INSIGHTS
GLOBAL MACRO TRENDS

VOLUME 10.2 • APRIL 2020

Keep Calm and Carry On

KKR
GLOBAL INSTITUTE

KKR GLOBAL MACRO & ASSET ALLOCATION TEAM

Henry H. McVey
Head of Global Macro & Asset Allocation
+1 (212) 519.1628
henry.mcvey@kkr.com

Frances B. Lim
+1 (212) 401.0451
frances.lim@kkr.com

David R. McNellis
+1 (212) 519.1629
david.mcnellis@kkr.com

Aidan T. Corcoran
+1 (353) 151.1045.1
aidan.corcoran@kkr.com

Kristopher Novell
kristopher.novell@kkr.com
+1 (415) 315.6540

Brian C. Leung
+1 (212) 763.9079
brian.leung@kkr.com

Rebecca J. Ramsey
+1 (212) 519.1631
rebecca.ramsey@kkr.com

Special thanks to Ken Mehlman for his valuable insights and contribution.

Main Office

Kohlberg Kravis Roberts & Co. L.P.
9 West 57th Street
Suite 4200
New York, New York 10019
+ 1 (212) 750.8300

COMPANY Locations

Americas New York, San Francisco, Menlo Park, Houston **Europe** London, Paris, Dublin, Madrid, Luxembourg, Frankfurt **Asia** Hong Kong, Beijing, Shanghai, Singapore, Dubai, Riyadh, Tokyo, Mumbai, Seoul **Australia** Sydney

Keep Calm and Carry On

Throughout KKR's forty-four year history, our track record has shown that we are at our best when we are engaged – engaged with our clients, engaged with our portfolio companies, and engaged with our employees – in order to drive the best possible outcomes, irrespective of the macroeconomic backdrop. In this note, we look at the present reality with clear eyes and the best thinking of our colleagues in order to chart a path forward, despite the significant uncertainty we all now face. No doubt, we are impressed with the speed and size of the fiscal and monetary response around the world, but we think that Covid-19 is hitting the system at a time of unique vulnerability. Corporate margins and financial leverage are both at historic peaks, and geopolitical tensions were already running hot. So, while not ever losing sight of the human tragedy, there are important market considerations that all investment professionals must consider in this new environment in which we find ourselves.

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**The next outbreak?
We're not ready.**

"

BILL GATES
BUSINESS MAGNATE, SOFTWARE DEVELOPER, INVESTOR, AND PHILANTHROPIST, MARCH 2015, TED TALK

Introduction

Every crisis has its human element, and how everyone responds to the problem at hand is usually what is most remembered. In 1939, on the verge of World War II, for example, the British government tagged the phrase "Keep Calm and Carry On" as a way to inspire its citizens amidst mounting air raids. As part of the country's history "Keep Calm and Carry On" is now viewed as a rallying cry, symbolizing how the British overcame significant adversity to help defeat Nazi Germany and in doing so, defined a generation.

Today is certainly a different time and a different place, but working together in partnership with colleagues located in multiple cities across multiple continents, now, too, is probably a time to "keep calm and carry on." To be sure, we must never diminish this most human element, particularly surrounding the devastating impact of the disease on so many individuals and families, as well as well as our collective anxiety in the face of a pandemic. However, as someone who called New York City home during the horrible events of 9/11, I remain optimistic about the resolve of the human spirit over the long run.

Beyond the human tragedy, there are also market considerations, which as investment professionals, we must consider amidst all the uncertainty. So, what are we to do? Throughout our Firm's 44-year history, our track record shows that we are at our best when we are engaged – engaged with our clients, engaged with our portfolio companies, and engaged with our fellow employees – to drive the best possible outcomes, irrespective of the macroeconomic backdrop.

Not surprisingly, besides being humbled by the destruction and despair created by the Covid-19 crisis, the last few weeks have been chaotic, and we have been inundated with a broad swath of questions from deal teams and clients. Most of them focus on four areas:

- What does all this mean for growth?
- What are the markets pricing in?
- What are some of the past lessons learned that could be applied this cycle?
- What does all this mean for our key investment themes and for overall asset allocation?

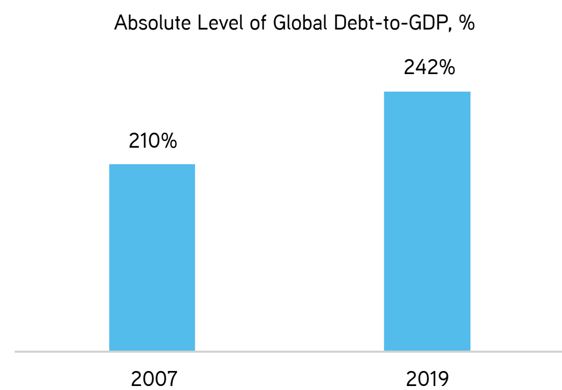
To this end, we thought we would 'redo' the format of our traditional in depth *Insights* reports and shift towards more of a free flowing, question and answer essay that addresses the aforementioned questions. See below for details, but our thoughts are as follows.

Question #1: What does all this mean for growth?

In terms of economic growth, we are looking for a sharp downturn during the second quarter, followed by more of a U-shaped recovery than a V-shaped one. There are several forces at work. First, we are now embarking on a major de-leveraging cycle, one that many investors may not fully appreciate. *The reality is that, unlike the downturn in 2008 (which was more linked to individual home ownership and banking), this crisis has started as a non-financial, corporate crisis*. One can see this in *Exhibit 2*. It also has the potential to be a serious government de-leveraging cycle, given the huge outlays that the United States and Europe are now making to bridge their economies during this uncertain period.

EXHIBIT 1

Even Before the Crisis, Debt Loads Were at a Record Level of GDP. De-leveraging Will Now Define the Next Chapter of Economic Growth

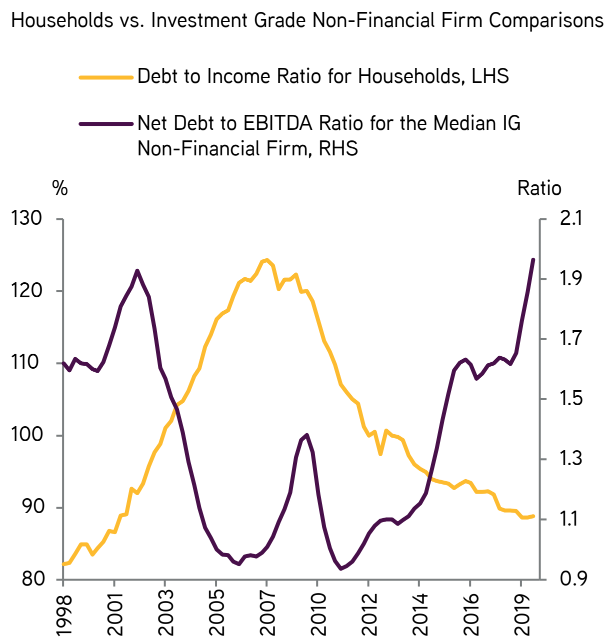


Data as at January 20, 2020. Source: Russell Napier.

> "Jobs create confidence, and confidence is what drives sustained economic growth over the longer term. Unfortunately, as we detail below, we are concerned that there will be an employment 'hangover' effect associated with this pandemic, as the global economy is likely to be reshaped quickly towards a more digitally-oriented society that favors national champions."

EXHIBIT 2

Households De-leveraged At the Same Time Corporations Re-leveraged Towards Record Levels



Data as at April 3, 2020. Source: Goldman Sachs, Factset, Moody's.

Second, there are likely to be sustained demand issues. Using several different big data sources, we estimate that hours worked in the United States have fallen 62% in just the past few weeks. Europe is not that dissimilar, we believe. The enhanced unemployment benefits of the government will likely help. In the U.S., for example, unemployment insurance now maxes out at around a wage of $28 per hour, which is $1,119 weekly, or $58,000 annually. By comparison, actual average hourly earnings in the U.S. are $28.62. As such, the typical household will see at least full income replacement, and more than half of households will make more under unemployment insurance than by being employed. However, jobs create confidence, and confidence is what drives sustained economic growth over the longer-term. Unfortunately, as we detail below, we are concerned that there will be an employment 'hangover' effect associated with this pandemic, as the global economy is likely to be reshaped quickly towards a more digitally-oriented society that favors national champions.

Looking at the big picture, we think that the road ahead will be a bumpy one for the global economy and its constituents. As the data bears out, China's strategy of containment was unique and has not been similarly executed in other parts of the world. Also, the services economy, including travel and leisure, is more developed in Europe and the United States, and it – along with a few other sectors – has been a major driver of growth in recent years (*Exhibit 3*).

EXHIBIT 3

U.S. Job Destruction Is Now Occurring Most Severely in Those Areas That Had Grown the Most in Recent Quarters

	Trailing 6-month Average			
U.S. Nonfarm Payrolls	**As % of Private Sector Jobs**	**As % of Private Sector Job Growth**	**Avg Job Growth ('000)**	**Latest Job Growth ('000)**
Professional Services	17%	15%	+30	-52
Education/ Healthcare	19%	28%	+56	-76
Leisure/ Hospitality	13%	23%	+47	-459
Total (3 Sectors)	**49%**	**66%**	**+134**	**-587**

Data as at April 3, 2020. Source: Bureau of Labor Statistics, Haver Analytics.

Meanwhile, though the banking system is in good shape, the overall financial services system that we all rely upon does have some rot in it. For example, last year only 23% of companies that went public in the U.S. actually made money (*Exhibit 7*), and Moody's estimated before the pandemic hit that the recovery rate on second lien loans would be 14% this cycle (*Exhibit 6*), compared to a historical average of 60%. Surely, Moody's updated recovery rate will now be a lot worse. There are also a growing number of examples of structures where managers borrowed short and bought long (e.g., mortgage REITs), and that mismatch will keep certain markets under pressure. Also, as we describe below, Covid-19 is an unprecedented shock to the system that could result in significantly negative GDP quarters. All told, we now forecast peak-to-trough decline in U.S. GDP to reach 12%, which is substantially worse than the four percent drop during the Global Financial Crisis (GFC).

"

Record low rates are implying that we are now entering a period of slower nominal GDP growth amidst lower inflation, or even disinflation/deflation. Remember that coming into the crisis, world debt loads were at a record 242% of GDP, compared to the prior peak in 2007 of 210%.

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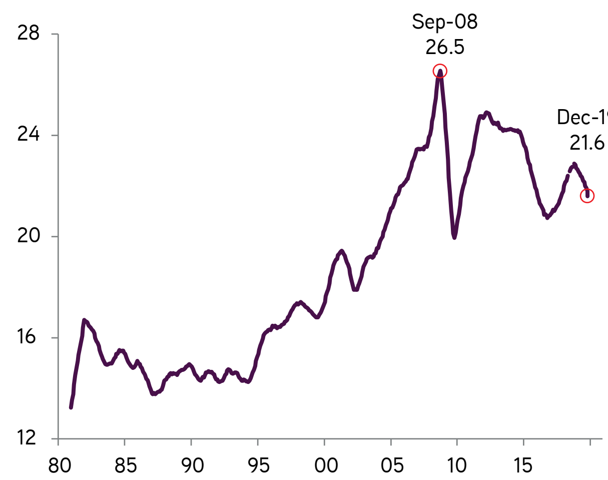
EXHIBIT 4

Trade as a Percentage of Global GDP Peaked Several Years Ago. Covid-19 Will Likely Only Accelerate This Trend

Global Merchandise Exports as a % of Global GDP

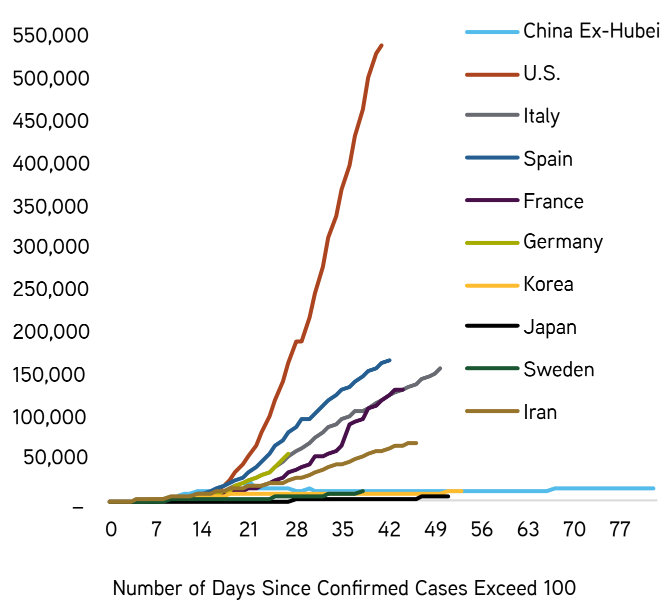


Data as at December, 31, 2019. Source: IMFWEO, Haver Analytics.

EXHIBIT 5

The U.S. Pattern Surrounding Covid-19 Will Be Different Than What Occurred in Other Areas of the World, Including China

Number Confirmed Cases



Data as at April 12, 2020. Source: WHO.

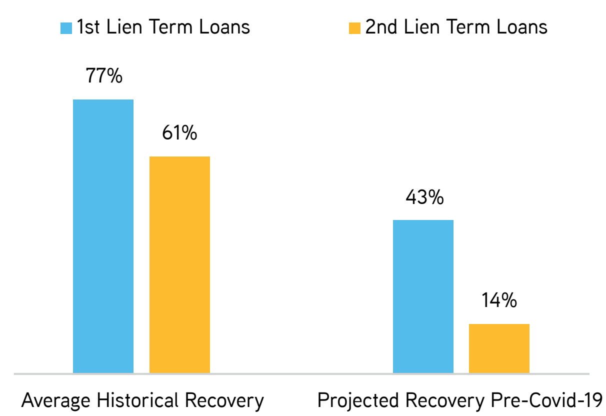
The disease has also arrived at a time when globalization is already under pressure and while nationalism and populism are running high. President Trump's decision to limit travel from Europe and Asia now means that, in addition to the trade war, America is potentially at odds with both the West and the East. Nationalist sentiment, including America First, will grow even further, potentially impacting medical supplies, food supply chains, and pandemic relevant critical sectors. Meanwhile, migration issues have already begun to roil politics and policy in both Europe and the United States. To the extent that Covid-19 overwhelms fragile health care infrastructure in emerging markets, the real or perceived threat of large numbers of potentially infectious migrants seeking refuge in developed markets with better health systems could exacerbate these issues.

My colleague Ken Mehlman has also written in the past about rising economic populism and institutional districting during the past decade of economic growth. The coming economic downturn – and the unequal provision of healthcare and economic pain – will inevitably accelerate both trends, we believe. U.S. political divisions, and parallel information universes where people seek affirmation rather than information, could splinter further, including on basic questions around public safety and medical response. Finally, as we detail below, governments and larger corporations will likely now take a more active role in the economy, which has both short- and longer-term implications for all investors. As such, we should all expect further focus, for example, on corporate governance, corporate impact on stakeholders, and increased regulation.

EXHIBIT 6

Even Before Covid-19, the Assumptions Around Defaults Were Pessimistic. We Now See These Headwinds As Even More Acute

Moody's Recovery Forecast, %

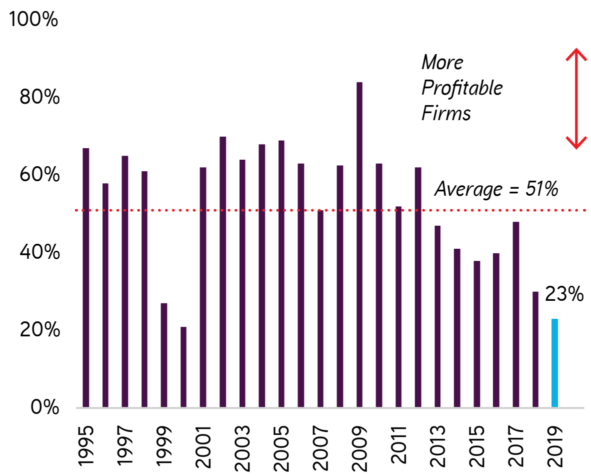


Data as at August 16, 2018. Source: *Convergence of Bonds and Loans Sets State for Worse Recovery in the Next Downturn*, Moody's Investors Service.

EXHIBIT 7

The IPO Market Reflected a Move Away from Cash Flow Generation in 2019. We Think That Is Now Poised to Change

Share of IPOs with Positive Net Income in Year One



Data as at December 31, 2019. Source: Goldman Sachs.

Our bottom line: Our base case assumes that cases peak in April in Europe and in May in the United States, and we look for growth to modestly reaccelerate by the time the U.S. celebrates its birthday on the Fourth of July. While China and India will likely maintain positive GDP growth in 2020, we forecast both the United States and Europe to experience a GDP contraction in the mid-single digits this year. Yet, as mentioned earlier, we do not look for a traditionally sharp snapback in the second half of 2020. Many countries remain behind on testing, fiscal programs are coming online more slowly than we might have hoped, and in certain instances, we do not rule out the possibility of virus flare-ups during the second half of the year. Also some commentators warn of a fall outbreak or recurring waves of the disease. Even if this doesn't occur, de-leveraging will take years, not months, to work through, and that downward impact on growth colors our thinking at this moment. One can see this in *Exhibits 6* and *7*, respectively. So, we would think about the aftermath as somewhere between what happened following the 'shock' of September 2001 and the market crash of 1987. If we are right, then we are likely to have more rolling recessions globally following the huge downward shock we just experienced with the onset of Covid-19.

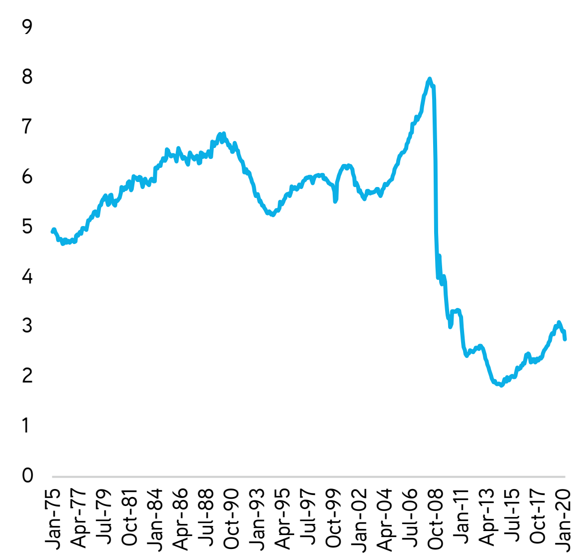
Question #2: What are the markets pricing in?

There clearly is no exact answer, but over time we have developed some effective tools for gauging what is in the price. For example, on the Credit side of the house, our High Yield implied default rate monitor (*Exhibit 9*) is now suggesting around a 12-14% percent default rate. A default rate at that level is nearly double the historical average of six percent, and it is above the 11% the model registered in February 2016 and October 2011. This reading tells us that we have now approached levels seen back in 2002, but it remains well below those of the Global Financial Crisis. This backdrop makes sense to us because we view the current downturn as a non-financial corporate crisis – not a financial crisis like we saw in 2008. So, our bottom line on Credit is that it is a buy at current levels, particularly if we are right that history repeats itself, or at least rhymes in some fashion. One can see this in *Exhibits 10* and *11*, respectively.

EXHIBIT 8

An Increase in Money Supply Has *Not* Led to an Increase in the Money Multiplier. We Look for More of the Same in 2020, Despite Huge Fed Intervention

Ratio of U.S. Commercial Bank Loans and Leases to the U.S. Monetary Base, %



Data as at March 1, 2020. Source: St. Louis Fed.

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Maybe more important, though, is that de-leveraging will take years, not months, to work through, and that downward impact on growth colors our thinking at this moment.

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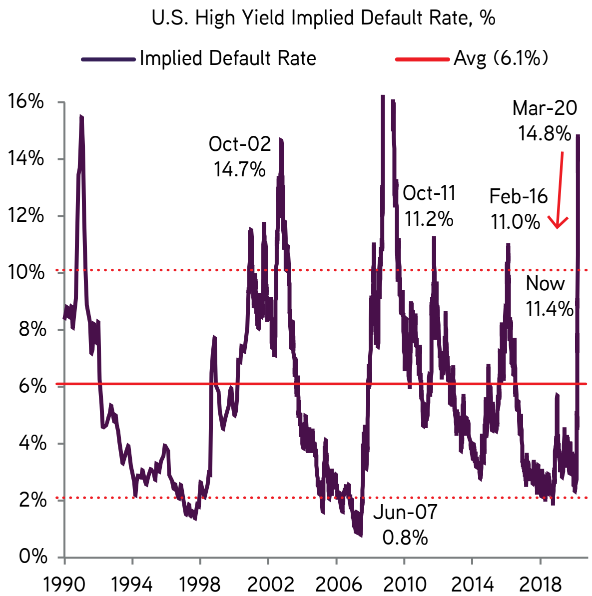
EXHIBIT 9

Credit Markets Are Discounting Something Akin to the 2002 Downturn. This Outlook Is Consistent With Our Thesis That This Downturn Will Be Remembered as a Non-Financial, Corporate Downturn



Our model assumes the long-term average realized default rate is 4% and the recovery rate is 40%. Data as at March 27, 2020. Source: KKR GMAA, ICE BofAML Bond Indices, S&P Global Ratings.

EXHIBIT 10

With the Implied High Yield Default Rate Hitting a Peak of More Than 14%, We Can Expect a Meaningful Recovery

U.S. HY Credit: Subsequent 1-Year Total Return, %

Implied Default is...	*>=8%*	*>=10%*	*>=12%*	*>=14%*
Median	17.4%	27.3%	39.4%	48.8%
Average	17.7%	27.9%	40.3%	46.1%
High	64.1%	64.1%	64.1%	64.1%
Low	(23.2%)	(20.3%)	22.4%	22.4%
Count	82	36	18	11
% Positive	84%	92%	100%	100%

12-Month Forward Return in Feb-2008 was -23.2%. Data as at March 27, 2020. Source: Bloomberg.

EXHIBIT 11

Our Work Shows a Similar Outcome Over a Two-Year Period As Well

U.S. HY Credit: Subsequent 2-Year Total Return, %

Implied Default is...	*>=8%*	*>=10%*	*>=12%*	*>=14%*
Median	33.3%	44.9%	63.5%	75.9%
Average	36.1%	47.6%	62.3%	70.0%
High	91.6%	91.6%	91.6%	91.6%
Low	(6.5%)	2.5%	41.0%	45.0%
Count	82	36	18	11
% Positive	96%	100%	100%	100%

Data as at March 27, 2020. Source: Bloomberg.

On the equity side, our base view is that we have had something akin to a crash already, and similar to prior recessions, the equity market already priced in a severe recession near the end of March. One can see this in *Exhibit 12*. In fact, this cycle has seen the sharpest declines in equities that we have *on record ahead of a recession*. To be sure, no downturn is ever the same, but our best guess is that we should be looking at a scenario somewhere between 2001-2002 and 1987, or an environment where you have an external shock *and* a subsequent recession.

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We think that risk assets are about appropriately valued for the current outlook. Credit appeals to us more than what Equities offer, and we think that record low interest rates are suggesting lower nominal GDP growth in the future – not that all risk assets are attractively priced.

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EXHIBIT 12

The Equity Market Appears to Be Pricing in a Recession of Significance

Dates				Price Performance, %		Duration (Number of Months)		
S&P 500 Peak	Start of Recession	End of Recession	S&P 500 Trough	SPX Peak to Start of Recession	SPX During Recession	SPX Peak to Start of Recession	Recession	Recession Start to SPX Trough
Oct-07	Jan-08	Jul-09	Mar-09	(13.4%)	(27.2%)	3.8	18.2	13.5
Mar-00	Apr-01	Dec-01	Oct-02	(18.0%)	(7.3%)	13.3	8.2	17.7
Jul-90	Aug-90	Apr-91	Oct-90	(13.6%)	17.2%	1.5	8.1	1.4
Nov-80	Aug-81	Dec-82	Aug-82	(11.7%)	13.1%	9.1	16.3	11.6
Feb-80	Feb-80	Aug-80	Mar-80	(5.1%)	8.9%	0.5	6.1	0.9
Jan-73	Dec-73	Apr-75	Oct-74	(18.9%)	(12.2%)	11.7	16.2	9.3
Nov-68	Jan-70	Dec-70	May-70	(21.5%)	8.5%	14.2	11.1	3.9
Aug-59	May-60	Mar-61	Oct-60	(8.2%)	16.7%	9.9	10.2	5.0
Aug-56	Sep-57	May-58	Oct-57	(14.5%)	3.6%	14.0	8.1	0.8
Jan-53	Aug-53	Jun-54	Sep-53	(11.0%)	24.0%	7.8	10.2	0.6
May-46	Dec-48	Nov-49	Jun-49	(20.6%)	4.8%	31.5	11.1	5.5
Mar-45	Mar-45	Nov-45	Mar-45	(5.4%)	25.1%	0.7	8.2	-0.1
Mar-37	Jun-37	Jul-38	Mar-38	(18.9%)	(18.6%)	3.7	13.2	9.2
Sep-29	Sep-29	Apr-33	Jun-32	(5.0%)	(74.1%)	0.4	43.6	32.6
		Median		**(13.5%)**	**6.7%**	**8.5**	**10.7**	**5.3**
		Average		**(13.3%)**	**(1.2%)**	**8.7**	**13.5**	**8.0**
		Best		**(5.0%)**	**25.1%**	**31.5**	**6.1**	**(0.1)**
		Worst		**(21.5%)**	**(74.1%)**	**0.4**	**43.6**	**32.6**
2/19/2020	**3/23/2020**			**(33.9%)**				

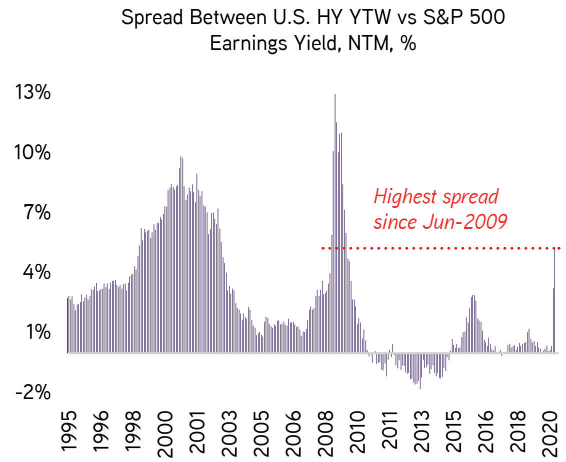
Data as at March 23, 2020. Source: Haver Analytics, Bloomberg and KKR Global Macro & Asset Allocation analysis.

Beside the major nose dive in earnings that we are forecasting, *we think that Equities do not represent the same relative value that Credit does right now*. Spreads in High Yield (and Investment Grade for that matter) suggest that the current P/E ratio for the market is too high on a relative basis, we believe. One can see this in *Exhibits 13* and *14*, respectively. Also, Credit is likely the lower volatility asset class in the new environment we envision. Given this mismatch, the models of sophisticated risk parity investors will likely prevent them from buying Equities when the VIX is north of 30. One can see this in *Exhibit 23*.

"Spreads in High Yield (and Investment Grade for that matter) suggest that the current P/E ratio for the market is too high on a relative basis, we believe."

EXHIBIT 13

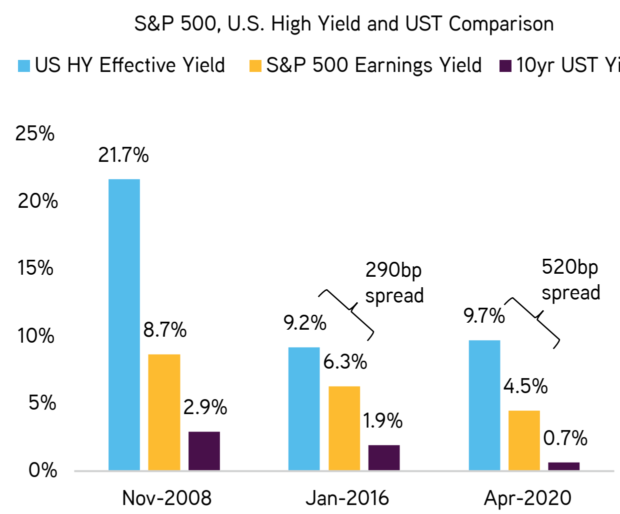
We Think Credit Looks Attractive at Current Levels



Note: Assumes 12-month forward EPS is $120 per share. Data as at April 9, 2020. Source: S&P, ICE-BofAML Bond Indices, Bloomberg.

EXHIBIT 14

In Terms of Asset Allocation Decisions, We Favor Dislocated Credit Over Equities



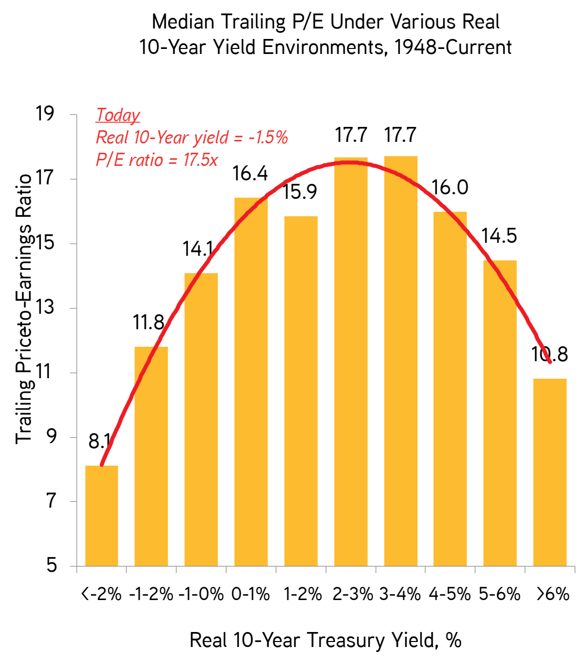
Note: Assumes 12-month forward EPS is $120 per share. Source: Bloomberg, S&P, ICE-BoFAML Bond Indices, KKR Global Macro & Asset Allocation analysis.

Meanwhile, at the CIO level we have been asked repeatedly what does a less than one percent 10-year Treasury mean for overall asset allocation? Our base view is that it is not signaling that all risk assets are long-term 'cheap.' Rather, it is implying that we are now entering a period of slower nominal GDP growth amidst lower inflation, or even disinflation/deflation. Remember that coming into the crisis, world debt loads were at a record 242% of GDP, compared to the prior peak in 2007 of 210%. These heavy debt loads will impede growth, we believe, at a time when demographics and re-regulation are likely to act as further headwinds. In addition to having debt at such high levels in the government and corporate sector, there is now amplified risk that the decision to use incremental debt to encourage growth backfires if: 1) earnings volatility increases; 2) cash conversion does not materialize; and/or 3) overall asset prices depreciate.

As one might guess, equity markets do react to declines in nominal GDP growth, real rates, and inflation. For example, one can see this in *Exhibit 15*, which shows that multiples tend to decline during periods when real rates go negative. A similar story holds true for inflation (*Exhibit 16*). I asked my colleague Brian Leung to check to make sure that the left tails are not skewed by just a few data points. Brian's review showed me that 1) the data goes back to 1948 on a monthly basis, so there are lots of data points; 2) about 85, or 10% of the data points in the inflation chart are below one percent; and 3) for the lowest real rates buckets, or those less than -2% or -1% to -2%, the sample size is nine percent and includes 79 observations.

EXHIBIT 15

The Fall Towards Negative Real Rates Is a Valuation Headwind If They Persist Indefinitely



Data as at April 8, 2020. Source: Thomson Financial, S&P, Bloomberg, Federal Reserve Board, Factset.

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Meanwhile, we also suggest thoughtful, forward-looking portfolio construction analysis to ensure that none of us are making a red/black bet (i.e., overconcentration in one particular area) when it comes to a theme, region, and/or asset class.

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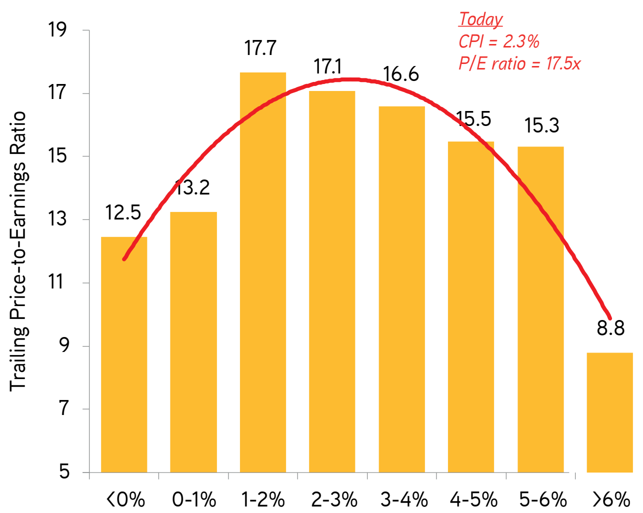
EXHIBIT 16

Maintaining Solid Inflation Expectations Is Key for Preventing Downward Pressure on P/E Ratios

Median Trailing P/E Under Various Inflation Environments, 1948-Current

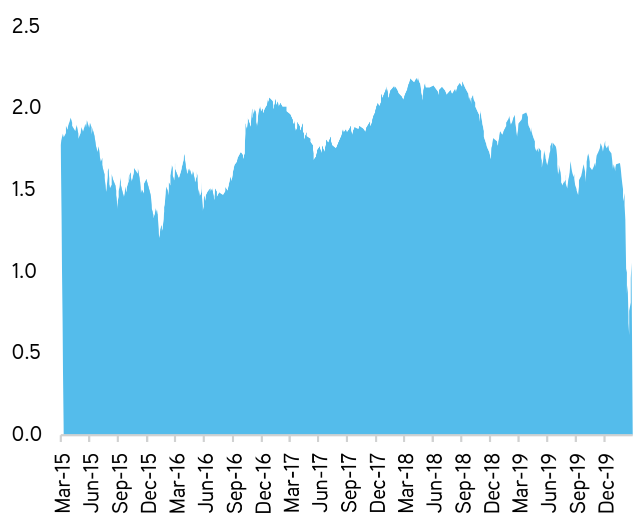


Data as at March 29, 2020. Source: BofAML, Bloomberg.

EXHIBIT 17

Unfortunately, the Market's Future Inflation Expectations Are Now Quite Anemic. The Federal Reserve Needs to Reverse This Sentiment Quickly

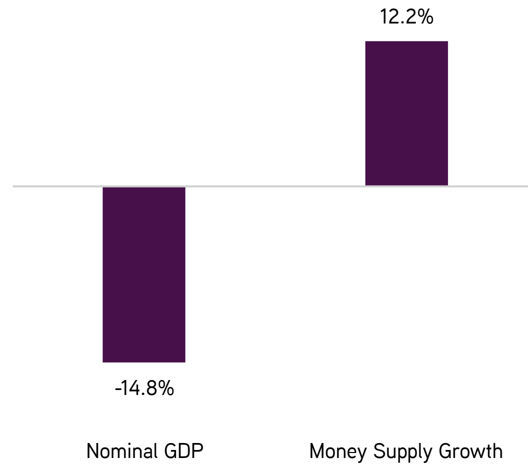
U.S. Breakeven 10-Year Index, %



Data as at March 27, 2020. Source: Bloomberg.

EXHIBIT 18

In the Near-Term, Prices in the Capital Markets Have Benefitted From Such a Huge Increase in Money Supply, Despite a Massive Decline in GDP



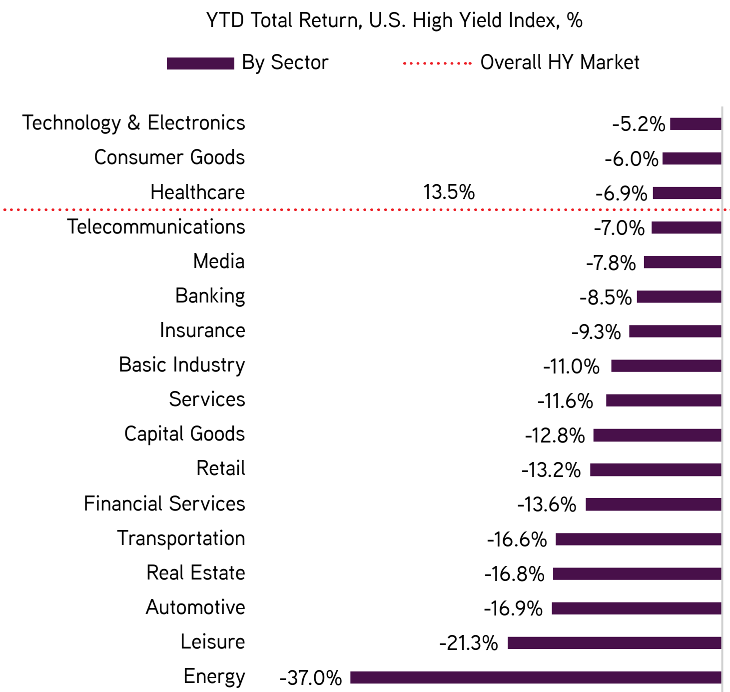
Data as at April 7, 2020. Source: EvercoreISI.

Thus, our bottom line: we think that risk assets are close to appropriately valued for the current outlook. Credit appeals to us more than what Equities seemingly offer, and we think that record low interest rates are suggesting lower nominal GDP growth in the future – not that all risk assets are attractively priced. As such, we advocate consistency surrounding speed of deployment and low leverage levels. Meanwhile, we also suggest thoughtful, forward-looking portfolio construction analysis to ensure that one is not making a red/black bet (i.e., overconcentration in one particular area) when it comes to a theme, region, and/or asset class.

"On the private side, investors are likely to see substantial opportunities to de-lever high quality companies, provide rescue financings, restructure weak balance sheets, and create significant M&A synergies in near-term distressed sectors."

EXHIBIT 19

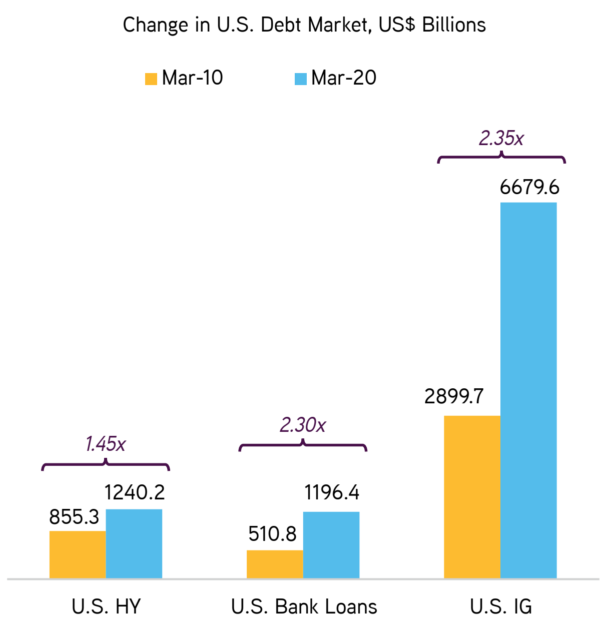
Dispersions in Credit Have Created Significant Security Selection Opportunities at the Sector and Security Level



Data as at March 31, 2020. Source: Bloomberg.

EXHIBIT 20

The Size of the Credit Markets Has Exploded in Recent Years



Data as at March 31, 2020. Source: Bloomberg.

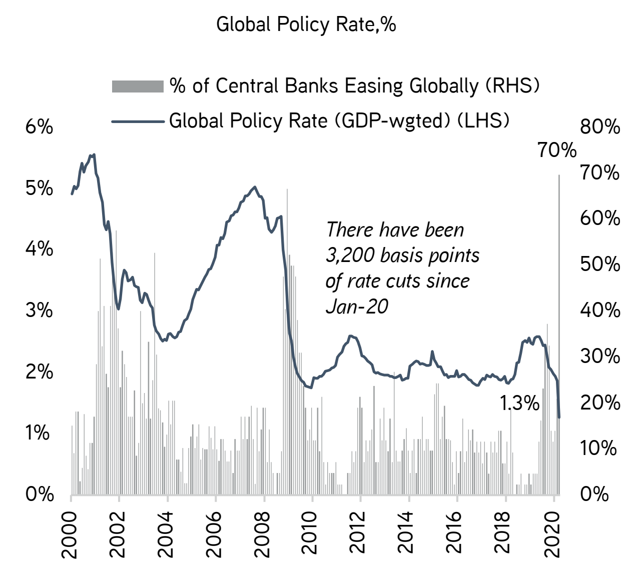
Question #3: What are some of the past lessons learned that could be applied this cycle?

Economic growth is likely going to get worse in the near-term. Indeed, the current slowdown could be worse than the worst quarter of growth during the GFC. Specifically, in Europe and the U.S., we expect second quarter 2020 GDP to fall sequentially somewhere between 20-40% depending on the country/region, compared to the worst quarter during the GFC sequentially at eight percent. The recovery we expect in the third quarter of 2020 and beyond may occur, but a sharp snapback is not guaranteed. Overall, we have entered a lower nominal GDP environment for the foreseeable future.

However, to put the current shock to financial conditions in context, we note that the S&P 500 fell nearly 34% from its high. That decline sounds like a lot, but consider that the S&P 500 fell -58% in the 2007/09 bear market, 2000/02 was -51%, 1987 was -35%, 1973/74 was -47%, 1969/70 was -36%, 1937 was -54% and 1929/32 was -86%. In total, the average across the sample set was down -52%. This is a once-in-a-century pandemic, so we should expect more volatility in the near-term. However, given rates, we believe that the recent lows around 2200 in the S&P 500 will hold. Thus, given the relative speed of the monetary and fiscal response and the absolute level of rates, we do not expect this market to be worse than average.

EXHIBIT 21

Since January of 2020, There Have Been 3,200 Basis Points of Rate Cuts Across the Globe



Data as at April 3, 2020. Source: UBS Research, Bloomberg.

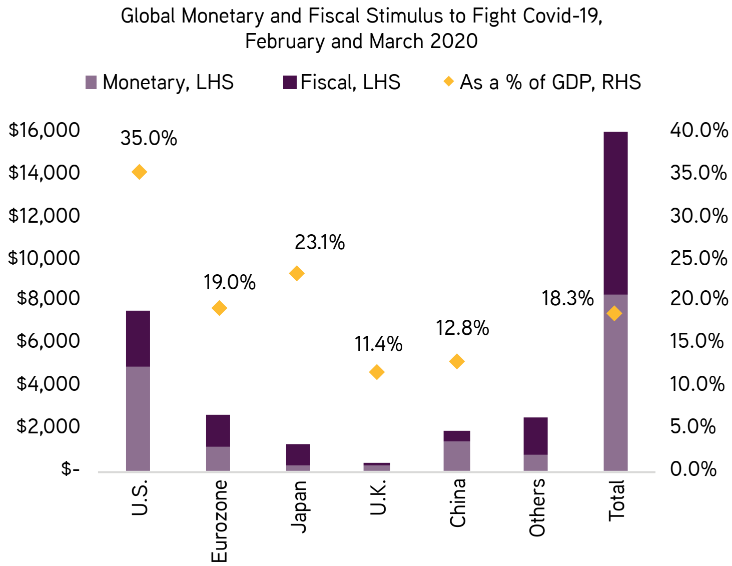
"

Do not buy a security until you fully understand what the debt is saying about the equity and the equity is saying about the debt.

"

EXHIBIT 22

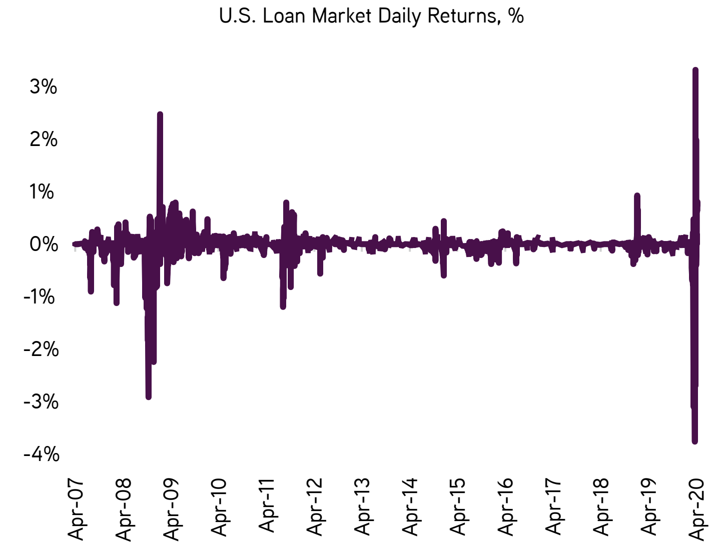
The Amount of Global Stimulus Has Been Breathtaking, and We Believe There Is Likely More to Come



Data as at April 12, 2020. Source: Cornerstone Macro.

EXHIBIT 23

We Expect Volatility in the Global Capital Markets to Remain Substantial During the Next Few Quarters



Data as at April 8, 2020. Source: Bloomberg.

Expect continued massive stimulus from central banks and government authorities to offset this downturn. We anticipate fiscal stimulus somewhere between 11-35% of GDP, depending on the country (*Exhibit 22*). Already, China is at nearly 13% of GDP, Spain is heading towards 20%, and we assume trillions of dollars in the United States in the form of business disruption insurance, unemployment insurance, and helicopter money. As we show in *Exhibit 22*, we think that total monetary and fiscal stimulus in the United States could approach 35%.

Recent announcements by the Federal Reserve to 'dip their 'toe' into the High Yield market underscore our view that they are willing to consider non-conventional approaches to improve financial conditions. All told, the Fed's Economic Stabilization package calls for $454 billion of funding that could be levered up to 10:1 to provide the Fed with $4.5 trillion of buying power. Through the programs announced, *it has – to date – earmarked less than half of the allocated funds*. Said differently, it still has a lot of firepower left if financial conditions do not begin to improve.

"

Within Private Equity, buying complexity/dislocation throughout the downturn actually can emerge as a key differentiator.

"

Before making an investment, check to see if the equity and debt are saying the same thing about a company's future prospects. Do not buy a security until you fully understand what the debt is saying about the equity and the equity is saying about the debt. This is one of the most important lessons from the GFC. Also, watch how bank preferred securities and hybrids trade to see what they are saying about your counterparty.

No one can time the bottom perfectly so leg in thoughtfully. That is more important to understand than any of our specific GDP assumptions. All of our work shows that consistency of deployment is what matters when the prices of a security and/or asset classes are falling. Also, on the way down, do not make red/black bets on one sector or theme (wait to do that on the way up), and do not use too much leverage. Finally, there will be bear market rallies along the way, so buy at least 2:1 more on down days.

There will be a recovery, we believe. Our base case, however, assumes that the peak in social distancing/new Covid-19 cases reaches an apex around May in the developed markets. We think a peaking of new cases is one of the most important signals for the markets. The other key variables on which to focus include implementation of fiscal stimulus, unemployment claims, central bank activity, and lessons learned from Asia.

Approach will differ by strategy, but we advocate buying Simplicity in Credit and Complexity in private markets. The lessons from 2001 and 2008 for Liquid Credit were to start buying the highest quality securities on the way down, and then pivot towards complexity on the way back up once the fog of war has lifted (some of which is already happening). Refinancing of companies with attractive collateral also makes sense. Within Private Equity, buying complexity/dislocation throughout the downturn actually can emerge as a key differentiator. To this end, we expect a wave of large scale divestitures, rescue financings, liquidity bridges, restructurings, and industry roll-ups. We need to focus on the needle movers, creating situations that advantage our existing portfolio companies and leverage our expertise in industries we know well in terms of new ideas.

Be humble: All investors will likely have to alter assumptions along the way, so over-communicate with all your various constituents. Our base case will likely change along the way, and we could make several mistakes as we go in terms of reading the macro perfectly. The same is true at the micro level. So, both allocators of capital and their clients will need to establish more formal and frequent sequencing for updating each other on how portfolios are taking shape.

Approach investments with the reality that populism will rise across the political spectrum. As noted earlier, populism has risen even during the past decade of economic plenty. The combination of a sharp downturn, coupled with a massive government stimulus, could enrage ideologically focused voters across the board. Just as the Tea Party and Occupy Wall Street movements were reactions to the 2008-2009 stimulus, watch for progressives and conservatives to expand their critiques of the scope (on the right) and distribution (on the left) of government responses to the crisis. Also watch for heightened attention on how critical services, particularly, health care, is provisioned based on wealth. As strong as these trends were in 2008-2010, today's more powerful and ubiquitous social media will supercharge both movements. Understanding how key industries and companies are perceived, their Environmental, Social, and Governance (ESG) practices and how they engage with stakeholders will be key for smart investors.

Our bottom line: The most important part of getting the macro right is having both the conviction and consistency to lean in on investments where we understand the entire capital structure. Relative value matters a lot in a bear market, particularly on the liquid side. Also, all investors must appreciate that we will likely experience an important regime change for growth, leverage, and regulation. At the moment, we see Credit as more attractive than Equities, particularly on a volatility-adjusted basis. Not surprisingly, we are maximum bullish on sector and security selection against the current backdrop. On the private side, investors are likely to see substantial opportunities to de-lever high quality companies, provide rescue financings, restructure weak balance sheets, and create significant M&A synergies in near-term distressed sectors. Surges in monetary supply help support asset prices in the near-term, but ultimately economic fundamentals matter. As we describe below in our themes section, we expect the economy to re-establish its momentum by the fall of 2020, albeit we think that it will include a new set of winners (e.g., multi-channel retail distribution) and losers relative to the prior cycle.

Question #4: What does all this mean for our key investment themes and for overall asset allocation?

From a bigger picture, long-term perspective, the onset of the new coronavirus will, in our opinion, further throw sand in the gears of globalization — interconnected, lowest cost supply chains in particular — and likely fuel a re-examination of over reliance on any one nation. This viewpoint is significant, as even before the outbreak of Covid-19, the WTO had estimated global trade would grow only around one percent in 2019, compared to three percent in 2018 and nearly five percent in 2017[1]. However, based on our discussions with leading global executives across a range of industries, we now think that many parts of the Technology sector in China will look to diversify 20-40% of their production away from China during the next five years in certain instances, up from our prior estimate of 15-25%. This transition could be both disruptive and meaningful, as my colleague Frances Lim reminds us that 81% of assembly and 64% of components for the Technology sector are provided by China. One can see this in *Exhibit 26*.

A variety of issues are driving the change in executive behavior regarding supply chains. Specifically, employee costs in China have increased notably in recent years, while the trade war has added complexity to the notion of outsourcing. More importantly, uncertainty about working conditions, including the ongoing threat of tense U.S.-China relations as well the potential for a second wave of the virus, have clearly forced corporate boardrooms to take a step back and reflect on where the world is headed. Not surprisingly, many executives with whom we speak feel that the world is shifting more towards what my former colleague at Morgan Stanley, Jay Pelosky, calls a "tri-polar world," or a global footprint that includes more distinct regional connectivity within the Americas, Europe, and China rather than across the regions. Heightened geopolitics and intensifying nationalism from voters are only accelerating this trend towards more regional specialization, we believe. Indeed, it feels to us that many industries, including healthcare and technology, could immediately be deemed strategic by government agencies. In the more tri-polar world we are envisioning, return on equity could get dented as the negative impact of a more splintered, less vulnerable to exogenous shocks, supply chain is absorbed. Finally, the competition has gotten better, and it is now attracting capital and activity away from China. Indeed, what Vietnam, Mexico, and the Philippines can offer to multinationals today in terms of production, skilled labor, and transportation versus a decade ago is markedly better, our research shows.

Given the existing interconnectivity, decentralizing supply chains is not an easy task (*Exhibit 26*), and there is clearly a cost trade-off for multinationals to consider. At its core, many CEO-types with whom we speak believe that alternative supply chain offerings relative to staying in China have to be within 15% of the current cost of production in China. However, cost is not the only critical variable in the equation. Rather, political pressure from the White House is also having an impact because companies do not want to take the brand risk of being called out by President Trump. Finally, multinationals in China currently benefit from local supplier 'villages' of subcomponent parts (i.e., the subcomponent players build factories near the multinational for maximum convenience and efficiency), particularly in the technology arena. However, as more of these competitor-type villages of subcomponent manufacturers get established in places like Vietnam, the Philippines, and Mexico, they become a more credible threat to China.

We also believe that our universal bullishness around the rise of the Asian millennial will now likely become more nuanced in the near-term. On the one hand, there will likely be a more elongated slowdown in luxury travel out of China that will have an impact on tourism from Tokyo to Paris to New York City. This outcome is to be expected, given the world we now live in. What we will need to watch more closely is how behavior patterns change around sanita-

1 Data as at October 2019. Source: WTO.

tion, as well as around the desire for larger community gatherings versus more Internet-based experiences, which could take an incremental share in the coming months. On the other side of the ledger, we believe online experiences will blossom. E-commerce too will accelerate its upward trajectory. We also think that 5G could become a point of differentiation globally, but it will likely start more quickly in Asia, China in particular.

Overall, we think the emergence of Covid-19 underscores how much the economic drivers of Asia, China in particular, have changed. China is no longer a commodity or fixed investment story; rather, it is a technology enabled growth story that will likely use the Covid-19 incident to see certain digital services and processes further inflect upward. Artificial intelligence will likely play a large part in building competitive advantage across healthcare, shopping, gaming, transportation, and payments. In simple terms, investors should expect that the coronavirus will advantage online over offline faster than we originally suggested during our 2020 Outlook just a few months ago.

EXHIBIT 24

China Has Been Moving Up the High Value Added Chain Since the GFC

Data as at December 31, 2019. Source: China General Administration of Customs, Haver Analytics.

> **"China is no longer a commodity or fixed investment story; rather, it is a technology enabled growth story that will likely use the Covid-19 incident to see certain digital services and processes further inflect upward."**

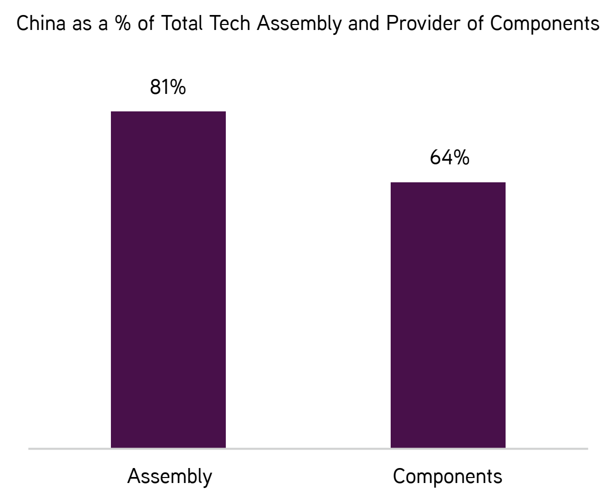
EXHIBIT 25

Given China's Increasing Size in Global GDP and the Capital Markets, the U.S.-China Relationship Has Become Even More Critical

Data as at January 30, 2020. Source: UBS Research, IBES, MSCI, Datastream.

EXHIBIT 26

Supply Chains Are Deeply Integrated in China; As Such, Unwinding the Status Quo Will Take Time and Money



Data as at February 9, 2020. Source: Company data, Morgan Stanley Greater China technology hardware research team, Morgan Stanley Research.

EXHIBIT 27

Sharp, Significant Downturns Often Lead to Changes in Behavior and Regulation

History of Market Crashes			Cumulative Price Return (%)			Annualized Price Return (%)		
Event	**Date**	**16-day chg**	**+1 year**	**+3 year**	**+5 year**	**+1 year**	**+3 year**	**+5 year**
Wall Street Crash of 1929	10/29/1929	-33.6%	(14%)	(65%)	(57%)	(14%)	(30%)	(16%)
Black Monday	10/19/1987	-31.3%	24%	36%	83%	24%	11%	13%
End of Gold Standard	10/5/1931	-26.7%	(9%)	0%	85%	(9%)	0%	13%
Lehman Crisis	11/20/2008	-25.2%	45%	62%	138%	45%	17%	19%
World War 2	5/21/1940	-24.6%	4%	30%	63%	4%	9%	10%
DotCom Bubble	7/23/2002	-19.3%	24%	55%	92%	24%	16%	14%
Post-WW2 Demand Shock	9/10/1946	-16.9%	3%	6%	61%	3%	2%	10%
US Debt Downgrade	8/8/2011	-16.7%	25%	71%	95%	25%	19%	14%
Great Financial Crisis	3/4/2009	-13.8%	58%	92%	159%	58%	24%	21%
LTCM	8/5/1998	-8.7%	21%	12%	(9%)	21%	4%	(2%)
	Median		**22.7%**	**33.1%**	**84.2%**	**22.7%**	**10.0%**	**13.0%**
	Average		**18.2%**	**29.8%**	**71.0%**	**18.2%**	**7.3%**	**9.7%**

Data as at March 31, 2020. Source: Bloomberg.

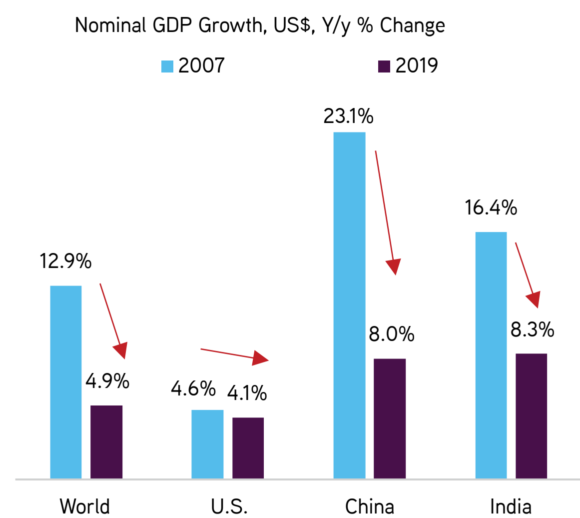
The other 'winners' we envision in this new environment include Environmental, Social, and Governance. On a global basis, we think that governments and private sector CEOs will unite behind this effort. As a result, we believe that Infrastructure as an asset class could be experiencing somewhat of a golden age.

On the other hand, business models and favored themes could be challenged, we believe. First (and consistent with what we were saying even pre-Covid-19), we think that globalization has peaked. We envision a more regionalized model, with the Americas coalescing around the United States and Asia around China. Europe is likely to vacillate somewhere in the middle. We also think that the trend towards urbanization could slow. Remember that 55% of individuals around the world live in cities, up from 20% a century ago. That's about four billion people. That number is supposed to reach six billion by 2050, according to the United Nations. However, recent events could slow, or even reverse, this trend in some instances. Finally, several of the benefits of the sharing economy might be questioned by a more isolationist undertone.

In terms of what this means for asset allocation, we see several action items. First, the value of upfront yield has clearly increased, and having some legitimate collateral against that cash flow is favored. If that collateral has pricing power, then its valuation is likely to be significantly re-rated upward. Not surprisingly, global infrastructure is likely to be an important part of the new world order we are describing. Second, we think that investors must own some Gold in their portfolio, given the huge surge in global monetary and fiscal activity (often with little regard for how the debt will be repaid).

EXHIBIT 28

Covid-19 Will Likely Only Accelerate Our Thesis About Slowing Global Nominal GDP



Note: China and India in local currency. Data as at November 21, 2019. Source: IMFWEO, respective national statistical agencies.

Third, given our view about de-leveraging, we expect a huge opportunity for managers who can help de-lever companies and/or restructure them as well as supply capital that can help provide growth. In liquid markets, we expect companies with strong balance sheets and the ability to gain market share to show outsized increases in market capitalization over the next five years. As mentioned earlier, we expect a potential further concentration of profits in large companies with economies of scale and a multi-channel distribution approach to prosper in the near-term. If we are right, then identifying the companies that support their supply chains makes a lot of sense to us. Overall, though, our message is to buy Simplicity in liquid markets and concentrate more on Complexity in private markets. This playbook worked well in the 2008 downturn, and we see enough similarities in this downturn to follow a similar approach during the next 12-18 months. Finally, if we are right about the trends we have identified, we see active managers outperforming passive ones for quite some time.

Conclusion

"Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning."

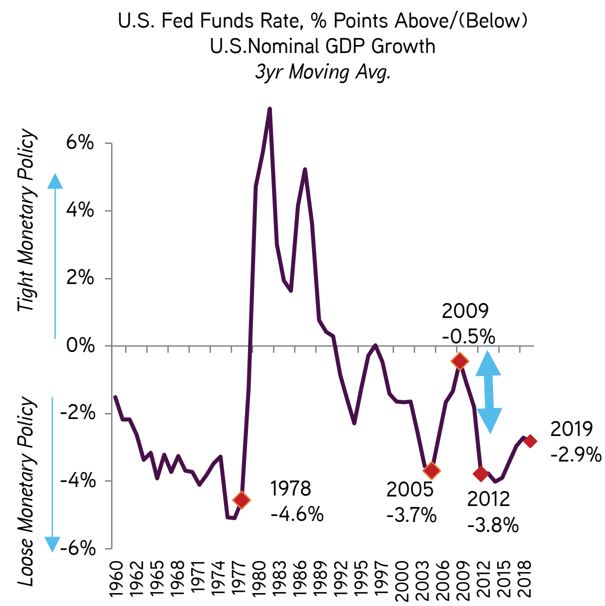
— Winston Churchill

No one has a crystal ball for predicting the macro, particularly given today's uncertain state of affairs. What we can do as investors is create scenario analyses, and then leverage as much real time information and insights from our portfolio companies as we are able to narrow the range of outcomes. Importantly, though, this crisis is occurring at a time of significantly elevated debt levels around the world. It is also coming at a time when interest rates were already low and government deficits were already high. So, just as we are humbled by the human tragedy associated with Covid-19, we too should be respectful that this disease is occurring at a time of notable macro risk in the economy. In particular, we are intently focused on the long-term implications of corporate and government de-leveraging. Also, as indicated earlier, we think that many industries could soon be deemed to be strategic priorities for national security reasons by select governments around the world. If we are right, then existing global supply chains definitely will be threatened.

> **"So, just as we are humbled by the human tragedy associated with Covid-19, we too should be respectful that this disease is occurring at a time of notable macro risk in the economy. In particular, we are intently focused on the long-term implications of corporate and government de-leveraging."**

EXHIBIT 29

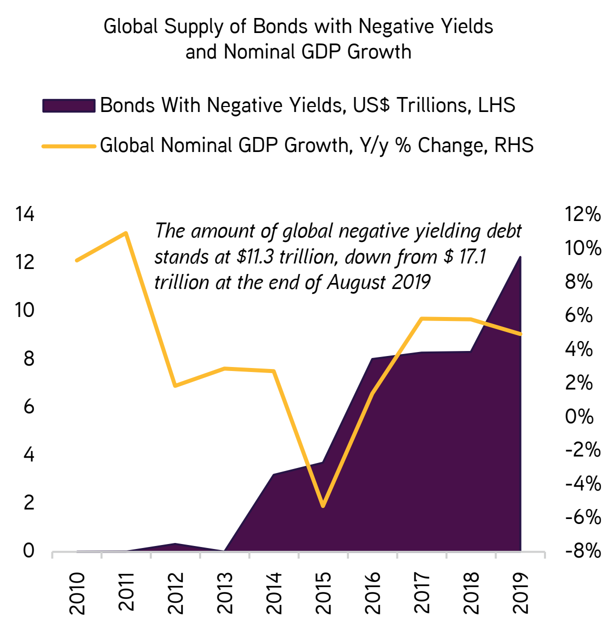
The Government Has Focused on Stimulating Nominal GDP through Monetary Policy. This Strategy Makes Us Want to Overweight Cash Flowing Assets with Upfront Yield



Data as December 31. 2019. Source: Bloomberg, KKR Global Macro & Asset Allocation analysis.

EXHIBIT 30

Even Before Covid-19, Negative Interest Rates Have Not Helped to Improve Growth in Nominal GDP



Data as at December 31, 2019. Source: Bloomberg, IMF, Haver Analytics.

EXHIBIT 31

China Activity Is Starting to Recover At An Incremental Pace...

Consumer, Y/y % Change	Feb-2 T+1W	Feb-9 T+2W	Feb-16 T+3W	Feb-23 T+4W	Feb-29 T+5W	Mar-8 T+6W	Mar-15 T+7W	Mar-22 T+8W	Mar-29 T+9W
Personal Care and Beauty	-1%	-33%	-33%	-12%	-7%	3%	12%	7%	36%
Hhold, Tools, Home Imp	67%	14%	-18%	-9%	-2%	7%	23%	27%	1%
Home Appliances	-18%	-38%	-57%	-48%	-34%	-28%	-19%	-15%	10%
Digital Electronics	9%	-8%	-27%	-11%	3%	-13%	5%	14%	-9%
Clothing	-14%	-20%	-36%	-24%	-14%	-23%	-10%	-7%	-19%
Mother and Baby	-11%	-23%	-33%	-26%	-21%	-17%	-11%	-10%	14%
Automotive	-30%	-17%	-56%	-53%	-43%	-61%	-54%	-50%	-27%
Jewelry and Gifts	-39%	-36%	-42%	-21%	-9%	-27%	-17%	-19%	88%
Computers and Office	-25%	-45%	-67%	-63%	-54%	-55%	-44%	-35%	22%
Sports and Health	-2%	-26%	-28%	-12%	2%	0%	7%	9%	15%
Food and Beverages	41%	46%	5%	8%	-29%	-5%	2%	9%	41%

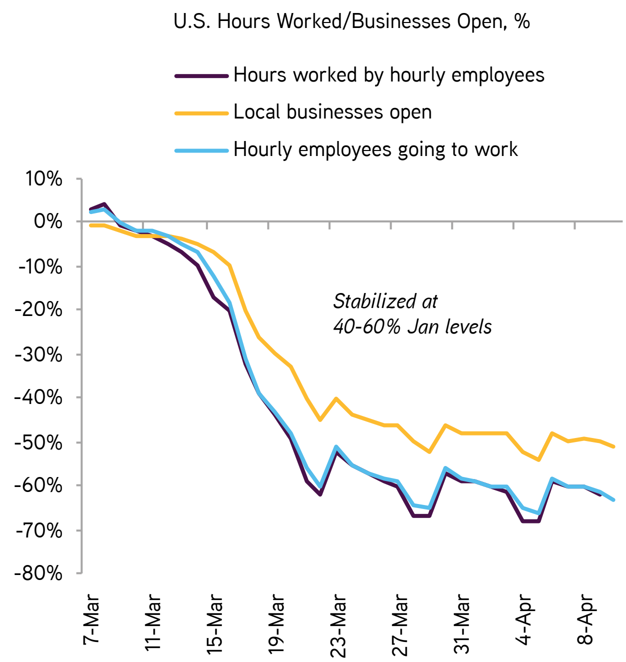
Data as at March 29, 2020. Source: Big China Lab.

What can we do from here? On defense, now is a time to think about upgrading the quality of existing investments to weather the storm during the next 6-12 months. The Federal Reserve, the ECB, and other global central banks are providing investors with an attractive near-term window to execute on this mandate before economic pressures become more of a harsh reality. On offense, our view is to buy Simplicity in the liquid markets and focus on Complexity in the private markets. Our other important suggestions are to maintain disciplined pacing and avoid creating overly concentrated bets in areas where there is not enough micro/macro information to support that wager.

As mentioned earlier, our strong belief is that we will come through to the other side of this tragedy. In a best case scenario there may be a resurgence of business activity – largely driven by fiscal initiatives and improving demand – that helps improve what is likely a heightened state of unemployment across many parts of the globe in the near-term. We take comfort that one can already see lots of 'green shoots' in the data we track out of Asia *(Exhibit 31)*. So, we do have confidence that a recovery will occur, which fuels our belief that collectively we will be stronger and better prepared for the future. In the interim, though, we should proceed cautiously but with a sense of purpose to the heightened sense of fiduciary responsibility we all now have to the allocators of capital we serve.

EXHIBIT 32

...But We're Not There Yet in the U.S.



Data as at April 8, 2020. Source, Federal Reserve, Bloomberg, Haver, KKR Global Macro & Asset Allocation analysis.

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