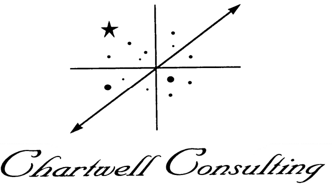

CHARTWELL REVIEW

April 2020 **FIRST QUARTER 2020** *Volume XXVII, Issue No.1*

UNPRECEDENTED

As the quarter began we were 11 years into a bull market and wondering how long that bull would/could/should run, and what the likely catalyst for change might be.

A global pandemic was not on anyone's radar screen. When the concept took hold in February, stock markets simply plunged. US equity markets experienced their swiftest fall from peak to trough *ever*; the S&P500 fell -35% in just 22 days.

2019's "green on the screen" turned mostly red by quarter's end. The swiftest ever descent from bull to bear market was not the only unprecedented event in 1Q20 -

- In March, ±5% was the average daily stock market move;
- The VIX, volatility index, reached an all-time high of 82 on March 16th – most volatile market since October 1929;
- The combination of interest rates plummeting, and credit spreads ballooning was devastating for bond return volatility. The 10-year Treasury interest yield fell 81 bps from year end (1.51% to 0.70%). At the same time, credit spreads on investment grade bonds widened to over 340 bps and over 1,100 bps for high yield;
- The Fed acted quickly and aggressively to support the economy and keep bond markets functioning. Fed funds rate was dropped to nearly zero and six lending and liquidity programs were instituted in a three-week period. On March 26th, Fed Chair Powell reassured markets "When it comes to this lending, **we're not going to run out of ammunition.** That doesn't happen.";
- Oil prices suffered their worst month and quarter on record, falling to $22.74, hit hard by both over supply and demand destruction precipitated by the global pandemic;
- Globally, governments imposed "shelter in place" restrictions and shuttered all businesses deemed non-essential, putting economies into a "self-induced recession" to stop the spread of the pandemic. In the US, by the end of March over 16 million people had filed for unemployment claims (end of April – 30 million).

Figure 1: Index Benchmarks

Market Index	Trailing Returns *				
	1Q 20	**1 Yr**	**3 Yr**	**5 Yr**	**10 Yr**
S&P 500	(19.6)	(7.0)	5.1	6.7	10.5
U.S. Top-cap Stocks	(17.7)	(4.1)	6.7	7.9	11.0
U.S. Mid-cap Stocks	(27.1)	(18.3)	(0.8)	1.9	8.8
U.S. Small-cap Stocks	(30.6)	(24.0)	(4.6)	(0.3)	6.9
Non-US Stocks (**EAFE**)	(22.8)	(14.4)	(1.8)	(0.6)	2.7
Non-US Stocks (**Emerg**)	(23.6)	(17.7)	(1.6)	(0.4)	0.7
3 mo. T-Bills	0.4	2.0	1.7	1.1	0.6
U.S. Aggregate Bonds	3.2	8.9	4.8	3.4	3.9
High Yield Bonds	(13.1)	(7.5)	0.6	2.7	5.5
Global Bonds ($Hdgd)	1.5	6.6	4.7	3.5	4.1
Consumer Prices, p.a.	*0.4*	*1.5*	*1.9*	*1.8*	*1.7*
Blmbrg Commodities	(23.3)	(22.3)	(8.6)	(7.8)	(6.7)
MSCI World REIT's	(23.4)	(16.8)	(0.5)	0.8	6.6
Chartwell 65/35 Global	(17.4)	(9.6)	1.7	3.1	5.8

Figure 2: Average Mutual Fund Returns

Fund Category	Trailing Returns *				
	1Q 20	**1 Yr**	**3 Yr**	**5 Yr**	**10 Yr**
U.S. Large-cap	(21.1)	(9.7)	3.1	4.8	9.1
U.S. Mid-cap	(28.8)	(21.1)	(3.4)	(0.1)	7.0
U.S. Small-cap	(32.2)	(25.8)	(6.5)	(1.2)	6.3
International Lg. Cap	(23.0)	(14.3)	(1.7)	(0.5)	3.0
International Sm. Cap	(26.7)	(18.0)	(2.6)	0.7	5.8
Emerg. Mkt. Equity	(24.6)	(17.8)	(2.5)	(0.6)	0.9
Balanced/Hybrid	(13.2)	(5.3)	2.0	2.8	5.8
General Bond	(0.8)	8.2	5.4	3.8	6.4
High Yield Bond	(12.6)	(7.5)	0.0	1.9	4.7
Hedge Funds, Equity	(13.0)	(8.1)	0.0	1.3	2.9

*Annualized trailing returns for periods ending 3/31/20

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Economies, Economics, Prices, and Policy

	3.31.20	3.31.19
CPI - headline, y-o-y	1.5%	1.9%
CPI - core, y-o-y	2.1%	2.0%
Unemployment Rate	4.4%	3.8%
Labor Force (millions)	162.9	162.9
Employed (millions)	155.8	156.7
Employment/Population	60.0%	60.6%
Growth in Real GDP, (y-o-y)	2.1%	2.9%

At 2.1%, *core* inflation (ex-food & energy) was virtually unchanged during the last twelve months. Collapsing energy prices during March (-6%; gasoline -11%) pushed year-over-year *headline* inflation down to 1.5%. The unemployment rate jumped to 4.4% at the end of March. The labor force declined by 1.6 million persons in March, and employment declined by 3 million persons (155.8mm vs. 158.8mm).

But, March was just the beginning. In April, a million more workers in Michigan, 21 percent of the workforce, applied for unemployment. Pennsylvania now has over 20% of workers out of a job; Ohio is over 15%. The worst state of all is Hawaii, with over 22% out of work.

April's 22 million additional jobless figure has wiped out nearly a decade's worth of employment, and is likely an understatement because most gig workers and temporary employees have not been able to apply for aid yet. Once one adds in those not captured by the data, we are almost certainly close to a 20% unemployment rate now. At this point in the pandemic, roughly one in every seven individuals in the workforce may be unemployed.

Figure 3: Breaking Down 1st Quarter* Real GDP

% Change from Preceding Period *(seasonally adjusted at annualized rates)*

Factor	1Q '20	4Q '19	3Q '19	2Q '19
Real GDP Growth	(4.8)%	2.1%	2.1%	2.0%
Nominal GDP Growth	(3.5)	3.5	3.8	4.7
Real Final Sales	(4.3)	3.1	2.1	3.0
Personal Spending	(7.6)	1.8	3.2	4.6
Private Investment	(5.6)	(6.0)	(1.0)	(6.3)
- Fixed, Businesses	(8.6)	(2.4)	(2.3)	(1.0)
- Fixed, Residential	21.0	6.5	4.6	(3.0)
*- Chg. In Inventories **($bn)***	*($9)*	*$18*	*$67*	*$75*
Export growth	(8.7)	2.1	1.0	(5.7)
Import growth	(15.3)	(-8.4)	1.8	0.0
Government Spending	0.7	2.5	1.7	4.8

** BEA final estimate on April 29, 2020*

The 4.8% annualized decrease in real GDP during Q1 was paced by the negative contribution from personal spending on services (specifically, housing consumption). This accounted for more than all of the -4.8% drop.

Increased housing investment and a sharp decline in net imports once again offset weaker business fixed investment and spending on inventories.

The Atlanta Fed's current model estimate of real GDP change in the 2nd quarter of 2020 is a very weak -16.6%, following April's sharply contracting construction spending and manufacturing. The *Blue Chip* consensus estimate is a widely varying -18% to -35%.

Businesses stopped hiring and started firing in March. Non-farm payroll jobs dropped -701,000 persons in March. According to the Household Labor Survey, employment levels declined by 2.99 million persons in March, to a total of 155.78 million. The labor force dropped by 1.63 million, and the number of unemployed rose by 1.35 million.

Employment levels are moving downward much faster than during the Great Financial Crisis, when unemployment rates nearly hit 11%. Based on the unprecedented level of unemployment claims in April, the rate is likely to hit 20%, and may rise from there.

On the fiscal policy front, Congress enacted three separate coronavirus-relief packages at a total cost of more than $2 trillion. The most recent legislation—the Coronavirus Aid, Relief, and Economic Security (CARES) Act—provides $1.8 trillion in direct aid to individuals and businesses, the largest stimulus package in U.S. history. In 2009, Congress passed the American Recovery and Reinvestment Act, which injected $831 billion into the U.S. economy through tax cuts and spending programs. The CARES Act is more than twice the size of ARRA2009, dwarfing what was previously the country's largest stimulus package since World War II.

On the monetary policy front, the Federal Reserve has completely redefined the role of a central bank in its efforts to shore up the U.S. economy. It is going further than ever to unveil programs to lend directly to states, cities, and midsize businesses that have seen revenues evaporate amid efforts to combat the coronavirus outbreak. In the first quarter it launched or re-started 8 programs, including a Commercial Paper Funding Facility (to buy A1/P1 commercial paper), a Primary Dealer Credit Facility, a $700bn QE program (later expanded to an "unlimited" amount), a Primary Market Corporate Credit and Secondary Market Corporate Credit facilities, to purchase investment grade corporate loans and newly downgraded "fallen angel" bonds.

Considered as a whole, the Fed has created or buttressed a combined $8.29 trillion of Asset Purchases ($3.9trn), Direct Lendings ($1.8trn), and Guaranties ($2.3trn). By April 10th, its loan portfolio had ballooned to $6 trillion.

For perspective, the WWII Marshall Plan provided direct support that equaled 2.5% of European GDP. The Fed's current program is 13% of US GDP.

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Bonds – after the disease, the debt

Fixed income markets took a roller coaster ride over the last month of the quarter. The extreme volatility reflected illiquid conditions as dealers worked from home; regulatory pressure weighed on dealer balance sheets; and profit taking in fixed income rose to cover losses in risk assets. Investors turned to core bonds, in particular US Treasuries, as a key vehicle for de-risking. This resulted in a sharp rise in stock-bond correlations

The Fed's strong policy action and a roll-out of the post financial crisis toolkit to deal with stress has brought back some normalcy into market function. Central banks moved with impressive speed and force. For one notable period, between March 9 and March 18, the 10-year Treasury yield rose to 1.2%, up 60bps, while the S&P 500 fell nearly 20%. As a result of this sharp de-risking, the negative correlation between stocks and bonds broke down.

Per Figure 5, U.S. yields plunged in Q1. The full 3mo/30yr yield curve at the end of Q4 ranged from 1.55% to 2.38%, with 10-year bonds yielding 1.91%. Three months later, short rates had dropped below 0.10%. The 30-year yield was down over 1.00%, to an all-time low of 1.35%. The 10-year was trading off 1.2%, to just 0.70%.

In the process, risk-free returns from the mid-term and longer maturities jumped. The three-year Treasury rose 4.0% in the quarter and 7.2% over the past 12 months. The 30-year returned an amazing 25.8% in the quarter, and just over 39% for the year.

One economic vulnerability of concern is the record-high level of U.S. corporate debt. We have often pointed out that this is unlikely to spark a recession by itself but could make matters more difficult during the next downturn. Many of these companies are reliant on steady economic growth and low interest rates. Even a short, sharp economic contraction could increase distress and cause a generalized fallout for companies with marginal finances. Thus, the critical nature of the Fed's aggressive policy moves in March and early April.

Despite these unprecedented moves, the market's sell-off of corporate credit was unprecedented. The S&P500 dropped nearly 35%, but the index of BBB Commercial MBS fell 36% versus similar maturity Treasuries, High Yield bonds declined 24% versus Treasuries, and Investment Grade credits 19% before each started their recoveries through quarter's end. Losses/gains for the quarter (see Figure 4) occurred in just the final six weeks.

The current panic in financial markets has led to a surge in the value of the U.S. dollar, given its safe-haven characteristics. The soaring demand for the currency has made it scarce and expensive, increasing the burden of dollar-denominated debt. The dollar shortage is exacerbated by the fall in trade activity and foreign trade flows. This dynamic raises the risk of an emerging market debt crisis, as a second-order effect of current market turmoil.

Figure 4: Primary Bond Sector Returns (%)

Index	1Q '20	1 Yr	3 Yrs	5 Yrs
US Aggregate Bond index	3.2	8.9	4.8	3.4
US Gov't/Credit: (1-3yrs)	1.7	4.5	2.6	1.9
US Treasury: Long	20.9	32.6	13.4	7.3
US TIPS (1-10yrs)	0.3	4.5	2.5	2.2
Mortgage-Backed (MBS)	2.8	7.0	4.1	2.9
Commercial MBS	0.5	5.4	4.1	3.1
Asset-Backed (ABS)	(0.2)	2.8	2.4	2.0
Inv. Grade US Credit	(3.1)	5.1	4.2	3.3
Leveraged Loans	(12.0)	(7.7)	0.0	1.7
US High Yield Credit	(13.1)	(7.5)	0.6	2.7
Municipal Bonds, broad	(0.6)	3.9	4.0	3.2
Global Agg., ($ hdgd)	1.5	6.6	4.7	3.5
Global Credit, ($ hdgd)	(3.3)	3.7	3.9	3.2
Emerg. Mkts Bonds (US$)	(13.4)	(6.8)	0.4	2.8

Figure 5: Fixed Income Yields – 1st Quarter 2020

(YTM, % p.a.)	Mar-20	Dec-19	Mar-19	Dec-18	*1-Year Change*
US Treasuries					
3-month	0.08	1.55	2.40	2.45	*(2.32)*
2-year	0.23	1.56	2.29	2.5	*(2.06)*
5-year	0.38	1.68	2.23	2.51	*(1.85)*
10-year	0.70	1.91	2.41	2.69	*(1.71)*
30-year	1.35	2.38	2.82	3.02	*(1.47)*
BarCap Aggregate	1.59	2.31	2.94	3.28	*(1.35)*
BBB Credit	4.32	3.17	4.03	4.65	*0.29*
AA Credit	2.12	2.35	2.99	3.37	*(0.87)*
Agency MBS	2.18	2.54	3.08	3.39	*(0.90)*
Emerging Mkts ($)	7.00	4.91	5.31	5.95	*1.69*
US High Yield	9.44	5.19	6.48	7.95	*2.96*
UST 10yr - 3Mo	0.62	0.36	0.01	0.24	*0.61*

Figure 6: Sovereign Bond Yields, selected countries

10-year yields (%)	Mar-20	Dec-19	Mar-19	Dec-18	*1-Year Change*
Germany	(0.47)	(0.18)	(0.10)	0.16	*(0.37)*
Switzerland	(0.32)	(0.48)	(0.40)	(0.15)	*0.08*
Japan	0.00	0.00	(0.10)	0.02	*0.10*
Britain	0.42	0.82	1.00	1.34	*(0.58)*
Spain	0.50	0.44	1.00	1.41	*(0.50)*
United States	0.70	1.91	2.41	2.69	*(1.71)*
Australia	0.73	1.43	1.80	2.29	*(1.07)*
Italy	1.62	1.41	2.50	2.70	*(0.88)*
Poland	1.69	2.12	3.00	2.75	*(1.31)*
Greece (new bonds)	1.80	1.49	3.80	4.40	*(2.00)*
China (5 year)	2.31	2.83	3.00	2.97	*(0.69)*
Brazil	3.42	4.58	7.30	7.22	*(3.88)*
India	6.12	6.52	7.30	7.35	*(1.18)*
Russia	6.81	6.40	8.30	8.81	*(1.49)*

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US Stocks - Blindsided

Stock markets closed out their worst quarter since the depths of the 2008-9 Global Financial Crisis, as the COVID-19 pandemic shuttered economic activity and shattered investor confidence. Volatility surged, with the VIX reaching an all-time high of 82 on March 16th. During the month, the *daily* average stock market move was 5%. The early March market freefall slowed when governments and central banks unleashed unprecedented policies, simultaneously launching fiscal stimulus and broad quantitative easing.

US equity markets experienced their swiftest fall from peak to trough ever, as the S&P 500 fell -35% in just 22 days, ending an 11-year bull market. From a market cap standpoint, large caps (S&P 500) fell the least (-19.6%) in 1Q20; while small (-30.6%) and mid (-27.1%) posted weaker results. Growth stocks fell less than value across all capitalization ranges. Every Russell Value index posted its worst absolute return on record (as did the core Russell 2000 and Russell Microcap indices) in 1Q20. From a sector perspective, all are in the red YTD. Weak sectors for the quarter were energy, financials, and industrials (off -27% to -50%) and the least negative were technology, healthcare, and consumer staples (-11.9% to -12.7%).

Figure 7: U.S. Equity Market - Size/Style Returns

		Trailing			
	1Q '20	**1-year**	**3-yrs**	**5-yrs**	**10-yrs**
Growth					
Large Cap	(14.1)	0.9	11.3	10.4	13.0
Mid Cap	(20.0)	(9.5)	6.5	5.6	10.9
Small Cap	(25.8)	(18.6)	0.1	1.7	8.9
Value					
Large Cap	(26.7)	(17.2)	(2.2)	1.9	7.7
Mid Cap	(31.7)	(24.1)	(6.0)	(0.8)	7.2
Small Cap	(35.7)	(29.6)	(9.5)	(2.4)	4.8

In terms of the size premium, it was completely **not** evident for the quarter. Small cap stocks **under**performed midcaps, which underperformed large-caps, in both value and growth styles.

In terms of style only, the first quarter was an almost classic risk-on market, favoring growth stocks over value. The Russell 200 large-cap differential was 12%, and the Russell 2000 small-cap differential was 10%. This contributed majorly to the 1-year positive differential for growth of 17% and 11%, respectively.

For growth stocks this once again followed strong relative performance earlier in the period, and we observe that large-caps have outperformed small-caps over trailing 1-, 3-, 5-, and 10-year trailing periods. That has not occurred during the past 25 years we've been writing this Review. Not unprecedented, but almost.

We were clearly not in a risk-on market environment during March. Equity markets were in disarray. Instead, sector return differences help explain the numbers. The major sectors driving return differentials in the quarter were –

- **technology**, accounting for 39% of growth stocks, only 9% of value stocks and outperforming by 8% (-12% vs. -20%);
- **financials**, accounting for only 5% of growth stocks, 19% of value stocks, and underperforming by 12%;
- **health care**, accounting for 11% of growth stocks, 21% of value, and outperforming by 7%;

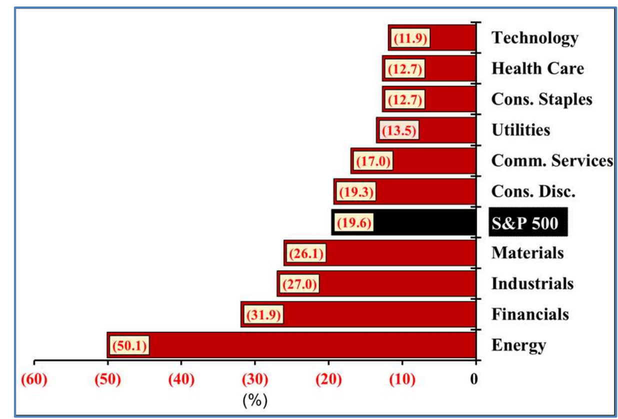
The top contributors to large-value portfolios were Gilead (+16%), Biogen (+7%), Regeneron (+30%), and Citrix Systems (+28%). Berkshire (-19%), Exxon/Mobil (-45%), Bank of America (-39%), and AT&T (-24%) contributed 3.1% of total losses.

Top contributors to large-growth portfolios were Amazon (+5.5%), Netflix (+16%), NVIDIA (+12%), and Microsoft (+0.3%). They contributed 0.83% to returns. Alphabet (-13%), JPMorgan (-35%), Facebook (-19%), and Apple (-13%) accounted for -3.1% of total losses.

The largest US stocks are Microsoft (5.6%), Apple (5%), Amazon (3.8%), Facebook, (1.9%), and Berkshire (1.7%).

Energy stocks attract more attention than they deserve. Large-cap energy stocks account for only 2.6% of the total market cap of the S&P 500. They returned a dismal -50.5% in the first quarter. Energy stocks represent only 2% of the Russell Midcap index market cap (a -61.5% return in Q1), and just 1.7% of the Russell 2000 index (-62% Q1 return).

Figure 8: US Sector Returns –1st Quarter 2020



At this difficult juncture, the questions equity investors need to address are – (1) the depth, length and shape of the economic recovery; (2) how this will translate into an earnings recovery, and (3) how that recovery will be valued by investors. To date, investors have been very optimistic about valuations, despite little or no clarity regarding the earnings translation. Stock market values appear to be considerably "ahead" of themselves.

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International Markets - Pandemic Plunge

Global stocks fell sharply as a severe coronavirus outbreak brought the world economy to a virtual standstill. Governments around the world responded swiftly and significantly with unprecedented monetary and fiscal measures to support economies and combat a global recession. All sectors posted negative returns, with energy suffering the largest declines. A demand shock and a price war between Russia and Saudi Arabia sent oil prices plummeting to 18-year lows. Financial stocks experienced steep declines as regulators in Europe were urging banks to suspend dividend payments and conserve capital. Technology, utilities and health care sectors fell the least, particularly drug companies working on potential coronavirus treatments and vaccines. Developed (MSCI EAFE) and emerging markets fell similarly, -22.8% and -23.6%, respectively. The energy-dominant Canadian markets fell -27.5%. The inclusive All Country World index declined -21.4%. Globally, the growth style fell less than value by a wide margin, and smaller capitalization stocks fell further than their larger cap peers.

Within developed markets, Europe (-24%) declined most, as the coronavirus outbreak hit Italy and Spain hard. The ECB launched an emergency 750 billion euro bond-buying program to backstop the eurozone economy.

ECB President Christine Lagarde declared "there are no limits to our commitment to the euro". The euro declined 2% versus the US dollar. In the UK (-29%), the Bank of England cut interest rates by 65bps. Germany (-27%) declared it would provide "unlimited" loans to businesses impacted by the global pandemic. The countries which held up best were Denmark (-8%), Switzerland (-12%) and Portugal (-13%). Denmark and Switzerland were bolstered by health care stocks (Novo Nordisk and Roche).

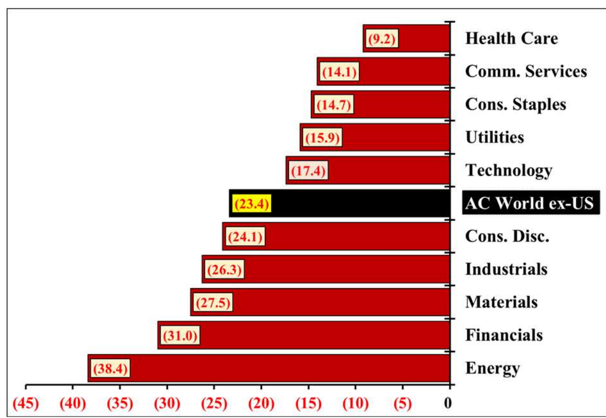
Figure 9: International Equity Markets – Returns

	U.S. Dollar Returns (%)		Local Currency Returns (%)	
thru 3/31/20	1Q '20	1-Yr	1Q '20	1-Yr
World ex-USA	**(23.3)**	**(14.9)**	**(20.3)**	**(9.7)**
- MSCI Growth	*(17.8)*	*(6.5)*	*(14.3)*	*(0.3)*
- MSCI Value	*(28.8)*	*(23.2)*	*(26.1)*	*(21.0)*
- Europe	(24.3)	(15.5)	(21.8)	(13.3)
- Pacific, ex-Japan	(27.6)	(23.7)	(21.2)	(16.7)
- Japan	(16.8)	(6.7)	(17.3)	(9.0)
- United Kingdom	(28.8)	(23.0)	(23.9)	(19.1)
Int'l Small Caps	**(28.4)**	**(19.0)**	**(25.5)**	**(16.6)**
Emerging Mkts	**(23.6)**	**(17.7)**	**(19.1)**	**(13.0)**
- EM Asia	*(18.1)*	*(12.1)*	*(16.2)*	*(10.4)*
- EM Europe	*(36.5)*	*(21.9)*	*(25.1)*	*(10.4)*
- EM Lat Amer	*(45.6)*	*(40.8)*	*(31.8)*	*(24.0)*
- EM BRIC	*(20.9)*	*(14.8)*	*(17.0)*	*(10.3)*

The Pacific region fell -20% during the quarter. Japan the largest country in the region, held up better than other constituents. It declined (-17%), despite manufacturing disruptions with its largest trading partner, China. The safe-haven Japanese yen was one of the few currencies to rise against the US dollar (0.7%). The postponement of the Summer Olympics in Tokyo was a blow to an already contracting economy. Prime Minister Abe promised a massive stimulus package, the Bank of Japan doubled its equity purchase program and established a new corporate lending facility to cushion the economic impact of the pandemic.

Hong Kong's economy also retreated -17%, as the coronavirus outbreak hit an economy already in recession after months of political protests and the US-China trade dispute. Australia' central bank cut its key policy rate to a record low 0.25%, which pushed the economy into recession for the first time since 1991. After a devastating bushfire season, Australia is now suffering the effects of a sharp slowdown in China, its largest export market and driver of its tourism and education sectors. Australia fell by -33% and was the weakest country in the region.

Figure 10: Ex-USA Sector Returns – 1st Quarter 2020



Emerging markets (-23.6%) tumbled, hit by a "perfect storm" trifecta – disrupted supply chains with China, plunging commodity prices and a flight to safety rising US dollar. Asian emerging markets dropped less than others, as China (-10.2%) was one of the least negative emerging markets, despite being the initial epicenter of the coronavirus pandemic and having much of its economy shuttered during 1Q20. China's leading internet companies posted mixed results. JD.com rose 15%, while its top rival, Alibaba, dropped -8%. In the region, semiconductor giants Samsung (-18%) and Taiwan Semiconductor (-17%) fell due to supply chain disruptions. European emerging markets fell -36.5%, led down by Russia (-36.4%), which suffered from collapsing oil prices amid the impact of initiating an oil price war with Saudi Arabia. Latin American markets fell most (-45.6%). Brazil (-50%) was battered by falling commodity prices and being the largest exporter of raw materials to a shuttered China.

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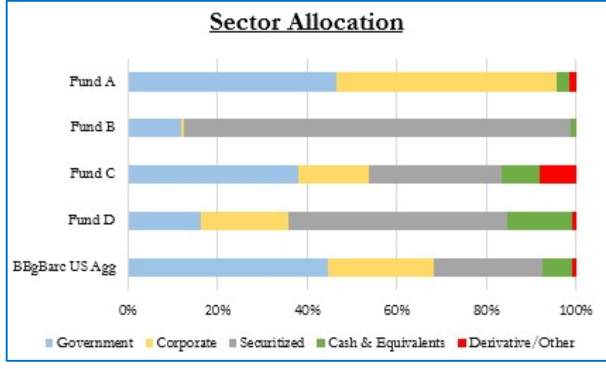
The Back Page – Bond Funds & Indices

Clients reviewing the performance of their core bond strategies in 1Q20 might be surprised by the challenges these strategies faced in meeting or exceeding the Bloomberg Barclays US Aggregate Bond Index, the bellwether core bond index (referred to as the 'Agg' going forward) often used as a benchmark. Fund names have been omitted for confidentiality, but these are among the largest funds in the core bond category:

Representative Core Bond Funds – Trailing Returns

	1Q20	1 Yr	3 Yr	5 Yr
Fund A	2.3	8.5	4.7	3.4
Fund B	-0.8	3.0	3.2	2.7
Fund C	2.2	7.6	4.5	3.2
Fund D	2.9	8.6	4.6	3.2
BBgBarc US Agg	**3.2**	**8.9**	**4.8**	**3.4**

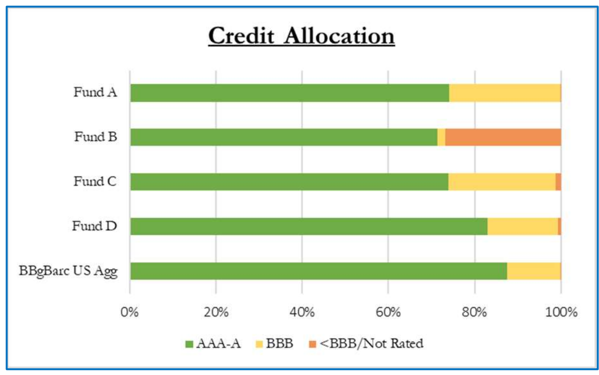
The answer lies in the composition of the index versus core bond strategies and the performance differentials the various sectors of the bond market experienced during the market turmoil in 1Q20. The table below shows the *sector allocation* of the Agg and four bond funds -



A few important observations:

⇒ **Sector allocation mattered** – a lot. Many core bond strategies have different sector weightings than the Agg. Plummeting interest rates and credit spreads widening to unprecedented levels in 1Q20 impacted sectors of the bond market (see Figure 4) very differently. Government and agency MBS posted the best returns during this flight to safety. Spread products; including corporate, non-agency mortgages, CMBS, ABS, posted negative returns. Many core bond strategies over/underweight sectors, and also void sectors.

⇒ **Quality mattered** – even within government bonds, Treasuries outpaced agencies and other government related bonds. Within corporates, higher quality investment grade corporate bonds (-3.1%) fell less than lower quality high yield bonds (-13.1%). The following table shows the quality breakdown of the Agg. Important to note, the Agg *does not* include high yield bonds; many core bond strategies do.



⇒ **Duration mattered** – The interest rate on the 10-year Treasury plummeted 71 bps in 1Q20 (from 1.51% at year end to 0.7% at quarter end). This favored longer-term bonds. Core bond strategies vary their duration exposure around the Agg (5.69 years); shorter duration positioning detracted in 1Q20. In 1Q20 the Agg posted a 3.2% return, while its shorter duration Intermediate Agg peer index rose 2.5%.

⇒ **Style mattered -** Core versus core plus versus multi-sector bond strategies are often benchmarked to the Agg, yet are invested very differently – thereby shining a spotlight on performance differentials.

⇒ **Bond Access and Survivorship Bias mattered –** There are bonds in the index which are priced but do not trade. These bonds were issued, purchased and are held by owners (often insurance companies, foreign governments) to maturity. Bond portfolios cannot access those holdings. Survivorship bias refers to bonds that are downgraded by rating agencies. The Agg does not include non-investment grade bonds, and when a downgrade occurs, the bond is simply removed from the index. Core bond strategies must assess if they want/can continue holding the downgraded bonds based on prospectus rules or client guidelines. They must also deal with the financial ramifications of the downgrade.

Performance of bond strategies often varies from the index. Normally, one or two of these factors accounts for the differential, but all came into play in 1Q20 and magnified the differences. It underscores the importance of knowing how your core bond manager invests and using an appropriate benchmark to evaluate relative performance. For these reasons, we construct *blended benchmarks* to more closely evaluate the bond strategies clients are using.

Stay Safe, sell high, buy low. See you next quarter!

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