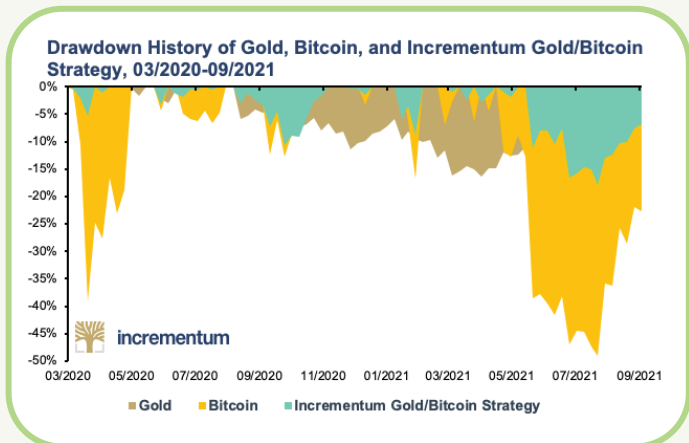
¹¹ "Gold and Bitcoin: Stronger Together?", In Gold We Trust report 2019, p. 261

¹² Meanwhile, we have launched a second, more dynamic strategy with a strategic allocation of 33% gold, 33% silver and 33% cryptocurrencies.

¹³ All return figures as of September 3, 2021

Risk

To assess risk, we look at the maximum drawdown. In our view, this is more informative than volatility, which does not adequately take into account any left-skewed moments in the distribution of returns.



Since the launch of our strategy, the "maximum drawdown" of Bitcoin shown in the diagram is 49.0%, that of gold 16.3%, and that of our combined strategy 17.9%.

As discussed in the In Gold We Trust Report 2019, the combination of the two investments significantly reduced risk during the period under review. This is noteworthy in that the strategy remarkably outperformed gold during the observation period.

A risk-adjusted comparability of returns can best be quantified using the common risk/return figures. Here, we have calculated the Sharpe ratio¹⁴, the Sortino ratio¹⁵, the Omega ratio¹⁶, and the return over maximum drawdown (RoMaD).¹⁷

Conclusion

We are convinced that a combination of selected cryptocurrencies – especially Bitcoin – within a diversified investment portfolio makes sense. The results achieved so far by our investment strategy clearly underline this thesis.

In our view, it is most effective to define a certain strategic allocation of cryptocurrencies and to rebalance them

	Incrementum Gold/Bitcoin Strategy	Gold	Bitcoin
Performance discret	115.51%	10.62%	450.19%
Performance In	76.79%	10.09%	170.51%
sd weekly	3.80%	2.56%	10.84%
Vol annualized	27.44%	18.47%	78.13%
Sharpe Ratio	1.84	0.36	1.44
sd down	2.92%	2.19%	8.54%
Vol down	21.06%	15.76%	61.57%
Sortino Ratio	2.40	0.42	1.82
sum neg	-0.78	-0.67	-2.26
sum pos	1.55	0.77	3.96
Omega Ratio	1.98	1.15	1.76
Mean	0.97%	0.13%	2.16%
Median	1.25%	0.42%	1.52%
Skewness	-0.53	-0.67	-0.80
Max DD	-17.88%	-16.30%	-49.04%
RoMaD	4.29	0.62	3.48

Source: Reuters Elkon, Incrementum AG

All the risk/return ratios of our investment strategy were clearly superior to the two individual investments for the period under review.

regularly. In this way, the high volatilities of the digital currencies can be dampened or used in favor of the investor. A combined crypto-gold portfolio seems to be particularly suitable for this purpose, as the relatively low correlation and the high volatility differential have a favorable effect on the so-called rebalancing bonus.

It is important to note, that past performance is no guarantee for future returns.

¹⁴ The Sharpe ratio is the measure of risk-adjusted return of a financial portfolio. A portfolio with a higher Sharpe ratio is considered superior relative to its peers. It is measured as the excess portfolio return over the risk-free rate relative to its standard deviation.

¹⁵ The Sortino ratio is a variation of the Sharpe ratio that differentiates harmful volatility from total overall volatility by using the asset's standard deviation of negative portfolio returns—downside deviation—instead of the total standard deviation of portfolio returns.

¹⁶ The omega ratio is a risk-adjusted performance measure calculated as the ratio of probability-weighted profits and losses.

¹⁷ Return over maximum drawdown is the average return in a given period for a portfolio, expressed as a proportion of the maximum drawdown level. A RoMaD of 0.5 would be considered the more attractive investment over one with a maximum drawdown of 40% and a return of 10% (RoMaD = 0.25)

CSI CHINA INTERNET MARKET VOLATILITY FAQ



Dr. Xiaolin Chen
Head of International,
KraneShares

There are a lot of questions regarding recent market volatility of China's technology stocks in the context of the country's new regulations on internet companies. Below we have compiled the five most frequently asked ones and answered them for you.

What are some near-term green shoots you are seeing following the recent regulatory uncertainty?

We have received new details on several specific near-term dates for regulation to take effect. China's Data Security Law, which will cover the usage, collection, and protection of user data, will go into effect starting September 1¹. The Personal Information Protection Law, which also protects internet user data, will go into effect on November 1². We believe clarity on timelines for these new regulations is positive for the market. We expect to hear additional dates announced soon.

On August 20th China's top market regulator, China Securities Regulatory Commission (CSRC), issued a statement pledging to "create conditions for audit cooperation with the U.S." Previously, Chinese regulators prohibited US-listed Chinese companies from providing their audit papers to the US Public Company Accounting Oversight Board (PCAOB). The CSRC's announcement removes a major roadblock for Chinese companies to continue listing on US-exchanges.

Other green shoots include the strong earnings that have been reported from several Chinese internet companies over the past few quarters and year. We have listed highlights from select companies most recent earnings reports:

- Tencent revenues increased 20% to \$21.4B quarter-over-quarter³.
- Baidu revenues increased 20.4% to \$31.35B year-over-year⁴.
- JD.com revenues increased 26.2% to \$39.9B quarter-over-quarter⁵.

We've also observed more stock buybacks by Chinese internet companies, a sign that these companies believe their stocks are undervalued:

- Tencent bought 650k shares in the last three days as of August 23.
- Baidu bought \$3B of shares since April 1 as of August 23.
- Alibaba increased buyback program to \$15B from \$10B on August 3.

Lastly, the continued growth of online retail sales within China further demonstrates the rapid growth of the sector:

- From January to July of this year, online retail sales reached 7.1 trillion yuan (1.01 trillion USD), a year-on-year increase of 21.9%⁶.

Is there a timeline for when the recent wave of new regulations will end?

As a general guide, we refer to The Ministry of Industry and Information Technology (MIIT), which announced that a six-month review of internet companies commenced on July 23. The review encompasses cybersecurity, data privacy, consumer protection, and monopolistic behavior. So far, 68 leading internet companies including Baidu, Alibaba, Tencent, ByteDance, Sina Weibo, and iQiyi have completed rectification as required⁷.

Additionally, on July 6, China's State Council released guidelines on curbing "illegal activities in the securities market and stepping up supervision of Chinese firms listed offshore⁸". The document outlined a 2022 timeline for "major progress" to be made on these issues, which aligns with the timeline set forth by the MIIT.

The document also confirmed that China "will seek to further deepen cross-border audit supervision cooperation in a law-based and reciprocal manner," and reiterated "China's commitment to integrate with the global capital markets". Amidst the heightened regulation, China continues to support both US-listed Chinese companies and its broader capital markets.

Moreover, both the MIIT and State Council's timelines align with China's political calendar. First, the Beijing Winter Olympic Games are set to commence in February 2022, which places a potential deadline on wrapping up new regulations. Second, in March 2022 the final meeting of the five-year session of the 13th National People's Congress (NPC) is scheduled to occur. In this session, China will elect government officials for the 14th NPC.

During this time, China's leaders will likely want to consolidate their agenda and demonstrate significant achievements for China's citizens. Such recent achievements from the regulatory campaign include: easing the financial burden of tutoring, which accounted for a staggering 25% of urban household income⁹, supporting minimum wage for China's 200 million gig-economy workers¹⁰, and addressing income inequality; Tencent recently pledged to contribute \$15 billion to a social aid fund¹¹.

As China's leadership notches popular wins ahead of the NPC meeting, they have generated price pressure on China's internet sector. As we have seen recently, any positive news about easing regulation leads to a spike in performance and vice versa. We believe China's leaders will likely want to put new regulations and market volatility behind them well before the Olympics and the NPC meetings.

Is China explicitly targeting US-listed Chinese internet companies with new regulations?

Following the government-led cybersecurity review launched on DiDi Global shortly after its US IPO, many investors have asked whether we believe US-listed Chinese companies are being targeted specifically.

The short answer is no. What is happening with DiDi – which is not held in CSI (Overseas China Internet Index) – is a separate issue, and is exactly why the government halted Ant Group's IPO in November 2020. The key difference is that since Ant was preparing to list in Hong Kong the regulators were able to prevent it from going public. Ant's IPO prospectus included financials compiled from before new fin-tech regulations were introduced. If Ant had gone public before the announcement of these new regulations it would have likely had a detrimental impact on the stock, which is exactly what happened to DiDi. It is important to note that Didi's IPO prospectus had 60 pages of risk factors. The government's interest in enforcing new regulations is industry-wide not specific to US-listings.

Following the initial DiDi shock, it is now clear that the CSRC is actively working with US-listed Chinese companies to enhance their compliance with US regulation. Earlier in the month, the CSRC reinforced their support for US-listings, stating that Chinese companies should be free to list wherever they choose if they abide by the laws of both jurisdictions.

"It is our belief that Chinese and U.S. regulators shall continue to enhance communication with the principle of mutual respect and cooperation, and properly address the issues related to the supervision of China-based companies listed in the U.S., so as to form stable policy expectations and create a benign rules framework for the market. The CSRC has always been open to companies' choices to list their securities on international or domestic markets in compliance with relevant laws and regulations. Regardless of their listing venues, companies shall abide by applicable laws, regulations, and regulatory requirements in both their listing jurisdiction and operating jurisdiction."

The CSRC's comments were issued in response to a statement made by SEC chair Gary Gensler following the DiDi IPO. Gensler expressed concern over Chinese companies going public through Variable Interest Entity (VIE) structures in the United States without complying with China's new guidance on cybersecurity reviews for companies raising capital through offshore entities. He also reiterated that investors should be aware that VIE companies are Cayman Island-based shell companies and that there should be additional disclosure for VIEs. A VIE share certifies ownership of a contractual right to a percentage of a company's profits, not ownership of a portion of a company itself, as provided by a traditional share of stock.

Based on these statements, we believe regulators in both countries are supportive of allowing Chinese companies to list in the United States but have a mutual desire to ensure there is transparency and that these companies comply with regulation.

How might CSI be affected by the U.S. delisting legislation? Can you convert US-listed shares to Hong Kong shares for companies with dual listings?

Congress passed the Holding Foreign Companies Accountable Act in December 2020. The new law requires all US-listed companies to allow the Public Company Accounting Oversight Board (PCAOB) to inspect their audit books or face delisting. Since the law was passed, we have received questions regarding US-listed Chinese companies held within CSI. We believe there are three key points to consider regarding the potential for delisting.

1. There is a long runway before this becomes an immediate concern. Under the current law, these companies have a three-year window to become compliant. Furthermore, the three-year timeline has yet to be activated. Recently the Senate passed the 'Accelerating Holding Foreign Companies Accountable Act,' which would reduce the window to just two years. The bill has not yet been taken up by the House of Representatives¹². There is a significant window for companies to come into compliance. We believe more open dialogue between the SEC and CSRC is likely based on recent statements.
2. The SEC has proposed an orderly solution to the PCAOB audit issue. The SEC would allow a 'co-audit' in which the US auditors of Chinese companies listed in the United States would be able to validate their Mainland subsidiaries' work¹³. Most US-listed Chinese companies are audited by the 'Big Four' US accounting firms: PWC, Deloitte, Ernst & Young, and KPMG.

3. KraneShares can convert US-listed CSI holdings to their Hong Kong-listed equivalents. Currently, about 64% of CSI's holdings by weight are comprised of US-listed Chinese companies¹⁴. Within the CSI portfolio, Alibaba, JD.com, NetEase, Baozun, Baidu, Autohome, Bilibili, and Trip.com have secondary listings on the Hong Kong Stock Exchange (HKSE). If we were to convert all the dually listed names today, we could reduce the US-listed weight from 64% to 28%¹⁵. We have already seamlessly executed tests converting Alibaba US to Alibaba HK. While we are prepared to convert entire positions, we still hold US listings today due to their favorable liquidity, size, and lack of stamp tax. Additionally, in March of this year, the HKSE launched a consultation "to streamline the listing regime for overseas issuers and facilitate listing by companies listed on qualifying exchanges."¹⁶ This would relax the HKSE's more stringent requirements and allow for Chinese companies currently listed in the US to relist in Hong Kong.

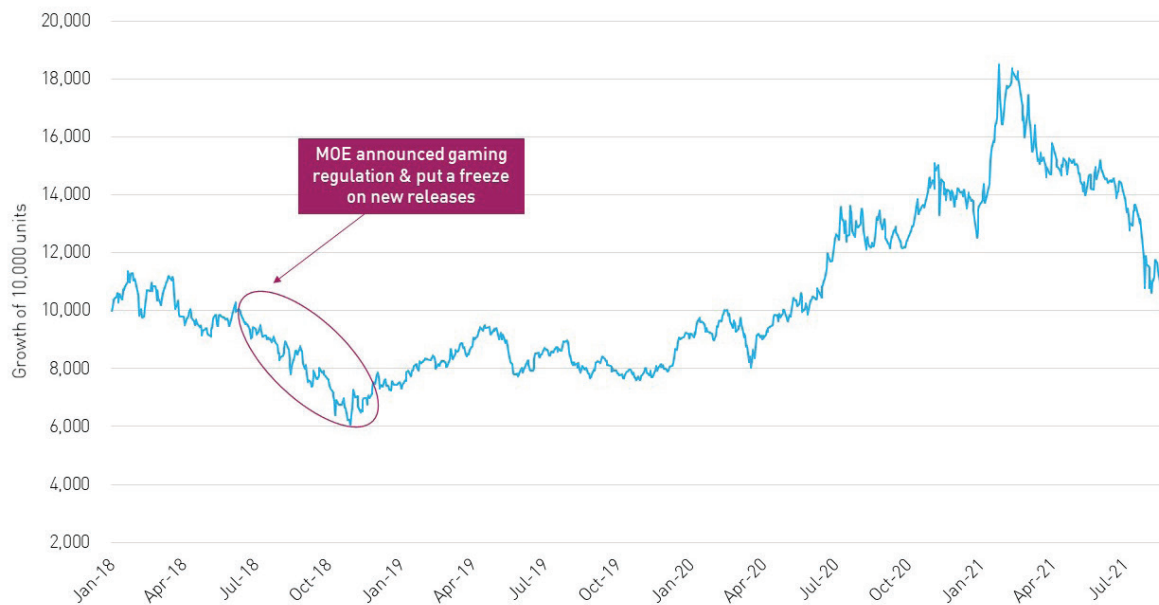
What do you think the parallels are between past regulations on internet companies versus now?

While today's regulatory review is touching multiple companies within the sector, we have seen similar reforms in the past. Regulators restricted the approval of certain Tencent's games in 2018 and curbed Baidu's healthcare advertising in 2016. In both cases, the companies' stock experienced short-term pressure but subsequently rebounded not long after.

In 2018, China spent months restructuring its approval process for new media (i.e. games and movies), maintaining policies restricting anything too violent or offensive for release. Ten months into the review, the newly formed Online Game Ethics Committee finally ended the suspension on new game releases. However, the freeze weighed heavily on Tencent, as its share price dropped roughly 30% over the course of 2018, losing more than \$200 billion in overall value. Tencent was receptive to the Committee's concerns and implemented new policies including mandatory identity/age verification and limits on younger users' playtime. Subsequently, Tencent received a wave of approvals on new games, and the stock recovered in 2019.

Baidu's 2016 advertising regulation followed a similar path. Regulators stepped in to make Baidu's medical advertisements more transparent after the death of a student who underwent an experimental cancer treatment that he found through a non-disclosed advertisement on Baidu's search engine. New regulation was introduced to clean up in-search healthcare ads and make it so the positioning of paid-for search ads of any kind could no longer be solely based on the highest bidder.

Tencent Performance



Data from Bloomberg as of 8/19/2021. Past performance does not guarantee future returns.

Baidu temporarily halted its healthcare advertising and focused on revamping its policies to comply with the new regulations. Baidu's sales were impacted in the following two quarters as healthcare advertising accounted for 20-30% of its overall search revenue at the time. In the long term, Baidu recovered, and its shares rebounded shortly after.

We believe these earlier instances of regulatory intervention offer insight into how today's new rules may affect the sector. Tencent's Q2 financial results released on August

17 highlight the continued success of the company despite new regulation; revenues increased 20%, games revenue increased 12%, FinTech revenues increased 40%, etc.¹⁷ The new regulation, which places stricter limits on gaming hours of children under 12, has an insignificant impact on Tencent's business, as revenues from this age group account for just 0.3% of total gaming revenue. China's main audience for gaming includes those between the ages of 18 and 35 (90-97%), who would not be affected by the regulation.

Tencent Performance



Data from Bloomberg as of 8/19/2021. Past performance does not guarantee future returns.

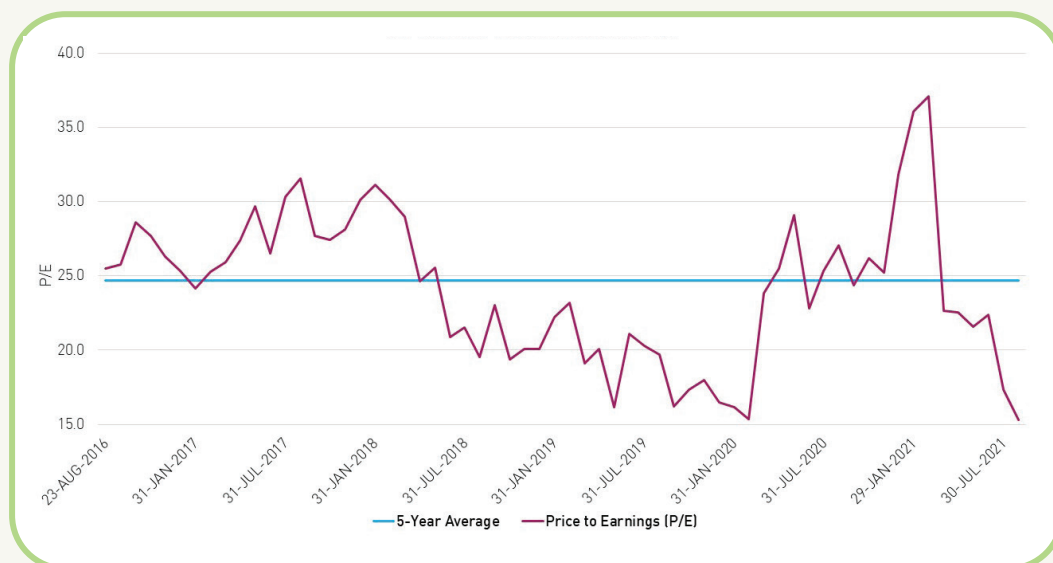
During Tencent's Q2 earnings call, President Martin Lau directly addressed the current environment, stating that internet regulation is a global phenomenon as it has occurred in Europe and the US. Most importantly he's "confident [Tencent] can be compliant" and will be a long-run beneficiary to regulation.

CSI's price-to-earnings ratio (P/E) has fallen dramatically. CSI is currently at its most attractive valuation in five years.

CSI has experienced periods of volatility in the past. While past performance is no guarantee of future results, each major contraction has subsequently been met with a period of even greater expansion.

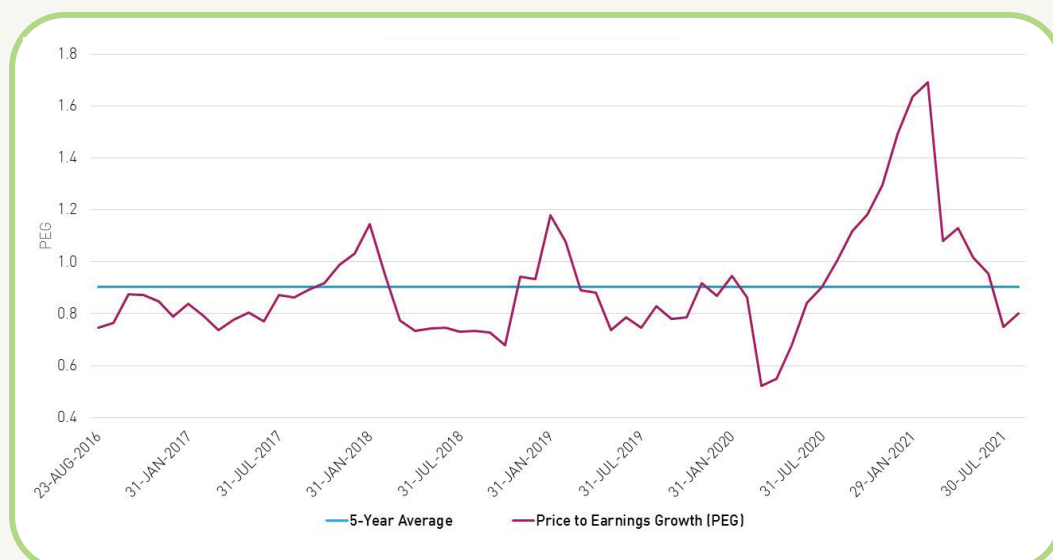
Have any additional questions we did not address here? Please email info@kraneshares.com or get in touch with your client service representative.

CSI Overseas China Internet Index P/E



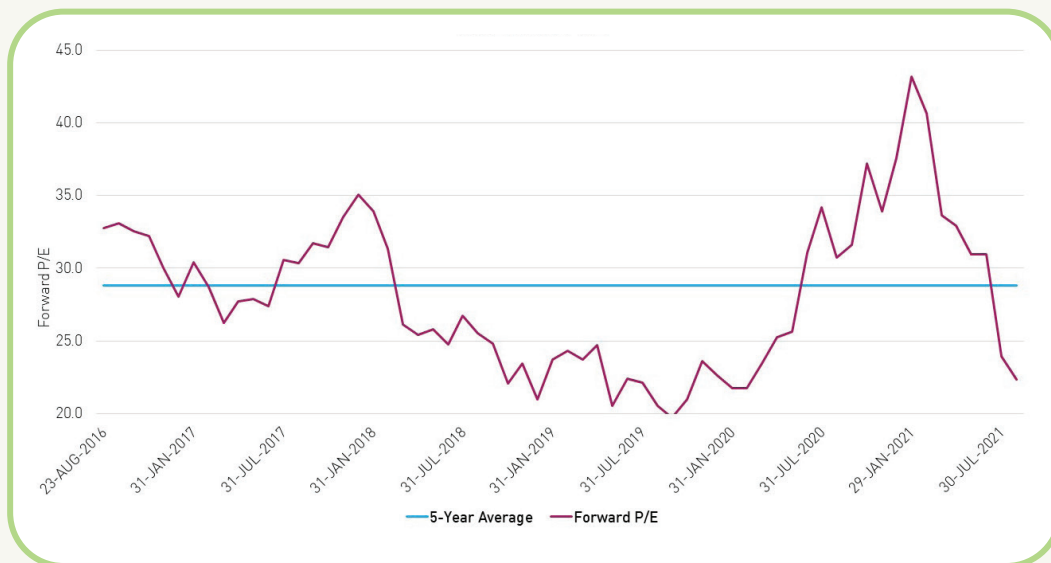
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CSI Overseas China Internet Index PEG



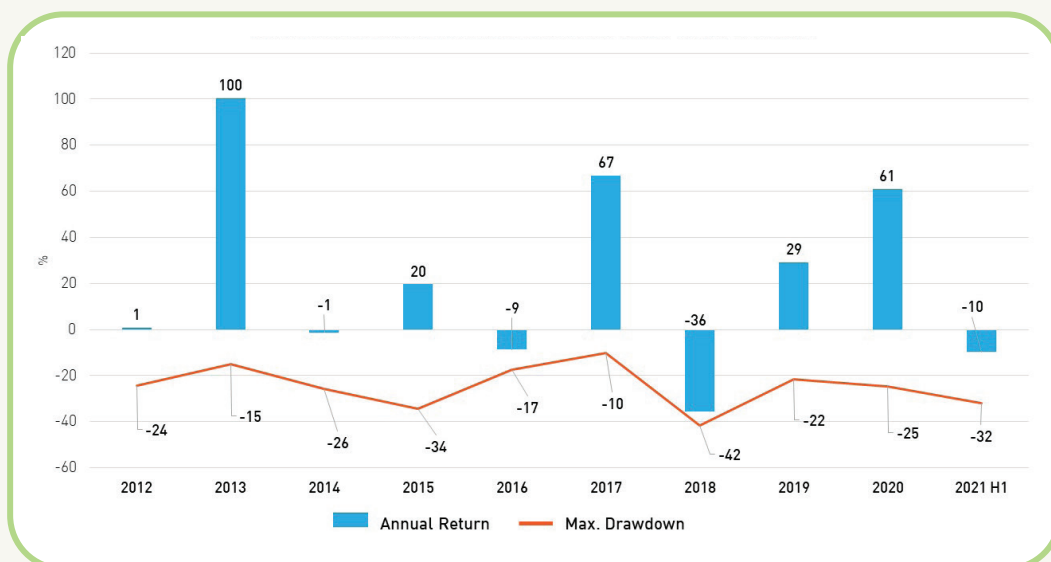
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CSI Overseas China Internet Index Forward P/E



Data from FactSet as of 8/23/2021.

CSI Overseas China Internet Index Annual Return & Max. Drawdown



Data from Bloomberg as of 8/23/2021. Indexes are unmanaged and one cannot invest directly in an index. Indexes do not reflect fees or other costs associated with investing. Past performance does not guarantee future results.

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5. JD.com, "Quarterly Results", August 23, 2021.
6. National Bureau of Statistics of China, "Total Retail Sales of Consumer Goods Went Up by 8.5 percent from January to July 2021", August 17, 2021.
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15. Data from Bloomberg as of 8/19/2021.
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Term Definitions

Price to Earnings (P/E): the ratio for valuing a company that measures its current price relative to its per-share earnings (EPS).

Price/Earnings to Growth ratio (PEG): the ratio for determining a stock's value which also factors in the company's expected earnings growth.

Forward P/E: Forward price to earnings is a version of the ratio of price-to-earnings (P/E) that uses forecasted earnings for the P/E calculation.

CSI Holdings Mentioned:

1. Tencent (10.98% of CSI Net Assets as of 8/18/2021)
2. Alibaba (10.39% of CSI Net Assets as of 8/18/2021)
3. JD.com (7.60% of CSI Net Assets as of 8/18/2021)
4. NetEase (4.40% of CSI Net Assets as of 8/18/2021)
5. Baidu (4.25% of CSI Net Assets as of 8/18/2021)
6. Trip.com (4.23% of CSI Net Assets as of 8/18/2021)
7. Bilibili (3.49% of CSI Net Assets as of 8/18/2021)
8. Autohome (0.81% of CSI Net Assets as of 8/18/2021)
9. Baozun (0.32% of CSI Net Assets as of 8/18/2021)
10. ByteDance (0% of CSI Net Assets as of 8/18/2021)
11. Sina Weibo (0% of CSI Net Assets as of 8/18/2021)
12. iQiyi (0% of CSI Net Assets as of 8/18/2021)

Holdings subject to change. Current and future holdings subject to risk.

Index Definitions:

The CSI Overseas China Internet Index: The CSI Overseas China Internet Index selects overseas listed Chinese internet companies as the index constituents; the index is weighted by free float market cap. The index can measure the overall performance of overseas listed Chinese internet companies. The Index is within the scope of the IOSCO Assurance Report as of 30 September 2018. The index was launched on September 20, 2011.



BITCOIN: THE CONTINUOUS INSTITUTIONAL ADOPTION OF CRYPTOCURRENCIES



Bradley Duke
CEO,
ETC Group

Bitcoin lately retook \$40,000; Amazon, Goldman Sachs, Twitter, Tesla and Shopify all caused crypto confidence, while exchanges and DeFi platforms cut leveraged trading and synthetic token trading in a bid to placate regulators.

The continuous institutional adoption of Bitcoin

Bitcoin adoption has grown significantly: on institutional balance sheets, in place of cash treasuries, in government pension funds and more broadly in payments and beyond, and while some countries continue to adopt a cautious or outright hostile stance to the world's first and largest crypto asset, others like El Salvador have made historic strides to integrate Bitcoin into their national currency models.

In corporate America, Tesla (NASDAQ:TSLA) is holding onto its 1.3 billion Bitcoin position in Q2, Goldman Sachs (NYSE:GS) has filed to launch a DeFi and Blockchain ETF with the US market regulator and the \$200 billion market cap Shopify (NYSE:SHOP) is now allowing merchants to sell Non-Fungible Tokens (NFTs) — the vast majority of which run on the Ethereum blockchain — directly through their stores.

As adoption clearly has grown, Bitcoin has rightly faced criticism of its proof of work consensus algorithm for that mechanism's contribution to outsize energy use and, by extension, climate change.

Leading a response to environmental concerns, alongside cryptocurrency miners starting to commit to green energy use for their mining operations, ETC Group was the first European crypto exchange traded product provider to announce a carbon neutral policy for its ETC Group Physical Bitcoin listed product:

"Companies benefiting from cryptocurrencies like bitcoin are right to take meaningful steps to address climate concerns. We are pleased to see that bitcoin miners are increasingly sourcing renewable electricity, but we at ETC Group feel it is important to do more and act now. That's why we have launched our initiative to calculate our bitcoin product's carbon footprint and offset it with high quality projects curated and monitored by some of the world's most respected climate action companies." — Bradley Duke, CEO, ETC Group

The de-Chinafication of Bitcoin

During the second quarter of 2021, Bitcoin reached an all-time high of over \$63,000 in mid-April, before losing half its value to end the quarter at \$35,069. One reason for the fall in price has been the continuing negativity toward crypto from the Chinese Government. In May, China's political cabinet ignited a campaign to crack down on mining and cryptocurrency trading, ostensibly to control risks to its population. The People's Bank of China, the country's de-facto central bank, said it had called upon big banks and payment processors, including Alibaba (NYSE:BABA) subsidiary Alipay, and state-owned lenders like the Agricultural Bank of China, the Postal Savings Bank of China and the Industrial and Commercial Bank of China.

"Speculative trading in virtual currencies roils economic and financial order, spawns the risks of criminal activities such as illegal asset transfers and money laundering, and endangers people's wealth."
— People's Bank of China, 21 June

An outcome from this was the beginning of a mass migration of cryptomining power. BIT Mining (NYSE:BTCM) for instance has delivered its first batch of 320 mining machines to Kazakhstan, with plans to move two more tranches totalling 2,600 machines by July¹. The company's Sichuan operations were effectively shut down on June 19 when it received notice that the state energy regulator would cut off its electricity supply. Mining pools in regions outside of China — like Foundry USA — are expected to be among the biggest winners of this shift, and access to renewable sources of energy are expected to quickly take precedence over coal and fossil fuels. One of the more interesting points to come out of this is how malleable the Bitcoin mining network is.

Key Bitcoin Events throughout Q2, 2021

On April 14, the cryptocurrency exchange Coinbase (NASDAQ:COIN) went public on NASDAQ via direct listing. Up to now, the listing is by far the biggest of a cryptocurrency company, with the San Francisco-based firm saying last month that private market transactions had valued the company at around \$68 billion this year, versus \$55.8 billion back in September 2020. Venmo, currently ranked the second most popular financial app in the US, started allowing its 52 million+ users to store, buy, and sell Bitcoin on its platform on April 20. Like PayPal, Venmo will support four popular cryptocurrencies: Bitcoin, Ethereum, Litecoin and

Bitcoin Cash.

El Salvador became the first country in the world to make Bitcoin legal tender, becoming a dual-currency model alongside the US dollar. President Nayib Bukele announced the news on June 5, 2021 in a pre-recorded video played on stage at the Miami Bitcoin 2021 conference. The law will come into effect in September 2021, Bukele later said, with all 6 million citizens eligible for a \$30 airdrop of free Bitcoin if they download the official Chivo crypto wallet.

2.3 million UK adults now own crypto assets including Bitcoin, said the FCA, the UK's market regulator, in a consumer survey of June 17, 2021. 78% of UK adults said they have heard of cryptocurrency, up from 73% in a year, but overall understanding of cryptocurrency has declined.² ETC Group led the charge to be first to list a cryptocurrency exchange-traded product (ETP), the ETC Group Physical Bitcoin on UK's Aquis exchange, Euronext Paris and Euronext Amsterdam. Listed companies, trusts and ETPs now control 7% of the Bitcoin supply, according to industry research.³

Bitcoin's core competitor: Ethereum

Testament to the level of excitement around Ethereum in Q2 2021 was the vast amount of capital being moved around on-chain, and institutions starting to see the huge potential in the programmable money blockchain as it births vast new subsectors of crypto assets in decentralised finance⁴ and non-fungible tokens⁵. Interestingly, The European Investment Bank (EIB), the lending arm of the European Union, issued the first-ever bond on the Ethereum public blockchain, with Goldman Sachs, Banco Santander and Société Générale overseeing the sale. The €100 million (US\$121 million) bond is due to mature on April 28, 2023.

But in which aspects is Ethereum different from its biggest rival? Ethereum uses a native currency called Ether (ETH) which can be transferred or traded just like Bitcoin (BTC). But the true genius of Ethereum is that it is not simply another Bitcoin clone. The growing conviction around Ethereum as an asset class relies on its utility. In terms of the technology, we can think of Ethereum's blockchain as a base layer upon which a whole host of computing functions and programmes can be built. The key analogy here is that of the TCP/IP tech stack that underpinned the creation of the internet, along with all the various protocols that were built on top of it. And its broad practical application as a foundational computing framework means that investors are now looking to Ethereum as a valuable asset to track.

¹ <https://www.coindesk.com/chinese-bitcoin-mining-company-delivers-first-machines-to-kazakhstan>

² <https://www.fca.org.uk/publications/research/research-note-cryptoasset-consumer-research-2021>

³ <https://cointelegraph.com/news/listed-companies-trusts-and-etps-now-control-almost-7-of-the-bitcoin-supply>

⁴ <https://www.investopedia.com/decentralized-finance-defi-5113835>

⁵ <https://www.investopedia.com/non-fungible-tokens-nft-5115211>

⁶ https://www.ey.com/en_gl/news/2021/07/ey-contributes-a-zero-knowledge-proof-layer-2-protocol-into-the-public-domain-to-help-address-increasing-transaction-costs-on-ethereum-blockchain

One clear example of the mainstream finance world's willingness to embrace and co-evolve ETH2 solutions is EY's open source release of Nightfall 3, a Layer 2 scaling solution that leverages zk-Optimistic rollups to decrease transaction costs to one-eighth their standard rate. The fact that foundational private companies such as EY are not only investing in Ethereum products and developers — but actively creating solutions to its most intractable problems for enterprise to use — bodes particularly well for the blockchain. Certainly Wall Street is most excited about building new applications on Ethereum.

"Ethereum to me has a much higher utility [than Bitcoin] through smart contracts...suddenly something shows up and your Walkman looks like an abacus."
— Todd Morley, Guggenheim co-founder, speaking on Bloomberg TV

Crypto Outlook for the rest of 2021

Bitcoin has been on a rollercoaster ride in Q2 2021 with some huge adoption and institutional investment news, married with significant price volatility. But has the crypto ecosystem outgrown its founding member? A relatively small increase in the number of daily active addresses — just 11% year on year — could support this assertion, as interest and excitement about moving value on-chain shifts elsewhere. This could be attributed to a larger proportion of accounts simply holding Bitcoin and waiting for its value to rise, however.

Bitcoin is old technology and has largely been superseded by more recent blockchain innovations, so the prevailing narrative goes. Today, it is perhaps seen as more of a static store of value and kind of digital gold, than a thriving ecosystem capable of supporting some of the more exciting and useful functionality prevalent on other networks like Ethereum or Solana.

However, recent technical upgrades to the Bitcoin network repudiate that narrative and experts in the Bitcoin space are beginning to push back on this theme with more force. Indeed, the introduction of better smart contract functionality, the use of the Lightning Network inside a sovereign state money system and the possibility of attracting greater numbers of developers to build out its app ecosystem — which could include Bitcoin DeFi — rivals anything to come on Ethereum and there is clearly potential here for reconfiguration of the story behind Bitcoin to develop as we progress deeper into the 2020s.

One key point to note is that global financial and political institutions are not behaving as though Bitcoin could be regulated out of existence, as they have in the past. Rather they are coming up with solutions to ensure that the structurally important crypto asset lives on in perpetuity.

Another innovation that we may see widely adopted, where the legal and regulatory framework will potentially allow, is in companies paying employees in Bitcoin:

"By offering to pay employees in cryptocurrencies, companies may attract workers looking for a forward-thinking employer by distinguishing themselves as early tech adopters that offer compelling benefits and compensation. Companies with remote or international contractors or employees might also appreciate the ease of making cross-border payments in cryptocurrency. Who needs to pick among international currencies and worry about exchange rates when anyone can send and receive Bitcoin in minutes with nothing more than a cell phone?"
— Hassan Aburish, Nicholas Hulse and Erica Wilson, Fisher & Phillips LLP

About Cryptocurrency Exchange Traded Products

Exchange-traded products (ETPs) in Europe are divided into the following three categories: ETFs (Exchange Traded Funds), ETCs (Exchange Traded Commodities), and ETNs (Exchange Traded Notes). They are types of securities that track financial instruments, underlying securities, or an index. Listed on stock exchanges, such products trade similar to stocks meaning their prices can fluctuate from day-to-day and intraday. However, the prices of ETPs are derived from the underlying investments that they track, as they are designed to replicate the return of an underlying asset or benchmark.

Taking a closer look at ETCs, this form of exchange traded products comes as debt instruments that are collateralized (asset-backed), open-ended (no maturity date), and pay no interest. They trade on stock exchanges, like conventional stocks, but track the price of a commodity or a commodity index. This allows investors to gain exposure to the underlying commodity without directly buying the physical commodity or commodity futures contracts. In this sense, ETCs have a share price that moves up and down as the price of the underlying

⁷ <https://bitcoincore.org/en/2021/05/01/release-0.21.1/>

commodities fluctuate in value – in this case – the value of the underlying cryptocurrencies. Popular ETCs exist on e.g. precious metals (e.g. gold as the underlying commodity), and in case of ETC Group's products, the underlying commodity is cryptocurrency such as Bitcoin.

As with all investments, when you trade cryptocurrency ETCs your capital is at risk. Cryptocurrencies can be highly volatile and past performance is no guarantee of future performance.

About ETC Group

ETC Group is the issuer behind BTCetc – ETC Group Physical Bitcoin (BTCE), and is one of the leading providers of crypto ETPs within Europe. The products are listed on multiple exchanges across Europe, and are distributed by HANetf in all major European jurisdictions. The company's physical Bitcoin ETC under the ticker BTEC was one of the top exchange traded product (ETP) performer for inflows, daily turnover and spreads among eight Bitcoin ETPs in Q2 in Europe⁸. It has subsequently launched Ethereum and Litecoin ETCs in 2021, ETHetc – ETC Group of Physical Ethereum and LTCetc – ETC Group Physical Litecoin respectively and shows the intent of ETC Group to be the leading crypto ETP provider in Europe. ETC Group provides a weekly crypto market update through its Crypto Minutes. For more information and the possibility to subscribe, visit <https://etc-group.com/blog/>.

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⁸ <https://www.boerse-frankfurt.de/en/etfs>

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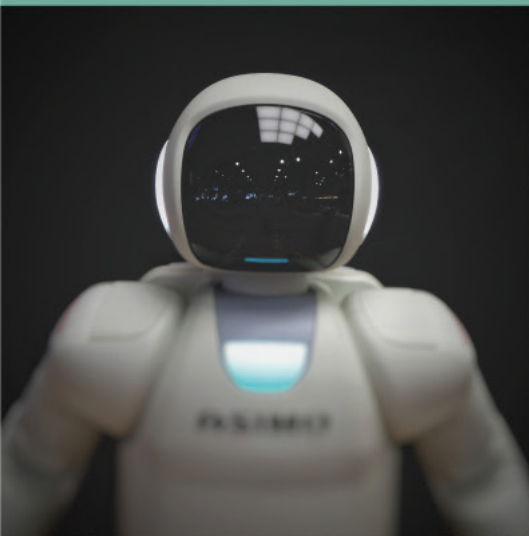
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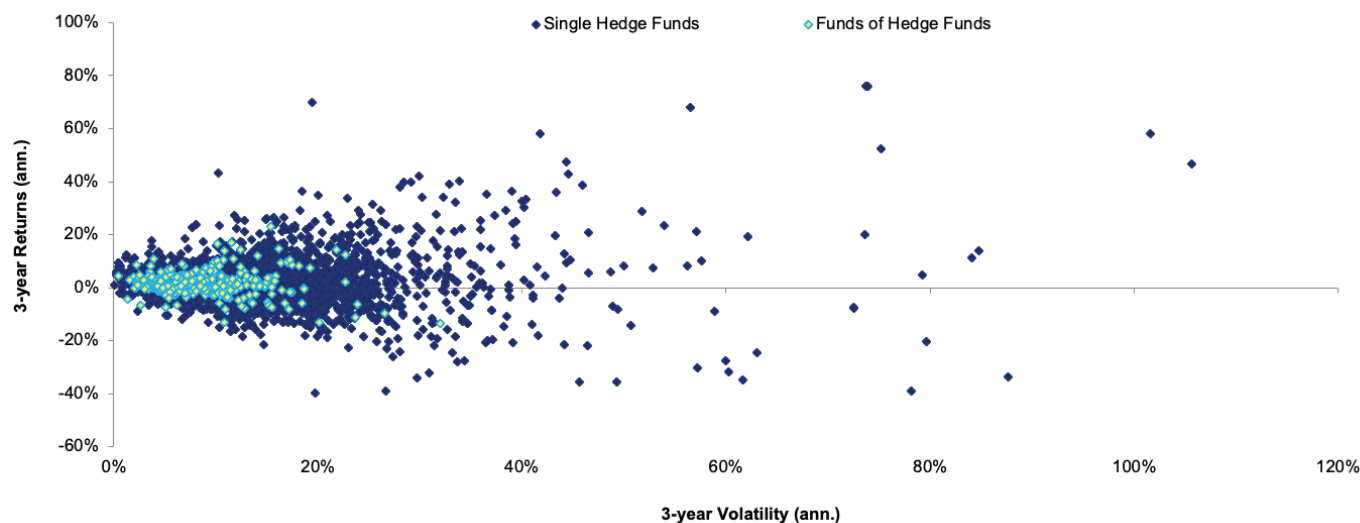
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Many investors have shared with us their impression that, during their careers, they have had to withstand 'once-in-a-hundred-years' tail events much more frequently than advertised. To investigate this feeling with data, we defined left-tail events as episodes in which the 'fear gauge' VIX Index closes up by five standard deviations or more in one day. From 1993–2007, there were left-tail risk events approximately once every two years. From 2008 onwards, left-tail risk events occurred twice every year, or four times more frequently! Most recently, COVID-19 led in the swiftest macroeconomic and market recalibration on record, with the VIX hitting its highest-ever level of 83 in March.

In light of this trend towards more dramatic market swings, we believe investors should construct portfolios to be resilient during left-tail events. It is famously difficult to foresee a left-tail event, and even more difficult to rapidly adjust a portfolio to prepare for such an event. In the absence of a crystal ball, most investors are better served by incorporating capital-efficient shock absorbers in their portfolio for the long-term. In our experience, a well-diversified basket of hedge fund strategies may serve this purpose by reshaping a portfolio's left-tail risk and providing downside cushioning during market shocks.

While many professional investors appreciate the portfolio construction benefits of hedge fund allocations, many portfolios we analyse are, in our view, under-allocated to the space due to a perception that hedge funds are risky. Some hedge funds did indeed underperform or even collapse amidst a flurry of headlines during the nadir of the 2008 financial crisis, or more recently in March. Investors who experienced or heard about such losses in individual funds may go on to exclude all hedge funds from their portfolios even though the asset class could be accretive. This may be the result of loss aversion, the feature of our brains that causes us on average to experience losses three times more acutely than we enjoy same-sized gains. We suspect that familiarity bias, the tendency to perceive things that are familiar as safe (and unfamiliar as not safe), comes into play as well. We will look at the data to determine how risky hedge fund investments are to balance these behavioural factors that may colour some investors' perceptions of the asset class.

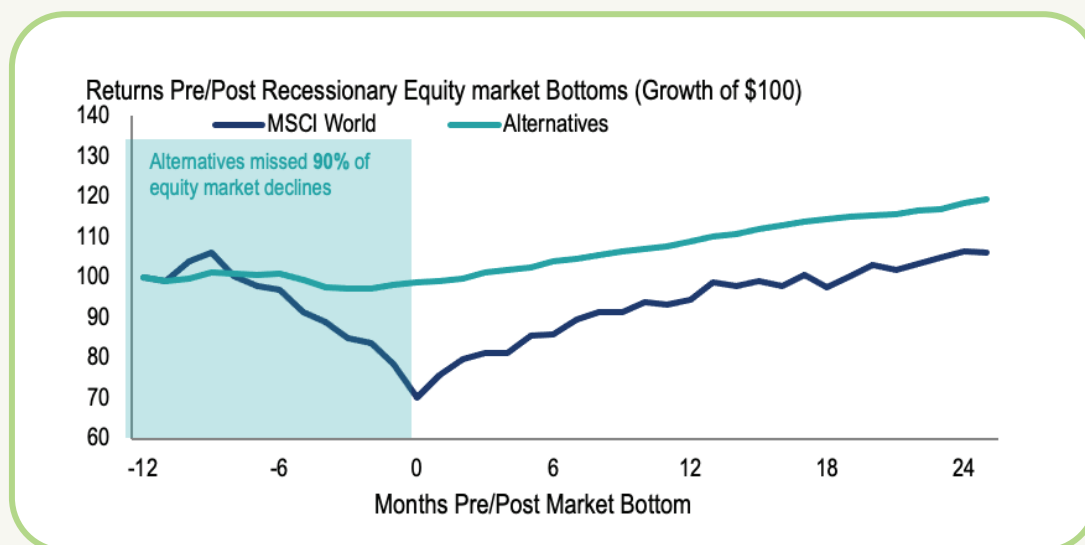
Exhibit 1 below shows the dispersion of individual hedge funds' return over the last three years, including this year's bear market. Some lost up to 40% per year, an obviously unpleasant experience for their investors. However, many more managers delivered positive returns and provided downside benefits during March, delivering 'what it says on the tin.'

Exhibit 1: Diversification may reduce the impact of outliers

Source: HFR Database, BarclaysHedge, and GSAM. As of July 31, 2020. Analysis based on a GSAM proprietary hedge funds universe of over 3,000 hedge funds, using HFR database and BarclaysHedge databases. Past performance does not guarantee future results, which may vary.

Further, a diversified portfolio of hedge funds may offer more predictable return and risk characteristics than a single hedge fund. As the chart shows, the historical performances of single hedge funds are widely dispersed, an effect we see with other asset classes as well. On the other hand, funds of hedge funds were more tightly packed. Looking forward, we expect diversified portfolios of hedge funds to have mid-single-digit volatility, lower than that of traditional equity or even high yield fixed income.

Historically, in most market upheavals, investors who have held alternatives have weathered smaller losses than those who held only equities, while still participating in the subsequent recovery. In our view, alternatives offer an efficient solution for investors looking to trim risk, yet remain invested.

Exhibit 2: Alternatives to reduce risk

Source: GSAM and Bloomberg. As of 31 December 2019. Alternatives is represented by the HFRI Fund of Funds. The chart shows the average monthly growth of a \$100 investment made one year before an average economic cycle market bottom (March 2009, October 2002, and October 1990) in both the MSCI World and the HFRI Fund of Funds Index (HFRIFO), a common index for alternatives. The analysis uses data from October 1988 to March 2011 for the MSCI World and from January 1990 to March 2011 for the HFRIFO, earliest available data through 24 months after the most recent recession. GROWTH OF \$100: A graphical measurement of a portfolio's gross return that simulates the performance of an initial investment of \$100 over the given time period. The example provided does not reflect the deduction of investment advisory fees and expenses which would reduce an investor's return. Investments in Alternative Funds expose investors to risks that have the potential to result in losses. These strategies involve risks that may not be present in more traditional (e.g., equity or fixed income) mutual funds. Past performance does not guarantee future results, which may vary.

ALTERNATIVE ASSETS

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Put simply, we must plan for left-tail events and unexpected bouts of volatility to continue. A 5-10% allocation to diversified hedge funds forms an important part of our planning, along with a right-sized allocation to core fixed income. Of course, thoughtful implementation of hedge funds is required to tap into the expected benefits of the asset class. A diversified, multi-strategy approach to hedge fund investing potentially delivers the downside cushioning we seek, and simultaneously allays some of the concerns that led some investors to avoid the entire asset class.

An appropriate analogy comes to mind: a broad diversified exposure to hedge funds is like a chorus, and the individual funds are like the singers. The chorus will likely sound in tune even if a few singers are not.

Risk Considerations:

Investors should also consider some of the potential risks of alternative investments: Alternative Strategies. Alternative strategies often engage in leverage and other investment practices that are speculative and involve a high degree of risk. Such practices may increase the volatility of performance and the risk of investment loss, including the entire amount that is invested. Manager experience. Manager risk includes those that exist within a manager's organization, investment process or supporting systems and infrastructure. There is also a potential for fund-level risks that arise from the way in which a manager constructs and manages the fund. Leverage. Leverage increases a fund's sensitivity to market movements. Funds that use leverage can be expected to be more "volatile" than other funds that do not use leverage. This means if the investments a fund buys decrease in market value, the value of the fund's shares will decrease by even more. Counterparty risk. Alternative strategies often make significant use of over-the-counter (OTC) derivatives and therefore are subject to the risk that counterparties will not perform their obligations under such contracts. Liquidity risk. Alternative strategies may make investments that are illiquid or that may become less liquid in response to market developments. At times, a fund may be unable to sell certain of its illiquid investments without a substantial drop in price, if at all. Valuation risk. There is risk that the values used by alternative strategies to price investments may be different from those used by other investors to price the same investments. The above are not an exhaustive list of potential risks. There may be additional risks that should be considered before any investment decision.

Equity securities are more volatile than fixed income securities and subject to greater risks. Small and mid-sized company stocks involve greater risks than those customarily associated with larger companies.

Fixed-income securities are subject to credit and interest rate risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and principal. This risk is higher when investing in high yield bonds, also known as junk bonds, which have lower ratings and are subject to greater volatility. All fixed income investments may be worth less than their original cost upon redemption or maturity.

General Disclosures

HFR disclosures: The HFRX Global Hedge Fund Index is designed to be representative of the overall composition of the hedge fund universe. It is comprised of all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage, and relative value arbitrage. The strategies are asset weighted based on the distribution of assets in the hedge fund industry. The HFRI Fund Weighted Composite Index is an equally weighted composite of constituent funds, as reported by the hedge fund managers listed within HFR database. The index encompasses over 2000 hedge funds.

Source: Hedgefundresearch.com

Diversification does not protect an investor from market risk and does not ensure a profit. The portfolio risk management process includes an effort to monitor and manage risk, but does not imply low risk.

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UK RETAIL: CLOSED FOR BUSINESS?



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Physical retail may have changed forever, but opportunities remain

Physical retail is dead. That is a mantra not too difficult to believe going by the news headlines. Store closures, administrations, stretched balance sheets, indebted private equity owners and the shift to online....Rents are down, vacancies are up, net investment weak and yields have been sailing outwards.

The headlines reveal much that is true – but they are not the whole story. Retail is not one homogenous asset class, not one single physical market. Shops, supermarkets, shopping centres, retail warehouses and ecommerce sheds, cities versus suburbs, local, convenience and comparison retail versus speciality, leisure and tourist-led trade, all are captured under the retail umbrella. While the decade has brought lasting damage to the sector, accentuated and accelerated by the pandemic, not all retail has been affected equally. Significant challenges remain, however there are grounds for cautious optimism.

Both footfall and sales have experienced a sharper recovery this year than when compared to the reopening of the sector in 2020, with UK Consumer confidence now ahead of its pre-pandemic level, having held firm or improved for six consecutive months. Meanwhile data from the ONS highlighted retail sales in June grew by 0.5% on the previous month and by 7.9% compared to the same period in 2019. There are lingering concerns that the consumer rebound may be running out of steam a little, but the surge in activity around the middle of the year has at least given cause for hope that savers from 2020 are becoming spenders in 2021.

The DIY industry has benefitted greatly during the nationwide lockdowns with spending on household items still some way above pre-pandemic levels. Independent retailers have, in certain geographies at least, also benefitted from a desire to shop local and avoid public transport, alongside a rise in staycations and corresponding leisure spend. Cornwall, Pembrokeshire and Blackpool reportedly all experiencing higher levels of retail mobility when compared to pre-Covid levels. With cross-border restrictions likely to remain for some months, the UK should continue to enjoy the recent surge in staycations and associated domestic spend.

Further positives are highlighted in the research released by Global Data, which shows that growth in click & collect over the next five years is expected to surpass that of online growth in practically all retail sectors. While it is to a degree inevitable that online growth rates will level off as saturation starts to have an impact, the increased focus on click and collect continues to demonstrate the requirement for a physical portfolio, close to population centres, that offers more than the anonymous warehouse can, at least in its current form. While many retailers are happy operating with an online only presence, others prefer that physical showroom space, that opportunity to demonstrate a good or a service, a chance to promote a brand or a lifestyle with the direct experience. Likewise many recognise the challenges, both in terms of cost and logistical hurdles,



in operating sales, deliveries and returns from a remote ecommerce platform in isolation, preferring a complimentary network of contact points for customers and suppliers, while offering an element of choice for their customer base. Many occupiers see this hybrid model as a solution and the pandemic has strengthened this belief, with even the likes of Amazon seeking physical representation in both small and larger format stores.

The grocery sector is leading the way for this 'omni-channel retailing', with sales for online groceries experiencing the greatest percentage increase of all sub sectors over the past 12 months. Yet the food and grocery market still has by far the highest proportion of in store sales at 87% of all expenditure, driven by consumers who prefer to be able to select their own items in person.

Undoubtedly, there are challenges

Mass market and comparison spend products that can be easily selected and sourced online are where we see the primary, ongoing threat. This has been borne out by distress in the mainstream fashion sector, in the dreadful performance of shopping centres over recent years and also the fall from grace of the department/variety store. Likewise, highly rented fashion parks have struggled with rental levels under continued pressure. Retailer margins continue to be squeezed by an ever-demanding consumer and raw material, haulage, staffing and frictional trade costs linked to both structural changes in the marketplace, Brexit and the pandemic.

Business rates are an issue, which in many cases now exceed the commercial rents payable. With a limited pot for occupancy costs, this has led to rents collapsing relative to property taxes. Rates suspensions during the pandemic have helped, though a more permanent solution is desperately needed. An online sales tax may not be a silver bullet for the high street with many of our high street anchors likely to be impacted by such a change. John Lewis & Partners, for example, had already moved to ca. 40% of sales online prior to the pandemic. It has been reported that a reduction in the business rates multiplier by around a third when combined with a 2% sales tax for online, could actually result in an increased burden for many businesses with a significant physical high street presence.

A changing landscape for property investors

As touched on above, many retailers continue to see the value in a physical retail presence, differentiating their brand through presentation, experience and engagement and with smaller, more geographically focused store portfolios. The new approach requires greater flexibility in lease duration

and payment terms, perhaps linked more to revenue or profitability via the turnover rent model – something that will require increased transparency from occupiers and will in the short term at least lead to pricing challenges for property investors. While we are yet to see this model gain huge traction in our own portfolios, it is certainly becoming more prevalent amongst the food and beverage sector, having been well established in the outlet mall sector for some time. Engagement, communication and co-operation remain paramount right now, particularly where rent collection is concerned. Medium term, an alignment on revenues and rents will be key and the underwriting capabilities of Investment managers will be tested.

Reasons to be optimistic

Whilst there are many who have had to endure financial hardship as a result of the pandemic, there are others who have benefitted and been in the fortunate position to have accrued savings, with Bank of England data suggesting UK households have saved over £180 billion during the pandemic. The release of even a proportion of this capital will have a meaningful impact on the fortunes of the sector.

The grocery subsector has been one of the most obvious beneficiaries over the last 18 months, both in terms of 'in store' sales, and of course online penetration rates. Segments of the population have been trialling the delivery of fresh produce for the first time, with the experiment inevitably set to become habit for many. The increased penetration rates for food have been the primary driver for such stellar growth of the online retail sales levels overall, given the quantum of spend in this category. Yet the food and grocery consumer continues to be the most wedded to in store purchases, driven by shoppers who prefer to be able to select their own items in person.

There has been a resurgence in local shopping habits, with support for independent retailers allowing suburban locations to outcompete city centres. Certain 'village'-like urban locations will continue to offer merit, as will food-led, convenience- and (albeit at rebased rents) experience-led locations, linked to leisure, tourism or education as their USP. Accessible retail warehousing, let off the correct rents, where socially distanced shopping can be undertaken more readily and without the need for customers to use public transport has continued to perform well. In schemes where there has been a prevalence of government mandated 'essential' retailers, occupancy and rent collection remains high. Indeed, such outlets are now forming part of the wider multi-channel platform for many occupiers via their integration into either click & collect services, delivery or a part of the strategy for returns, the latter being quite the profitability conundrum.

There are limitations...

Repurposing of high street and shopping centre assets in particular is a popular topic for market commentators. Redevelopment of obsolete physical structures is all well and good – but what is the appropriate fair value, what are the capital requirements, and what is the timetable for stabilising income in the business plan? Many of the entry points simply carry an unacceptable level of risk for core, institutional investors – and we remain a little sceptical about the credibility of some of the current plans for this wholesale repurposing at current pricing, particularly where ownership is fragmented and control of the overall streetscape is limited. At a level we anticipate both opportunistic yield driven investors to re-enter the market, as well as developers, but these buyers will require a tolerance for risk and long-term investment horizons.

... but don't discount all retail

There are undoubtedly some attention-grabbing yields available in the sector, but they need to be analysed alongside the leasing risk and importantly the likely longer-term sustainable rental tone for a given location. We would certainly guard against discounting all retail. Indeed, we see some genuine merit in retail warehouse parks, especially where income is underpinned by residual site value. From an income perspective too, the income yields on offer continue to look attractive with rent collection from the space resilient in the most part. Meanwhile, the grocery sector continues to set new pricing records, intimidating for some, but demonstrating the health and liquidity of the sector. Occupancy levels for supermarkets are perhaps unsurprisingly the highest of all retail segments according to data released by MSCl, a market benchmarking service.

Our cities are resilient and we continue to see first-hand the work that is being undertaken to ensure our urban spaces offer more in the way of mixed use, live/work environments, something which the UK has not traditionally delivered as well as its European counterparts. A move towards greater integration of uses should offer support to retail and leisure by way of a captive, immediate consumer. This will be of particular relevance with flexible working patterns gaining more traction amongst office employees, offering support to retailers that have traditionally thrived off this type of

trade in isolation. Partnership will play an even greater role. We are seeing local authorities stepping forward to facilitate development, recognising the existential threat from a collapse in their city centres, fearing a corresponding impact on public finances and civic pride.

Final thoughts

With retail pricing having corrected sharply, and with the market now yielding far higher than the All Property benchmarks, the challenge for investment managers who hold the sector is to focus on fundamental value. Conviction will be needed to buy the sector, but it should not be overlooked, and managers should guard against liquidation of assets out of fear of association with the retail badge. This is a particular challenge for those in the public markets and certainly true at a time of strongly negative sentiment towards the sector. Neither must one be seduced by this margin though. Rather, it is paramount to identify those locations and those styles of asset that are fit for purpose, accessible at the right price point and can offer defendable, sustainable income. Importantly, these opportunities do exist.

While we have been sellers of high street retail over the past five years or so, we have retained selected trade, convenience and DIY warehouse assets that have performed relatively well, offering attractive income alongside defendable residual and/or alternative use valuations. This sentiment is evidenced by the absence of any vacancy in the retail portfolio at the present time, with numerous lease renewals and lease re-gears conducted over the 12 months to June 2021 and the recent practical completion of the pre-let food store and drive-thru development at our site in Luton. Stock selection has been key to performance with the line-up consisting predominantly of the likes of Aldi, B&Q, B&M, Halfords, Pets At Home and others who have weathered the pandemic relatively well and delivered practically full rent collection over the year. The retail market might well be changed forever, but that does not mean that there will not be opportunity.

Risk disclaimer

Capital is at risk. The value of an investment is dependent on the supply and demand for the trust's shares rather than its underlying assets. The value of the investment will not be the same as the value of the trust's underlying assets.

The value of property related securities are likely to reflect valuations determined by professional valuers. Such valuations are the opinion of valuers at a particular point in time and are likely to be revised, and movements may cause the value of investments and the income from them to fall as well as rise, and investors may not get back the amount originally invested. Property and property related assets can sometimes be illiquid. A fund investing in a specific country carries a greater risk than a fund diversified across a range of countries. If markets fall, gearing can magnify the negative impact on performance.

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CHANGING VALUES



Josh Varghese
*Founding Partner,
Axia Real Assets,*

In a previous life not too long ago, I managed a C\$5B global REIT portfolio, one of the largest in Canada. For the first half of my investment career, I was a disciple of the classic Benjamin Graham bottom-up value focused investment school, and it worked well. The specific strategy was a simple one: identify real estate companies, almost regardless of the underlying real estate, that were trading at large discounts to their net asset values (NAV) and going through some form of positive change – a new management team, a new strategy, an activist investor, as examples – that analysts and investors were reluctant to give credit for, but that we viewed as large enhancements to the entity. Here, we were able to invest in companies at large discounts to the value of their underlying real estate, and if we were right on the positive changes at the company, our reward came in the form of a significantly higher stock price, a privatization, or some other corporate action at a sizable premium to our purchase price. The analysis was, over a three-to-five-year time frame, in our downside scenario, due to dividends collected and growing NAVs, our return was flat. In an upside scenario, annual returns would be 15-20%. This risk/reward skew made things compelling.

REIT by REIT, the thesis played out and much of alpha was generated. The strategy worked remarkably well from 2010 until sometime in 2015.

And then the strategy stopped working so well.

While we didn't lose money for our investors, the REIT portfolio significantly underperformed both broader equity markets and REIT indices for almost two years. The fact that my downside scenario of flat returns was playing out offered no solace in a world where public market investor time horizons continue to shorten, and a flat return in a world of 10-20% returns was akin to going bankrupt.

The decision to act swiftly took about a year and a half to make. During that year and a half, I fell into the classic value trap, which I will define as convincing oneself that the market is wrong and that the individual investor is right, while misreading all the surrounding signals. However, after my 18-month journey to climb out of that trap, I gutted virtually the entire portfolio and started fresh. It is not a fun day selling investments at 20-30% discounts to NAV in order to buy companies at 10% premiums. But it worked. The premium companies continued to compound capital at a much more accelerated rate than their peers, earning continued premiums which allowed them to outperform their peers and completely decimate the returns of their value-stock counterparts.

What is value?

If we boil it down to the simplest of terms according to financial theory (likely a vast oversimplification), value is the present value of future cash flows. Breaking it down further, the discount rate applied to generate that present value is comprised of 1) the risk-free rate and 2) the risk premium on the asset. It is these factors that are implicitly being calculated when a capitalization rate or "cap rate" is applied to a real estate asset. The difficulty, however, is not the math involved in the calculation, but in the assumption applied to these two factors to generate the appropriate discount rate. Adding significantly to the complexity is the fact that these two factors constantly change, meaning that value itself also constantly changes. And sometimes structural changes alter value significantly.

Macro environments matter

I learned that our value strategy had only thrived because of the bigger picture environment that permitted it. This five-year environment was characterized by low economic growth (relatively when compared to today), muted global technological disruption, and interest rates around the world that had been cratering. It was this environment that defined what value really was.

The world and the businesses within it were largely operating normally, and central banks were driving the bus adding to ultra-low interest rates and a scarcity of yield. From a real estate perspective, owning assets leased to tenants whose businesses are intact with no risk of business disruption supported by exceptionally low borrowing costs, there is hardly a better environment to be in. This meant that one had very few impediments to earning solid returns on one's real estate, whether the asset be a warehouse, a mall, an office, or other. This meant that real estate transaction markets were robust, and that asset prices continued to climb. This in turn meant that REIT NAVs were 'real', and well supported by an active transaction market in private real estate. This, then meant that a REIT trading at a large discount to NAV was bound to trade closer to its net asset value should 1) it improve its business model and 2) investors continue their unwavering confidence in NAV.

So what changed? Well, the world.

That unwavering global confidence in all things real estate started to wobble in 2016, and in some real estate asset classes, ended up completely derailing. The 2016 election of the new U.S. President kicked this off, as commitments to economic growth, tax cuts, and repatriation of cash to the

U.S. marked a broader "growth on" mentality in the markets, with accelerated capital flows into cyclical and growth sectors. Some of the most emergent, unproven corners of the market had stratospheric performance such as Bitcoin in 2017. Interest rates began to reflect this environment as they more than doubled in the U.S. from their lows in 2016 to their highs in 2018. The global economy was in good shape and safe investments were not as valuable, so why buy real estate when you can get a 10-bagger in crypto or Canadian cannabis, or at least a 50% return in a FAANG stock?

The capital flows side of the equation was a negative for broader real estate values. But there was a bigger, structural issue at play – the technology enabled disruption to our use, need, and therefore value for real estate.

It started with e-commerce and social media

E-commerce kicked things off, really started by Amazon, and then followed by almost every other successful retailer, with low-to-mid-teens percentage annual e-commerce penetration growth in the U.S. since 2010. Social media platforms Facebook and Instagram (not to mention Google and Apple) played no small part in this success. Capturing the constant attention of billions of humans globally, enabled by artificial intelligence and big data that they had generated monitoring the use of these humans over the past decade, these platforms had an enormous advantage. Competing against this type of access to customers and knowledge about them, traditional advertising channels were found flat-footed. How successful would a large poster in a mall of a couple wearing Gap khakis, that only updates every six months be in a world where Instagram will show its users fashions from Europe, Asia, Africa and the Americas that are tailored to their tastes and refreshes daily? Social Media influencers emerged. Tyra Banks in a magazine shoot is not going to tell you what to wear, just go to Kim Kardashian's or <insert random influencer's name here>'s IG page to see what you should be ordering. One's personal Facebook and Instagram network also played a role. Instead of being limited to seeing 5-7 friends in real life, we were now able to see 2000 of our closest friends and humbly evaluate our lives against theirs. These friends would also serve as marketing models showing us the latest fashions that they are fond of. This ease of access to trends and products fueled society's impatience as well as its need and expectation that people should be able to get what they want, when they want it, however they want it. The demand side of the equation was changing fiercely and individuals were in the driver's seat.

The customer demand, more fragmented than ever was being met by more fragmented supply. Ease and declining

costs of technology, and platform software companies like Shopify enabled the creative, fashion forward individual to launch their own line of merchandise, from dresses to mattresses to protein shakes. Individuals were able to earn supplemental income by launching new e-commerce companies, and if they were successful, could grow them into a full-time business.

None of this would have been possible to capitalize on, had the infrastructure and supply chain not adapted significantly to match this supply and demand, which it did.

With the ability to see new trends and products in an instant, the accessibility to hundreds of retailers, big and small in a few taps, and the ability to receive products in one to two days, what was one's motivation to walk through a mall? Mall owners tried to address this problem by adding more 'experience' to the centers, which could range from restaurants to waterparks. However they began to realize that the 'experience' industry is much more competitive and fragmented than the retail industry, and this seemed to only work for the very best malls, and would require heavy capital investment. The combination of lack of visibility of tenant demand and lack of visibility on capex in the asset began to increase the risk premium in the assets, negatively impacting the values of malls.

The effect of decentralization

Technological advancement is enabling societal change that is going to have structural impacts on how we use real estate, and what type of real estate is valuable. The example of technology's impact on brick and mortar retail is emblematic of a larger force – the decentralization effect that digitization is having on how humans interact.

If one can shop from anywhere, what else can one do from anywhere? As it turns out, many things. Watching movies, working out, ordering food, transferring money are some quick examples. These activities have all seen impacts on the value of the brick and mortar locations that used to house them. What else? Medical consultations? Buying and selling stocks? Dating? Hanging out with friends? Sure, easy.

Not only can people consume from wherever they want, they can create from wherever they want. From a computer screen one can mine a digital currency, design a videogame and generate revenue, or start an online retailer. Thousands of retail investors can mobilize to move multi-billion dollar company share prices without ever having to meet one another. People can choose to not work for a company and instead work for themselves by offering their talents as a

freelancer in many different fields, in control of their own hours. WeWork, with all its flaws, was early-stage evidence of a new work environment forming – one that focused on flexibility and creativity that was empowering individual workers more than ever before. A sort of democratization of everything has been taking place.

Covid of course unleashed many of these trends that were previously emerging on the fringes. Overnight, the world was forced to go digital, like it or not. Companies who had the proper technological infrastructure, had a relatively seamless experience migrating their operations to the cloud. Companies who did not, had to adapt quickly or disappear. Throughout the year, employees were hired, employees were fired, new projects were started, new business was won, new companies emerged, M&A happened, and the corporate world soldiered on. For all the complaints from CEOs who had been chomping at the bit to get their employees back into the office for fear of 'lost productivity', the work from home experiment seems to be going ok, if the S&P 500 at all-time highs is any indication.

What technology has been doing is transferring control from centralized incumbents to a distributed network of people. We have more options than ever to carry out more functions and continue to become less reliant on centralized locations. This certainly has and will continue to impact real estate positively and negatively.

The virtual world's impact on the physical world

While the physical world shut down throughout most of 2020 and into much of 2021, the virtual world thrived. Cryptocurrency, which needs no central location to be created, mined, nor to be transacted, hit the mainstream, with institutions beginning to embrace the new asset class, and Bitcoin reaching over \$1 trillion at its peak. As mentioned earlier, stock markets reached all-time highs and this time, the retail investor, powered by Robinhood and online chat platforms could participate. No one shook a single hand yet thousands were able to mobilize to move a stock in whatever direction they wanted. Many Netflix movies were watched. Pelotons were ordered. Cottages and vacation homes were purchased as people could work and communicate virtually. Far too many Zoom calls were had. Non-fungible tokens were created and traded. The Metaverse was (not so) quietly growing.

The Metaverse, in all its sci-fi rhetoric and potential, is really just an advanced extension of what we are all currently at least partially living in, a digital world. Mainstream to the

tech world, and a fringe theme to the rest of the world, the Metaverse is being crafted in large part by the video game industry via companies such as Epic Games and Roblox who reach userbases in the hundreds of millions. If an Instagram user can click on an ad as they are scrolling their feed, what can a videogame player do when they are immersed in a virtual 3D world, step into a virtual mall, see a customized ad for a new item, and try it on their avatar? How about when they are able to purchase items with cryptocurrency or tokens that they have earned in the video game? What happens to the value of virtual real estate in this digital world when more companies realize that they can buy advertising space and reach this customer base and are willing to pay for it? Will digital real estate have value? Looks like it is already happening with \$1M paid for digital real estate on Decentraland. This is early. The user experience in the Metaverse is not yet there for the mainstream user, but it is evolving. As digital worlds evolve, it will continue to challenge the incumbents in the physical world. Both sides will compete on experience. Many inconvenient activities that we had to do in the physical world will be transferred to the more efficient digital world (examples: shopping, learning, banking, and in many cases, yes, working) and activities we want to do will continue in the physical world. If one wants to go skiing, the digital world will have a tough time competing at present. If one wants to start or operate a company, the advantage of the physical world is a lot less clear.

The implications for real estate

Much of the real estate value in the modern era depended on providing a centralized space for people to gather to carry out their functions. Malls, offices hotels, and apartments all are more valuable when more people are inside them. However this notion of centralized real estate continues to face competition enabled by the digital world. Some of these risks are: malls (online shopping), offices (work from home), hotels (shared accommodations), apartments (potentially less demand for urban smaller space due to work from home). It does not render these assets obsolete, however it does impose an additional burden of requiring owners to rethink their businesses in the context of a rapidly evolving technological environment. Capex will likely have to significantly increase to repurpose or reinvigorate buildings. Money will have to be spent on technology and data analytics to better attract and service users. If done right and in the right location, revenues may increase significantly as well. If done wrong, or not at all, asset values will significantly decrease.

On the other hand, real assets that enable digitization and decentralization will continue to thrive. Assets like warehouses that enable e-commerce, data centers that enable digital communication and storage, last mile supply chain solutions

like grocery stores can be expected to be critical components of the new world.

With increasing amounts of activities being offered online, irreplicable real-life experiences will continue to have more value such as beachfront property, cottages, single family homes with more space, ski resorts (let's refrain from getting into climate change for now), exotic travel, cycling, pickleball, vineyards, pubs, and restaurants as humans, hollowed by life in the virtual world continue to desire real life.

'Value' is an evolving concept

During my tenure managing REITs I learned that determinants of value constantly change, and it is important to adjust one's view of value by taking macro changes into consideration.

What I thought were stocks trading at discounts to intrinsic value, turned out to be stocks that reflected the true value that investors, customers, and society in general were to place on those assets in the future. Conversely the assets that appeared expensive, were expensive because of the role that investors, customers, and society were to place on them. What appears to be 'cheap' or 'expensive' can often be a mirage if the bigger picture environment is not properly understood. In a low yield, low economic growth environment, it for now appears evident that investors will continue to seek alternative assets to allow them to reach their wealth accumulation goals. However, in such a rapidly changing technological environment that is driving major societal changes, it is also becoming clear that the real estate assets poised for better returns in the future will likely be far different than the ones from the past.

HOW ARTIFICIAL INTELLIGENCE WILL FREE ADVISERS TO FOCUS ON WHAT THEY DO BEST



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The key to productivity "is not in spending time, but in investing it," best-selling author Stephen R. Covey once said. So, why is it that the average financial adviser spends more than 53 hours a week working on so many tasks that could easily be automated and free them up to focus on the things they would rather be doing, like building solid relationships with their clients?

Advisers spend an average of 4.2 hours a week on administrative tasks, six hours a week on client service tasks, and nine hours a week prospecting for new clients, all of which can be cut down significantly with new and emerging automation tools.

Yet, the adviser's role has changed dramatically in the past decade. Years ago, advisers were expected to provide guidance on financial planning and investment opportunities. Now, the modern adviser's scope of work requires a broader level of expertise – from providing direction on budgeting and retirement planning, to even helping clients understand the larger role money plays in their day-to-day lives.

Those services have increased in importance since the COVID-19 pandemic began. That has resulted in a heightened pace of adoption of digital tools among advisers and their clients in which client expectations have shifted radically toward digital communications that make it possible to stay in touch frequently and with added convenience.

In fact, clients, both young and old, now say they prefer the flexibility of having meetings via videoconferencing as they eliminate the need to travel and meet in person with advisers. Furthermore, these tools make it possible to schedule a meeting at a time that suits the client, like a lunch hour or between work meetings.

However, for advisers, staying connected with every client on an individual level takes up a lot of time. And with so many tasks taking up an adviser's day, many are embracing digital technology tools that use artificial intelligence (AI) to take care of repetitive tasks and save time so they can focus on what matters most, which is fostering and strengthening relationships with their clients.

Some of these tools include videoconferencing and scheduling applications that will set up regular touchpoints with the client, ensuring meetings are routine and easy to join. A few video conferencing services will even transcribe notes and discussion points from the meeting, allowing for easier review and follow-up.

Other examples include powerful client engagement platforms that will send weekly updates to each client with content tailored to their individual financial and personal interests, and, in some cases, even tailored to their portfolio holdings.

These functions would otherwise be a laborious and a largely manual process, but AI technology makes it possible for advisers to send out highly personalized communications that demonstrate each client is truly understood.

Beyond saving time, digital adoption provides a benefit that advisers are starting to realize could give them an edge over competitors that rely solely on traditional methods. Digitally savvy advisers are currently sitting on a goldmine of data that can be used to enhance the client experience and drive new business.

That's because every time investors interact or click on content they receive from an adviser – an e-mail, newsletter, social media or blog post – they are communicating indirectly what they are interested in. These non-verbal cues can be tapped to understand what keeps an investor up at night, what topics are at the forefront of their mind and ultimately what an adviser should discuss with clients to ease their mind.

Parsing through this data would be difficult for advisers to do manually, especially without expertise in data science. Automation platforms can help fill this gap by analyzing data in real-time to detect personal interests and key life events, which can spark potential new business and increased assets under management.

For example, a client who is expecting her first child might suddenly start consuming content related to parenting, which would tip an adviser off that it may be worthwhile to reach out to the client about planning for the child's education and setting up a registered education savings plan.

Gone are the days of making financial assumptions about clients based on age or demographics; clients now expect to be treated as a 'segment of one,' with every communication tailored to their financial situations and interests.

The average adviser has around 300 clients, and the only way to personalize their experiences is with the power of automation and AI technology. Thankfully, the technology to do this has become affordable and approachable to just about anyone – from the independent adviser to large firms looking to get more from their marketing and client-engagement efforts.

About AdvisorStream

AdvisorStream is an automated digital marketing platform for financial advisers that helps drive growth, revenue and retention with content licensed from the world's most respected publishers (e.g., The Guardian, The Independent, BBC, The Wall Street Journal and more).

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The English Channel, The Strait of Dover at it's narrowest point. Image courtesy of the European Space Agency.