TD Wealth

Mirror of our Times

Portfolio
Strategy
Quarterly

Q3 2020

Jean-Paul Riopelle
Composition 1952, 1952
TD Bank Art Collection

Inside

Mirror of our times

Welcome to the summer edition of the TD Wealth *Portfolio Strategy Quarterly.* You now hold in your hands (or on your tablet, more likely) the authoritative compendium of expert opinion from across our institution — TD Economics, TD Securities, TD Wealth and TD Asset Management — delivering one thought-leadership report specifically designed for TD Wealth clients. This quarter we also expanded our horizons to incorporate the knowledge and wisdom of our colleagues at the TD Bank Art Collection, who as you will see, contributed generously to the conceptualization of our theme. Our goal with this document is to provide our clients with everything they need to review the past quarter and outline expectations for the next 12 to 18 months. We think we've accomplished this, and we hope you agree.

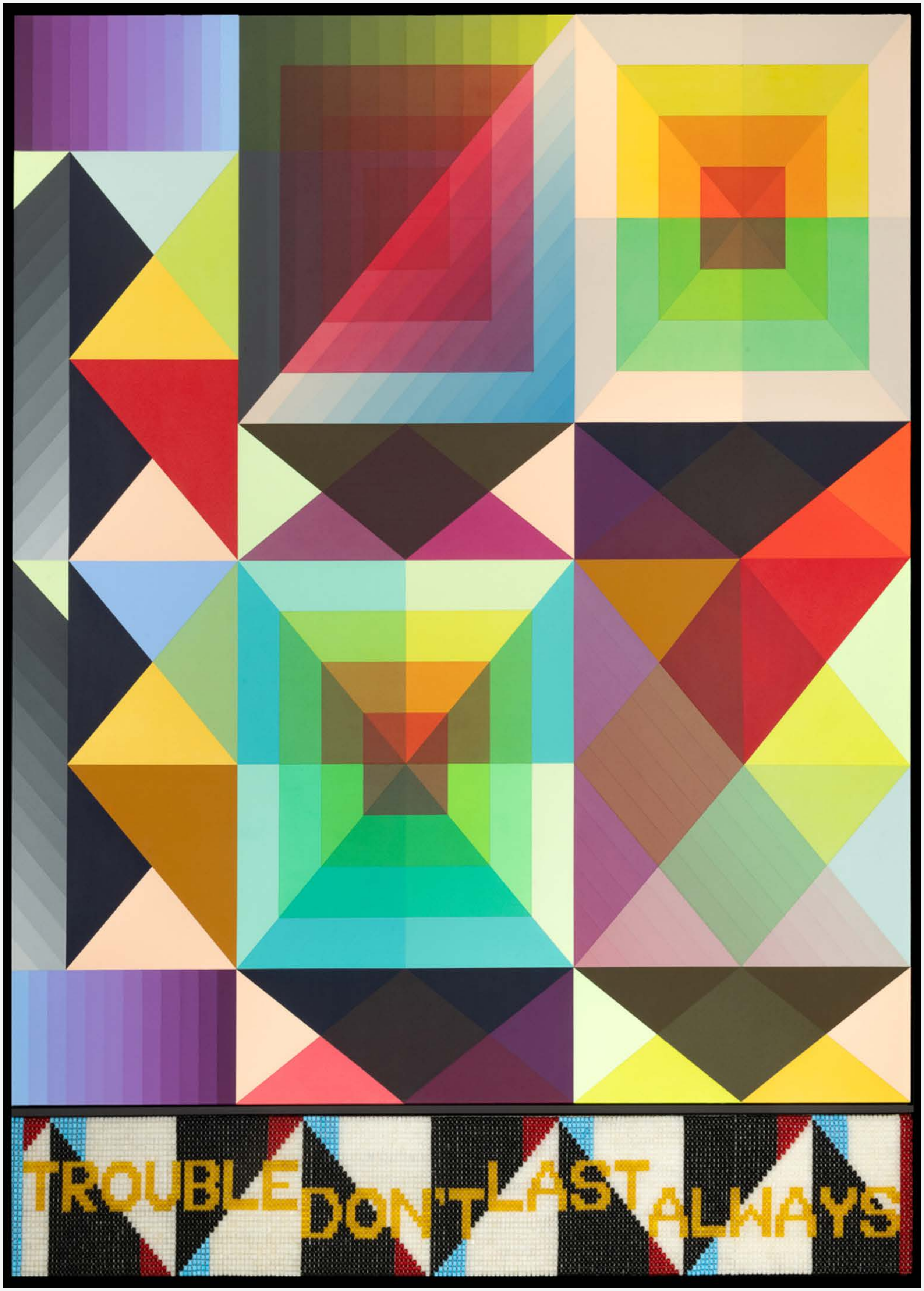
If the last quarter was one that will be remembered for all ages, the one we've moved into is starting to feel like the dawn of a new frontier — with additional stimulus expected, and increasing acceptance of heretofore controversial practices, like yield curve control and modern monetary theory. These, on their own, would make the time we're living in one of the most remarkable in economic history, and I didn't even include the rise of COVID-19, escalating U.S.-China tensions and the upcoming U.S. election.

There's a reflexiveness at work here. Art mirrors the age in which we live, and financial markets operate in the age that art mirrors. Whether we're talking about economics, investment or art, the future is unknown. But it's hard to ignore the feeling that we are in the middle of an enormous transition. The following image highlights the current work of Choctaw-Cherokee artist Jeffrey Gibson entitled *Trouble Don't Last Always.* Finished in 2019, I think the title speaks for itself. I admire the artist's optimism and his extraordinary work. Now and in the future, we will expect the best and plan for the worst, have a well-thought-out wealth plan and a portfolio with true diversification, balancing assets and risk factors, with our commitment to the understanding of financial behaviour. By doing this, we will considerably increase the likelihood that we will successfully navigate this and every other future crisis.

Wishing you a safe summer

Brad Simpson

Chief Wealth Strategist, TD Wealth



Jeffrey Gibson, *Trouble Don't Last Always*, 2019
TD Bank Art Collection

Chiffres Clés

Complexity

$200,000,000,000,000

Governments have deployed US$11 trillion in extra spending (8% of global GDP). Estimated global debt will rise by US$16 trillion this year, pushing public and private debt to a record US$200 trillion.

>16 million, 650,000, >75%

Over 16 million COVID-19 cases have been confirmed globally and more than 650,000 people have died from the virus.[1] More than 75% of countries are reopening as the pandemic intensifies in emerging-market and developing economies.[2]

+20.5%, 1998

U.S. stocks soared 20.5% in Q2, the biggest quarterly gain since 1998.

-4.5%

TD Economics expects U.S. real GDP to contract by 4.5% in 2020, while consensus expects an even worse contraction of 5.6%. Either way, this will be the biggest slump in productivity since the Second World War.

AAA - A = AA+

Fitch Ratings downgraded Canada's credit to AA+ given the expectation that emergency spending will push the country's debt to 115.1% of GDP. With high-quality credit still in short supply, this may boost provincial bonds.

6 over 5 = 100%

The 6 internet giants make up US$6.5 trillion, or 25%, of the S&P 500's market capitalization and created 100% of the index's earnings growth over 5 years.

Whatflation?

Stagflation? Deflation? Inflation? In a world of rampant monetary and fiscal policy, long-term impacts are the great unknown.

Unease = 90/100

Expected volatility remains at the 90th percentile mark, underscoring the unease investors continue to feel about where markets may be headed.

Adaptation

Process over prediction

We manage investments based on a guiding set of principles designed to work in a world that's constantly changing. We focus on investor's goals and true diversification. We build resilient portfolios that aim to perform regardless of the environment.

Steady streams

The private market for real assets, which is linked more closely with the economy than the sentiment-driven equity market, has shown resiliency, providing investors with a source of stability.

Multi-speed market

There has been a wide dispersion of returns in equities, driven by the perceived impact of the shutdown on various industries. After a phase in which all boats were floating on liquidity, only a few segments were left to drive returns. We still see opportunities.

Corporate composure

A spike in issuance has placed corporate bonds in relatively steady hands and is not overly reliant on the Fed's corporate bond-buying programs. We expect further spread compression.

True diversification

To prosper in this new world, investors need a contemporary portfolio approach with true diversification, balancing: (1) broad asset allocation and (2) risk-factor diversification with (3) a deep understanding of financial behaviour.

Be compensated

The goal of factor diversification is to reduce unintended risk exposures and target exposure to compensated factors while minimizing exposure to uncompensated factors.

Buy or sell?

The question at the top of most client's minds is: "Should I chase this rally or sell into it?" The answer is to neither chase nor exit.

PSQ3 | Executive Summary

House Views | International equities upgraded to neutral: Improving economic indicators in Europe suggest a stabilizing outlook. ● **Chinese equities upgraded to modest overweight:** Strong policy measures to cushion the pandemic impact, rebounding manufacturing sentiment and improving credit conditions. ● **Fixed income modest underweight:** Government rates expected to remain at all-time lows for some time; we remain constructive on corporate credit. ● **Equities neutral:** The worst of the economic downturn may be behind us; long-term allocation to U.S. equities modest overweight. ● **Real assets / alternatives modest overweight:** Expectations are for an uptick in activity over Q3/Q4 as provinces and major cities reopen. ● **Sub-classes modest underweight:** Modest overweight on gold, which is near historic highs; neutral on USD. ● **Posture defensive:** S&P 500 above fair value, credit slightly expansionary, principal component analysis deteriorating, PMI contractionary.

Risk Environment | Economic growth (weak): Second-quarter data is expected to mark the worst slump in productivity since the Second World War. ● **Inflation (weak):** The economic lockdown has curtailed spending and pushed inflation down. ● **Employment (weak):** Jobless claims have fallen faster than expected but are on the rise again in states that have halted their reopening after a rise in COVID-19 cases. ● **Consumer sector (neutral):** May spending surged on increased confidence as businesses reopened but may fall again as rising case counts scuttle reopening plans. ● **Housing (strong):** Price and optimism indicators show a rebound compared to last quarter and even 12 months ago. ● Business conditions (weak): Productivity has fallen to record lows; double-digit declines in EPS are expected. ● **Financial conditions (neutral):** Most measures have pulled back from extreme levels, indicating that stress is on the wane and suggesting a modest uptick in risk appetite ● Foreign trade (strong): As markets stabilized, the U.S. dollar has given back much of its appreciation; this should make U.S. exports more competitive. ● **Government/fiscal policy (accommodative):** The U.S. government has deployed almost US$3 trillion, or 14.8% of GDP, in response to the lockdown. ● **Monetary policy (accommodative):** The Fed has indicated it will keep rates within lower bounds until at least 2022. ● **Risk sentiment (neutral):** Implied volatilities have fallen but are still high; retail investment advisors ended the quarter bearish, while investors have been bullish.

Factor Analysis | The contrast between implied volatilities in Q1 and Q2 for major asset classes highlights the stabilizing impact of government and Fed support, although investors still expect turbulence. ● Assets that benefit from rising economic growth and rising inflation — equities, corporate bonds, emerging-market debt and commodities — performed exceptionally well in the second quarter. ● Size and growth factors outperformed in Q2 as investors focused on a quick economic recovery, buying equities that carry more risk and growth. ● Value stocks continued to underperform as investors moved out of more defensive sectors such as financial, industrials and consumer staples.

Economy | As the pandemic ushers in a new era of policymaking, the long-term implications for the global economy are manifold. Disruptions to capital and labour markets will likely weaken growth potential, particularly in emerging markets where disparities will persist for longer. Deflation is the near-term risk, inflation the risk in the medium to long term. This crisis will be a watershed moment for how fiscal and monetary policy interact going forward. Central banks have all but run out of ammunition, which may lead to less effective policymaking. Greater reliance on fiscal policy will, as a result, threaten central bank independence as co-ordination with governments becomes standard practice. Governments, which have authorized unprecedented levels of spending, will have few good options to reduce debt. Austerity measures may further weaken growth, while monetization of debt through central banks is likely to stoke inflation. Monetization of debt could also raise international tensions by fanning currency and trade wars, and ultimately accelerating the populist push to deglobalization that is already underway.

Fixed income | Corporate bonds recovered strongly over the past quarter, with spreads tightening significantly. Investment-grade corporates enjoyed a surge in demand from traditional investors after the price collapse in Q1. A recent spike in new issuances has placed bonds in the hands of traditional investors and is therefore not overly reliant on Fed stimulus. ● High-yield corporates have enjoyed a strong recovery, particularly the "fallen angels" that had been downgraded to sub-investment-grade. We see room for further outperformance from these. However, we maintain our cautious stance on the broader high-yield category due to insufficient revenue and low recovery rates on defaults. ● In the sovereign bond market, rates have been slashed to their effective lower bounds. The Fed could consider negative policy rates, but we see this as unlikely, even if the economy performs worse than expected. Developed-market government bonds will remain a core part of diversified portfolios, given their downside protection, but their return potential has deteriorated significantly.

Equities | At the index level, equity markets appear to be fully valued. But when we dissect the broad equity indices, we see attractive opportunities. Trillions of dollars in fiscal stimulus has led to a "multi-speed" market, with segments and sectors performing differently depending on perceived impacts of shutdowns. After an initial phase in which all boats were floating on liquidity, only a few segments of the market have been left to drive returns. We can also see widening dispersion between value and growth, and between large-caps and mid-/small-caps. These disparities should narrow as we progress through a slow and steady reopening of the economy, assuming governments can keep the rise in infections at bay. As economies begin to recover, segments that have been left behind should also recover, making it worthwhile to stay invested rather than trying to time the market. What should be done now is to manage exposures in pursuit of opportunities that still exist. Sectors currently benefitting from the secular growth story could continue to appreciate, despite their stretched valuations and lack of growth. There's still some potential in North American equities, and a broad-based recovery is yet to follow. Moreover, we believe that international equities, especially in the EU and China, are well positioned and offer an attractive risk/reward profile.

Real Assets | Real assets have recovered, boosted by accommodative monetary and fiscal policy and the reopening of the global economy. During the Q1 market crash, alternative investments such as private real assets did a remarkable job of preserving capital and providing diversification. While most real asset sectors held up relatively well throughout the pandemic — with rental collection rates above 90% — reopening of the economy has provided a boost to the ailing retail sector. Occupancy rates, another indicator of real estate strength, ended Q1 slightly above the five-year average. Financial costs have plummeted.

Currencies | Fundamentals have taken a back seat to pandemic data and the political landscape. The USD will continue to remain under pressure from negative 10-year real rates and Fed monetary support. The CAD has reached a consolidation point. We remain concerned about Canada's imbalances — high household debt levels and depressed oil prices — which could hurt economic recovery and the loonie.

Commodities | TD Securities is positive on gold, which performs well when debt skyrockets. The weakening USD, declining real rates, and the requirement for more debt-financed stimulus and low policy rates is expected to push gold towards US$2000 per ounce in 2021. ● TDS is still cautious on the near-term outlook for metals, particularly copper. Base metal prices have bounced from recent lows. TDS forecasts demand will drop in 2021 to below-2019 levels and that the inventory surplus will grow. ● Oil prices are set to drift lower in the near term as risks emerge. Weak demand has offset lower crude imports, lessening the chance of significant inventory draws. Any sustained rebalancing needs stronger demand growth.

Mirror of our Times

Brad Simpson, Chief Wealth Strategist and Head of PAIR, TD Wealth

For the past 32 years, the Art Gallery of Greater Victoria has hosted an incredible outside exhibit of local artists. This event, which I'm also proud to say has received the support of this bank, is called the TD Art Gallery Paint-In. It's a community outreach initiative featuring over 100 professional and emerging artists from Victoria and surrounding areas. Every year, over 30,000 people make it out to Moss Street to experience amazing work from artists who are invited to the event. It's a fantastic time, but sadly, like so many events that call for the congregation of people, the Paint-In has been cancelled this year amid the pandemic.

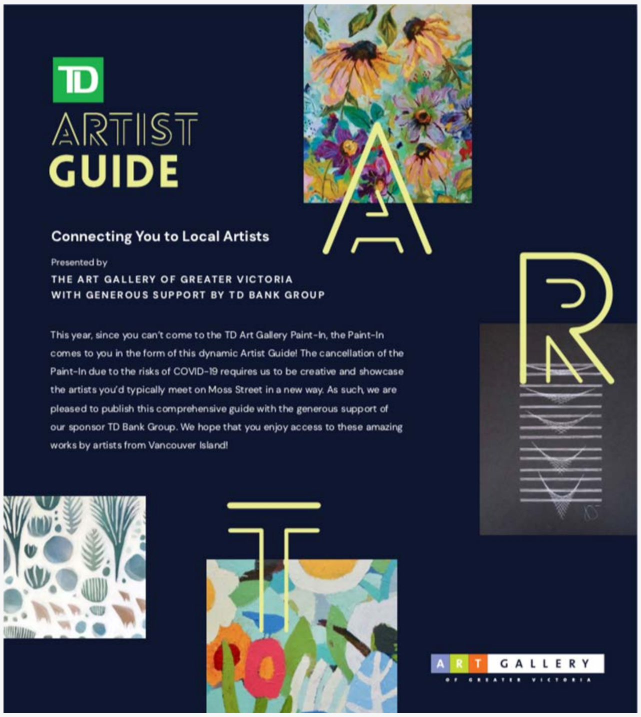
Cancellations like this take their toll, and it's depressing to think about what's been lost. This event drew our community together, providing an opportunity to engage with one another and be entertained. It strengthened our social networks and generally contributed to the enhancement of community cohesion. That may sound like some kind of sociology thesis, but it's no exaggeration. Beyond the fun-in-the-sun good times, festivals like this also have an economic impact — what we financial folks call a "multiplier effect."

The Paint-In is the Art Gallery's biggest fundraiser of the year. For many local artists, it will represent their biggest sales day — kind of like their Christmas eve. It attracts local businesses such as food trucks, boutique brew houses and service providers. It also brings in tourists, who fill local hotels, restaurants and local stores. All told, services such as these account for over 70% of the world's economy. Cancellation leads to losses at various levels of the economy, which is one of the reasons we are currently mired in a global recession.

But wait a minute. Perhaps "cancelled" is the wrong word. You see, the event may not be happening in the traditional sense, but the idea has been repurposed. One of the most incredible things about human beings is our ability to adapt. When things like this occur, we alter our activity, which changes the path of economic output, which correspondingly, changes the investment opportunities in world financial markets. There is a reason why the first principle of our investment philosophy at TD Wealth is "Innovate and look forward."

One of the innovations for this year's Paint-In, for example, was to create an Artist Guide showcasing 175 local artists (figure 1). This virtual gallery gives artists

Figure 1: TD Artist Guide



in my community an online platform where they can reach art consumers around the world. It enabled me to add it as a link to my commentary (bit.ly/3fPcfv8), enabling 200,000 or so of our global clients to click and attend the exhibit. So artists can sell their work, earn income, pay taxes in the community — and the multiplier effect takes hold.

"Okay, Brad, so what does art have to do with investments?" Everything, that's what. When people think about the investment industry, they imagine soulless office spaces filled with calculators and people in dark suits speaking in dry language, but investments are so much more than that. Art mirrors our times, including economic ones, and financial markets operate in the times that art mirrors.

So, let's tackle it this way. Let's say you click above on the Artist Guide and start perusing. One of the first things you will notice is that the exhibit contains an eclectic mix of artwork. Not all pieces will resonate with you. Some will seem affordable, others exorbitant. At the end of the day, however, the perceived value of the art is really more a reflection of your own tastes than the art. Beauty is in the eye of the beholder.

Second, if you know anything about art, you'll notice that most of the pieces have grown out of, or have been inspired by, past art movements — be it Neoclassicism, Impressionism or Pop Art, to name a few. Interestingly, the works that garner the highest prices tend to be the ones that harken back to popular eras of the past. The ones that are less familiar, more "cutting edge," will often be sold at a lower price because demand for the style or genre has yet to emerge. The operative word there is yet, because what seems unorthodox today can become the new norm of tomorrow.

These points encapsulate some of the most difficult things to appreciate about investing. First, one invests for the future, not the present (described in traditional finance as "discounting future cash flows to the present"). Second, investment markets operate in a complex, adaptive system. Simply put: the world is a living place where individual agents adapt to the environment while the environment adapts to them, which can over time lead to major evolutionary changes.

Today, we see a Da Vinci and take for granted that he was the most renowned artist from the Italian Renaissance period. We go to a Van Gogh exhibit and learn that he was the preeminent painter of the Post-Impressionist period. But during their lifetimes, these artistic geniuses were just a couple of aspiring painters who no doubt tired of hearing how little their art was worth, and what a pity it was that they could never achieve the greatness of the giants who preceded them. Just as modern-day readers of the Artist Guide may balk at some of the works and their price, the citizens of Milan couldn't believe how much the Duke paid for Leonardo's *Virgin of the Rocks.*

There are two things at play here. One, with Leonardo da Vinci and Vincent van Gogh, we have two iconoclasts changing the "standard practices" of their time. Sometimes these changes represent a mere nudge in a certain direction, other times they constitute enormous leaps — what we call "movements." The second thing to keep in mind is that historians frame the experiences of historical figures in retrospect, using an academic process called "periodization."

Da Vinci, after all, didn't know that he was living in the Renaissance period any more than Van Gogh knew he was a Post-Impressionist. Both artists contributed mightily to artistic movements that had a major impact on the world. As a result, future chroniclers would define what they did as part of a distinct period. Today, their work is highly prized because of what they represent to these periods, and because their work is limited — supply is finite, while demand continues to rise alongside wealth. Economic eras work in a similar fashion. We are always evolving and changing, and as we do, so does the economy and our systems for evaluating the things around us.

When I started in the investment business, I had, in retrospect, the good fortune of beginning my career just as the scope of central banks, particularly the U.S. Federal Reserve under the guidance of Alan Greenspan, was growing enormously. He changed standard practices. This has had a considerable impact on how the economy functions and, correspondingly, on the value of financial assets.

The U.S. financial sector has expanded rapidly in the wake of Greenspan's leadership (figure 2). From 1990 to 2019, the finance sector has grown from 5.5% to 8.5% of the economy; bank assets have grown from 55% of GDP to well over 80%; domestic credit has risen from 150% of GDP to 240%. Over that period, meanwhile, the S&P 500 has enjoyed an astonishing annual return of 10.1%.

Perhaps a hundred years from now, we will call the era from 1987 to 2006 the "Greenspan Era." We may, in turn, call the time from 2006 to 2016 the "Bernanke-Yellen Era," after Fed Chairs Ben Bernanke and Janet Yellen. While the former period will be remembered for broad use of interest-rate policy, the latter will be

Figure 2: Financial Assets vs Economy

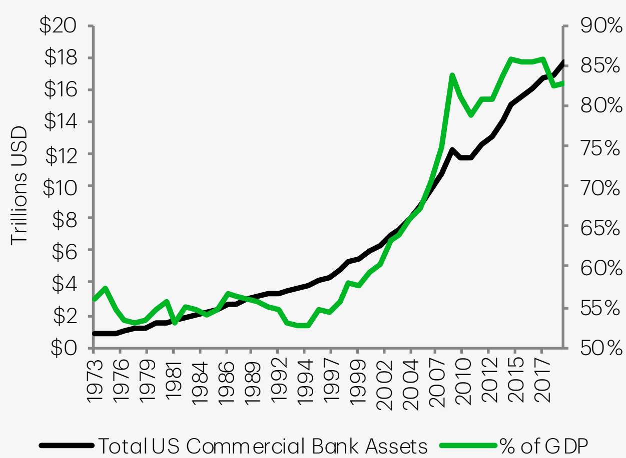
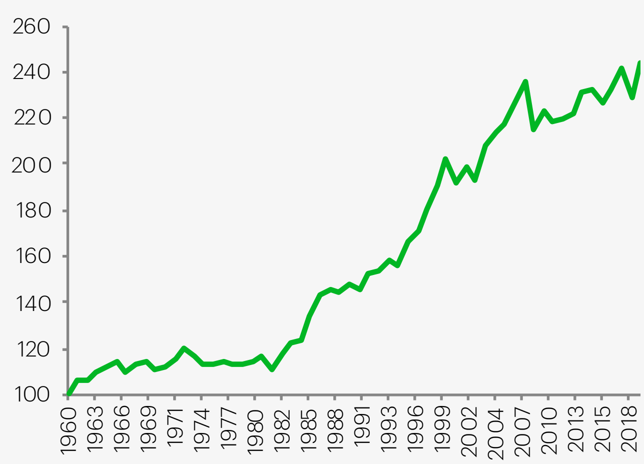


Figure 3: Domestic Credit Provided by Banking Sector (% of GDP)



Source: Bloomberg, as of June 30, 2020.

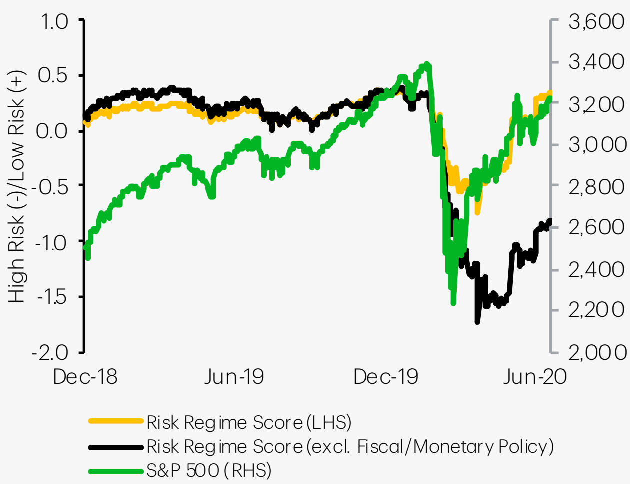
known for quantitative easing (QE), as central banks began participating directly in markets with the purchase of long-term securities.

Or maybe the roles of these individuals will be shrouded by the veil of time, and these eras will simply come to be known as "Monetary Policy 1" (MP1) and "Monetary Policy 2" (MP2). If that's the case, it's fair to say we are now moving into MP3 — an era in which a country like the United States, with its powerful reserve currency, can produce almost as much debt as it needs to fund projects and provide incomes in times of crisis. That may sound like an outlandish proposition, but it's a core tenet of something called Modern Monetary Theory, which economists are beginning to take seriously.

Whatever you call the era of monetary policy we're moving into — MMT, MP3, the Powell Era — it's no nudge. This is a big push toward coordinated monetary and fiscal policies. In the past, there was a deep moat between a central bank and the treasury of a government; today, the central bank has begun to work as the government's banker and the treasury as a kind of chequing account. And, to be clear, this is having the desired impact, at least in the short run.

Figure 4 demonstrates the power of the Market Risk Regime Score we introduced at the beginning of the pandemic to gauge our progress toward recovery. This score is largely driven by expectations for economic and financial markets based on leading indicators. The overall risk regime score, the black line, has increased from -0.70 at its lows in April to +0.3 now, close to where it was before the pandemic. The orange line, meanwhile, at -0.9, offers an indication of the kind of risk we would be facing without all the monetary and fiscal stimulus that's been provided — an environment that is far riskier and more fragile.

Figure 4: Market Risk Regime Score



Note: scores represent number of standard deviations away from long-term average. Source: Bloomberg, as of June 30, 2020

We haven't seen coordinated involvement like this from governments and central banks since the end of the Second World War, the time referred to by the periodization folks as the "post-war era." This is also a time of rapid social change, the likes of which we haven't seen since the 1960s. With all this change, it should come as no surprise that art, as a reflection of society, has also changed rapidly.

If a picture is worth a thousand words of meaning, a piece of art may be worth a thousand years of change, and thanks to the TD Bank Art Collection, I have a couple of good ones to offer up as examples. Just look at the evolutionary transition between the Impressionist-inspired works of the Group of Seven, represented here by Lawren Harris's *Winter Landscape with Pink House*[3], and the Abstract Impressionism of Jean-Paul Riopelle's Composition 1952[4]. (Both important works are in the holdings of the TD Bank Art Collection.)

Lawren Harris, *Winter Landscape with Pink House*, 1918
TD Bank Art Collection

Jean-Paul Riopelle, *Composition 1952*, 1952
TD Bank Art Collection

When these artists' work came into the public consciousness, they were considered outliers. It is hard for us to imagine that Harris's work, which is now a Canadian treasure, was ever seen as shocking and innovative. Today it is the standard of beauty. Central bankers and government officials are using words like "temporary" and "short-term" to describe their current changes to "standard practices" (sound familiar?), but if the past 30 years is any indication, once these policy brush strokes are introduced, they may soon become permanent.

Whether we're talking about economics, investment or art, the future is unknown. But it's hard to ignore the feeling that we are in the middle of an enormous transition. I am going to lean on art one last time as I conclude my comments for the quarter. Figure 5 highlights the current work of Choctaw-Cherokee artist Jeffrey Gibson entitled *Trouble Don't Last Always.*[5] Finished in 2019, I think the title speaks for itself.

I confess that as I was writing this quarter's article, I got to the point that I needed some help to explain this transition between eras. I reached out to Stuart Keeler, Senior Curator & Manager, TD Bank Art Collection. He shared the following thoughts:

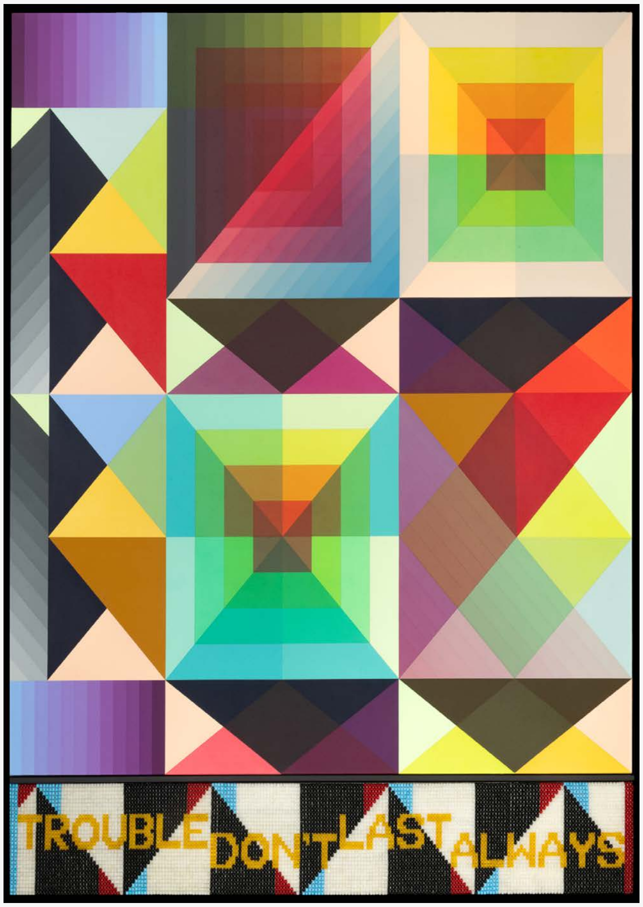
"Time is on our side. Artists and works of art both take time to mature, grow, and they require relationship and patience. Outstanding works share an idea, a story that has meaning, and connect with us on multiple levels. Of course, aesthetics are important, but how does the work make us feel and think? The TD Bank Art Collection signifies over 50 years of how art creates conversations and amplifies diverse voices. Many works once seen as controversial have mellowed with age – yet, the dialogue is still present! Artists are barometers of our time, reflecting social issues, pushing boundaries and capturing our curiosity. Jeffrey Gibson reminds us how an artist takes time to grow into their brilliance by pushing the rules of what art can be and we have the opportunity to grow with this experience."

Time to mature? Time to grow? Patience? That sounds an awful lot like investing, doesn't it? Keeler's last point echoes Principle 7 in Risk Priority Management: Invest for lifetimes not market cycles.

Gibson's work combines Indigenous traditions with the visual languages of Modernism to explore the contemporary confluence of personal identity, culture, history and international social narratives. To mirror the times, his works combine traditional Indigenous materials like animal hides, beads and tipi poles with modern mediums like spray paint, acrylics, ceramic and tape. This reminds me of our approach to managing portfolios here at TD Wealth, where we utilize traditional and alternative investments to also mirror the times.

I appreciate Gibson's optimism. Let's hope trouble don't always last. As we move forward, our approach will be to follow our principles, which are based on the conviction that markets are adaptive. Investors make mistakes. From those mistakes, they learn, adapt and innovate. As they experiment and succeed (or fail), the process of natural selection takes its toll on individuals, institutions and markets. This evolutionary process is what determines financial market dynamics, risk and returns. Beauty, in other words, is in the eye of the beholder.

Figure 5: Trouble Don't Last Always



Jeffrey Gibson, *Trouble Don't Last Always*, 2019
TD Bank Art Collection

Leading Macro Indicators

The below table itemizes the many inputs that inform our understanding of the economic and financial environment. For each indicator, we calculate current values and compare them against recent trends and long-term history using a standardized approach that makes it possible to aggregate across indicators.

Risk conditions at the end of the second quarter have certainly improved from the first. Many of the indicators are still negative, but the general trend is towards stability. Most of the improvement in the risk score came from better-than-expected data on employment, consumer confidence, housing, financial conditions and investor sentiment. Investors are increasingly optimistic about an economic rebound despite the continuous spread of COVID-19.

The aggregate risk regime number is still skewed by supportive fiscal and monetary policies, which are expected to remain highly accommodative for the foreseeable future as governments and central banks bolster the financial system and stem the lingering economic fallout from the lockdown. However, despite recent stability and the aggressive risk rally, the fragile state of many indicators underscores the elevated risk environment — one that markets have largely discounted but is still evident through risk sentiment.

The appetite for equity risk remains fraught. Although credit risk appetite has improved, it's still weak, with spreads sitting at wider-than average levels. So while the market risk regime score is positive, there is an undercurrent of uneasiness running through financial markets that keeps risk sentiment elevated, even though markets have recovered virtually all their losses.

Figure 1: Market Risk Indicators

U.S. Macro Indicators	Measure	Current	12M Ago	LT Average*	Current Percentile	Z-Score	Current State	Trend	Overall
Economic Growth	Real GDP Growth (qoq %, saar)	(5.0)	2.0	2.1	1%	(2.9)	Negative	Improving	Weak
	Real GDP Growth (YoY %)	0.3	2.3	2.2	8%	(1.1)			
	Real GDP Economic Forecast (YoY %)	(5.6)	1.8	2.2	4%	(4.7)			
Inflation	Headline CPI	0.6	1.6	2.2	9%	(1.3)	Negative	Improving	Weak
	Core CPI	1.2	2.1	2.0	6%	(1.8)			
	CPI Forecast (YoY %)	0.8	2.1	2.2	0%	(1.1)			
	10YR Breakeven Inflation	1.3	1.7	2.0	4%	(1.6)			
Employment	Unemployment Rate (%)	11.1	3.7	5.9	99%	2.7	Negative	Improving	Weak
	Initial Jobless Claims (000s)	1,413	222	393	99%	2.1			
	Wage Growth (yoy %)	5.0	3.4	2.6	99%	3.0			
Consumer	Consumer Confidence (1985=100)	98.1	124.3	94.6	53%	0.1	Negative	Improving	Neutral
	UofM Consumer Sentiment	78.1	98.2	86.6	27%	(0.7)			
	Consumer Spending (MoM %)	8.2	0.3	0.3	100%	6.4			
	Household Consumption (YoY%)	(6.8)	4.6	2.4	0%	(4.2)			
	Household Consumption Forecasts (YoY%)	(6.3)	2.1	2.4	0%	(4.0)			
	Household Debt to Disposable Income (%)	97.5	97.0	110.5	15%	(1.1)			
	Household Debt Service Ratio (%)	9.7	9.7	11.3	0%	(1.3)			
Housing	S&P/Case-Shiller Composite (YoY %)	4.0	2.1	4.2	36%	(0.0)	Positive	Improving	Strong
	Home Builders Index	58.0	64.0	49.6	48%	0.4			

Risk Regime: Below 0 means market conditions are riskier than average. Above 0 means conditions are less risky than average.
*Since 1999. Source: Bloomberg Finance L.P., as of June 30, 2020

Figure 1: Market Risk Indicators (cont'd)

U.S. Macro Indicators	Measure	Current	12M Ago	LT Average*	Current Percentile	Z-Score	Current State	Trend	Overall
Business Conditions	Capacity Utilization (%)	68.6	77.7	77.1	3%	(2.6)	Negative	Improving	Weak
	Industrial Production (YoY %)	(10.8)	1.0	0.9	4%	(2.7)			
	Industrial Production Forecasts (YoY%)	(7.5)	1.6	0.9	0%	(1.9)			
	Private Investment (YoY%)	(10.2)	(6.3)	2.8	6%	(1.1)			
	Private Investment Forecasts (YoY%)	(9.7)	2.3	2.8	4%	(1.0)			
	12M EPS Forecasts (S&P 500)	125	166.1	94	84%	0.9			
	Markit US Composite PMI	47.9	51.5	52.1	9%	(0.7)			
	Markit US Manufacturing PMI	49.8	50.6	52.4	9%	(0.6)			
	Markit US Services PMI	47.9	51.5	52.1	9%	(0.7)			
Financial/ Credit Conditions	3M LIBOR/OIS Spread (%)	0.2	0.2	0.3	68%	(0.1)	Negative	Improving	Neutral
	10Yr Treasury Yield (%)	0.7	2.0	3.4	1%	(2.1)			
	10YR/3M Yield Spread (%)	0.5	(0.1)	1.7	19%	(1.0)			
	10YR/2YR Yield Spread (%)	0.5	0.3	1.2	31%	(0.8)			
	IG Credit Spread (% OAS)	1.4	1.1	1.4	60%	(0.0)			
	HY Credit Spread (% OAS)	6.3	3.8	5.5	71%	0.3			
	Net Debt to EBITDA (S&P 500)	171%	190%	289%	36%	(0.9)			
	Financial Conditions Index (Bloomberg)	(0.5)	0.5	(0.5)	35%	(0.0)			
	Financial Conditions Index (Chicago Fed)	(0.4)	(0.6)	(0.3)	68%	(0.0)			
Foreign Trade	Current Account (% of GDP)	(2.1)	(2.4)	(3.3)	81%	1.0	Positive	Improving	Strong
	Current Account Forecast (% GDP)	(2.1)	(2.5)	(3.3)	96%	1.0			
	Trade-Weighted Broad Dollar (2006=100)	120.9	114.6	103.3	99%	1.8			
Fiscal Policy	Budget Balance (% of GDP)	(13.8)	(4.3)	(3.4)	0%	(3.3)	Positive	Stable	Accomodative
	US Budget Balance Forecast (% GDP)	(17.0)	(4.6)	(3.4)	0%	(4.3)			
	Government Spending (YoY %)	1.1	4.8	1.3	42%	(0.1)			
	Government Spending Forecasts (YoY%)	2.0	1.4	1.3	86%	0.3			
	Government Debt (% GDP)	79.2	77.4	53.2	98%	1.4			
	Government Debt Forecasts (% GDP)	101.3	79.8	53.2	100%	2.6			
Monetary Policy	Fed Funds Rate (%)	0.25	2.5	2.0	0%	(0.9)	Positive	Stable	Accomodative
	Monetary Base (YoY %)	51.0	(10.4)	11.5	95%	1.8			
	M1 Money Supply (YoY %)	37.0	4.8	6.7	100%	5.2			
	M2 Money Supply (YoY %)	24.2	4.7	6.4	100%	7.2			
Risk Sentiment	Implied Volatility - S&P 500	30.4	15.1	20.0	91%	1.3	Negative	Improving	Neutral
	Implied Volatility - US Treasury	54.1	70.4	88.9	8%	(1.1)			
	Implied Volatility - Oil	57.7	39.5	37.7	92%	1.1			
	S&P 500 Implied Correlation	62.1	39.2	53.6	66%	0.5			
	CBOE Equity Put/Call Ratio	0.5	0.6	0.6	14%	(0.9)			
	Strategist Consensus (S&P 500)	2,999	2,912	1,691	98%	2.1			
	Retail Investor Bullish/Bearish Ratio	0.7	1.0	1.17	1%	(1.3)			

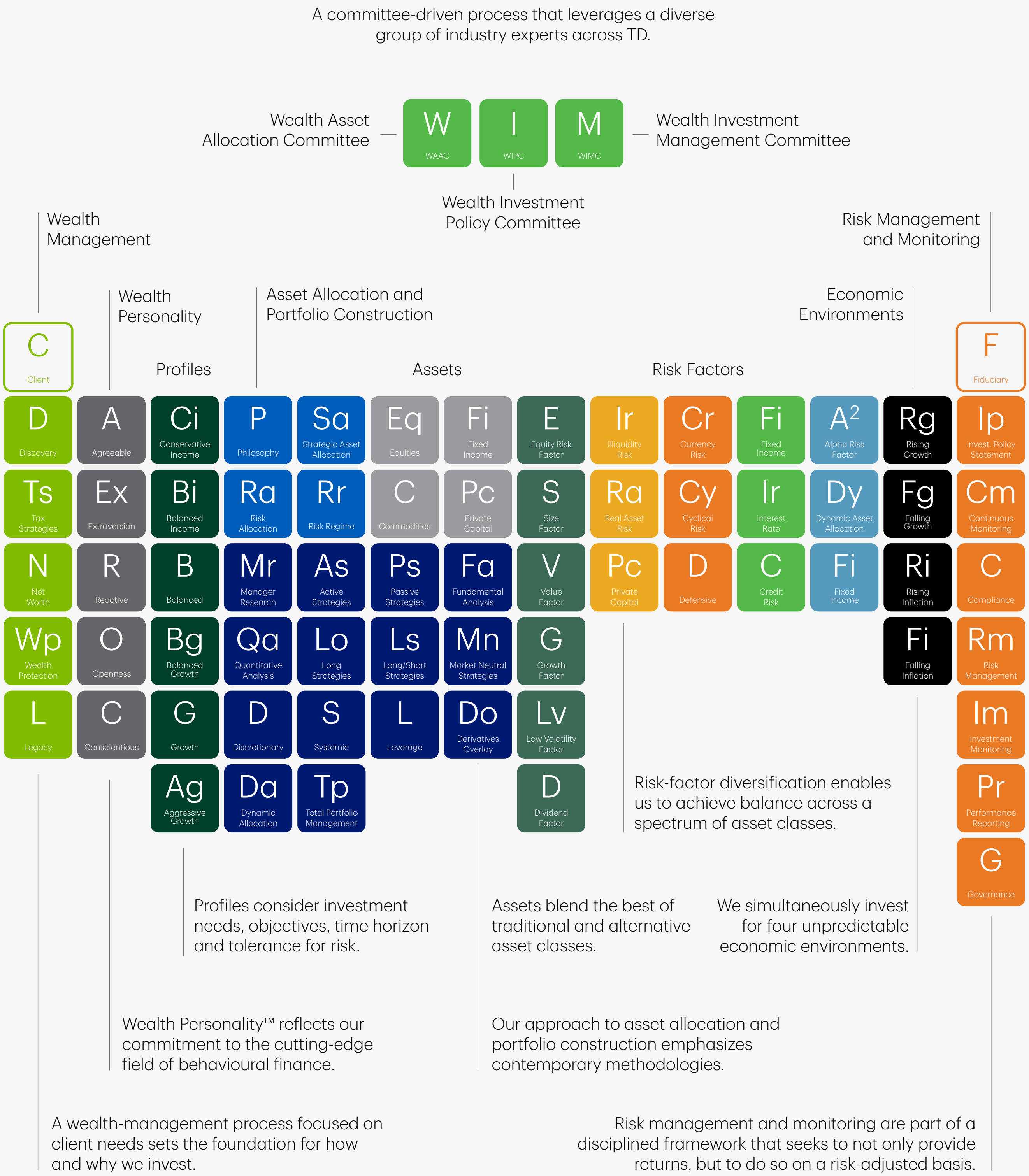
Risk Regime Score		**0.3**	Neutral	Improving	Average Risk
Risk Regime Score (excl. Fiscal/Monetary Policy)		**(0.9)**	Negative	Improving	High Risk

Risk Regime: Below 0 means market conditions are riskier than average. Above 0 means conditions are less risky than average.
*Since 1999. Source: Bloomberg Finance L.P., as of June 30, 2020

Elements of Wealth Management

Investors are often left to make decisions without any formal process. Our solution? Follow an investment philosophy — a guiding set of principles designed to work in a world that's constantly changing, often with dramatic impact on financial markets. At TD Wealth, we call that philosophy "Risk Priority Management," and it provides the foundation for our decision-making process. That process is then broken down into its most basic components, similar to a periodic table of elements, as illustrated below, with groupings and weights. These components comprise our entire process, from wealth management to risk management to monitoring. All in all, there are 72 "elements" that fall into eight categories.

Figure 1: Elements



Wealth Asset Allocation Committee

The TD Wealth Asset Allocation Committee (WAAC) is composed of a diverse group of TD investment professionals. WAAC's mandate is to consider the financial market environment and provide direction and themes for equities, fixed income, real assets and sub-classes for the prevailing six to 18 months.

Considers the financial market environment and provides direction, themes and current stance.

Utilizing risk factors to manage exposures, we build and manage portfolios that blend the best of traditional and alternative asset classes.

Committee members:

Robert Vanderhooft, CFA	**Chief Investment Officer, TD Asset Management Inc. (Chair)**
Robert Pemberton, CFA	Managing Director, TD Asset Management Inc.
David Sykes, CFA	Managing Director, TD Asset Management Inc.
Michael Craig, CFA	Managing Director, TD Asset Management Inc.
Ted Welter, CFA	Managing Director, TD Asset Management Inc.
Kevin Hebner, Ph.D.	Managing Director, Epoch Investment Partners, Inc.
Brad Simpson, CIM, FCSI	Chief Wealth Strategist, TD Wealth
Sid Vaidya, CFA, CAIA	U.S. Wealth Investment Strategist, TD Wealth
Glenn Davis, CFA	Managing Director, TDAM USA
Bryan Lee, CFA	Vice President & Director, TD Asset Management Inc.

Direction from WAAC

Strategic Positioning

	Assets Class	Underweight		Neutral		Overweight
Fixed Income Underweight	Domestic Gov't Bonds		●			
	Investment Grade Corp Bonds				●	
	Inflation Linked Bonds				●	
	High Yield Bonds			●		
	Global Bonds - Developed	●				
	Global Bonds - Emerging			●		
Equities Neutral	Canadian		●			
	U.S.				●	
	International			●		
	Emerging Markets excluding China			●		
	China				●	
Alternative / Real Assets Overweight	Commercial Mortgages				●	
	Commercial Real Estate			●		
	Core Infrastructure				●	
Sub-Classes Underweight	Gold				●	
	Canadian Dollar vs U.S. Dollar		●			
	U.S. Dollar vs Basket of Currencies			●		
	Cash			●		

Source: TD Wealth Asset Allocation Committee, as of July 9, 2020

WAAC Positioning Changes

International equities upgraded from modest underweight to neutral. Improving economic indicators in Europe, including expansionary manufacturing purchasing managers index (PMI) data in some countries, suggest a stabilizing fundamental outlook. Despite prevailing macroeconomic headwinds, international markets may offer cyclical upside potential, amid a backdrop of solid public health measures and aggressive policy responses. European Central Bank efforts to support the economy and businesses should also be a boon for economic expansion.

Chinese equities upgraded from neutral (as part of a broader EM view) to modest overweight. From a strategic allocation perspective we believe the growth trajectory of the Chinese economy is favourable relative to other EM counterparts. Strong policy measures to cushion the pandemic impact, rebounding manufacturing sentiment and improving credit conditions underpin our overweight Chinese equities view. Recent developments and technical indicators for China have been positive; however, we are cognizant of geopolitical and macroeconomic risks. We maintain our neutral overall positioning in other EM economies, as recovery and growth rates may lag that of China.

Fixed Income – Modest Underweight

Yields on government bonds remain at all-time lows as policymakers aggressively cut borrowing rates to ease financial conditions in response to the pandemic. We expect rates to hold at these low levels for some time, though we do not believe authorities will implement negative rates in North America. We are mindful of the risks that could impact the macroeconomic environment, including slow global growth, impaired corporate health, elevated sovereign debt levels, and inflationary/disinflationary pressures.

We remain constructive on credit and are comfortable with our strategic modest overweight position on corporate bonds. Corporate credit continues to offer a yield advantage over government bonds. We maintain a conservative stance on fixed income and maintain a modest underweight overall. We are defensively positioned with an emphasis on liquidity and quality in high-yield exposures.

Equities – Neutral

The global economic picture has shown improvement as recent manufacturing PMI data have demonstrated positive trends. Some regions including the U.S., China and parts of Europe have entered expansionary territory. Based on these trends, we on the Wealth Asset Allocation Committee believe we may have seen the worst of the economic downturn; however, the question remains as to how quickly economies can rebound to pre COVID-19 levels.

Our long-term allocation to U.S. equities remains modestly overweight, despite elevated valuations. Expectations for a bleak upcoming earnings season and surging COVID-19 cases in many U.S. states may add to near-term volatility. However, optimism over a vaccine and treatment progress by year's end, the improving employment picture, policy accommodation and low rates should be supportive of higher valuations longer-term.

We maintain our modest underweight view of Canadian equities. While employment and economic growth indicators have stabilized, the Canadian economic recovery is expected to underperform that of the U.S. over a 12- to 18-month horizon. Canada has additionally been slowed by depressed crude prices as a result of severe demand disruptions.

Alternatives / Real Assets – Modest Overweight

Real estate transaction activity remains slow on a relative basis, but expectations are for an uptick in activity over the third or fourth quarter as provinces and major cities reopen their economies. While there has been a pickup in transaction volume within the commercial mortgage market, lenders are being much more conservative in their lending criteria, particularly to new lenders. Greater scrutiny is being given on factors such as liquidity, reputation, financial strength and track record.

Across the global infrastructure market, assets that are contracted and deemed essential continue to be less impacted than GDP-linked assets, which should help with the preservation of income through the pandemic.

Sub-Classes – Modest Underweight

The price of gold bullion continues to remain near historic highs as downward pressure on real interest rates, a weaker U.S. dollar and safe-haven buying have continued to support the precious metal. We maintain our modest overweight view on the commodity, as it also continues to provide portfolios with the benefits of diversification.

Despite recent weakness, we maintain our neutral stance on the U.S. dollar versus global currencies. Bouts of risk aversion should support investors' preference for the U.S. dollar as a safe-haven currency along with its status as a global reserve currency. The ongoing stimulus measures by U.S. authorities could limit the dollar's upside, however.

Current Investment Themes

Our Wealth Asset Allocation Committee keeps a running watch list of themes that guide our decision-making. Current themes include:

1. Neutral equities overall and underweight fixed income.

2. Maintain a modest overweight U.S. equities view; however, valuations remain at the high end of fair value. Longer term, we expect U.S. equities to outperform due to their relative quality advantage over global counterparts.

3. Interest rates and inflation are expected to remain at historically low levels. Aggressive monetary- and fiscal-policy responses have contributed to economic stabilization, but may become a long-term drag on economies.

4. We remain constructive with a focus on high-quality opportunities in corporate credit. Wide spreads have narrowed but still represent attractive yields.

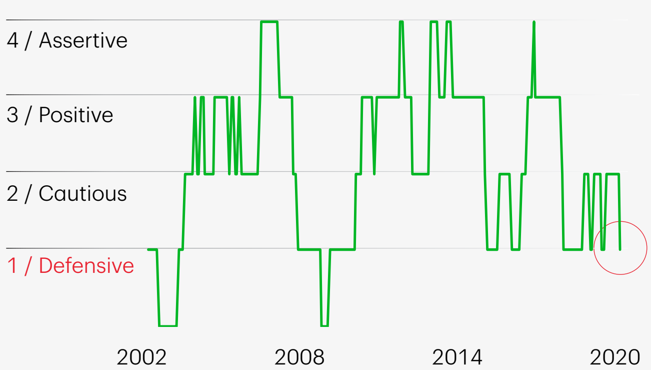
5. Amid the economic damage, earnings and employment are expected to remain weak, but encouraging data are emerging. The speed of recovery from recession will largely be dictated by COVID-19 treatment and vaccine progress.

6. Robust diversification across our real asset and private debt strategies has provided relatively stable income resiliency through the current crisis.

Regime: Defensive

WAAC quantifies its current financial environment with a numerical grade. The current grade is a Category 1: Defensive. The inputs underlying this decision include: S&P 500 above fair value, credit slightly expansionary, but PCA is deteriorating (diversification potential) and PMI is contractionary. The model is based on four factors: U.S. private credit cycle, market potential, PCA analysis, and PMI level and trend. □

Figure 1: Current Financial Environment



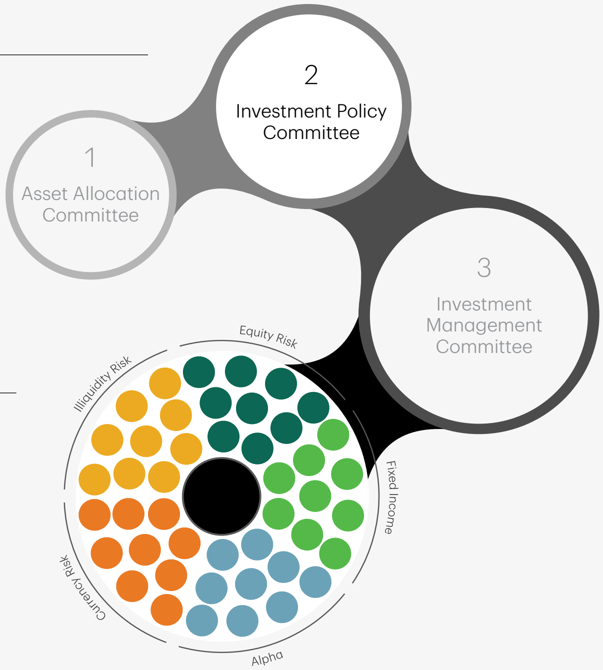
Source: WAAC, as of July 9, 2020

Wealth Investment Policy Committee

The Wealth Investment Policy Committee is composed of a diverse group of TD investment professionals. WIPC's mandate is to interpret WAAC views and set general asset-class weights for each investor profile.

Interprets WAAC views and sets general investor profile asset class weights.

Utilizing risk factors to manage exposures, we build and manage portfolios that blend the best of traditional and alternative asset classes.



Committee members:

Brad Simpson, CIM, FCSI .... Chief Wealth Strategist, TD Wealth (Chair)

Michael Craig, CFA .... Managing Director, Head of the Asset Allocation & Derivatives, TDAM

Amol Sodhi, CFA, CIM .... VP & Director, TDAM

Anna Castro, CFA .... VP & Director, TDAM

Christopher Lo, CFA .... Head of Managed Investments, PAIR

Alice Lim, MBA .... Head of Product Governance & Marketing, PAIR

Van Hoang, FRM, CFA .... Senior Macro Strategist, PAIR

Strategic and dynamic asset-class weights by investor profile

We employ a greater spectrum of asset classes including: fixed income, equity and real assets

Asset Class	Cons. Income			Balanced Income			Balanced			Balanced Growth			Growth			Aggressive Growth		
	Strat	Dyn	Diff	Strat	Dyn	Diff	Strat	Dyn	Diff	Strat	Dyn	Diff	Strat	Dyn	Diff	Strat	Dyn	Diff
Cash	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	0.5%	0.5%
Fixed Income	80.0%	77.5%	-2.5%	65.0%	62.5%	-2.5%	50.0%	47.5%	-2.5%	35.0%	32.5%	-2.5%	25.0%	22.5%	-2.5%	10.0%	9.5%	-0.5%
Government	43.0%	38.0%	-5.0%	35.0%	30.0%	-5.0%	30.0%	25.0%	-5.0%	20.0%	15.0%	-5.0%	15.0%	10.0%	-5.0%	3.0%	0.0%	-3.0%
Corporate	37.0%	39.5%	2.5%	30.0%	32.5%	2.5%	20.0%	22.5%	2.5%	15.0%	17.5%	2.5%	10.0%	12.5%	2.5%	7.0%	9.5%	2.5%
Equity	20.0%	20.0%	0.0%	35.0%	35.0%	0.0%	50.0%	50.0%	0.0%	65.0%	65.0%	0.0%	75.0%	75.0%	0.0%	90.0%	90.0%	0.0%
Canadian	6.0%	3.0%	-3.0%	10.0%	7.0%	-3.0%	11.0%	8.0%	-3.0%	16.0%	13.0%	-3.0%	19.0%	16.0%	-3.0%	24.0%	21.0%	-3.0%
U.S.	10.0%	13.0%	3.0%	16.0%	19.0%	3.0%	23.0%	26.0%	3.0%	28.0%	31.0%	3.0%	31.0%	34.0%	3.0%	33.0%	36.0%	3.0%
International	4.0%	4.0%	0.0%	9.0%	9.0%	0.0%	14.0%	14.0%	0.0%	18.0%	18.0%	0.0%	20.0%	20.0%	0.0%	26.0%	26.0%	0.0%
Emerging Markets	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	2.0%	0.0%	3.0%	3.0%	0.0%	5.0%	5.0%	0.0%	7.0%	7.0%	0.0%

Strat: Strategic, Dyn: Dynamic, Diff: Difference. Source: Wealth Investment Policy Committee, as of July 9, 2020

Expanded Strategic and dynamic asset-class weights by investor profile

Asset Class	Cons. Income			Balanced Income			Balanced			Balanced Growth			Growth			Aggressive Growth		
	Strat.	Dyn.	Diff.	Strat.	Dyn.	Diff.	Strat.	Dyn.	Diff.	Strat.	Dyn.	Diff.	Strat.	Dyn.	Diff.	Strat.	Dyn.	Diff.
Cash	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	2.5%	2.5%	0.0%	0.5%	0.5%
Fixed Income	73.0%	70.5%	-2.5%	58.0%	55.5%	-2.5%	43.0%	40.5%	-2.5%	28.0%	25.5%	-2.5%	18.0%	15.5%	-2.5%	3.0%	2.5%	-0.5%
Domestic Gov't Bonds	27.0%	24.5%	-2.5%	22.0%	19.5%	-2.5%	17.0%	14.5%	-2.5%	12.0%	7.0%	-5.0%	7.0%	2.0%	-5.0%	3.0%	0.0%	-3.0%
Invest. Grade Corp Bonds	25.0%	27.5%	2.5%	20.0%	22.5%	2.5%	10.0%	12.5%	2.5%	5.0%	7.5%	2.5%	3.0%	5.5%	2.5%	0.0%	2.5%	2.5%
Inflation Linked Bonds	5.0%	7.5%	2.5%	5.0%	7.5%	2.5%	5.0%	7.5%	2.5%	3.0%	6.0%	3.0%	3.0%	6.0%	3.0%	0.0%	0.0%	0.0%
High Yield Bonds	5.0%	5.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Global Bonds - Developed	8.0%	3.0%	-5.0%	5.0%	0.0%	-5.0%	5.0%	0.0%	-5.0%	3.0%	0.0%	-3.0%	3.0%	0.0%	-3.0%	0.0%	0.0%	0.0%
Global Bonds - Emerging	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	3.0%	3.0%	0.0%	2.0%	2.0%	0.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%
Real Assets	7.0%	7.0%	0.0%	10.0%	10.0%	0.0%	15.0%	15.0%	0.0%	15.0%	15.0%	0.0%	15.0%	15.0%	0.0%	15.0%	15.0%	0.0%
Mortgages/Private Debt	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%	7.0%	7.0%	0.0%
Real Estate/Infrastrucutre	0.0%	0.0%	0.0%	3.0%	3.0%	0.0%	8.0%	8.0%	0.0%	8.0%	8.0%	0.0%	8.0%	8.0%	0.0%	8.0%	8.0%	0.0%
Equity	20.0%	20.0%	0.0%	32.0%	32.0%	0.0%	42.0%	42.0%	0.0%	57.0%	57.0%	0.0%	67.0%	67.0%	0.0%	82.0%	82.0%	0.0%
Canadian	6.0%	3.5%	-2.5%	9.0%	6.5%	-2.5%	9.0%	6.5%	-2.5%	14.0%	11.5%	-2.5%	17.0%	14.5%	-2.5%	22.0%	19.5%	-2.5%
U.S.	10.0%	12.5%	2.5%	15.0%	17.5%	2.5%	20.0%	22.5%	2.5%	25.0%	27.5%	2.5%	28.0%	30.5%	2.5%	30.0%	32.5%	2.5%
International	4.0%	4.0%	0.0%	8.0%	8.0%	0.0%	11.0%	11.0%	0.0%	15.0%	15.0%	0.0%	17.0%	17.0%	0.0%	23.0%	23.0%	0.0%
Emerging Markets (ex.China)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	1.0%	-1.0%	3.0%	2.0%	-1.0%	5.0%	4.0%	-1.0%	7.0%	6.0%	-1.0%
China	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	0.0%	1.0%	1.0%	0.0%	1.0%	1.0%	0.0%	1.0%	1.0%
Fixed Income	80.0%	80.0%	0.0%	65.0%	65.0%	0.0%	50.0%	50.0%	0.0%	35.0%	35.0%	0.0%	25.0%	25.0%	0.0%	10.0%	10.0%	0.0%
Equity	20.0%	20.0%	0.0%	35.0%	35.0%	0.0%	50.0%	50.0%	0.0%	65.0%	65.0%	0.0%	75.0%	75.0%	0.0%	90.0%	90.0%	0.0%

Strat: Strategic, Dyn: Dynamic, Diff: Difference. Source: Wealth Investment Policy Committee, as of July 9, 2020

Dynamic positioning by risk factor weights

Assets	Positioning	Fixed Income Factor	Equity Risk Factor	Currency Risk Factor	Illiquidity Risk Factor	Alpha
Factor Positioning		Underweight	Neutral	Overweight	Overweight	Dynamic
Cash	Neutral	●				●
Fixed Income	Underweight					
Domestic Gov't Bonds	Underweight	●				●
Investment Grade Corp Bonds	Overweight	●	●	●		●
Inflation Linked Bonds	Overweight	●		●		●
High Yield Bonds	Neutral	●	●	●	●	●
Global Bonds - Developed	Underweight	●		●		●
Global Bonds - Emerging	Neutral	●		●	●	●
Equity	Neutral					
Canadian	Underweight		●			●
U.S.	Overweight		●	●		●
International	Underweight		●	●		●
Emerging Markets (Ex. China)	Neutral		●	●		●
China	Overweight		●	●		●
Real Assets	Overweight					
Mortgages/Private Debt	Overweight	●	●	●	●	●
Real Estate/Infrastructure	Neutral	●	●	●	●	●

Source : Wealth Investment Policy Committee, as of July 9, 2020

Economic Outlook

The post-pandemic world

Sohaib Shahid, Senior Economist, TD Economics

The future is uncertain anyway, but the pandemic — which is unlike anything seen before — has exacerbated this uncertainty to unprecedented levels. Given the uncertainty we will be living in over the next few months (and even years), it is difficult for us — or anyone — to present the future with certainty. Economic forecasters have been humbled by these times.

Therefore, we believe it is important to think about the post-pandemic economy within a clear framework by looking at different economic sectors and understanding the interlinkages between them (Figure 1).

So far, government and central bank interventions have prevented an all-out financial crisis. However, the financial sector today is highly interlinked with the broader global macroeconomy. Therefore, the longer the weaknesses in the broader economy persist, the higher the likelihood of increased vulnerabilities to and from the financial sector.

The ongoing crisis is unique in the sense that its health and economic ramifications are intertwined. We believe the pandemic will usher in a new era of economic policymaking. It will worsen certain pre-existing conditions of the global economy (inequality, deglobalization, populism) while creating new ones (debt sustainability issues, lower potential growth, capital controls).

Real Sector: Weaker Growth Potential

We believe growth potentials will decline due to lasting impacts in capital and labour markets. The pandemic has already disrupted capital markets, and we believe these disruptions will continue for some time due to lingering uncertainty and higher private-sector debt levels. For example, we expect total U.S. business investment to be 5% lower by 2026 than what it could have been without the pandemic.

Labour market disruptions will also keep growth potentials low, with the younger workforce facing the brunt of these disruptions. Many jobs may never return. This is especially true for in-person service jobs, particularly those requiring low skills and paying low wages. According to a recent study, about 42% of job losses in the U.S. may be permanent, despite ongoing government support. This shock will hurt employment prospects of those with basic education, while having a negligible impact on those with advanced degrees. Previous epidemics have shown a rise in subsequent inequality. Any rise in inequality will give way to an increase in social unrest, populism and political polarization.

Figure 1: The Global Economy will Change Across the Board

Global Economy

Real	Monetary	Fiscal	External
Decrease in growth potentials	Monetary policy less effective	Large deficits	Deglobalization
Inflationary pressures especially for emerging markets	Depletion of central bank tools	Debt sustainability issues	U.S/China economic decoupling
Continued labor market weakness	Convergence of monetary policy and fiscal policy	Increased monetization	More exchange rate interventions
	Compromised central bank independence	Pressure to act	More trade wars and currency wars

Source: TD Economics, as of June 4, 2020

The economic disruptions caused by the pandemic will considerably slow down emerging markets' (EMs) "catch-up" to advanced economies (AEs) and lead to a greater divergence in per capita incomes. It will also push a large share of the EM population — especially that of low-income countries — into poverty.

Much like the Great Depression, deflation (negative growth in prices) caused by weak demand is the immediate short-term risk to prices. Some countries (Canada, Italy, Spain) are already experiencing negative growth in prices. Deflation can raise the already high debt burdens in the near term. It can also lead to a vicious cycle of weak demand as consumers postpone their non-essential purchases — why buy today if one can buy for less tomorrow?

While deflation is a near-term risk, high inflation is a medium- to long-term risk. The size of fiscal and monetary stimulus measures today could turn out to be inflationary a few years from now. Governments may be tempted to ask their central banks to keep interest rates low to reduce their burgeoning debt-servicing costs, leading to overheating and inflation. While some inflation is desirable, the lack of central bank and government separation is a recipe for (hyper) inflation.

Monetary Sector: Less Effective Policy

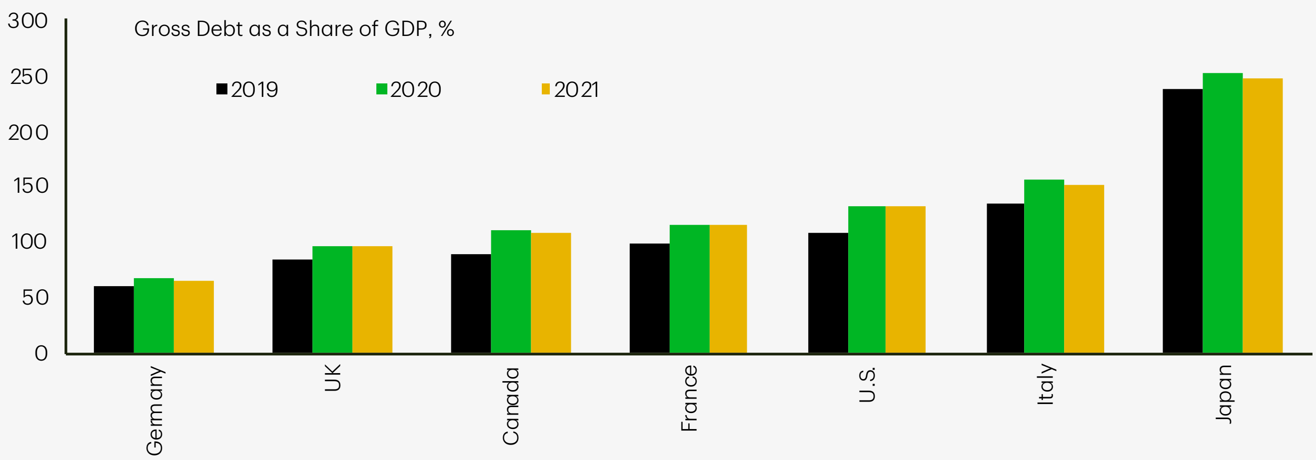
Central banks have pulled out all the stops in response to the pandemic hit. Compared to the global financial crisis (GFC), central banks are conducting quantitative easing (QE) at a much larger scale and buying a wider variety of assets. Meanwhile, global interest rates are already at their lowest levels in recent years, so there is little room for further easing. Considering these factors, monetary policy could become less effective, as central banks would have little of their ammunition left.

Central banks had already been discussing moving away from inflation-targeting before the pandemic. Given the scale of labour-market disruptions around the world, central banks may become more inclined to put greater emphasis on keeping employment levels stable rather than just prioritizing stable prices.

We expect interest rates to stay low for longer. As a result, banks will see their net interest margins further compressed, putting more pressure on banks' profitability. When unable to generate profits, banks may be less likely to provide loans and other financial services to businesses and households, which could further hamper growth.

This crisis will be a watershed moment for how fiscal and monetary policy interact going forward. Policy measures announced by central banks and governments have led to a convergence of fiscal and monetary policy, putting central bank independence at risk. Such coordination will be standard practice going forward, as the world tackles the unprecedented rise in public debt.

Figure 2: Heavy Debt Burdens Going Forward



Source: IMF, TD Economics, as of June 4, 2020

Fiscal Sector: High Debt Burdens

Given weaker monetary policy, there will be more pressure on fiscal authorities to act. Large open-ended fiscal programs announced to counter the pandemic have already resulted in large fiscal deficits and debt burdens (Chart 2). The increase in fiscal deficits is likely to be outpaced by the rise in public debt as tax revenues tend to fall even faster than economic activity during deep recessions. High public debt levels also threaten to crowd out private-sector spending, creating a drag on growth.

Governments will have a few options to reduce debt. They can count on inflation, debt restructuring, financial repression, higher taxes, austerity or wealth expropriation. While these measures can reduce the debt burden, the negative growth consequences can easily outweigh the benefits. For instance, Japan increased consumption taxes twice (2014 and 2019) in the past decade. Both instances drove the economy into a recession. As the popular adage goes, there is no such thing as a free lunch. To make up for lost revenue today, governments may have to impose higher taxes when the crisis is over.

However, if a central bank monetizes its government debt, the increase in taxes will not have to take place. This way, the government can have its cake and eat it, too. However, there are limits to government deficits being monetized by central banks without resulting in inflation. The upside of higher inflation is that it can decrease government's debt burden.

External Sector: Deglobalization and U.S.-China Decoupling

Increased debt monetization and money creation would lead to weaker currencies. And since interest rates would already be low, countries would increasingly resort to exchange-rate interventions to stimulate their economies. This in turn may lead to more currency wars, not just between the U.S. and China, but also between other bilateral pairs.

Deglobalization was well on its way before the pandemic hit. However, the pandemic will accelerate the deglobalization process through an increase in protectionism and onshoring. While this would keep jobs at home and companies self-reliant, it may also reduce companies' profit margins and productivity. More protectionist trade will allow AEs to subsidize their industries, keeping EMs — especially low-income countries — mired in recession for longer. These factors may combine to increase the frequency of trade wars.

Economic decoupling between the U.S. and China has also accelerated due to the pandemic. This is seen across the board — in trade, technology and investment. This decoupling is reflected in the latest data: China's direct investment in the U.S. in the first quarter of this year fell to just US$200 million, down from an average of US$2 billion last year.

Given the rapid reversal of capital flows in EMs, the pandemic will usher in a period where we are likely to see restrictions to the movement of capital, in the same way we are seeing restrictions to the movement of people and goods. These capital controls on outflows can be in the form of limits, taxes, differential exchange rates, and bans. Capital controls on inflows are a useful weapon during trade wars as they can depreciate currencies, making exports more competitive.

However, there are also several downsides to imposing capital controls on inflows. They can fan currency wars and trade wars when other countries retaliate. Domestically, they create credit constraints, reduce business investment and decrease potential growth. The permanent nature of capital controls also means that they are difficult to remove once implemented.

Bottom Line

The pandemic-induced crisis has brought unprecedented uncertainty. Once the dust settles from this crisis, we will wake up to a new world. Since this pandemic is a historical novelty, economic forecasts cannot be made with much certainty. Therefore, it is important to think about the post-pandemic economy within a clear framework. Looking at different economic sectors and understanding the interlinkages between them can serve as our guide for the uncertain future. The ongoing crisis will worsen some of the global economy's pre-existing conditions, while creating new ones. We should prepare ourselves for weaker growth potential, massive debt burdens, less effective monetary policy, deglobalization and low for (even) longer interest rates. This will be a bumpy ride. □

Asset Class Analysis

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Quarter in Review

Investors peer beyond the crisis

The second quarter was one for the ages as risk assets staged an aggressive rally from their sharp selloff in Q1, amidst a pandemic that is still in ascendance across much of the world. The rally was driven by a few key factors: (1) trillions of dollars in coordinated monetary and fiscal stimulus from central banks and major governments; (2) signs that much of the developed world (except the U.S.) was getting the outbreak under control, coupled with promising news on the development of a vaccine; and (3) optimism about the economic recovery, as major economies have started to reopen and recent jobs and sentiment data have handedly exceeded expectations (Figures 1 and 2).

Despite the market rally, there are doubts as to whether the optimism it represents is grounded in an economic reality that is still in crisis. Nonetheless, investors have discounted short-term challenges and shifted focus toward the intermediate and longer term as central banks have agreed to provide uncapped accommodation for the foreseeable future. There are even discussions about the Federal Reserve implementing explicit yield curve control to help governments that are in emergency-spending mode manage borrowing costs and fill the income vacuum left by the shutdown in economic activity and surge in unemployment.

Figure 1: Central Bank Accomodation

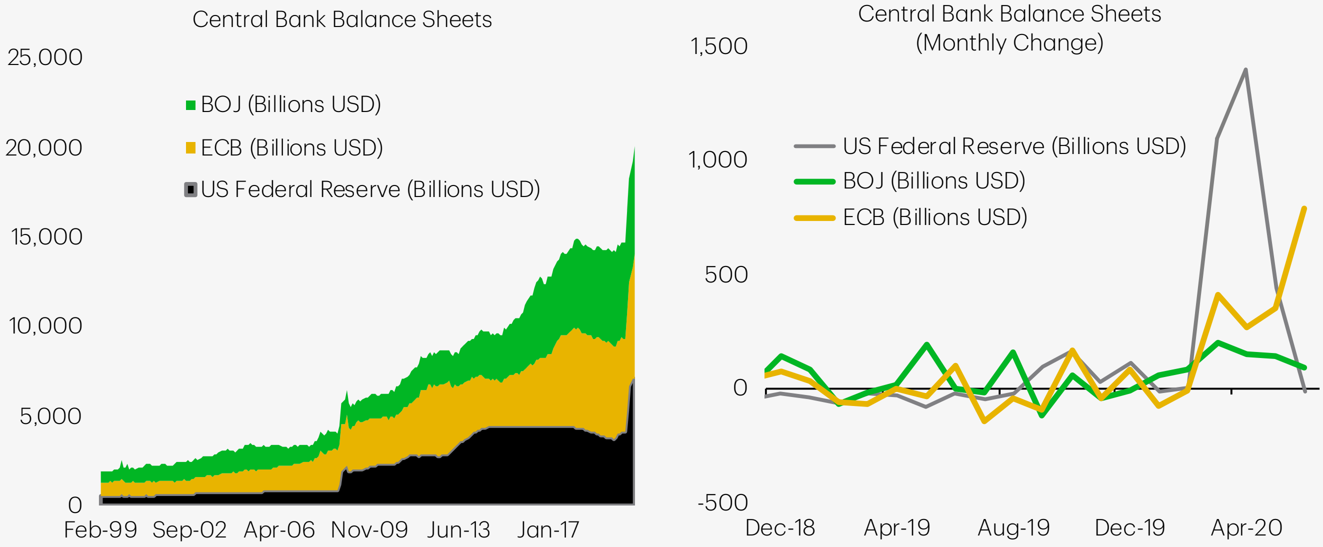
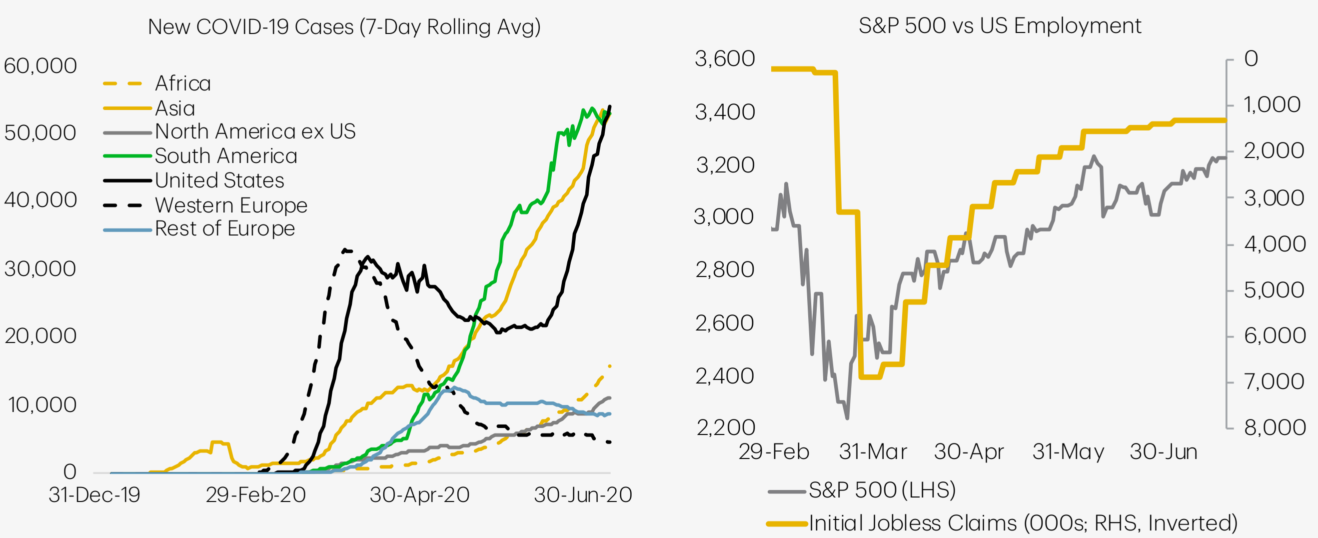
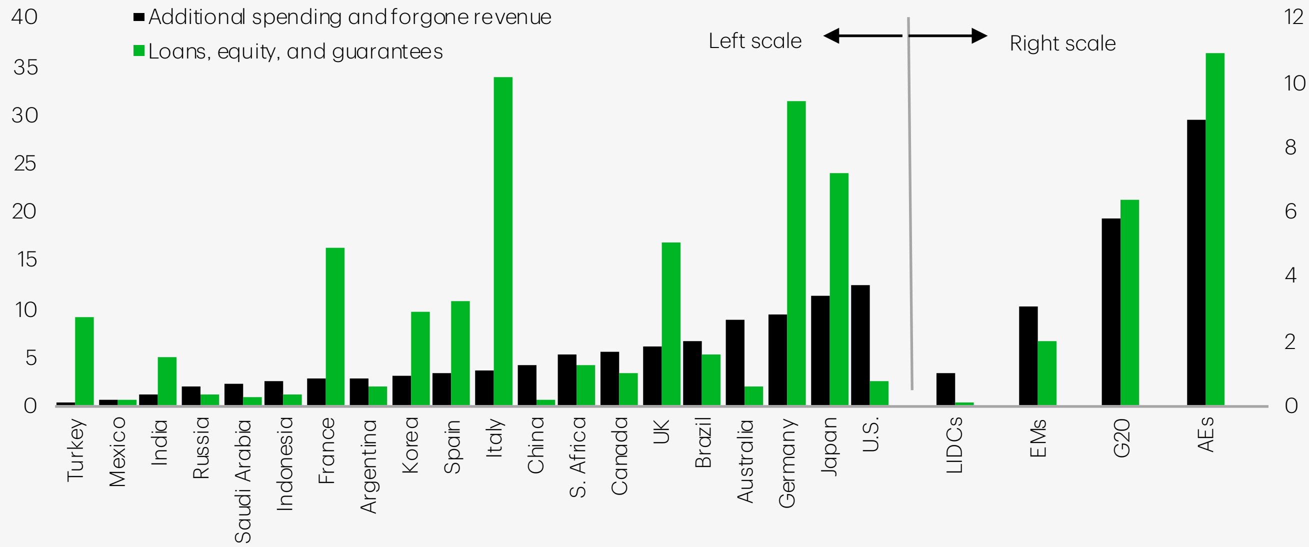


Figure 2: Covid-19, U.S. Equity and Jobless Data



Source: Our World of Data, Bloomberg, as at June 30, 2020

Figure 3: Global Fiscal Spending in Response to COVID-19 (% of GDP)

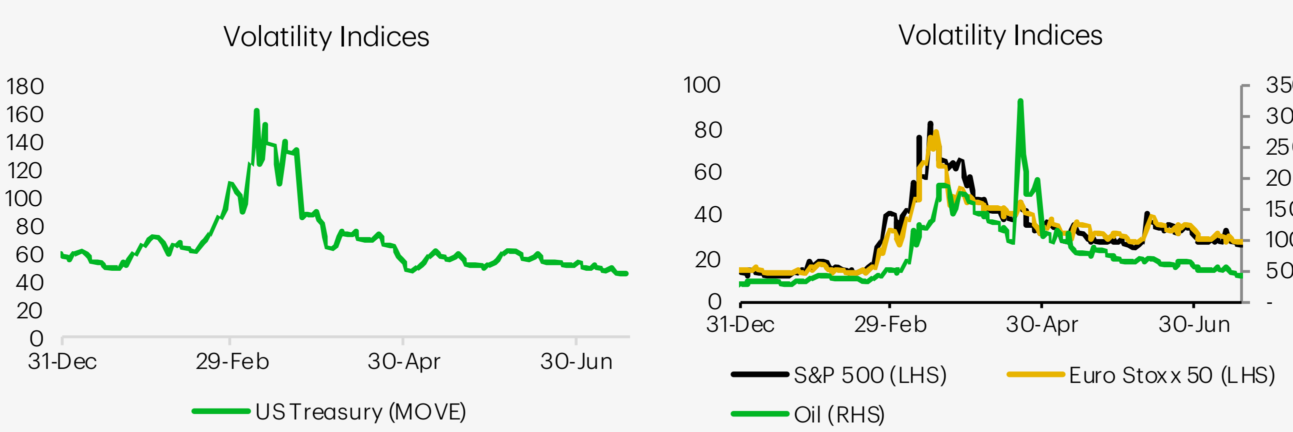


Source: National authorities, IMF staff estimates, as of June 12, 2020. Note: Country groups are weighted by GDP in purchasing power parity-adjusted current US dollars. Revenue and spending measures exclude deferred taxes and advance payments. For details, see the Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic. AEs = advanced economies; EMs = emerging markets; G20 = group of twenty; LIDCs = low-income developing countries.

As of June 2020, governments have deployed $11 trillion in extra spending to counteract the economic impact of the outbreak, with much more on the horizon (all USD). Almost all this fiscal stimulus (about $9 trillion) is coming from G-20 countries (Figure 3). By the time the pandemic is over, governments will have issued trillions of dollars in new debts to finance the enormous fiscal responses. It is estimated that global debt will rise by $16 trillion in 2020, bringing total public and private debt load to a record $200 trillion.[6]

We can see the stark contrast between Q1 and Q2 through the swing in implied volatilities for major asset classes (Figure 4). Implied volatilities for U.S. Treasuries surged to extreme highs toward the tumultuous second half of Q1 as investors sought refuge in safe-haven assets and sold off risk assets in droves; however, volatilities have subsided substantially since then, largely due to intervention from the Fed and the resulting improvements in risk appetite. Implied volatilities for U.S. and European large-cap stocks and commodities have also become much more subdued as of the end of Q2 even though they remain about twice as volatile as they were at the beginning of the year, which indicates that investors still expect turbulence in the near term. In fact, the VIX index for the S&P 500 was hovering above 30 points at the end of Q2, which is above the 90th percentile compared to history and approximately double its historical realized volatility. Longer-horizon measures of implied volatilities also showed elevated expectations of risk and unease with where markets may be headed.

Figure 4: Expected Volatility of Major Asset Classes



Source: Bloomberg, as of June 30, 2020

Environmental and Factor Perspective

We view asset-class performances through an environmental and factor perspective, which captures their true exposures and underlying risk characteristics. After all, at an elementary level, asset classes are defined by a common set of fundamental macroeconomic phenomena or risk characteristics that drive their behaviours. Key macroeconomic risk factors include: interest rates, economic growth, credit, inflation, liquidity and currency risk. From this perspective, asset classes are simply representations of these underlying risk factor exposures.

These risk factors imbue each asset with environmental biases that explain how they perform under a variety of market scenarios, such as rising growth or inflation. For instance, some asset classes (equities, corporate bonds and commodities) perform well in accelerating growth environments, while others (government bonds) do well in the opposite kind of environment. Similarly, some assets (inflation-linked bonds) do well in inflationary environments, while others (nominal government bonds) perform in disinflationary situations. This framework forms an intuitive four-quadrant matrix (Figure 5) and shows how key asset classes have performed historically over many market cycles. Each of the four scenarios have occurred about a quarter of the time based on historical data.

Looking at Q2 through this environmental perspective, asset classes that benefited from rising economic growth and rising inflation performed exceptionally well during the quarter as investors became more optimistic about the economic recovery in light of robust accommodation from central banks and governments, positive developments in unemployment and consumer spending trends, and optimism in the ability of developed countries to keep the outbreak in check as economies reopen for business. In connection with a positive economic growth outlook and improved appetite for risk, asset classes such as equities, corporate bonds, emerging-market debt and commodities all generated strong returns.

Corporate bonds outperformed as credit risk (both investment-grade and high-yield) were again in favour and spreads tightened after spiking in Q1. The same was true for emerging-market debt, which benefited from increased appetite for sovereign credit. Optimism about a robust economic recovery helped commodities (energy specifically) bounce back from extreme lows. Conversely, interest-rate-sensitive assets like nominal government bonds, which tend to perform well when economic growth prospects are gloomy, underperformed during the quarter as investors shifted toward risky assets. Despite the headwinds, they eked out positive returns largely due to the enormous scale of quantitative easing and bond purchasing by central banks. Canadian government bonds were an exception as they booked strong gains during the quarter (more on this below).

Figure 5: Asset Class Performance

Economic Environment	Rising Inflation					Falling Inflation				
			MTD	QTD	YTD			MTD	QTD	YTD
Rising Growth	Commodities	GSCI	5.1%	10.5%	-36.3%	Equities	Global	2.9%	18.3%	-5.3%
		Energy	8.9%	18.6%	-53.8%		US	2.0%	20.5%	-3.1%
		Oil	10.7%	91.7%	-35.7%		Canada	2.5%	17.0%	-7.5%
		Gold	2.8%	12.1%	17.1%		EAFE	2.6%	12.6%	-10.5%
							EM	6.6%	16.7%	-5.5%
	Emerging Market Debt	Hard	2.9%	11.2%	-1.9%	Corporate Bonds	Global IG	1.8%	7.9%	3.5%
		Local	0.7%	9.6%	-6.8%		Global HY	2.1%	11.8%	-4.4%
							Private Debt	1.1%	9.7%	-4.6%
Falling Growth	Inflation-Linked Government Bonds	Global	1.1%	6.0%	6.5%	Nominal Government Bonds	Global	0.3%	1.1%	5.1%
		US	1.1%	4.2%	6.0%		US	0.1%	0.5%	8.7%
		UK	0.5%	10.6%	12.5%		Eurozone	1.0%	1.7%	2.0%
		Canada	2.4%	6.2%	6.3%		Japan	-2.0%	-2.7%	-2.5%
							Canada	1.4%	5.1%	8.3%

Source: Bloomberg, as of June 30, 2020

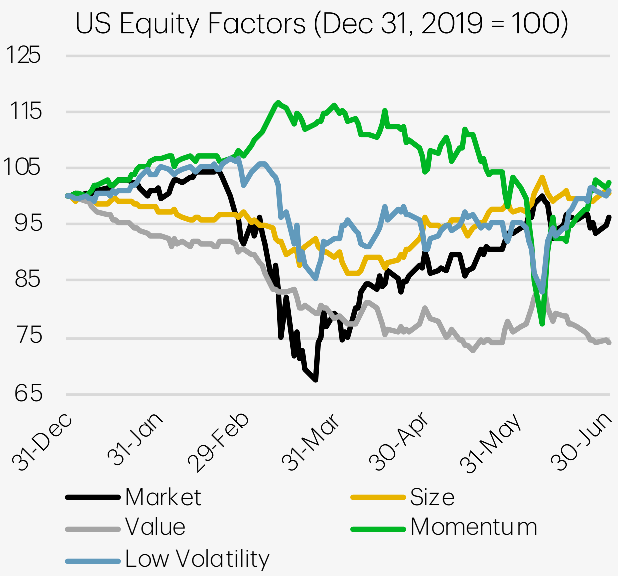
Meanwhile, inflation-protected assets such as inflation-linked bonds delivered strong returns, outperforming their nominal counterparts due to a significant rise in inflation expectations. These expectations coincided with an optimistic growth outlook and concerns about the inflationary consequences of quantitative easing, debt-powered spending and possible debasement of the dollar. Inflation expectations had diminished so much in Q1 that, even though expectations at the end of the quarter remain subdued, it didn't take much of a rise in inflation expectations for inflation-linked bonds to outperform, given their longer maturity profiles.

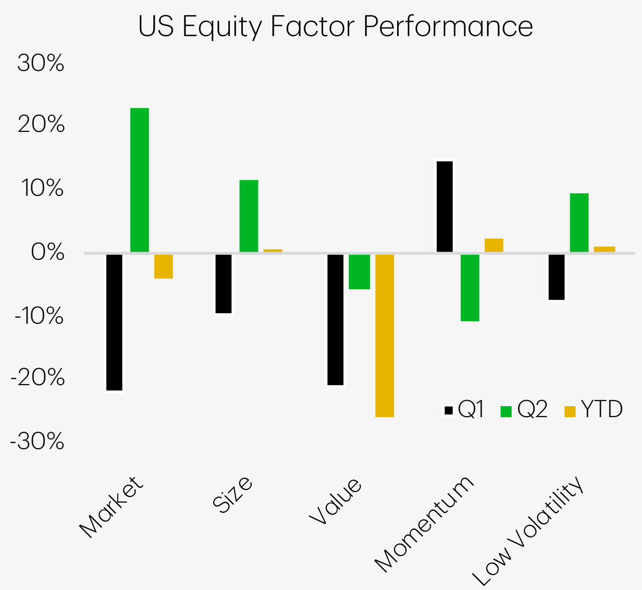
The rise in expected inflation was also a headwind for assets that don't provide inflation protection, especially nominal bonds. Commodities are a growth asset that also provide moderate inflation protection. They performed well during the quarter as both the growth and inflation picture worked in their favour. Gold is considered a safe-haven asset, but continued uncertainty and inflation concerns drove prices to post Bretton Woods highs alongside the risk-asset rally (it was up 12.1% for the quarter and 17.1% for the year). Energy, meanwhile, benefited from coordinated OPEC action and lower production from U.S. shale producers.

Shifting to equity-style factors (Figure 6), size outperformed during the quarter as investors rotated to riskier and growthier names, which benefited smaller-cap stocks. Value stocks continued to underperform, while growth stocks have been on a tear.[7] Growth is dominated by the internet and communications giants, particularly the FAANGM[8] stocks, which have consistently outperformed the broader market in recent years, so the trend (i.e., momentum) was most definitely their friend in this environment. In fact, these stocks outperformed the S&P 500 by a multiple of five since 2013. The internet giants make up $6.5 trillion, or 25%, of the U.S. large-cap index and have been responsible for *all* the index's earnings growth in the past five years.[10] Their size and business models proved advantageous during the lockdown.

Value, on the other hand, is dominated by out-of-favour financial and energy names, which have been hit hard by the fall in rates and what is expected to be a significant rise in defaults. Although there were weeks when value stocks generated strong outperformance against their growth counterparts, these gains ultimately did not persist. As a result, value stocks, which were already historically cheap relative to growth, became even cheaper in Q2. More defensive factors, such as quality, also underperformed during Q2 as turbulence subsided and investors soured on sectors that are considered more stable, such as financials, industrials and consumer staples. Momentum generated double-digit outperformance in Q1 but gave back some of its gains in Q2 until recovering partially late in the quarter. Low-volatility stocks failed to provide much protection in Q1 during the market selloff, which hit all sectors indiscriminately, and they continued to struggle during the Q2 risk rally, since technology was underrepresented in the factor. It experienced a sharp bounce-back late in the quarter and is flat for the year.

Figure 6: U.S. Equity Factor Performance





Source: AQR, as of June 30, 2020

Equities in Review

From a traditional asset-class perspective, investor optimism about the prospect for a quick economic recovery drove equities to record gains during the quarter (Figure 7). Global equities gained 18.3%, the most in a quarter since Q2 2009, led by U.S. stocks with gains of 20.5%, which is also the highest in a quarter since 1998. As a result, U.S. equities have recovered almost all their losses and are only down 3.1% for the year. Within U.S. equities, cyclical sectors led the rally, with consumer discretionary up 32.6%, technology up 30.1%, energy up 28.7%, and materials up 25.3%. Conversely, defensive sectors that were more resilient during Q1, such as utilities, consumer staples and health care, underperformed during the quarter as investors shifted to growthier sectors. Utilities were hurt by the likelihood of lower-for-longer demand. Health care was hurt by the decline in elective medical procedures as much of the world focused on the outbreak. Meanwhile, real estate lagged due to concerns about the consequence of the pandemic on demand for offices and retail spaces going forward.

In parallel with the risk narrative, small-cap stocks outperformed large-caps by 4% after trailing far behind with a 30.6% loss in Q1.

Canadian stocks weren't far behind U.S. stocks, with gains of 17.0%, led by a return of 68.3% from the narrow technology sector that is dominated by a single name: Shopify. Other cyclical sectors, such as consumer discretionary and materials, were also key contributors, with returns of 32.8% and 42.0% respectively. Although WTI crude almost doubled in price during the quarter, Canadian energy stocks returned only 10.9%, much less than the 28.7% gain in the U.S., as the sector continues to be weighed down by weak demand, rising corporate defaults, and environmental and pipeline concerns. Despite the significant gains during Q2, energy is still the worst-performing sector for the year, with a loss over 30.0% in both the U.S. and Canada.

Outside of North America, stocks in Europe, Australasia and the Far East (EAFE) lagged but still gained 12.6%, although European stocks outperformed U.S. equities toward the end of the quarter as Europe's economies

Figure 7: Equity Performance

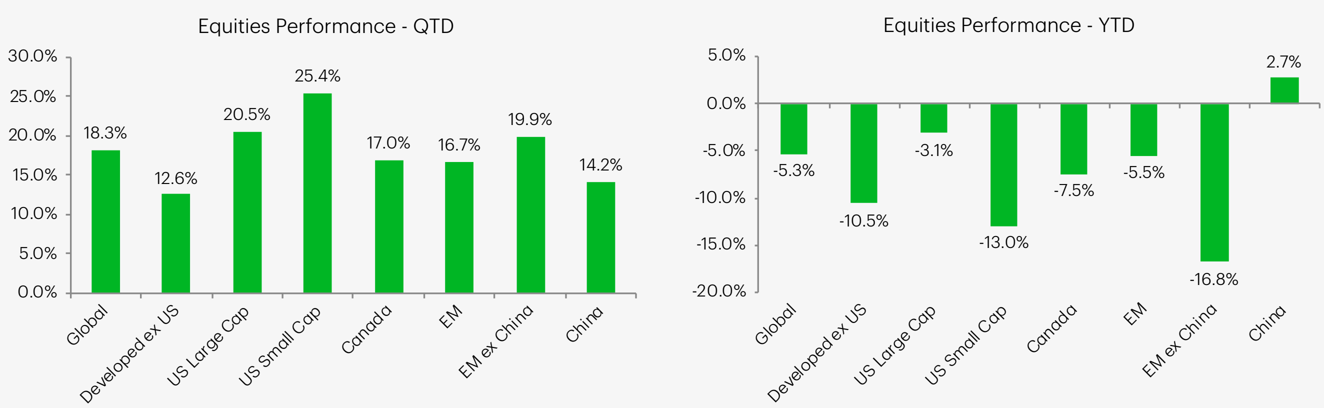
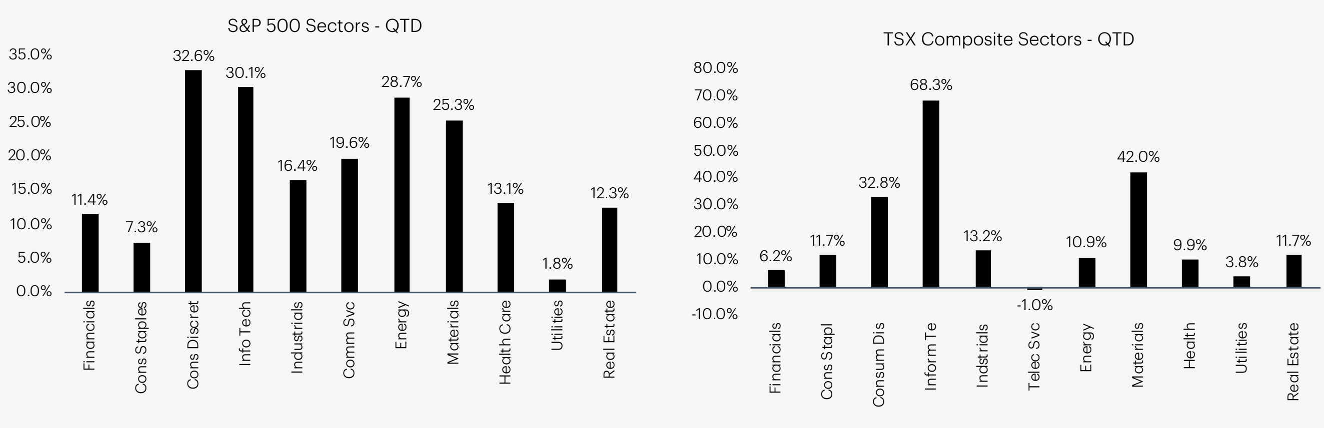


Figure 8: Sector Performance



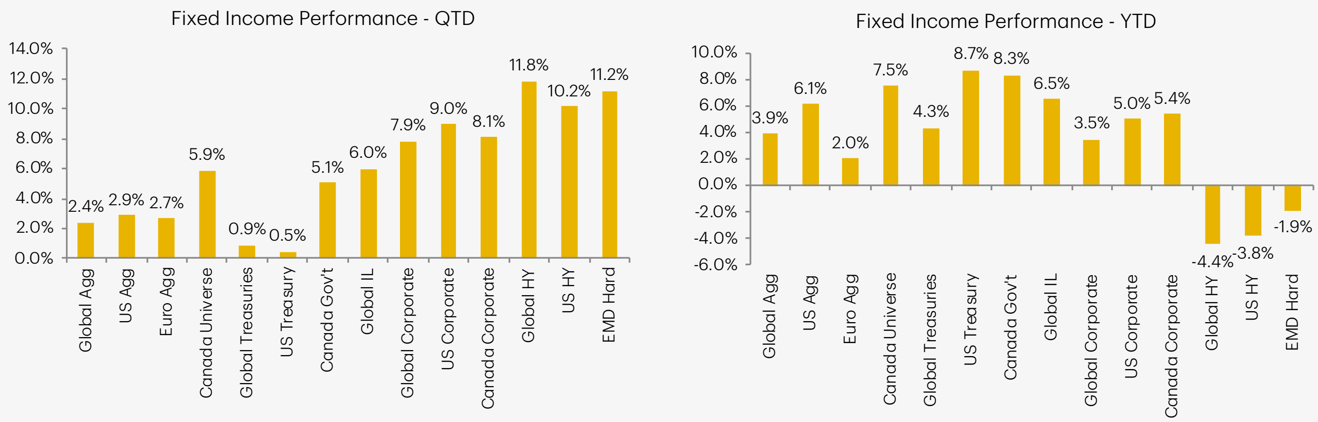
Source: Bloomberg, as of June 30, 2020

emerged from the lockdown and, unlike the U.S., successfully kept new infections in check. EAFE was led by a 24.0% return from German equities, while Japanese and UK equities trailed, with high single-digit or low double-digit gains. Japanese stocks failed to capture much of the upside in equity markets as the Bank of Japan maintained its low interest rate policy but did not announce additional stimulus measures. Emerging-market stocks, which outperformed developed markets in Q1, trailed during the latest quarter, with a 16.7% return. EM was led by a 30.2% gain from Brazil after a deep 37.0% loss in Q1, as risk sentiment improved, despite the fact that key EM countries (with Brazil at the forefront) have rapidly become the epicentre of the outbreak. Chinese equities have been an outperformer throughout the year but underperformed during the second quarter, with gains of 14.2% as risk appetite improved.

Fixed Income in Review

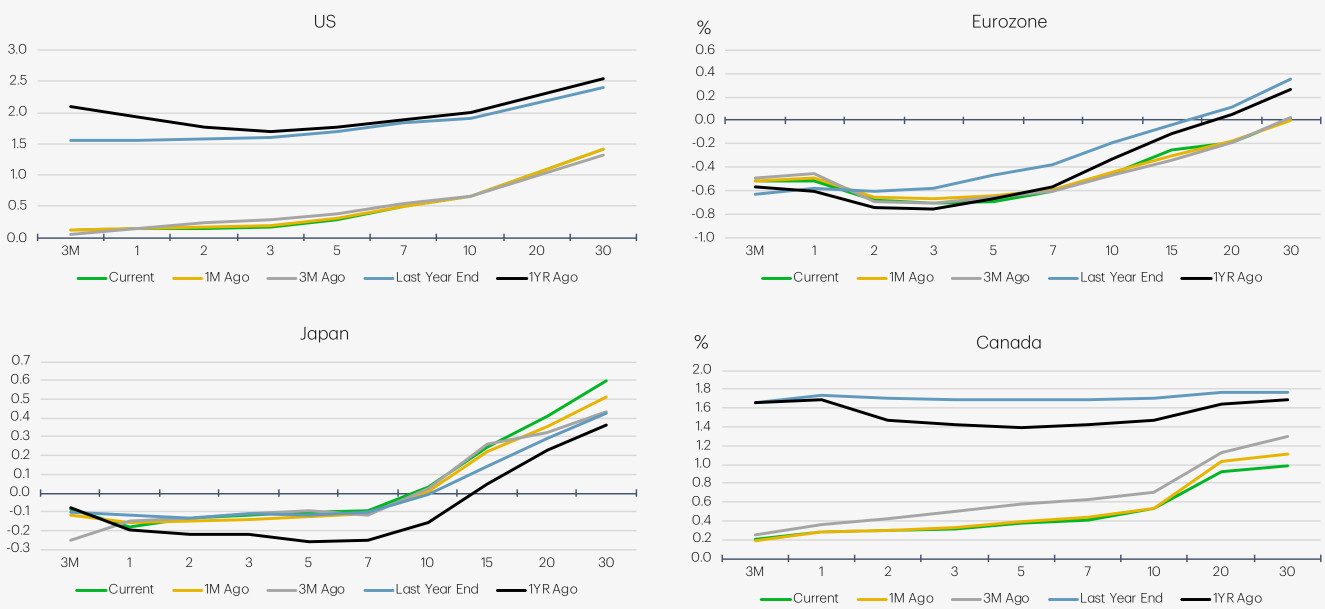
Fixed income also held up during the quarter as government yields remained near historic lows while credit spreads tightened toward pre-pandemic levels (Figure 9). Broad global fixed income, as represented by Bloomberg Barclays Global Aggregate Index, returned 2.4% during the quarter. U.S. Treasuries were up slightly as yields remained steady. The U.S. 10-year Treasury yield ended the quarter at 0.66%, which is only one basis point lower than where it began Q2. A key reason yields remained flat, despite the rally in risk assets and trillions in new issuances, is central bank bond buying as a part of quantitative-easing (QE) action and the Fed's much more cautious view on the recovery. Gains for Treasuries were concentrated in the belly of the yield curve, which flattened modestly during the quarter, while the very short-end and long-end yields rose (Figure 10).

Figure 9: Fixed Income Performance



Source: Bloomberg, as of June 30, 2020

Figure 10: U.S. and Eurozone Government Yield Curves



Source: Bloomberg, as of June 30, 2020

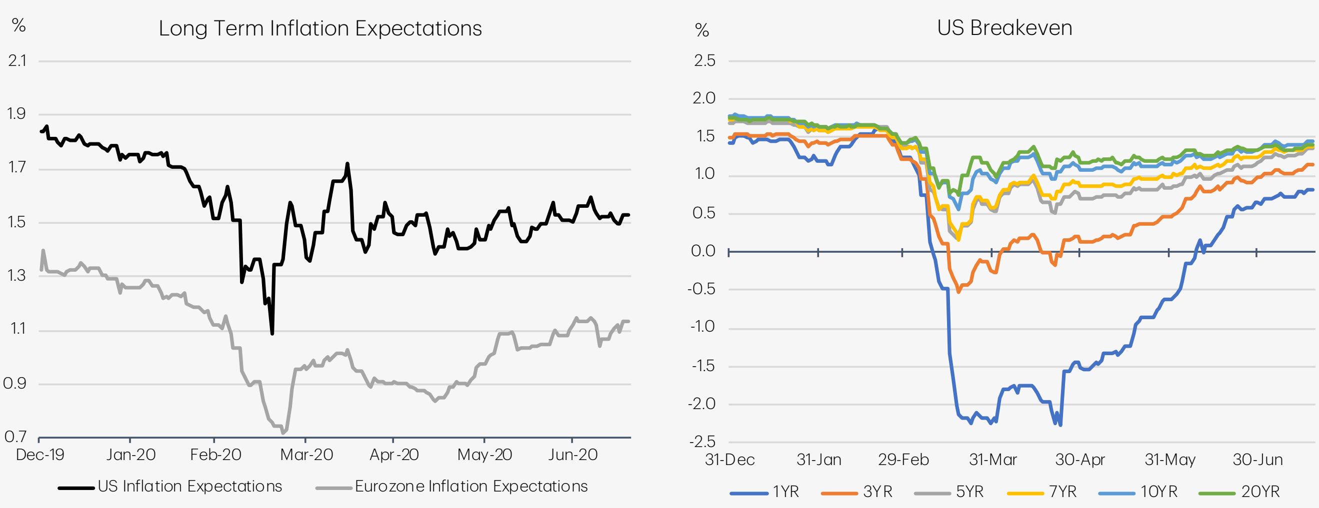
Eurozone curves were virtually unchanged, but five-year and shorter yields fell slightly. The entire curve remains sub-zero all the way to the 30-year, which offers a yield of 1 bp. Canadian government bonds were a key outperformer, with gains of 5.1%, as Canadian bonds remained attractive from a carry trade perspective. This outperformance was driven by the significant flattening of the Canadian yield curve at the long end compared to the steepening in the U.S. curve; the Bank of Canada has been targeting the short and long end with its bond purchases, whereas the Fed has been buying across the entire curve. In addition, the economic outlook is weaker for Canada, which puts pressure on the Canadian yield curve and prevents it from steepening as much as the U.S. curve. The U.S. Treasury has also issued significantly more long-dated bonds to finance stimulus spending, which puts upward pressure on yields and contributes to greater steepening.

Switching to inflation-linked bonds (Figure 11), break-even inflation rates (the market's expected rate of inflation) had fallen sharply for much of the year alongside the economic contraction and gloomy outlook. This was especially the case for the near term, since one and three-year U.S. break-evens dipped well below zero in March, which indicates that investors expected deflation over the next one and three years. Even 10-year expectations for inflation fell to 1.0% for the U.S. and sub-1% for the eurozone, making inflation protection extremely cheap. However, during Q2, inflation expectations recovered as investors became more optimistic about the strength of the economic recovery. Longer-term inflation expectations, based on the 10-year break-even rates, have since risen above 1.5% for the U.S.

European break-evens saw similar increases during Q2. Investors have become increasingly wary of inflation risk that may emerge from the trillions of dollars in debt-fuelled spending and quantitative easing, and the prospect of devaluation of the U.S. dollar. These concerns helped global inflation-linked bonds gain 6.0% during the quarter, outperforming nominal bonds by more than 5.0%. Canadian inflation-linked bonds also generated significant gains during the quarter (up 6.2%), but these gains were largely because of the higher duration profile of inflation-protected bonds and substantial flattening of the Canadian yield curve.

Within fixed income, gains were led by riskier segments as appetite for risk surged and investors clamoured for enhanced yields under the auspices of a Fed backstop for credit markets. Major central banks (notably the Federal Reserve) were unequivocal in pledging the full extent of their balance sheets to maintain the smooth functioning of the market and keep liquidity flowing. The Fed explicitly stated that it would keep its policy rates at effectively zero over the next few years. It conducted, for the first time ever, the buying of investment-grade corporate bonds and high-yield bond ETFs. It even decided to purchase sub-investment-grade bonds from issuers that had been downgraded after April 22 as a consequence of the outbreak (so-called "fallen angels").

Figure 11: Inflation Expectations



Source: Bloomberg, as of June 30, 2020

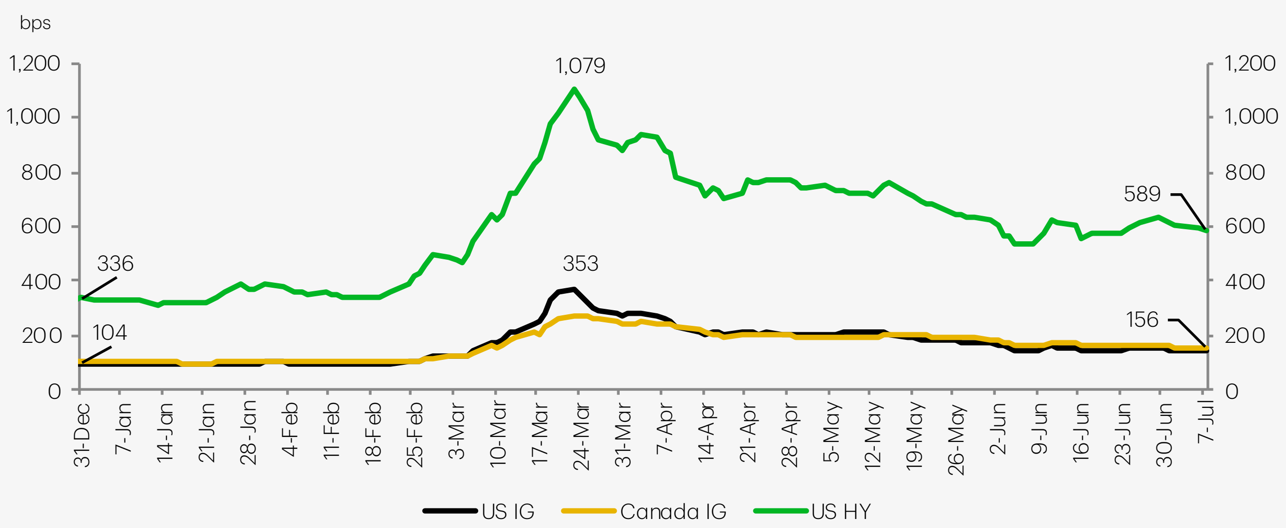
Against this supportive backdrop, investors rushed back into credit markets in Q2 (Figures 12 and 13). Credit spreads tightened significantly, with U.S. IG spreads falling by 122 bps over the quarter and U.S. high-yield spreads tightening by 254 bps. All segments of the U.S. IG and HY universe saw improved spreads, but higher-beta issuers (like energy, auto, etc.) were the main beneficiaries. Lower-rated IG and HY issuers also saw greater spread compressions. Within U.S. IG, BBBs returned 11.5% during the quarter, outperforming A-rated at 7.2% and AAs at 4.8%. Overall, the U.S. IG corporate bond universe gained 9.0% (bringing returns well into positive territory YTD) while U.S. HY bonds returned 10.2%, leaving a low single-digit loss YTD.

Similarly, on the Canadian side, the IG corporate credit spread tightened by 83 bps over the quarter to an option-adjusted spread of 160 bps, and returned 7.8%, outstripping the aggregate Canadian fixed income index returns of 5.7%. Diving deeper, returns on Canadian BBBs came in at 9.6%, once again beating higher-quality A-rated credit at 7.9% and AA-rated at 4.1%. Emerging-market debt also gained 11.2% as part of the rally in risk assets. With the backstop provided by the Fed, investment-grade issuers raised record amounts of capital at relatively low yields to bolster their liquidity in anticipation of tough times ahead. The upper tier of high-yield issuers was also able to raise sizable amounts of capital, but not at the record-setting levels seen in U.S. IG. Overall, IG and HY spreads remain more than 50% and 80% higher than where they were at the beginning of the year, reflecting the greater probability of expected downgrades and defaults.

In the end, it's important to look through short-term dynamics, since markets will inevitably rise and fall, and factors will naturally come in and out of favour. From a strategic perspective, it's important to start with a well-constructed, well-diversified asset mix that is designed around the client's unique circumstance and long-term goals, and one that is engineered to maximize the likelihood of achieving these goals. Most of a portfolio's return is expected to come from asset allocation, so everything beyond asset mix design should be treated as secondary, and this includes manager or fund selection and tactical positionings. At TD Wealth, this means constructing asset mixes based on risk allocation and the underlying risk characteristics of asset classes, rather than their asset-class labels, and focusing on risk-factor diversification.

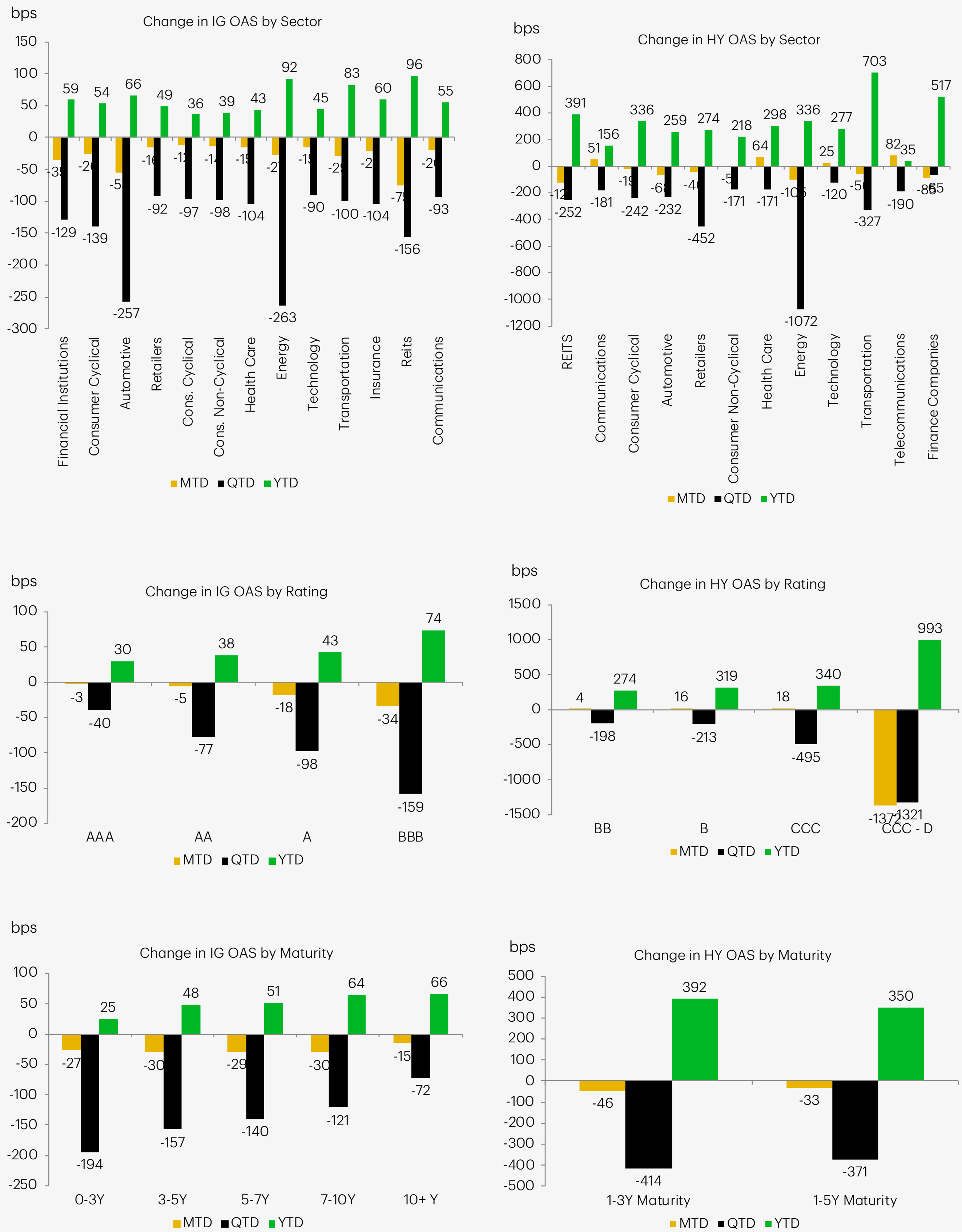
The objective of factor diversification is to target exposures that provide a return premium over time while minimizing exposure to uncompensated factors. And to avoid excessive exposure to any single factor, which go through cycles and can experience prolonged periods of underperformance. We've seen the risk of factor concentration with the value factor, which has underperformed for well over a decade as the market has been on an extended late-cycle rally that has been beneficial to growth. By diversifying across factors, we can capture factor return premiums while reducing the impact of factor cyclicality, which helps to produce a more stable return stream. Ultimately, this approach helps us build robust portfolios that can protect against adverse market events like the one in Q1 2020. □

Figure 12: Credit Spreads (December 31, 2019 to June 30, 2020)



Source: FactSet, as of June 30, 2020

Figure 13: Change in IG and HY Credit Spreads



Source: FactSet, as of June 30, 2020

Outlook on Fixed Income

Corporates, fallen angels rise again

Underweight

Let's begin our analysis with a look at interest rates within the sovereign bond market. Government debt and central bank asset purchases have increased materially in response to the pandemic, in many cases by roughly the same amount. Broadly, central banks have maintained ultra-accommodative financial conditions as a means of softening the blow to the economy that is expected to come from the industrial slowdown, historically high unemployment and subsequent support claims. If economic activity continues to rebound, traditional central bank rate cuts have probably already run their course. For the broader bond market, reaching the effective lower bound (ELB) on policy rates should imply steeper curves, a change in curve directionality (i.e., flattening in rallies and steepening in sell-offs), lower realized and implied volatility, and a worse return distribution for duration in general. Given downside protection offered, we expect that developed-market government bonds will remain a core part of diversified portfolios for that reason. But their return potential has deteriorated significantly, suggesting lower risk-adjusted returns in the future. Here are a few forward-looking themes for duration and government bond investments:

Fed unlikely to cap long-term yields:

Although the central bank has been very active in the bond market, we do not think these actions should be interpreted as de facto yield curve control (YCC). First, the Federal Open Market Committee has said that its bond purchases were intended to "support the smooth functioning of markets," and it has scaled down its buying as market functioning has improved. Second, like past QE operations, the Fed's purchases are quantity-based rather than price-based (i.e., they target a dollar amount of purchases, not specific yield levels). That said, if there is YCC policy, whether implicit or explicit, it will likely focus on the very short end of the maturity profile and will not impact yields of longer-maturity bonds.

Limited scope for further rate cuts:

The Fed, Bank of England and other central banks could consider negative policy rates, which would have an impact on many facets of this outlook. However, we still see this step as a relatively low-probability outcome, even if the economy performs worse than expected. Fed and Bank of Canada officials have reiterated that negative rates are not their preferred policy tool, partly due to the structure of the U.S. financial system (and perhaps reflecting a view that fiscal policy is better placed to support economies in this recession). While forward rates may price in negative policy rates from time to time, we expect the Treasury market and most other G-10 sovereign bond markets to trade as if the ELB is binding.

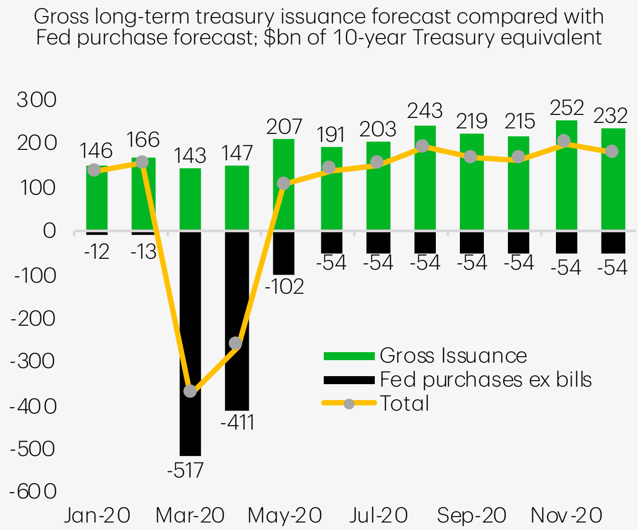
More risk from inflation than deflation over time:

Unless currencies depreciate sharply, recessions tend to reduce inflation, and the demand shock from the coronavirus outbreak should dominate in the near term — a point underscored by the record monthly decline in the U.S. Core CPI in April and the decline in May as well. However, we think markets may be underpricing the potential for inflation over time. We cannot entirely rule out deflation, but falling price levels are uncommon in countries with flexible exchange rates and a macro policy mix similar to that of the U.S. Moreover, the outbreak may have supply-side implications — related to the dismantling of supply chains, for example — that may put upward pressure on consumer prices beyond what we see in typical recessions. And if we price in a rebound in energy, then we have an even stronger case for future inflation.

Prepare for a deluge of government bond supply:

In response to the economic shock, most G-10 governments have resorted to aggressive fiscal expansion. Even with the Fed buying $2.5 trillion, markets will still have to absorb $150 billion in 10-year equivalent government bonds on a monthly basis through year-end (Figure 1).

Figure 1: U.S. Treasury bond supply and Fed purchases



Projections assume Fed continues to purchase $80bn Treasuries per year through remaining 2020. Source: U.S. Treasury, Bank of Canada, TD Securities, JP Morgan, as of June 2020

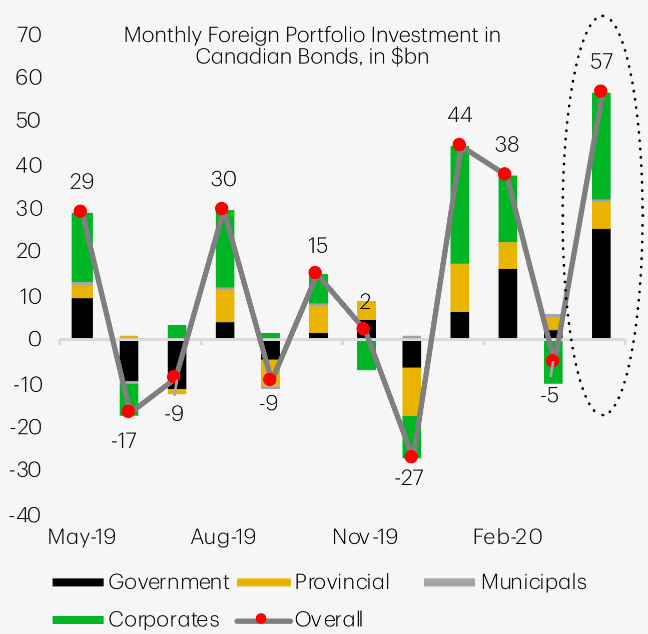
While this is only slightly above the pre-virus run rate, the government bond supply is propagating at far less attractive yield levels, which means bond yields (mostly real risk premia) should reprice higher.

Reduced hedge value from duration:

The value of sovereign bonds in multi-asset portfolios should be reassessed, in our view. Unless central banks develop a way to cut policy rates deeply into negative territory, these bonds have lost a significant part of their "hedge value." As yields have approached effective lower bounds, the betas of nominal yields to risk asset performance has deteriorated, suggesting decreased ability to offset losses.

On June 24, Fitch downgraded Canada to AA+, while Moody's and S&P maintained their stable AAA ratings. Although Fitch had previously rated Canada as AAA with stable outlook, it's worth noting that Fitch had been musing about Canada's high levels of total government debt in early 2019. Canada's downgrade clearly isn't good news: Notably, downgrades by other agencies may be reflected in ratings for affiliated issuers. But in the near-term at least, we don't think it will have a significant impact on Canadian government bond yields. We believe that positive and relatively higher Canadian yields should continue to attract domestic and foreign investments, as was witnessed in April (Figure 2). Given that Government of Canada, Provincials and Canada Housing will still be top tier assets from a regulatory and credit perspective, we see limited impact on the high-quality spread category.

Figure 2: Foreign flows into Canadian bond market



Source: U.S. Treasury, Bank of Canada, TD Securities, JP Morgan, as of June 2020

Uncertainty about the economic outlook remains high, and we will need more evidence of a sustained recovery but the "lower duration profiles" thesis has strong support. As long as second-round effects from the recession remain manageable and progress continues on COVID-19 treatments and vaccines, most economies should be able to climb back over time, as most economists forecast. This rebound, once it takes hold, is likely to be inconsistent with the current level of yields in Canada, the U.S. and several other developed market economies.

Moreover, most short- to medium-term rate forecasts imply persistently negative total returns from current government yield levels. Rather, we prefer duration longs in investment-grade corporates and provincials. In addition to higher yields overall, the macro drivers of bond markets point to steeper curves over the next 12 to 24 months. Unlike the front end, long-maturity bonds lack complete central bank support, and are more sensitive to increasing supply. Though there are clear risks, we think that the expected bear-steepening of curves should be a relatively orderly process, and any backup will likely still see longer-term yields below pre-2020 historical lows. This low level of yields should have an anchoring effect on interest-rate volatility, which we expect to continue to decline across both regions and tenors due to improved market liquidity and ELB constraints.

Investment-Grade Credit

U.S. and Canadian investment-grade (IG) corporate spreads have recovered strongly over the quarter and we believe that the rally has been driven both by the anticipation of a successful economic reopening in the U.S. as well as extremely strong technical indicators. IG bond supply is over US$1 trillion YTD, and we believe the bulk of demand has come from traditional IG investors who have scaled up their exposure to IG in response to spreads widening to levels following the global financial crisis. A motivating factor for the steady demand from core buyers over the past quarter has simply been performance of new issuances. In our view, the recent spike in issuance has placed bonds in relatively steady hands and is not overly reliant on whether the Fed's corporate bond-buying programs come to fruition this summer, nor on continued participation from non-traditional investors. Over the medium term, significant uncertainty remains, which makes point forecasts imperfect summaries of the forward distribution of outcomes — more so than usual. But assuming the response to rising new infections remains focused on targeted restrictions, concerns over another round of large-scale disruptions in economic activity should subside. We continue to hold a positive view on this segment of the market and expect further spread compression in coming quarters. Here are a few forward-looking themes for Canadian and U.S. IG corporate bonds:

Fed support:

After signalling for many weeks that it only intends to be a lender of last resort to non-financial corporations, the Fed shifted to a role of regular secondary-market participant, with a visible flow of purchases. By removing the requirement for issuers to opt in to the Secondary Market Corporate Credit Facility (SMCCF) and stating that it "will begin buying a broad and diversified portfolio of corporate bonds," the Fed has essentially moved to validate its announcements on March 23 and April 9.

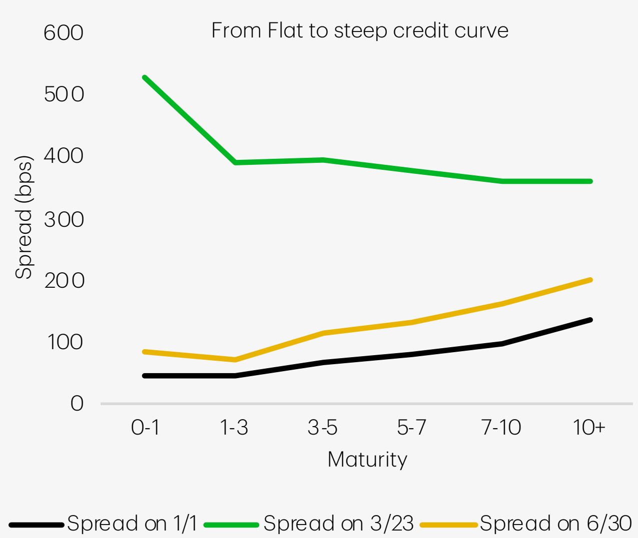
Reduced debt capacity will require an even stronger policy response if growth disappoints:

The biggest risk to this view is that the U.S. remains behind the curve in terms of its ability to control the virus spread. While such an outcome would obviously derail the economic recovery and thus weigh on risk appetite across the board, the stakes are even higher for credit. This year's record-high issuance has allowed companies to rebuild their liquidity positions. The flip side of this record-high issuance, however, has been reduced debt capacity and a diminished ability to respond to any adverse macro shock by increasing gross leverage again.

Valuations and "search for yield" motives favour longer-maturity credit:

At the height of the twin oil/virus selloff in March, the spread between 10- and 30-year IG tightened (credit curve flattening) dramatically. Since that time, however, there has been a notable steepening of long-end spreads relative to intermediate maturities (Figure 3). We therefore believe that longer-maturity corporates are favourably placed versus the shorter-maturity counterparts for three reasons. First, the recent steepening over the past two months has improved long-end valuations. Second, given the low-rate environment and recovery in IG spreads from the March peak, search-for-yield incentives should move to the forefront once again. This will likely encourage certain investors to extend maturities, where possible, in order to capture additional yield. Improving foreign demand for USD credit may also provide a tailwind for long-end IG spreads.

Figure 3: U.S. IG Credit Curve

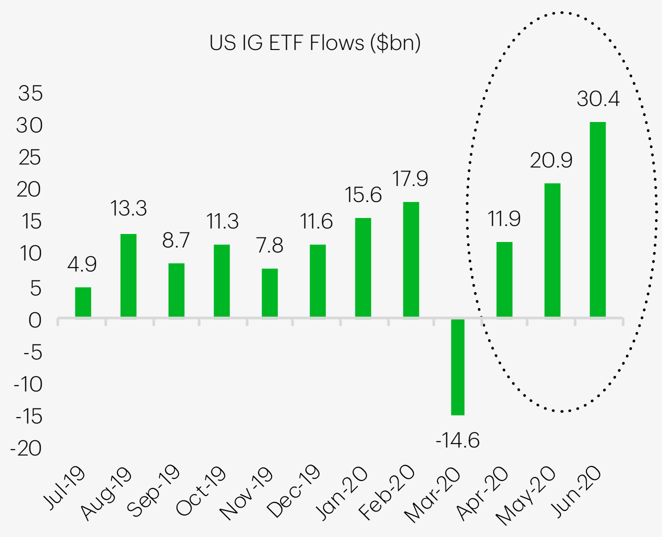


Source: FactSet, Bloomberg, as of June 30, 2020

Foreign demand for USD credit will remain firm given low hedging costs:

Q1 saw the largest first-quarter net sales of USD corporate bonds by foreign investors in the post-crisis period. In April, foreign investors purchased an additional $11 billion of USD corporate credit, according to the most recent data. Looking ahead, we expect continued foreign demand for USD credit, especially since the cost of hedging USD corporate bonds is now the lowest since 2016 for EUR, JPY and GBP investors, which should support appetite for USD credit in the coming months. Figure 4 shows flows into U.S. IG ETFs.

Figure 4: Inflows into U.S. IG Funds



Source: FactSet, Bloomberg, as of June 30, 2020

Approaching the end of the downgrade cycle:

The U.S. economy is rebounding much faster than expected at this early phase. That directly impacts the velocity with which rating agencies downgrade corporate debt. The pace of downgrades has slowed significantly since May compared to the March/April period. Figure 5 shows the reduced pace of downgrades in the past eight weeks.

Defensive across sectors within IG:

In our view, the potential for sectors that were severely disrupted by the sudden stop in the economy will likely be constrained by news on the virus. This is particularly so for sectors that are sensitive to discretionary spending, such as retail/consumer, media/entertainment and cable satellite, where we continue to recommend caution. There are certain sectors within the IG BBB space that are still trading at BB levels (Figure 6). On the other hand, we are inclined to turn neutral on energy and autos, given the still positive signs of rebounding demand. We also continue to recommend allocations to credit-friendly sectors and those with strong balance sheets: banks, pharma/healthcare and telecom.

High-Yield Credit

As we approach the end of second quarter, the U.S. high-yield (HY) index is down an unremarkable 3.8% year-to-date. Of course, that does not begin to indicate the volatility we have seen. At a more granular level, many stable areas of the high-yield market (especially in context of COVID) are up for the year. The majority of the losses can be attributed to those with the biggest impact from COVID, such as transportation, energy, aerospace/defense and retailers.

Fallen angels have been a big focus for the market this year, with a notional $184 billion in bonds falling into the high-yield sector YTD. Despite initial market concerns over supply risk from fallen angels, many of the structures have performed very well since they were downgraded. As Figure 7 shows, fallen angels have been outperforming the broader HY market since the Fed announced, on April 9, that companies downgraded to high-yield after March 22 would be eligible in the SMCCF, provided they are BB-rated.

Figure 5: Pace of net IG downgrades

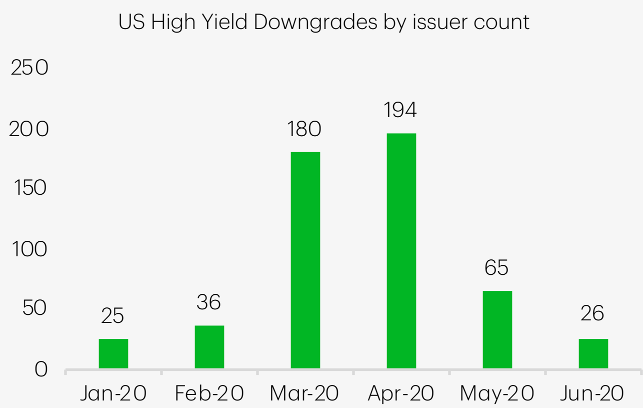
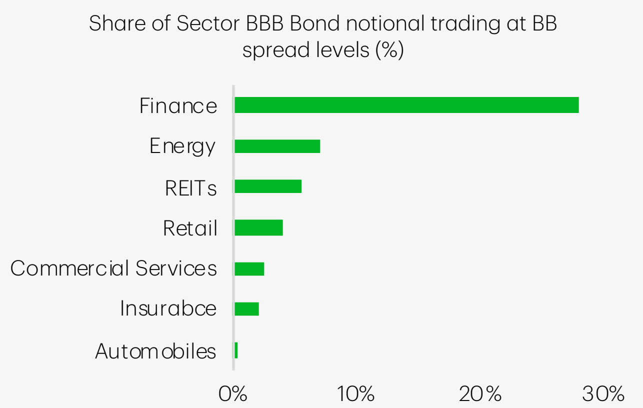


Figure 6: BBB index issuers trading at BB spreads, share of sector



Source (Figures 5,6) : BAML, Bloomberg, as of June 30, 2020

Figure 7: Recovery of fallen angels

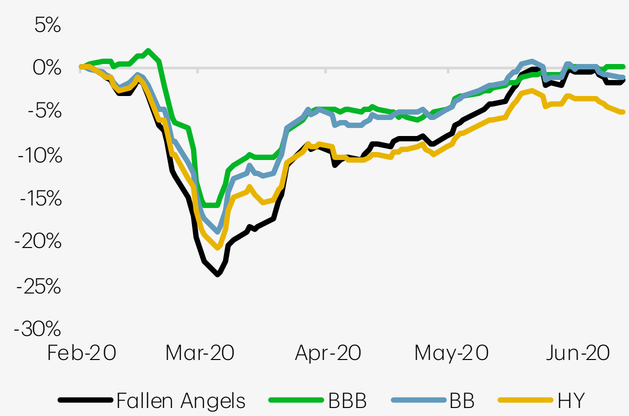
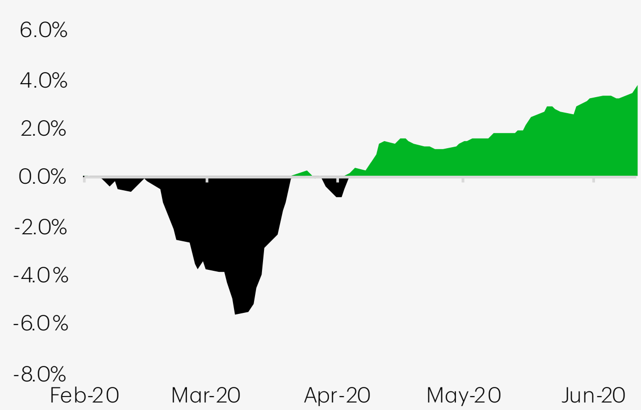


Figure 8: Fallen angels excess return over HY



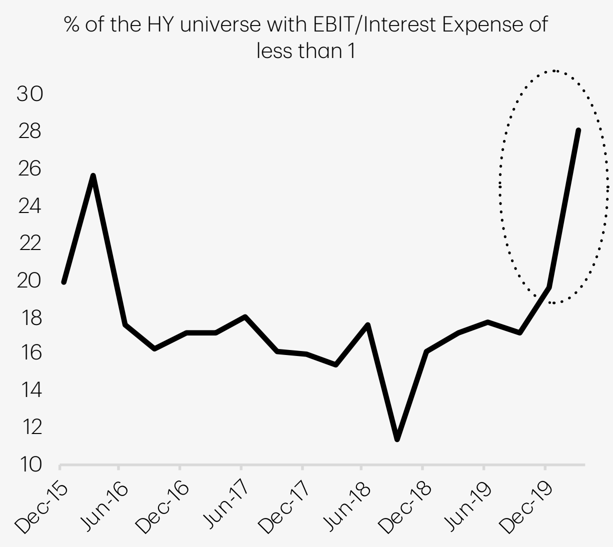
Source (Figures 7,8): Bloomberg, as of June 30, 2020

Importantly, we see room for further outperformance now that the Fed is officially deploying its balance sheet into the secondary market. There is an inherent circularity to all of this: the sudden and steep nature of the downturn led the rating agencies to issue downgrades as the macro data was rapidly deteriorating, but this has since bounced back strongly too. Last, but not least, the Fed's announcement regarding angels that had fallen after March 22 has helped many of their performances in the secondary market.

Delving deeper into defaults by sector this year, energy has led the pack (as of June 18), along with two very large defaults by telco/cable companies (Intelsat and Frontier) that were unrelated to COVID-19, retail and financial services. Excluding Intelsat and Frontier, energy and retail sectors account for over half of the defaults, at 40% and 17%, with estimated default rates over the past 12 months of about 18% and 17%. Default rates in gaming/lodging and transportation, two other hard-hit sectors, are currently much lower at about 1.8% and 3.1% respectively. Broadly, insolvency inflation is only just picking up now and is a headwind to total return projections.

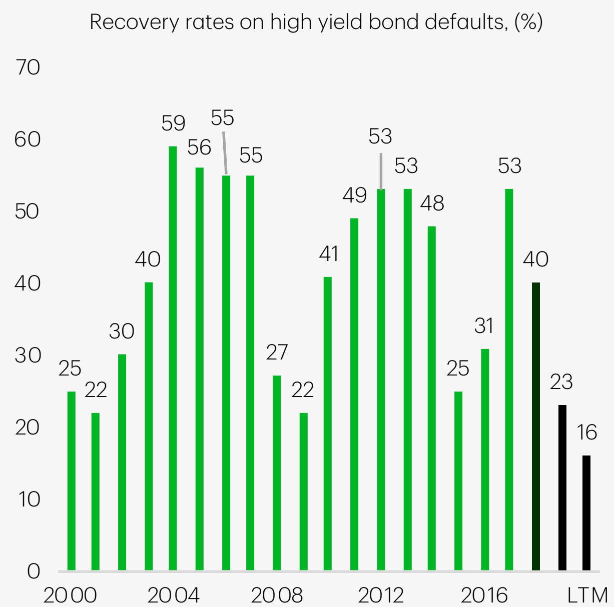
We maintain our cautious stance on the broader high-yield category for the following reasons: (1) The proportion of issuers in the HY universe with insufficient revenue to meet interest costs has risen, as shown in Figure 9, a precarious situation if the economic recovery is slower than expected and leads to insolvencies and defaults; (2) Recovery rates on defaults have trended downwards since 2017 for both high-yield bonds and leveraged loans, meaning lenders are recovering less when an issuer defaults (Figure 10). This is likely due in part to looser underwriting standards by non-bank lenders and the continued growth in covenant-lite loans. The amount recovered from high-yield-bond defaults fell to 16 cents on the dollar in May on a trailing 12-month basis, down from 53 cents in 2017. This is already significantly below the prior low of 22 cents, seen in 2009 and 2001. □

Figure 9: Interest cost shortfall



Source: Bloomberg, JP Morgan, as of June 30, 2020

Figure 10: Default recovery rates



Source: Bloomberg, JP Morgan, as of June 30, 2020

Outlook on Equities

The multi-speed market

Neutral Weight

The equity story of 2020 starts with one of the most loathed bull markets in history. In January, market participants had concerns about the valuation of the market, the slow growth in earnings and the fact that it had, to that point, been the longest-living bull market on record. In February, the coronavirus epidemic, which started in China, began to spread around the world. And by March, markets were into one of the most rapid declines in history — followed in April by one of the fastest recoveries in history, leading us full circle to an equity market that is now experiencing one of the most loathed market recoveries ever.

Unlike all the bears in modern history, this one — perhaps the shortest ever — resulted from a health scare and not because of a financial debacle or because the Fed decided to raise rates to keep inflation at bay. The economic interruptions seen around the world were part of government responses to control the spread of the virus, and those responses, while very ad hoc, included a great deal of support for economies.

That support has in turn led to a "multi-speed" market — with segments and sectors performing very differently depending on how participants are judging the shutdown effects on each. Figure 1 and 2 illustrate how, after an initial phase in which all boats were floating on liquidity, only a few segments of the market were left to drive returns in the three months ended July 9. Both U.S. and Canadian equity performances show strong leadership from the consumer discretionary and information technology sectors. However, both sides of the border also show marked differences between sectors that have led the rally and those that are falling behind.

The relative performances of the communications services sector between the TSX and the S&P 500 is striking, but close examination of the constituents provides an explanation. The S&P 500 Communications Services Index includes many companies that are technology-adjacent companies, such as Alphabet (Google), Facebook, Twitter and Netflix.

Figure 1: S&P 500 Three month Returns to July 9, 2020

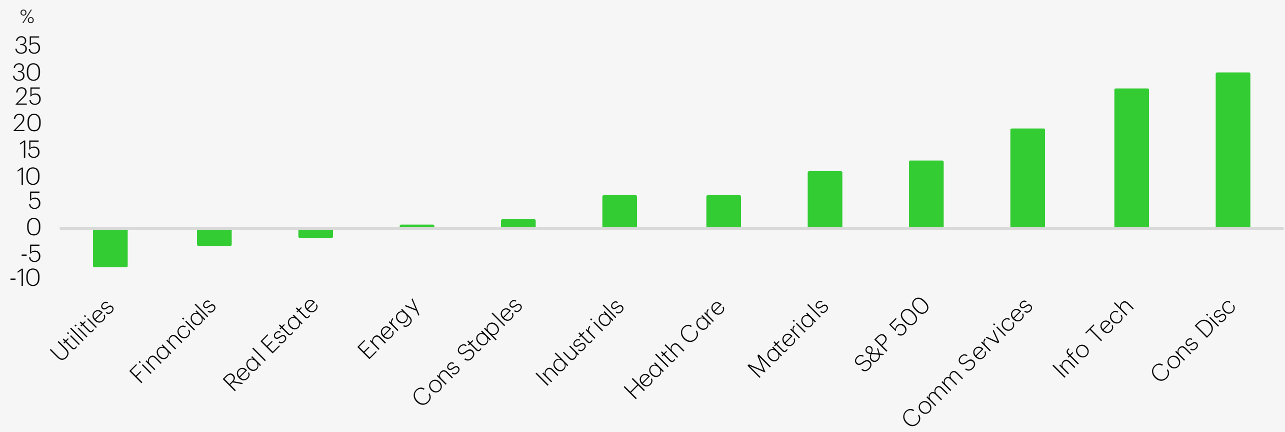
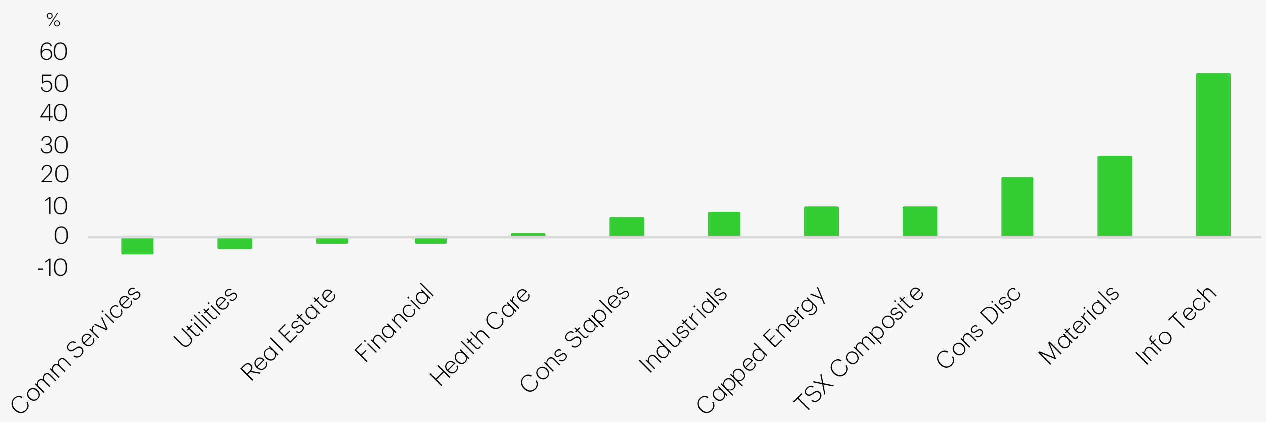
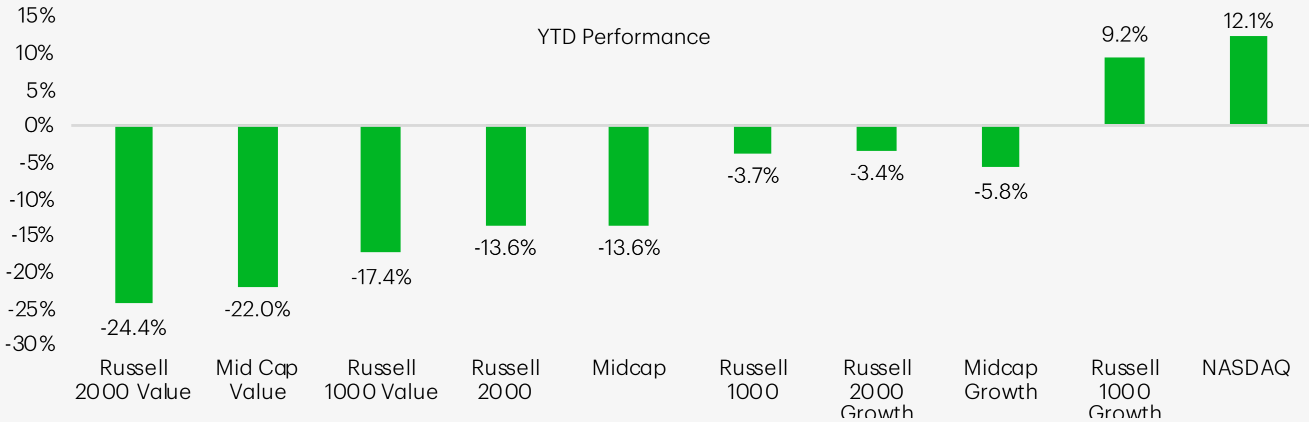


Figure 2: S&P/TSX Composite Three Month Returns to July 9, 2020



Source: FactSet, as of July 9, 2020

Figure 3: Performance disparities have intensified post Covid-19 outbreak



Source: Bloomberg, as of June 30, 2020

Now, the question for equity holders and for those sitting on the sidelines is: "Should I chase this rally or sell into it?" The answer to that question is to neither chase nor exit. What should be done now is to manage exposures in pursuit of opportunities that still exist. Sectors currently benefitting from the secular growth story could continue to appreciate, despite their stretched valuations and lack of growth. More importantly, however, we believe that the strong recovery rally has not been a broad-based recovery.

In addition to the widening dispersion among sectors, we can also see widening dispersion between value and growth, and between large-caps and mid-/small-caps. These disparities should narrow as we progress through a slow and steady reopening of the economy, assuming governments can keep the rise in infections at bay. This process may be prolonged, but there is little doubt that, as economies begin to recover, segments that have been left behind should also recover, making it worthwhile to stay invested rather than trying to time the market. Thus, we believe that there's still some potential in North American equities, and a broad-based recovery is yet to follow. Moreover, we believe that international equities, especially in the EU and China, are also well positioned and offer an attractive risk/reward ratio.

Now let's take a closer look at sectors and segments across North America.

Technology:

The technology sector is perceived to be one of the key beneficiaries of the pandemic. As workplaces and schools closed, office workers and students took to a variety of video platforms as replacements for classes and business meetings. Zoom Video Communications — the poster child of remote working — has become a market darling, gaining over 230% from the end of January to the end of June as demand spiked. Other tech companies also fared well as workers scrambled to acquire the requisite work-from-home equipment. Desktop and laptop computers, monitors, webcams, networking equipment and internet services all saw high demand in the latter part of the first quarter and into the second quarter. Companies exposed to these segments should perform well when reporting second-quarter results later in July. The tough question for the market is whether present demand represents a growing trend or, rather, a cannibalization of future demand.

Health Care:

Health-care stocks have generally benefitted from the onset of the pandemic, although to be sure, some companies will see mixed results as demand for vaccines and therapeutic treatments for COVID-19 were offset by the widespread postponement of elective surgeries and visits to doctors and dentists. With more than 100 vaccine candidates under study around the world, including more than a dozen now in human trials, it's difficult to predict the extent to which any single company will benefit; quite probably, more than one vaccine will be approved. But there's no doubt that there will be strong demand for whatever vaccines are approved later this year.

Industrials:

The industrial sector in general has been hurt by the pandemic. Economic lockdowns and social-distancing have made it difficult to operate factories, and for companies that could remain open, supply chains have been interrupted as operating models are transformed to satisfy distancing requirements. Many businesses, in addition, were closed and unable to accept shipments. While the sector is seeing an initial strong rebound from its virtual standstill, it will likely take several quarters before demand completely recovers.

Airlines:

With travel essentially shut down internationally and even domestically in many countries, the airline industry has been severely hurt by the pandemic. The industry has a high-fixed-cost operating model with little flexibility, so the travel restrictions have severally curtailed revenue and put the industry in a position where it sees millions of dollars of cash losses each day. Over time, these companies are able to reduce some of their costs; however, the terms of contracts on aircraft leases and landing slots have restricted the speed of cost-cutting. American Airlines provides a case in point: on June 12, management announced that, from a cash burn rate of over US$100 million per day in April, they hoped to get to about US$40 million per day by the end of June and approximately zero by the end of the year. In the end, the company got down to just US$35 million per day by the end of June. However, the industry continues to struggle, with traffic over the July 4 holiday weekend down 70% compared to the year-ago figure.

eCommerce:

In retail, nearly every category is seeing explosive growth online because of the COVID-19 pandemic. Home Depot said that their digital business accelerated from approximately 30% growth in early March, to triple-digit growth by the end of April, and that, during the past three weeks of the quarter, traffic to homedepot.com was consistently above Black Friday levels. At the same time, many companies have been downplaying the ability of eCommerce to offset declines in other parts of the business, and have also been frank about the potential pressure on margins if the online business is not rolled out to an adequate scale.

Consumer Discretionary:

As governments issued lockdowns to get the spread of COVID-19 under control, spending patterns have changed dramatically. According to U.S. data for May 2020, retailers in the building materials and garden equipment space have been one of the biggest beneficiaries of the pandemic, with sales up 16.4% year-on-year. Retailers of sporting goods, hobby paraphernalia, musical instruments and books have also done well, with sales up 4.9% year-on-year. The survey indicated that general merchandise was flat year-on-year, benefitting broadline retailers, as one-stop shopping and consolidation of shopping trips remained the prevailing theme.

Precious Metals:

Gold rose 12.8% in the second quarter and 17.4% during the first half of 2020. Gold equities, due to their leveraged position, did even better, with the S&P 500 and S&P/TSX gold sub-sectors rising 36.3% and 50.6% respectively during Q2/20. The Fed's QE program, large-scale fiscal-stimulus programs, downward pressure on real interest rates, a weaker U.S. dollar, safe-haven buying and concerns about higher inflation and fiat currency debasement down the road all helped support the precious metal. We believe that these factors will continue to be supportive of gold prices going forward.

Travel & Tourism:

All aspects of travel continue to be among the most restricted areas of spending, though declines have moderated somewhat from April lows. In mid-June, travel spending was down 46% year-on-year, substantially better than the 86% decline reported in early April. Categories like cruise lines remain particularly pressured, with spending still down 76% in early April to 62% in mid-June. Meanwhile, lodging has fared the best and recovered from -80% to -18%. Bank of America projects that COVID-19 has shifted consumer spending away from international travel and traditional entertainment (e.g., amusement parks, movie theaters, tourist attractions) toward "solitary" leisure activities and "staycations," which will likely have an impact on spending in the foreseeable future.

Restaurants:

In the U.S., restaurant sales declines have been moderating since mid-April, attributed partially to the receipt of first-round stimulus cheques. Fast food, take-out and delivery restaurants fared better, with fast food spending up 2% year-on-year in mid-June and food delivery spending (including online grocery) up 74.1% year-on-year.

Energy:

During the second quarter of 2020, crude oil and energy commodities staged a stunning recovery as aggressive OPEC+ and non-OPEC production cuts, industry-wide curtailments and the relaxing of social-distancing measures in most countries led to rapid recoveries in oil and energy product demand, and as the extreme selling pressure on energy equities abated. During the quarter, WTI crude rose 91.5%, from US$20.51 per barrel to US$39.28. In the U.S., the energy sector outperformed the broader index by 8.2 percentage points (pp) and returned 28.7%. In Canada, the energy sector underperformed the broader index by 6.7 pp, returning 9.3%, as lower-beta midstream names lagged the higher-beta integrated, exploration & production (E&P) and oil field services (OFS) names.

During April, investors worried about crude inventories reaching storage capacity due to the significant imbalance in crude supply and demand. These fears did not materialize, as COVID-19-related crude demand destruction ended up not being as severe as feared, and as production cuts and curtailments ended up being higher than expected. Consequently, OECD inventory levels likely peaked at 3.2 billion barrels in June, significantly better than the April estimate of more than 3.5 billion barrels. The EIA and IEA now both expect inventories to start drawing down in H2/20 and to reach pre-COVID-19 levels during H2/21.

Given the rapid run-up in crude prices and energy equities, we could see a pullback in the sector. In addition, crude prices will likely remain volatile as they react to headlines regarding the pace of COVID-19 demand recovery. However, sustained inventory draws will likely continue to support crude prices. We also note that portfolio managers continue to remain on the sidelines when it comes to energy, and their willingness to return to the sector could mean another leg up for energy equity performance. In Europe, the proportion of funds overweight energy is the lowest it has been since 2015.

Materials:

In prior downturns, this sector has typically underperformed on the way down and outperformed on the way up. Given the cyclical nature of the materials sector, it typically starts to outperform soon after the economic outlook starts to improve. During Q2, the S&P 500's materials sector outperformed the broader market, returning 25.3%, with metals/mining returning an even stronger 38.2%. In Canada, the materials sector returned 41.6% with metals/mining providing a return of 51.0%.

China is the primary consumer of industrial metals, and as the nation's rebound in industrial activity has continued to impress, it has provided support to base-metal prices. In addition, a number of factors should continue to support base metals. These include economic reopenings (which appear less staggered in regions other than the U.S.), stimulus via large infrastructure spending packages, a weakening U.S. dollar, and concerns about supply disruptions due to shutdowns in South America and Africa.

Financials:

In Canada, the focus has been on provisions, capital and dividends. Banks on both sides of the border recovered some of their losses as they demonstrated their resiliency during the pandemic. In Canada, banks reported a 376% increase in provisions for credit losses (PCLs) in fiscal Q2 (FQ2, February through April). BMO and BNS are expected to take higher PCLs in FQ3 due to their asset mix and lower provisioning in FQ2, while PCLs for the other banks seem to have peaked. The industry common equity tier 1 (CET1) ratio dropped by 40 bps to 11.3%, but it could drop further due to inflation in risk-weighted assets and an increase in delinquencies when the forbearance programs end. Nevertheless, the Canadian banks are very well capitalized and have solid balance sheets. We believe Canadian bank dividends are secure. Most recently the Office of the Superintendent of Financial Institutions (OSFI) reviewed the Domestic Stability Buffer and maintained it at 1%. As a reminder, OSFI lowered the DSB by 1.25% in March to free up an additional $300 billion of lending capacity. While we are still in an early stage of the credit cycle, this is positive as it indicates confidence in the ability of the banks to withstand the impact from credit losses while maintaining healthy capital levels.

The first-quarter results of the U.S. banks reflected only two weeks of the pandemic, so while provisions were elevated, they are expected to be high again in Q2. The U.S. banks were recently subjected to the Dodd-Franks Act Stress Test (DFAST) and the results were in general positive, with most banks having enough capital to sustain the severely adverse scenario. However, the Fed conducted a sensitivity analysis under different recovery scenarios and, given the uncertainty of the economic outlook, banks will have to update and resubmit their capital plans. The Fed has also taken action to preserve capital by: suspending share repurchases; capping the growth of dividends and imposing a limit that does not exceed recent income; and requiring banks to reassess their capital needs and resubmit their capital plans later this year.

Despite the challenges brought forth by COVID-19, and although the shape of the recovery remains uncertain, bank management expressed the view that the environment is not as challenging as it was at the end of April.

Consumer Staples:

The consumer staples sector is among the most defensive sectors and tends to lead in market downturns. However, following market troughs, the consumer staples sector typically delivers weak performance relative to the broader market as investors move out of the perceived safest names into more cyclical holdings. The current market recovery has not been any different, with the S&P 500 consumer sector increasing 7.3% compared to the broader market's rise of 20.0% in Q2. Given the reduced potential in this sector once a market trough is established, we caution investors to be cognizant of any overweight positions.

Telecommunications:

The sector was a safe haven for equity investors during the market volatility, but it still experienced some challenges from lower wireless subscriber growth (due to store closures) and wireless service revenue erosion owing to roaming and data overage (Q2 and Q3 are peak travel seasons), along with potential cost pressure from bad debt (small-business exposure and higher unemployment). Given the stability of cash flows and the fact that indebtedness is within reasonable levels, we believe dividends are sustainable. Increasing data usage, the shift towards a work-from-home environment, internet of things (IoT) and adoption of streaming are all positives for the industry.

Real Estate:

Real estate has been a particularly hard-hit sector as investors fled the uncertainty of tenant cash flow and office space demand. However, the size and scope of income-replacement programs from governments in Canada and the United States have been adequate to help cover costs for apartment renters. That segment of the real estate sector, as a result, has been relatively resilient, although still hurt. Particularly impacted have been the retail-oriented REITs and the office-space category, as investors worry about the number of weak retailers that may never recover and the number of companies that will choose to forgo office space by offering employees the option of working from home on a permanent basis.

Cable Television:

Cord-cutting in the U.S. accelerated at a startling rate in the first quarter. Based on industry data for operators representing 88% of the overall market, U.S. pay TV subscribers declined by 6.7% year-on-year in Q1, down from a decline of 5.2% in Q4/19. Not surprisingly, the quarantine measures are driving a boom in streaming. According to data from Nielsen on the U.S. market, in April 2020 streaming had 23% share of consumption on connected televisions, up from 15% in April 2019. Average daily streaming consumption in April grew by 95% year-on-year, compared to total TV usage growth of 27% year-on-year. The large positive inflection in streaming is a net negative for pay TV subscription, especially if major sports leagues remain sidelined. While live news ratings are also inflecting meaningfully higher, and live news remains a competitive advantage for pay TV over most streaming services, there are still a variety of places to get news aside from a pay TV subscription (e.g., broadcast TV, online, newspapers).

International Equities

Backed by the Fed's relentless and unconditional stimulus support, U.S. equities have rallied at a much sharper rate than international equities. A lot, however, has happened in recent months. Across Europe, most countries took a cautious approach in reopening their economies, leading to a consistent decline in case counts. This paved the way for further expansion in activity, albeit slowly and steadily. By contrast, a few states in the U.S. rushed to open their economies, leading to a spike in infections. While the overall death rate in the U.S. is not yet alarming, a continued rise in new infections has delayed the reopening of economies and will hamper growth in the region unless all states adopt a more cautious approach.

In June, the European Central Bank (ECB) stepped up their quantitative-easing programs, pumping an additional US$672 billion in liquidity to their economy. Governments across Europe have managed to keep unemployment rates low by providing direct liquidity to companies through state-sponsored payroll subsidies. This has helped companies continue to pay their employees and has avoided large layoffs as seen in the U.S.

More recently, Germany's decision to take over the European Union Council's presidency is a significant positive step for the EU, giving the region an opportunity to tackle some unfinished businesses while it remains in the hands of experienced German leadership over next six months. Germany's focus will be on both economic and social recovery from the pandemic outbreak, setting up a recovery fund, progress on climate protection, and a strong push towards digitalization. After suffering dismal economic growth over the past 10 years, the EU economy stands to benefit from these moves, which have also led to a positive view on EU equities. As such, our positioning on international equities has been elevated to neutral from underweight. The reopening of European economies in a more sustained manner has led EU equities to outperform U.S. equities for the month of June.

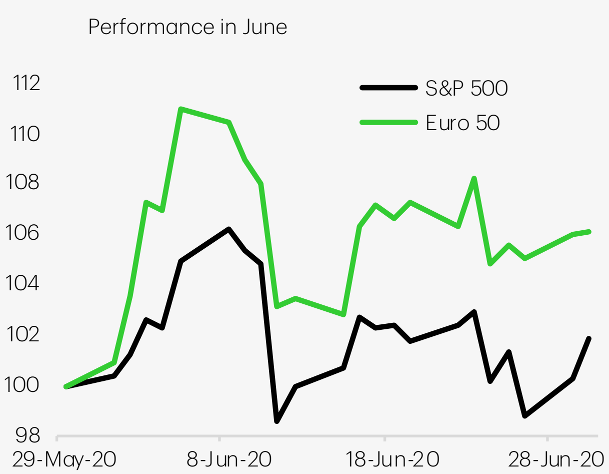
European equities are dominated by sectors like industrials, financials, materials and staples — sectors that have yet to enjoy a broad-based recovery. Thus, as economies in Europe continue to reopen, and overall growth kicks in, European equities could continue to outperform U.S. equities, especially if U.S. case counts continue to rise. For a sustainable performance over the long term, however, it will be important for economic growth in the eurozone to remain stable, and for expansion in manufacturing activity to exceed 50 levels (Figures 4 and 5) on purchasing managers' indices (PMIs). Since 2018, manufacturing PMIs in Europe have been decelerating. A meaningful expansion in manufacturing PMIs is essential for the overall sustainable performance of European equities.

China: The Silver Lining

The MSCI Emerging Markets Index has continued to demonstrate impressive performance relative to equities in developed markets. This can be attributed to the resilient performance of equities in China and Taiwan, backed by their government's relatively effective and swift response to the pandemic (Figures 6 and 7). EM equities, moreover, offer more potential from a valuation viewpoint compared to developed-market equities.

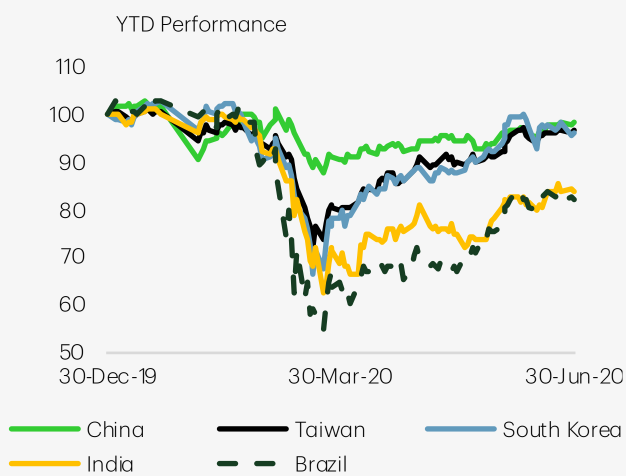
Not only was the government in China geared to provide adequate stimulus support, but efficient handling of the crisis has significantly helped the economic recovery, as evidenced by China's manufacturing

Figure 4: Outperformance in Euro 50 Index over S&P 500



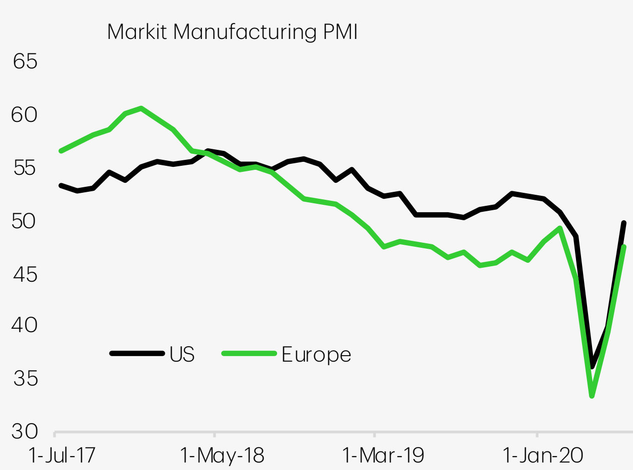
Source: Bloomberg, as of June 30, 2020. Rebased to 100.

Figure 6: Resilience demonstrated by equities in China



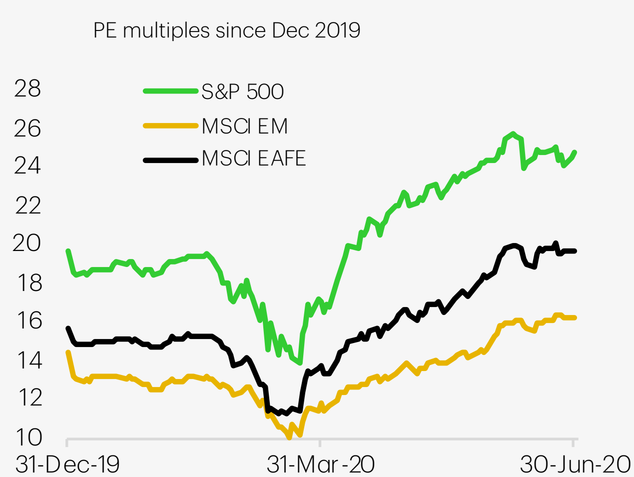
Source: Bloomberg, as of June 30, 2020. Rebased to 100.

Figure 5: Decelerration in Manufacturing PMI since 2018



Source: Bloomberg, as of June 30, 2020

Figure 7: Expansion in PE since 2019



Source: Bloomberg, as of June 30, 2020

PMI levels, which have remained close to 50 since April 2020 (Figures 8 and 9). China's services PMI suggested that activity in its services sector rose in June at its quickest pace in more than 10 years, as loosening pandemic-related curbs led to a resurgence in consumer demand. Thus far, China's COVID-19 case counts appear under control, and the reopening of the economy has been relatively successful, leading to higher confidence in Chinese equities. However, future readings on employment levels, inflation and gross domestic product would offer a better gauge of the economy's health.

Over long term, we continue to be positive on equities in China (along with other emerging markets). Emerging markets have been the engine of global growth over the past three decades. Though the overall exposure to technology in the MSCI EM Index is not as large as in U.S. equity indices, Chinese and Taiwanese equities provide exposure to some of the largest tech giants in the world — from the likes of Alibaba, Baidu, Xiomi and Tencent in China, to Taiwan Semiconductor Manufacturing and Hon Hai Precision Industry in

Figure 8: Markit Services PMI

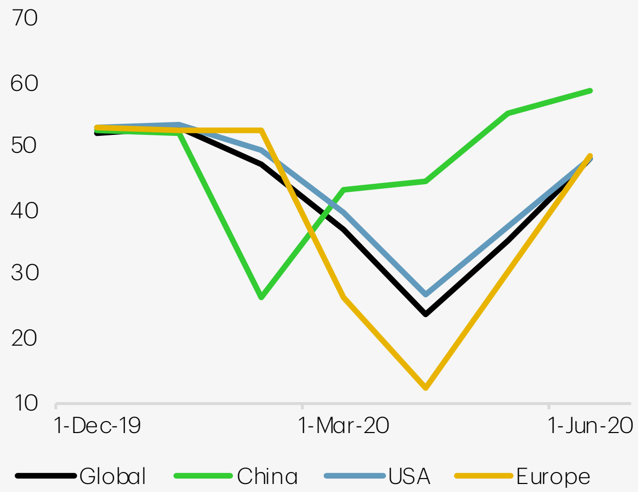
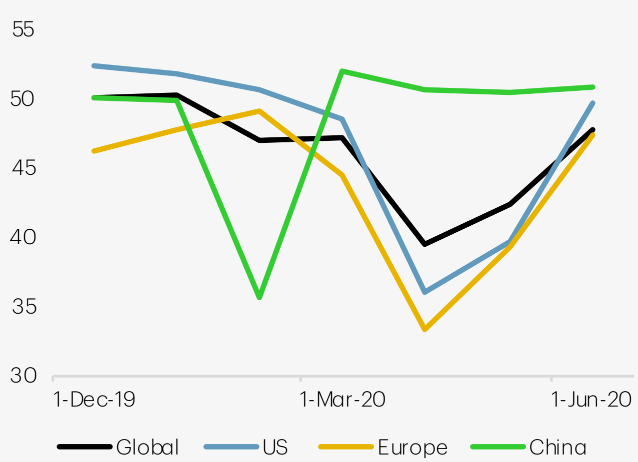


Figure 9: Markit Manufacturing PMI



Source: Bloomberg, as of June 30, 2020

Taiwan. The push towards digitalization of businesses in the current environment, moreover, will likely benefit the overall equities' performance in China.

On the other hand, after the United States, the countries still struggling the most against COVID-19 happen to be in emerging markets, such as India, Brazil and Indonesia. Thus, both economic and social recovery from the pandemic could take longer in these regions. The escalating tensions between China and the U.S. over trade tariffs, meanwhile, could pose another threat as well. However, we do not foresee a significant risk for EM equities on the growing concerns around deglobalization in the interim, given the time it will take companies to shift their supply chains from emerging to developed markets while maintaining an acceptable profit margin. Over the long term, there is little doubt that emerging-market equities will provide a higher growth component in an investment portfolio.

Balancing Act

We are facing a conundrum in equities today. At the broad index level, equity markets appear to be fully valued. But when we dissect the broad equity indices, we see opportunities that are still attractive. Moreover, the uncertain environment has led to a very low positioning in equity betas of hedge and quant funds. Equity beta of hedge funds is in its 10th percentile, while for quant funds like CTAs and volatility-targeting and risk-parity funds, beta is in its 20th and 5th percentile, respectively. We believe that once the health crisis is over and more clarity emerges around economic recovery, these funds will begin to deploy more cash into equity markets.

We continue to stress the importance of remaining diversified across sectors and geographies, and advise against taking concentrated bets in any particular segment of the market. We continue to believe that a traditional 60/40 portfolio is no longer optimum. An investment portfolio should be extended to include alternative strategies beyond the traditional asset classes. Though alternative strategies have played little role in the 10 years since the global financial crisis, strategies run by reputable managers have continued to shine during the recent market correction. While we continue to face many challenges in equities today, it has never been more essential to seek exposure or increase exposure to alternative strategies, which can come in the form of a long/short strategy, or by adding a protective layer in the form of derivatives in a long-only portfolio; or by hedging the portfolio with the use of precious metals like gold and silver. Hedged positions will play the role of a trump card when traditional asset class diversification fails to do its job. □

Outlook on Real Assets

Retailers get back to business

Overweight

After a tumultuous start to the year, real assets have enjoyed a remarkable recovery, aided by accommodative monetary and fiscal policy, and a gradual reopening of the global economy. Despite the continued rise in COVID-19 cases, the world we live in today is very different than the one we struggled through in March of 2020.

In anticipation of a post-pandemic world, countries have begun to implement guidelines that they hope will allow for a safe reopening of their economies. Take, for example, the United States. Despite a rise in daily case counts that exceeds the previous peak established in April 2020, 44 states have reopened or are in the process of reopening their economies, adding 4.8 million jobs in June — the largest single monthly gain in U.S. history.

The private market for real assets, which is linked more closely with the economy than the sentiment-driven equity market, has shown resiliency, providing investors with a source of stability at a time when asset correlations have largely converged. To illustrate, the NCREIF Fund Index, which tracks open pools of capital that invest in direct real estate, declined 1.87% in the first quarter of 2020 (-2.56 as of June). Over the same three months, the S&P 500 fell 19.50%.

Real assets typically have long-term, contracted cash flows. Tenants are obligated to pay rent and utilities will continue to be consumed, regardless of the economic conditions. This contractual nature leads to more stable valuations, which can help blunt the impact of short-term downturns and enhance portfolio diversification.

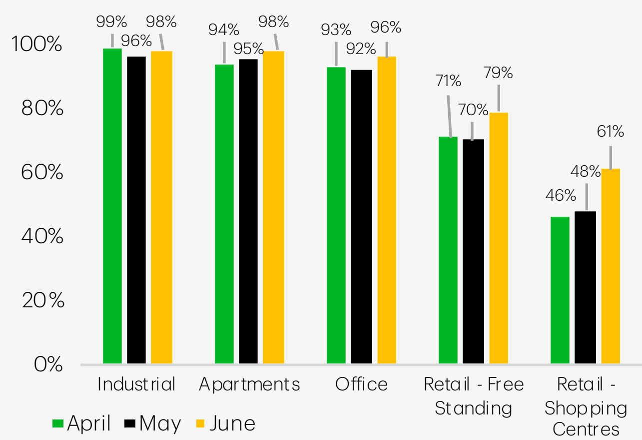
While most real asset sectors have held up relatively well throughout the pandemic — with rental collection rates above 90% — the gradual reopening of the economy has provided a much needed boost to the ailing retail sector, which was already battling the rise of e-commerce and changing consumer preferences. Rent collection for freestanding retail and shopping centres recovered eight and 15 percentage points (Figure 1) since the lows of March and April 2020.

Occupancy rates, another indicator of real estate strength, ended Q1 2020 at 93.6%, slightly above the five-year average. Unsurprisingly, multi-residential occupancy rates rose to a new record high of 96.3%.

Demand for rental housing typically rises during times of economic uncertainty as potential homeowners look for more affordable options (Figure 2). While we expect occupancy to decrease in the coming months, as more vulnerable businesses shut down, we believe government support programs, such as stimulus cheques, wage subsidies and a moratorium on evictions, will help limit the decline in occupancy rates until the economy sufficiently recovers.

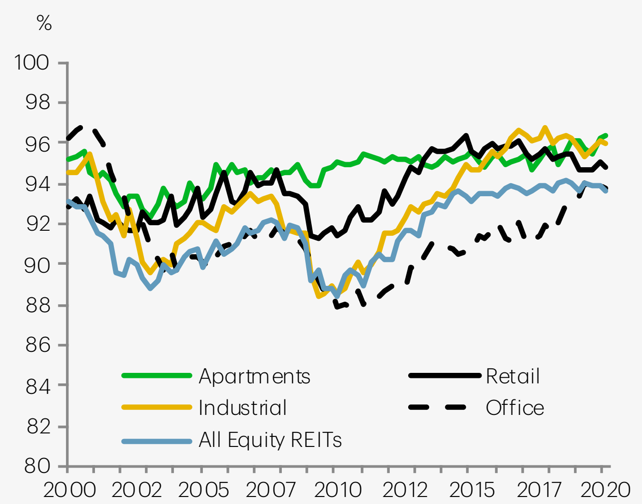
Financing costs have plummeted as central banks cut rates to near zero globally to support a sagging economy. Today, real asset managers are in a stronger position to weather the COVID-19 storm than they were during the global financial crisis of 2008.

Figure 1: 2020 Real Estate Rent Collection (%)



Source: NAREIT, as of June 24, 2020

Figure 2: Occupancy Rates



Source: S&P Global Market Intelligence, Nareit T-Tracker(R) Q1 2020

The weighted average interest rate on debt in Q1 2020 (Figure 3) was 3.6% — an all-time low — and interest expense to net operating income was 21.7% versus 35.4% in 2008.

Based on guidance from the Wealth Asset Allocation Committee, the Wealth Investment Policy Committee and the Wealth Investment Management Committee, PAIR holds a modest overweight stance in real assets. During the historic market crash of Q1, alternative investments such as private real assets did a remarkable job of preserving capital and providing diversification, as the long-term, contractual nature of the asset class helped blunt the impact of the sudden global economic shutdown. While headwinds in the form of rent deferrals will continue to pose a challenge until the economy fully reopens, we believe the global commitment to resume business — coupled with fiscal, regulatory and monetary support from governments — will facilitate a recovery in both the global economy and real assets.

Office

Vacancies in the second quarter rose 50 bps, to 10.8%, with rental rates remaining flat for the year. Net absorptions were negative 1.9 million square feet — the first negative quarterly absorption in three years — as tenants paused new leasing activities while they evaluate current and future needs for office space. At the same time, 1.5 million square feet of new office space was delivered in Q2 and 18 million additional square feet came under construction, with 63.2% pre-leased. Vacancies in select markets such as downtown Toronto (2.7%) and Vancouver (3.3%) remain close to historical lows and are among the most competitive in North America.

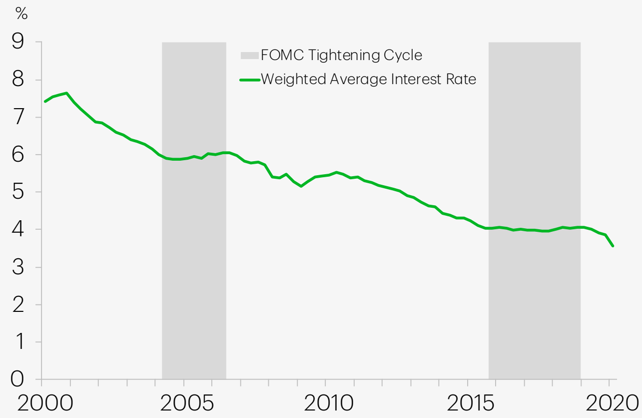
Industrial

Vacancies in the second quarter rose 40 bps, to 3.5%, below the 10-year average of 5.1%. Rental rates increased 2.6%, to $9.17 per square foot. The increase in rental rates was unexpected; instead of reducing rents, many landlords opted to provide flexibility on free rent, term length, rent escalations, and tenant inducements. Despite COVID-19 delays, six million square feet of new industrial space was delivered, mainly to Vancouver and Toronto, with 21 million square feet in development, signalling confidence in the industrial real estate space, which is benefiting most directly from the rise of e-commerce.

Retail

Retail continues to recover alongside the reopening of the economy, with rent collection for freestanding retail and shopping centres currently at 79% and

Figure 3: Weighted Average Interest Rate on Total Debt of All Equity REITs



Source: S&P Global Market Intelligence, Nareit T-Tracker(R) Q1 2020

61% respectively. Performance has been hindered by foot traffic limitations, the continued closure of certain types of retailers, like movie theatres, and by consumer concerns regarding indoor shopping. REITs in the retail and lodging sectors have experienced the largest declines through June 30, with YTD returns of -36.8% and -48.6%. We expect demand for hotels to be depressed until a vaccine is found and tourism returns to previous levels.

Residential

Multi-residential continues to be a strong performer, with occupancy and collection rates above 95%. According to the CoStar Value-Weighted Commercial Repeat Sales Index, the price of multi-residential units has increased 8.2% year-over-year as the twin tailwinds of population growth and the “income substitution” effect (i.e., as income falls, home ownership is substituted by home rentals) have provided a boost to the sector. Additionally, in areas of the country where there are rent controls in force, such as B.C. and Ontario, tenants are incentivized to keep current on their rent as they are likely to face higher rental rates for a new unit once evictions resume.

Infrastructure

Q2 2020 fundraising was at its lowest level since 2016, at $12 billion. Investors were selective in their investment decisions, choosing managers with established track records to help better navigate the economic uncertainties. Dealmaking across all sectors and global markets were down, as investors sat on the sidelines. Borrowing a page from the 2008 financial crisis, the U.S. is currently exploring an infrastructure stimulus package, with President Trump mulling over a $1-trillion spending proposal. The Democrats, meanwhile, unveiled a $500-billion infrastructure plan in June 2020.

Outlook on Currencies

Fundamentals take a back seat

One of the most defining and perhaps prominent developments in the COVID era has been the linkage between risk and foreign exchange (FX). Indeed, ever since the March 23 low on the S&P 500 Index, FX correlations have firmly tightened. Accordingly, the U.S. dollar has seen its fortunes tied to the same dynamic, though we note that this took on new meaning as the fierce outperformance of global equities vs. U.S. risk assets towards late May and early April compelled a more acute retreat in the reserve currency. This also helped to fuel bearish U.S. dollar views. A distinction needs to be made, however, as betas have softened towards the end of Q2 and remain that way currently.

Against this backdrop, the data has taken a backseat. This will likely remain the case for the foreseeable future as fundamentals have to compete for attention with COVID cases and a shifting political landscape (China, U.S. elections). The exception here may be U.S. jobs data, where recent upside surprises were welcome, but caution remains given the persistent elevation of jobless claims alongside surging COVID cases.

We are in a waiting game. Waiting for U.S. COVID-19 cases to evolve and waiting for the pandemic to be contained (though that ship may have sailed). Waiting for the political will to actively combat it rather than just "live with it." Waiting for the next round of stimulus cheques. Waiting for the U.S. election to become a focal point. Waiting for the data to matter or validate risk assets. We get the sense that the euphoria in prior months has run out of steam somewhat.

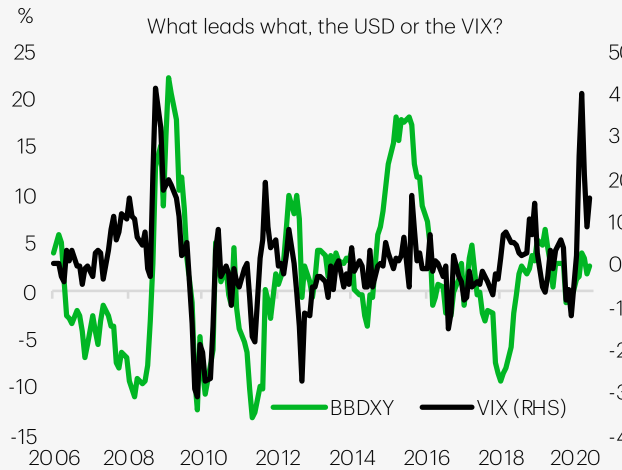
For now, we think USD weakness is tactically exhausted, but a combination of forces including negative 10-year real rates and an open-ended commitment to supply unlimited amounts of U.S. dollars from the Fed to help fund the bulging U.S. deficit is a powerful negative anchor.

Fitch Downgrades Canada

Fitch downgraded Canada's sovereign debt rating to AA+. It remains to be seen whether the other rating agencies follow Fitch's lead, but the downgrade primarily reflects a significant deterioration in the general government's finances. While additional ratings action by the other credit-rating agencies would, on the surface, be a concern, we think this will not deter foreign demand interest in Canadian government debt, as the universe of high-credit assets is sparse. Indeed, we think provincial bonds could be a major beneficiary. That said, we remain concerned about Canada's imbalances, which could imperil the recovery phase. This includes very high levels of household debt, which may weigh on consumption habits, and an adverse terms-of-trade shock due to constrained oil prices.

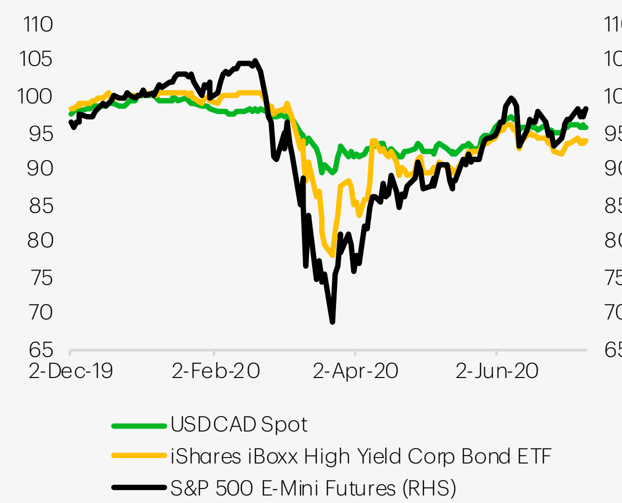
For now, we still do not see a timeline for when the market will shift its focus to the fundamentals. COVID management and risk assets remain the ultimate arbiter of currency dynamics. The Canadian dollar is no exception. Unless the risk rally bursts higher, we may have reached a consolidation point for the next couple of months — particularly as focus will soon shift to what will surely be one of the most contentious and consequential U.S. elections in modern memory. □

Figure 1: What leads what, the USD or the VIX?



Source: Macrobond, TD Securities, As of July 10, 2020

Figure 2: USD/CAD Remains Highlighly Sensitive to Risky Asset Prices (Rebased to December 31, 2019 = 100)



Source: Macrobond, TD Securities, As of July 10, 2020

Outlook on Commodities

Higher gold and firming economy can coexist

Once the post-COVID-19 economic trajectory is well-defined and health issues are managed with some certainty, the economy should have a good base for a sustained recovery, albeit a prolonged one given the massive dislocation and insolvencies faced by small businesses and individuals. Negative real interest rates will likely be the order of the day for a long time, which makes gold relatively cheap and desirable to hold in absolute and relative terms.

And since gold is no one's liability — quite the opposite from government paper issued to support trillions in spending throughout the G7 — we continue to believe the precious metal has a path towards US$2,000 per ounce. There is evidence that gold performs well when debt is skyrocketing, and debt is at a record high.

It is likely that the Fed and other key central banks will keep rates low for longer and will likely be very pragmatic in how they respond to an inflationary drift higher. It is also likely that fiscal stimulus will be kept for a prolonged period, giving rise to massive fiscal deficits, which will need to be funded. We expect markets will worry about monetization and purchasing power debasement, which tend to be positive drivers for the price of gold.

While gold has shown some weakness as stronger-than-expected U.S. jobs data was released over the past few weeks, we expect that some of the move is due to an element of "missing-out" anxiety that has been lifting risk appetite in financial markets. In addition, the strong payroll data has also lifted yields across the curve, which is typically a negative for gold.

Nevertheless, we continue to believe that bullion will perform well into Q3. The USD is weakening, and real rates should drop as inflation expectations continue to rise. Despite the recent strong jobs data, wages are lower, labour participation is near its lows and we expect the economy will function at below potential for some time, requiring massive debt-financed fiscal stimulus and low policy rates for the foreseeable future. As such, we are happy with our positive gold view and continue to see the yellow metal trending toward US$2,000 per ounce into late-2021. □

Figure 1: Real Rates Back in Negative Territory as Inflation Expectations Lift Off the Floor

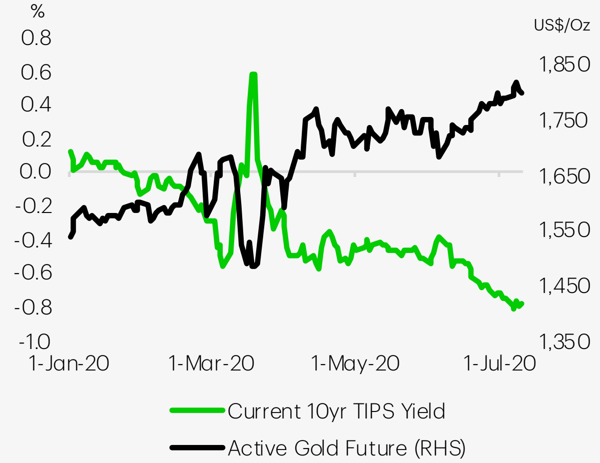


Figure 2: Expanding Central Bank balance sheets and Gold so happy together

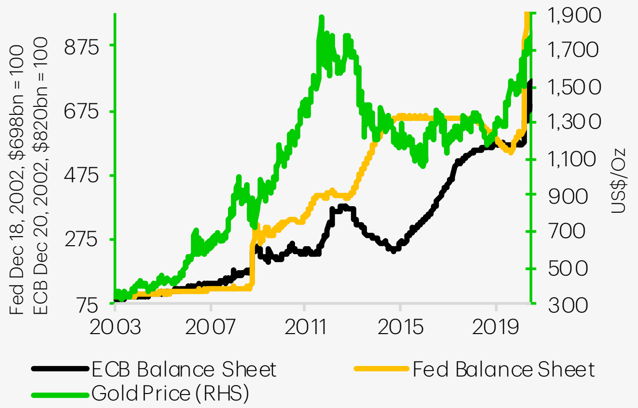
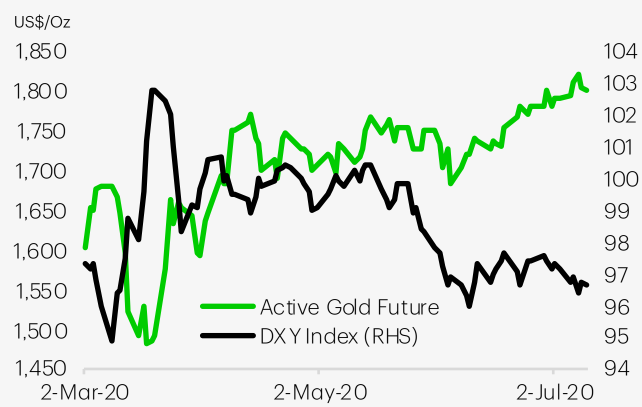


Figure 3: Lower USD and the Yellow Metal So Happy Together



Source: Bloomberg, TDS Commodity Strategy, as of July 10, 2020

Dr. Copper: Too much too soon?

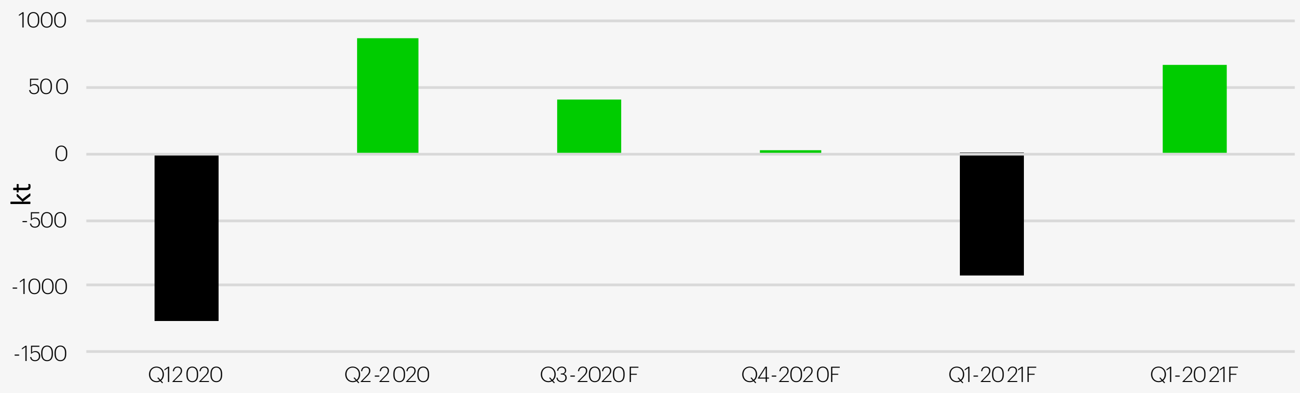
As the opening of the global economy slowly evolves, commodity demand is starting to pick up, albeit from very low levels in April and May. Metal prices have bounced, with copper leading the way (Figure 4). We believe that optimism about the pace of economic reopening, expectations of increased infrastructure spending (particularly in China), concerns about supply from South America, a weaker U.S. dollar, and general risk-on sentiment have combined to drive metal prices higher.

After having its best quarter since 2010, copper surged again in early June to reach a two-year high on optimism over a stronger-than-expected demand rebound in top-consuming regions like China, the U.S. and Europe. At the same time, the supply side of the equation is adding support to prices with COVID-19 mine shutdowns in South America and other regions.

Copper is said to be the base metal with a "PhD in economics" because of its reputed ability to predict turning points in the global economy, as it is used in everything from autos to electronics. Since it has surged approximately 37% from its lows last quarter, many assume that demand is very robust and the market is tight. However, this time around "Dr. Copper" may be reflecting a temporary V-shaped surge in demand, after a massive plunge and a sharp, temporary COVID-driven decline in primary supply, not a sustained recovery in consumption and a permanent reduction in mined copper supply.

We expect the rate of change in demand growth will decline to zero in the fourth quarter and expect a 900,000-tonne decline in demand in Q1 due to seasonal factors combined with slower Chinese imports (Figure 5). At the same time, we believe shuttered mines will begin to restart, driving growth in mine supply. Indeed, TD Securities model projects that demand will still be lower in 2021 than it was in 2019, with a surplus growing to approximately 850,000 tonnes over the next 18 months. Based on fundamentals — supply, demand, inventories and cost structure — we are cautious on the near-term outlook for metal prices, particularly for the price of "Dr. Copper."

Figure 4: Copper Demand Profile: Seasonal Gains are in the RearView



Source: TD Commodity Strategy, Wood Mackenzie, as of June 30, 2020

Figure 5: Copper Demand

Copper (kt)	2019	2020F	2021F
Supply			
Mine Production	20,978	20,558	21,484
Total Supply	23,492	23,210	23,953
Demand			
Consumption	23,609	22,712	23,620
China Consumption	12,038	11,677	12,027
Market Balance	-117	498	332
Commercial Stocks	4,368	4,866	5,199
Stock Ratio (Days)	68	78	80
Mine Production	0.8%	-2.0%	4.5%
Total Supply	0.1%	-1.2%	3.2%
Consumption	0.0%	-3.8%	4.0%

Source: Wood Mackenzie, TD Securities, as of June 30, 2020

Oil: Poor demand to prevent material upside

In early June, OPEC+ extended their oil production cuts to the end of July, with Nigeria and Iraq also agreeing to comply with their quotas. The major oil producers are hoping that their production discipline will help prices recover, along with firming demand, as the economy continues to move towards a return to normal in the aftermath of the strict coronavirus lockdowns.

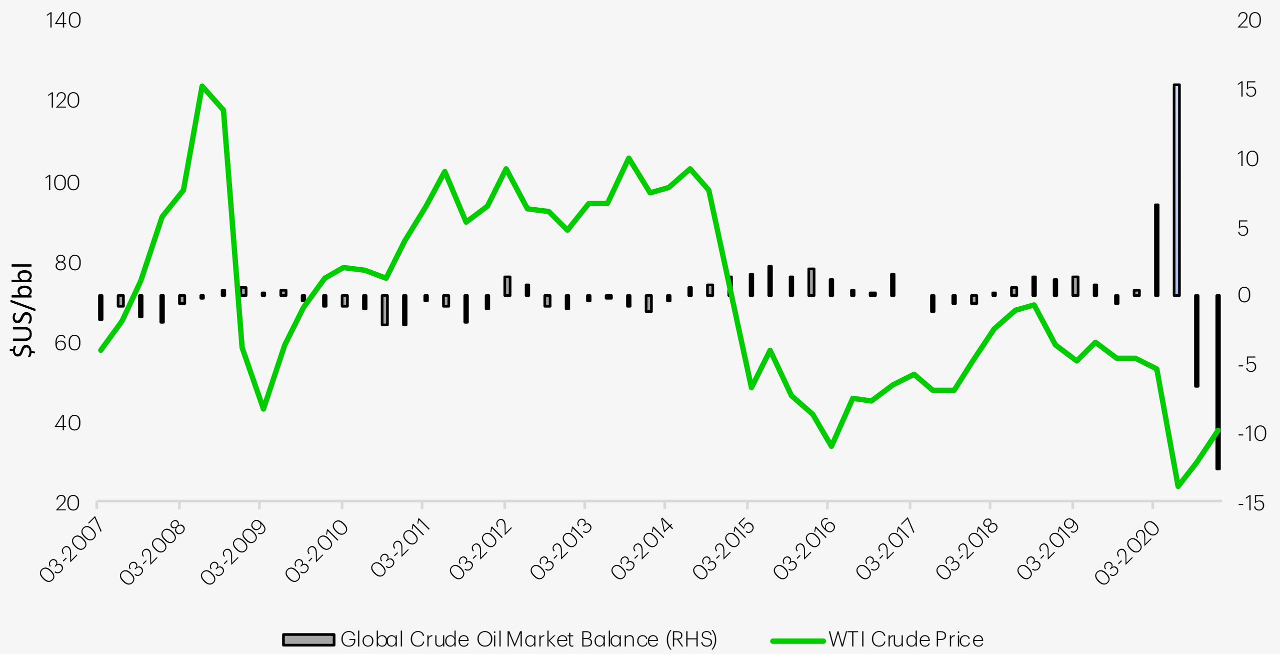
With OPEC, Russia and other key producers again deciding to extend the record 9.6 million barrels per day of oil production cuts until the end of July and global oil demand starting to return as major economies reopen, one might expect the rally that took WTI crude into US$40 territory from the lowest levels on record to continue.

However, there was also some less positive news, in the form of over one million barrels of oil returning to the market, as Gulf nations curtail their massive voluntary cuts. In addition, shale restart worries continue to loom over markets, as traders speculate that the recent price surge may have propelled prices to levels that will incentivize U.S. producers to lift production, eliminating a key assumption behind the recent rally.

With refinery runs in the U.S. struggling to pick up, despite the modest demand-side normalization, the projected 2-billion-barrel inventory accumulation during H2/20 may take longer than expected to unwind. While data suggests that gasoline demand has also picked up substantially, the weak heating oil cracks provide little economic incentive for higher runs. We believe that, as risks emerge, WTI may drift lower in the near term (Figure 6).

On balance, weak product demand has offset lower crude imports, lessening the chances of significant inventory draws. A sustained rebalancing will require stronger demand growth, which could be challenged by fears and subsequent effects of a second wave of infections. □

Figure 6: Crude on Path to Rebalancing - But There is Still Work to be Done



Source: Bloomberg, TDS Commodity Strategy Estimates. As of July 10, 2020

Risk Environment

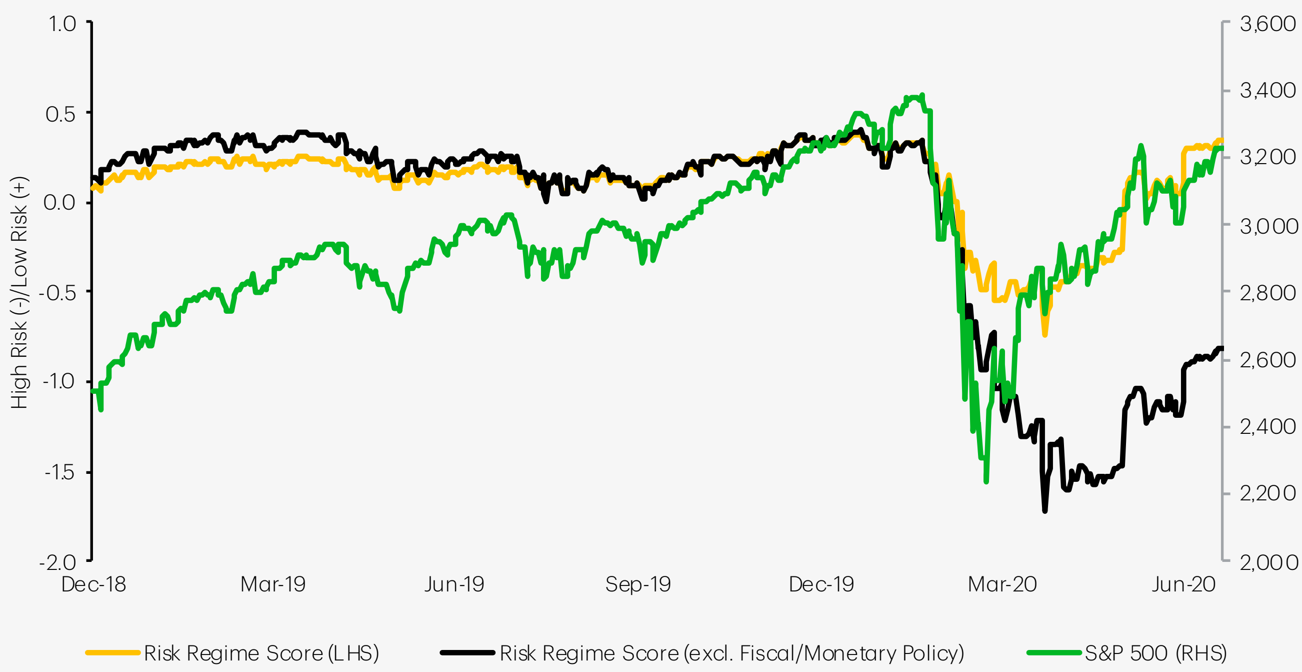
Improving but still fragile

Risk conditions at the end of the second quarter have certainly improved from the first quarter. Many of the indicators are still negative, but the general trend is towards stability. Fiscal and monetary policies are expected to remain highly accommodative for the foreseeable future as governments and central banks bolster the financial system and stem the lingering economic fallout from the lockdown. When we aggregate the indicators, the overall risk regime score is +0.3 (a noteworthy improvement from -0.3 at the end of the first quarter), which indicates a slightly better-than-average risk regime, one that is neither resilient nor fragile. This is surprising since many indicators are still flashing red.

Most of the improvement in the risk score came from better-than-expected data on employment, consumer confidence, housing, financial conditions and investor sentiment. Investors are increasingly optimistic about an economic rebound despite the continuous spread of COVID-19. The aggregate risk regime number is still skewed by supportive fiscal and monetary policies. When we exclude fiscal and monetary support from the equation, the risk regime score falls to -0.9 (compared with -1.6 last quarter), which still reflects a very fragile risk environment. From a historical perspective, this score would rank at about the 68th percentile in terms of risk. The stark difference between the two risk scores illustrates the extent to which fiscal and monetary actions have moderated risk now and, more importantly, are expected to continue to do so in the future.

Figure 1 shows the risk regime score since the end of 2018. We can see the collapse in the risk score from well above 0 (indicating a stable environment), to a low of -0.73 on April 21. Over the past three months, as markets stabilized and sentiment improved, the risk score ticked up to the current +0.3. However, without government and central bank stimulus, the score is much lower. The two scores were almost identical until right before the S&P 500 plummeted from its record high in February. The overall score stabilized by mid-March just before markets started to recover. The gap between the two scores remains very wide, and this illustrates the underlying fragility in the market.

Figure 1: Historical Risk Regime Scores



Note: scores represent number of standard deviations away from long-term average
Source: Bloomberg, as of June 30, 2020

When we overlay the S&P 500 Index on historical risk regime scores, we see the close relationship between the scores and equity market performance since the start of 2019. The equity sell-off started soon after the overall risk regime score began to drop. As the risk environment improved, equity markets started to recover, although much of the resilience appears to hinge on continued support. Any disappointment in the areas of fiscal or monetary policy will likely put a drag on markets.

Despite recent stability and the aggressive risk rally, the fragile state of many indicators underscores the elevated risk environment — one that markets have largely discounted but is still evident through risk sentiment. The higher-than-average Volatility Index (VIX) over multiple time horizons indicates that the appetite for equity risk remains fraught. Although credit risk appetite has improved, it's still weak, with spreads sitting at wider-than average levels. So even though the risk regime score is positive, there is an undercurrent of uneasiness running through financial markets that keeps risk sentiment elevated even though markets have recovered virtually all their losses.

Central banks more cautious

Central banks remain more cautious about economic recovery than investors since economies remain weak despite the stimuli, although we're starting to see some improvement. The good news is, consumer and corporate leverage is more moderate now than during the global financial crisis (GFC), although they too have been rising. With so many uncertainties, markets remain fragile, volatile, and very susceptible to shocks. Correlations for risk assets could quickly converge higher as they did in the first quarter, undercutting their diversification benefits just when investors need diversification most. In this environment, taking greater risk isn't expected to generate higher returns — in fact the opposite is likely true. That's why it's key to build portfolios that prioritize risk management and are designed to be resilient across risk regimes.

For a full breakdown of all indicators, see the following table (Figure 4).

Risk Regime Scorecard: Methodology

Our philosophy is to build resilient portfolios that are well-diversified across key factors and don't depend on any single market environment to perform well. However, from a strategic asset allocation perspective, we monitor and assess market risk regime so we can decide, within defined parameters, when to de-risk a portfolio. We use a broad set of indicators based on business, investor and analyst expectations to gauge market risk. Most of these are leading indicators and are, therefore, forward-looking. This helps us understand not only past events, but what investors expect in the near term, which should already be reflected in asset and security prices.

We use this risk-management framework to take advantage of how asset classes behave under different risk scenarios and make strategic risk allocation decisions in portfolios over the intermediate to longer term. Risk assets such as stocks and credit tend to perform well during more resilient environments, while safe-haven assets such as government bonds tend to outperform in more fragile environments. We advise against using this framework to make short-term tactical bets or market-timing decisions. Over the longer term, the main determinant of portfolio returns for most clients will likely be asset allocation rather than any other active portfolio decisions.

Figures 2 and 3 highlight the data that inform our understanding of the current risk environment.

There are 11 broad indicators, ranging from macroeconomic variables — productivity growth, inflation, employment and foreign-trade account — to variables representing key stakeholders such as consumer spending, housing conditions, business conditions and financial conditions. We also include high-level policy variables — government and fiscal policy, and monetary policy — as well as measures of market and investor sentiment, which are driven by expectations and indicate forward-looking risk appetite. We evaluate the current values of each indicator and compare them against recent trends and long-term history, using a standardized approach that makes it possible to aggregate across indicators. Because each indicator is measured in different units, we use their historical dispersions to convert distinct indicators to Z-Score values. This allows us to compare indicators on a consistent basis.

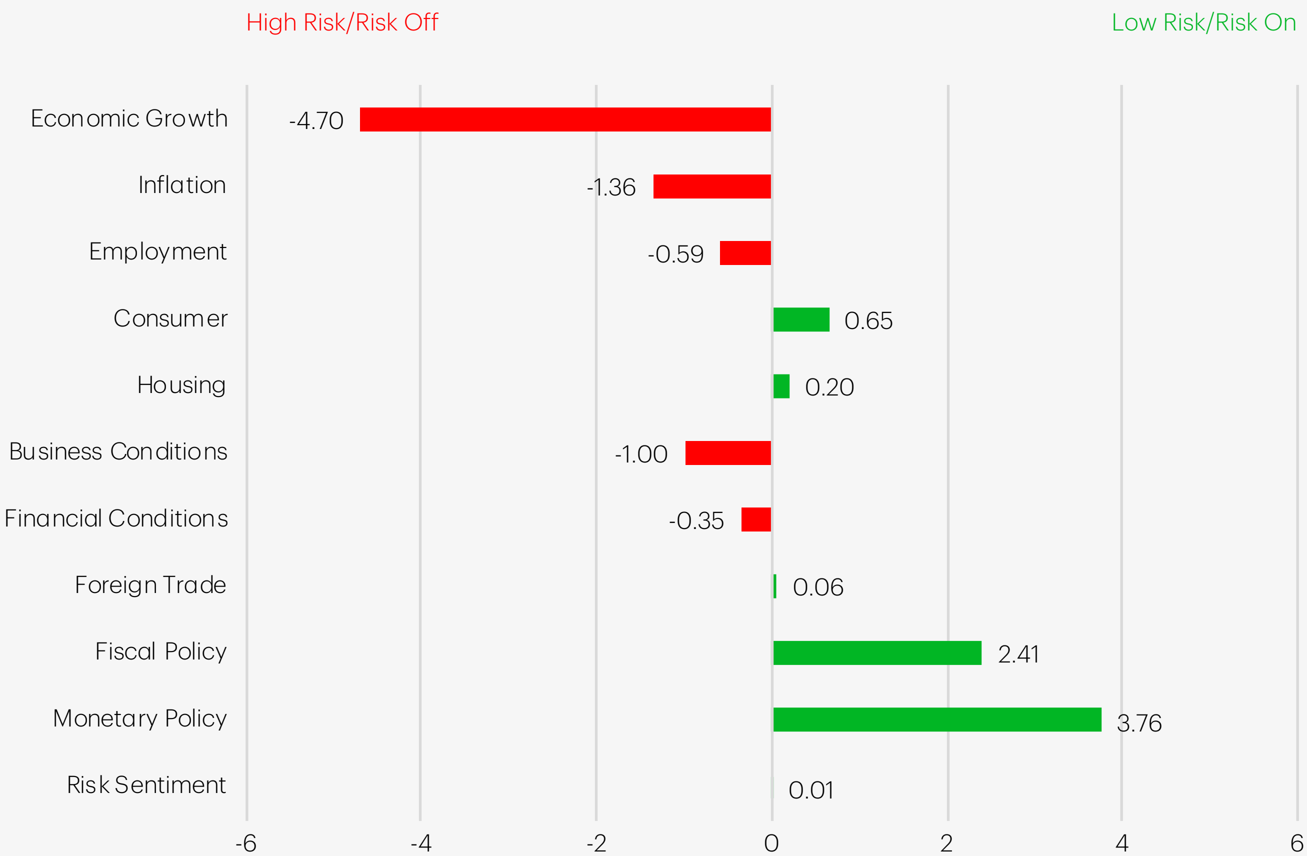
■ See Appendix for Glossary of Terms

Figure 2: Market Risk Regime Scores

Indicator	Overall Condition	Risk Regime Score
Economic Growth	Weak	(4.7)
Inflation	Weak	(1.4)
Employment	Weak	(0.6)
Consumer	Neutral	0.6
Housing	Strong	0.2
Business Conditions	Weak	(1.0)
Financial Conditions	Neutral	(0.4)
Foreign Trade	Strong	0.1
Fiscal Policy	Accomodative	2.4
Monetary Policy	Accomodative	3.8
Risk Sentiment	Neutral	0.0
Risk Regime Score	**Average Risk**	**0.3**
Risk Regime Score (excl. Fiscal/Monetary Policy)	**High Risk**	**(0.9)**

Source: Bloomberg, as of June 30, 2020

Figure 3 : Market Risk Regime Scores



Source: Bloomberg, as of June 30, 2020. Scores represent number of standard deviations away from long-term average

Figure 4: Market Risk Regime Indicators

U.S. Macro Indicators	Measure	Current	12M Ago	LT Average*	Current Percentile	Z-Score	Current State	Trend	Overall
Economic Growth	Real GDP Growth (qoq %, saar)	(5.0)	2.0	2.1	1%	(2.9)	Negative	Improving	Weak
	Real GDP Growth (YoY %)	0.3	2.3	2.2	8%	(1.1)			
	Real GDP Economic Forecast (YoY %)	(5.6)	1.8	2.2	4%	(4.7)			
Inflation	Headline CPI	0.6	1.6	2.2	9%	(1.3)	Negative	Improving	Weak
	Core CPI	1.2	2.1	2.0	6%	(1.8)			
	CPI Forecast (YoY %)	0.8	2.1	2.2	0%	(1.1)			
	10YR Breakeven Inflation	1.3	1.7	2.0	4%	(1.6)			
Employment	Unemployment Rate (%)	11.1	3.7	5.9	99%	2.7	Negative	Improving	Weak
	Initial Jobless Claims (000s)	1,413	222	393	99%	2.1			
	Wage Growth (yoy %)	5.0	3.4	2.6	99%	3.0			
Consumer	Consumer Confidence (1985=100)	98.1	124.3	94.6	53%	0.1	Negative	Improving	Neutral
	UofM Consumer Sentiment	78.1	98.2	86.6	27%	(0.7)			
	Consumer Spending (MoM %)	8.2	0.3	0.3	100%	6.4			
	Household Consumption (YoY%)	(6.8)	4.6	2.4	0%	(4.2)			
	Household Consumption Forecasts (YoY%)	(6.3)	2.1	2.4	0%	(4.0)			
	Household Debt to Disposable Income (%)	97.5	97.0	110.5	15%	(1.1)			
	Household Debt Service Ratio (%)	9.7	9.7	11.3	0%	(1.3)			
Housing	S&P/Case-Shiller Composite (YoY %)	4.0	2.1	4.2	36%	(0.0)	Positive	Improving	Strong
	Home Builders Index	58.0	64.0	49.6	48%	0.4			
Business Conditions	Capacity Utilization (%)	68.6	77.7	77.1	3%	(2.6)	Negative	Improving	Weak
	Industrial Production (YoY %)	(10.8)	1.0	0.9	4%	(2.7)			
	Industrial Production Forecasts (YoY%)	(7.5)	1.6	0.9	0%	(1.9)			
	Private Investment (YoY%)	(10.2)	(6.3)	2.8	6%	(1.1)			
	Private Investment Forecasts (YoY%)	(9.7)	2.3	2.8	4%	(1.0)			
	12M EPS Forecasts (S&P 500)	125	166.1	94	84%	0.9			
	Markit US Composite PMI	47.9	51.5	52.1	9%	(0.7)			
	Markit US Manufacturing PMI	49.8	50.6	52.4	9%	(0.6)			
	Markit US Services PMI	47.9	51.5	52.1	9%	(0.7)			
Financial/ Credit Conditions	3M LIBOR/OIS Spread (%)	0.2	0.2	0.3	68%	(0.1)	Negative	Improving	Neutral
	10Yr Treasury Yield (%)	0.7	2.0	3.4	1%	(2.1)			
	10YR/3M Yield Spread (%)	0.5	(0.1)	1.7	19%	(1.0)			
	10YR/2YR Yield Spread (%)	0.5	0.3	1.2	31%	(0.8)			
	IG Credit Spread (% OAS)	1.4	1.1	1.4	60%	(0.0)			
	HY Credit Spread (% OAS)	6.3	3.8	5.5	71%	0.3			
	Net Debt to EBITDA (S&P 500)	171%	190%	289%	36%	(0.9)			
	Financial Conditions Index (Bloomberg)	(0.5)	0.5	(0.5)	35%	(0.0)			
	Financial Conditions Index (Chicago Fed)	(0.4)	(0.6)	(0.3)	68%	(0.0)			
Foreign Trade	Current Account (% of GDP)	(2.1)	(2.4)	(3.3)	81%	1.0	Positive	Improving	Strong
	Current Account Forecast (% GDP)	(2.1)	(2.5)	(3.3)	96%	1.0			
	Trade-Weighted Broad Dollar (2006=100)	120.9	114.6	103.3	99%	1.8			
Fiscal Policy	Budget Balance (% of GDP)	(13.8)	(4.3)	(3.4)	0%	(3.3)	Positive	Stable	Accomodative
	US Budget Balance Forecast (% GDP)	(17.0)	(4.6)	(3.4)	0%	(4.3)			
	Government Spending (YoY %)	1.1	4.8	1.3	42%	(0.1)			
	Government Spending Forecasts (YoY%)	2.0	1.4	1.3	86%	0.3			
	Government Debt (% GDP)	79.2	77.4	53.2	98%	1.4			
	Government Debt Forecasts (% GDP)	101.3	79.8	53.2	100%	2.6			
Monetary Policy	Fed Funds Rate (%)	0.25	2.5	2.0	0%	(0.9)	Positive	Stable	Accomodative
	Monetary Base (YoY %)	51.0	(10.4)	11.5	95%	1.8			
	M1 Money Supply (YoY %)	37.0	4.8	6.7	100%	5.2			
	M2 Money Supply (YoY %)	24.2	4.7	6.4	100%	7.2			
Risk Sentiment	Implied Volatility - S&P 500	30.4	15.1	20.0	91%	1.3	Negative	Improving	Neutral
	Implied Volatility - US Treasury	54.1	70.4	88.9	8%	(1.1)			
	Implied Volatility - Oil	57.7	39.5	37.7	92%	1.1			
	S&P 500 Implied Correlation	62.1	39.2	53.6	66%	0.5			
	CBOE Equity Put/Call Ratio	0.5	0.6	0.6	14%	(0.9)			
	Strategist Consensus (S&P 500)	2,999	2,912	1,691	98%	2.1			
	Retail Investor Bullish/Bearish Ratio	0.7	1.0	1.17	1%	(1.3)			

Risk Regime Score		0.3	Neutral	Improving	Average Risk
Risk Regime Score (excl. Fiscal/Monetary Policy)		(0.9)	Negative	Improving	High Risk

Risk Regime Score: Below 0 means market conditions are riskier than average. Above 0 means coditions are less risky than average.
*Since 1999. Source: Bloomberg, as of June 30, 2020

Shifting Conditions

Economic Growth (weak)

U.S. real GDP growth rose 0.3% year-over-year based on the latest data, compared with about 2.3% one year ago.

Real GDP contracted by 5.0% in the latest quarterly data (first quarter), worse than the 4.8% consensus estimate, mainly due to the plunge in spending.

Real GDP is expected to contract by 5.6% in 2020, based on consensus forecasts (worse than the 1.8% growth expected 12 months ago).

Consensus forecasts may be too optimistic: International Monetary Fund (IMF) expects the U.S. economy to contract this year by 8.0% in real terms, before bouncing back to 4.5% growth in 2021.

Either 5.6% or 8.0% would qualify as the biggest slump in productivity since the Second World War. (Real GDP fell 2.8% during the GFC.)

Inflation (weak)

Headline Consumer Price Index (CPI) inflation has been falling and is at 0.1% year-over-year (compared with 1.6% 12 months ago), largely due to the economic lockdown.

Core CPI inflation, which excludes food and energy costs, was hit by the lockdown, slipping to 1.2% (compared with 2.0% last quarter).

The Fed's preferred measures of inflation, headline and core Personal Consumption Expenditure (PCE), stand at 0.5% and 1.6% respectively, below the 2.0% target. Core PCE is expected to fall toward 1.0% over the near term.

Long-term inflation expectations, based on break-even inflation rates, rose to 1.3% from 1.0% in the first quarter but are expected to remain below the Fed's 2.0% annual target, suggesting investors don't expect inflation to be a major concern in the longer term, even though inflation risk has risen.

Near-term break-even inflation moved up above zero after falling to -2.0% in the first quarter. Although inflation expectations remain depressed, recent increases reflect an understanding that quantitative easing and government spending will push prices up.

Deflation fears have lessened following the Fed and government interventions.

Figure 5: Historical and Forecast Economic Growth

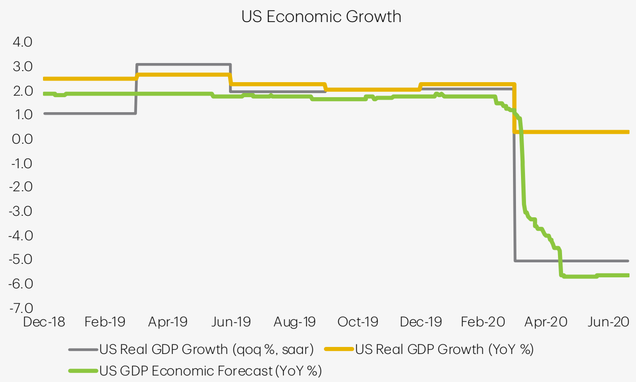
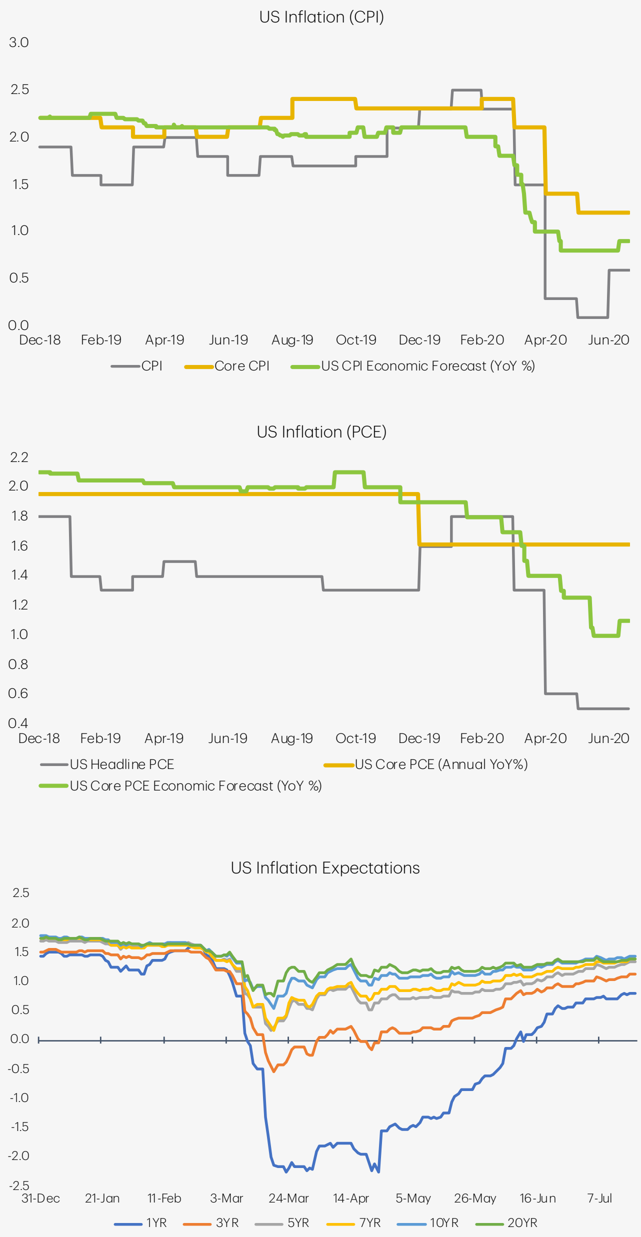


Figure 6: Historical and Expected U.S. Inflation



Source: Bloomberg, as of June 30, 2020

Employment (weak)

Unemployment surged to historic highs earlier this quarter, with more than 45 million new applications for benefits, or almost 30% of the labour force, since late March. The pace of new claims has tumbled for 14 straight weeks to just above 1.0 million a week in early July, from a peak of almost 7.0 million in late March / early April. The number of workers collecting unemployment benefits remains elevated at 18.1 million at the end of June — that's almost three times the 6.6 million high recorded in the GFC.

Jobless claims fell faster than expected, encouraging investors to reevaluate their expectations to include a quicker economic rebound.

There are signs that claims are on the rise again in states like Texas, which has halted reopening efforts after a spike in COVID-19 cases.

At the same time, the unemployment rate has improved to 11.1% (from a recent high of 14.7%) and is expected to fall to single digits in the near term. The number of unemployed at the end of June was 17.8 million, down 3.2 million from May but up 12.0 million from February.

Wage growth remains strong at 5.0% year-over-year but this number is misleading because it is impacted by lower-income jobs that have been lost in the service sector and other areas, therefore artificially inflating the average wage of the remaining workforce.

Consumer Sector (neutral)

The Conference Board Consumer Confidence Index reversed its downward trend and rose to 98.1 based on survey data for June (compared with 85.9 in the previous reading, 87 points at the end of the first quarter, 119 points in March, and 129 points a year ago). The latest reading is higher than the long-term average of 94.6 points.

Consumers' view of current and near-term business and labour conditions, which rose to 86 from 68 in May (but is far from its March value of 167) was the main driver behind the boost in confidence. Expectations improved in June from 98 to 106 points, as the spread of COVID-19 slowed and businesses started to reopen. Consumers are less pessimistic about the near-term economic outlook, but they're still cautious as the overall index remains below pre-pandemic levels. It will be interesting to see if the improvement continues now that many states are halting or postponing reopening plans because of a surge in COVID-19 cases.

Consumer spending surged by a record 8.2% in May, marking the largest jump in over six decades of data. That compares with a 12.6% collapse in April, which was the biggest month-over-month decline since 1959. The record increase is off a low base, and spending remains well below pre-pandemic levels so concerns remain that consumer spending will continue to stagnate.

Household consumption is expected to fall 6.3% year-over-year (a slight improvement over the previous month's forecasted fall of 6.5%).

Household debt levels and debt-servicing costs are much lower than during the GFC, meaning households are better equipped to withstand economic shocks and support a recovery.

Figure 7: U.S. Employment

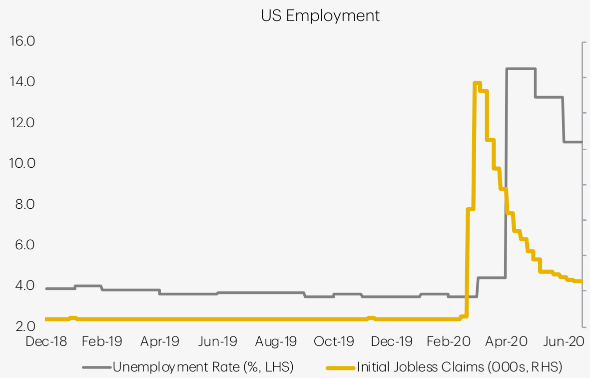
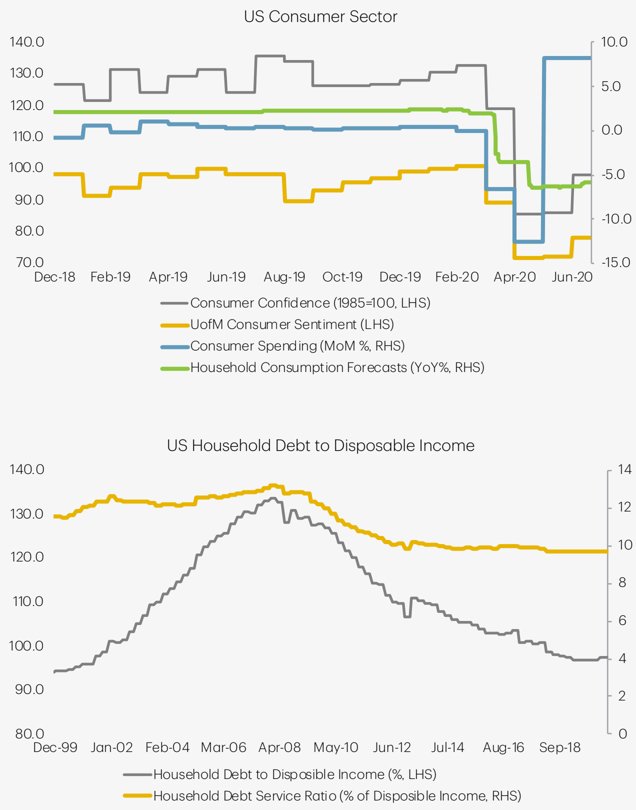


Figure 8: U.S. Consumer Sector and Household Debt



Source: Bloomberg, as of June 30, 2020

Housing (strong)

U.S. housing indicators show a rebound compared to last quarter and even to 12 months ago.

The S&P/Case-Shiller Home Price Composite Index, which measures residential home prices across the U.S., logged a 4.0% increase over the past year (as of June 2020). This is a positive indicator for the sector, although it's a lagged composite and hasn't reflected the full impact of the shutdown.

The National Association of Home Builders (NAHB) Housing Market Index rose to 58 in June from an extreme low of 30 in April and 72 at the end of March. A number above 50 indicates an optimistic view on home sales. The 42-point drop from March to April was the largest monthly drop in the index's 35-year history and the lowest builder confidence reading in eight years.

Business Conditions (weak)

U.S. capacity utilization has fallen significantly from about 80% over the past year to a record low of 64% in April as many factors curtailed production. The level edged up to 64.8% at the end of June but this was lower than the expected 66.9% and is still about 15% lower than its long-run average of 80% since 1972.

Industrial production in June plummeted 15.3%, down from an increase of 1.0% a year ago and surpassing the 15% drop in the 2009 GFC.

For the full year, industrial production is expected to contract by 7.5% and private investment by 9.7%. Both are much worse than forecasts from April.

S&P 500 earnings remain elevated relative to historic levels, but earnings forecasts have tumbled. Analysts now expect earnings per share to decline by 10.9% over the next 12 months compared with 12-month trailing earnings. This expectation is likely too optimistic: earnings are skewed by the FAANGM stocks — Facebook, Apple, Amazon, Netflix, Google (now Alphabet) and Microsoft, which were responsible for virtually all the earnings growth in the S&P 500 over the past five years.

Purchasing Managers Indexes (PMIs) have recovered from extreme lows. This is true for both manufacturing and services PMIs, which ended the quarter at 49.8 and 47.9 respectively. Both are below the 50-point mark that indicates an expansionary outlook. The services sector, which accounts for more than 77% of the U.S. economy, was hurt most by the shutdown: services PMIs sunk to 27 in April (compared with 36 for manufacturing); however, the services sector has demonstrated resilience through the swift rebound.

Figure 9: U.S. Housing Sector

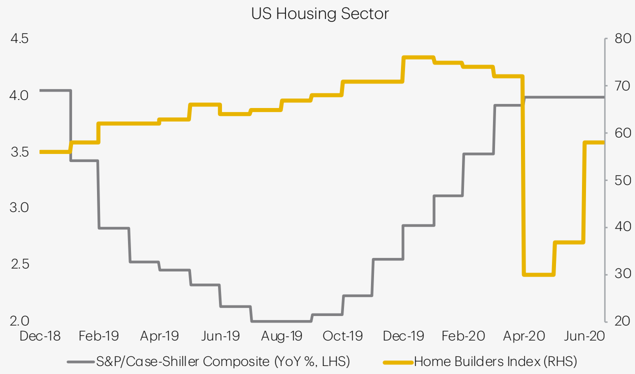
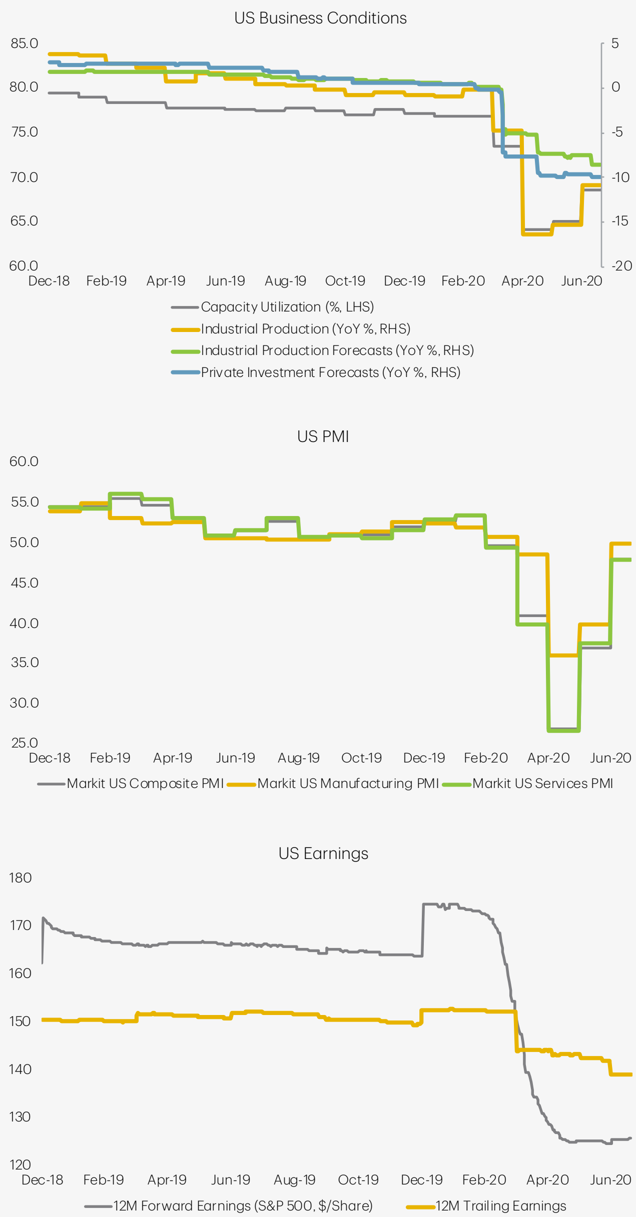


Figure 10: U.S. Business Conditions and PMIs



Source: Bloomberg, as of June 30, 2020

Financial Conditions (neutral)

Most measures of financial conditions have pulled back from extreme levels, indicating that stress in the banking sector and financial markets is on the wane and suggesting a modest uptick in risk appetite.

The Federal Reserve Bank of Chicago's weekly National Financial Conditions Index has a current value of -0.37, reflecting looser conditions due to liquidity injections and highlights the shift from the much tighter financial conditions in March when the peak index value was +0.34.

The Bloomberg Financial Conditions Index's current value is closer to the long-term average, indicating stable or neutral conditions. This is a reversal from the February-end value of almost +1.0; it has bounced back from the -6.3 low hit during the flight to safety in the second half of March.

The three-month London Interbank Offered Rate (LIBOR) and Overnight Index Swap (OIS) rate spread has gradually moved closer to its long-term average, as strains in the overnight bank lending rates have eased and capital has become more available. The spread has retraced much of its earlier move, illustrating a return to normalcy (Figure 11).

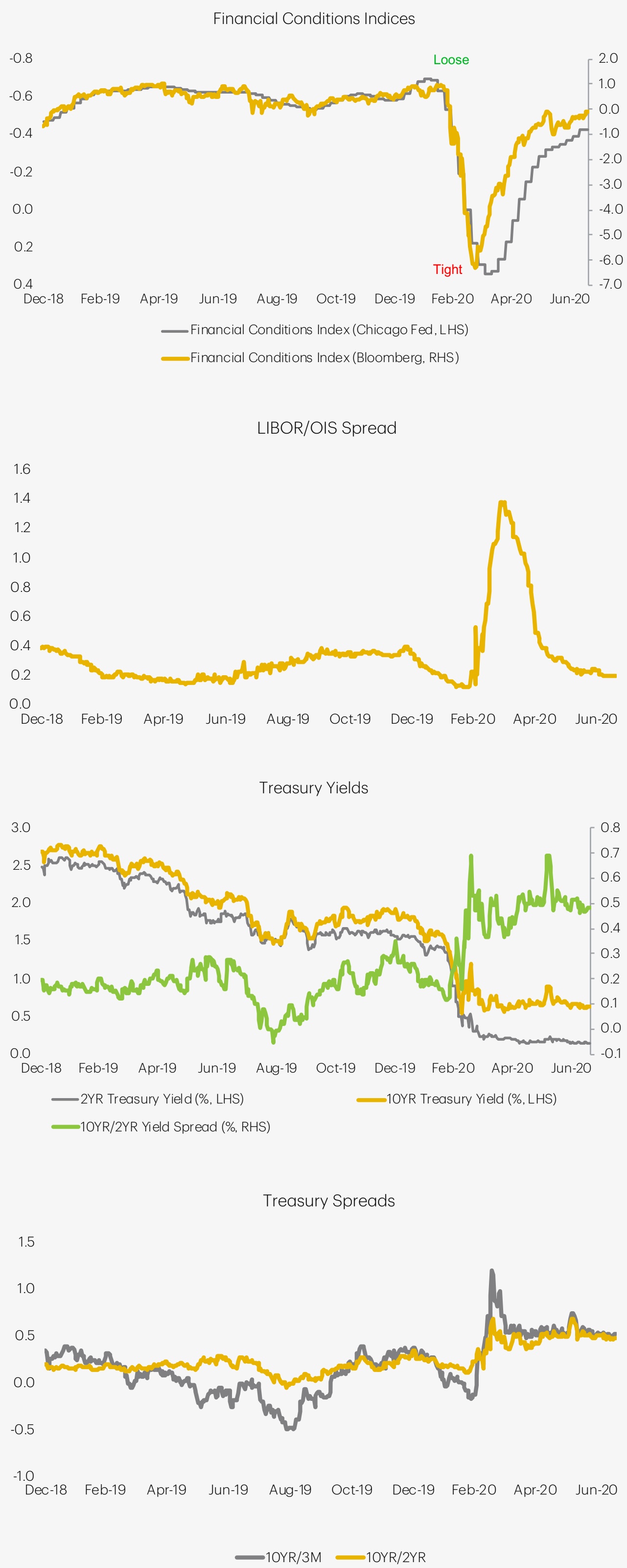
The current 10-year benchmark yields are around 65 bps, indicating a willingness to pay more for the lower risk associated with government bonds. The Fed's bond-buying program has also limited the supply of government bonds for private investors, pushing prices even higher and yields lower. The following chart shows how sustained demand for longer duration and highest-quality income has pushed the trend for the U.S. benchmark rates lower.

The 10YR/3M and 10YR/2YR spreads are lower than their long-term average because of the flatter government yield curve, the lack of term premium (due to subdued inflation expectations) and the anticipation that rates will remain lower for longer. Since the March rate cuts, the U.S. government yield curve has steepened and the term premium is back on offer, though much lower than historical values or the long-term average.

Investment-grade corporate bond spreads have narrowed since March and returned to their long-term average, bolstered by the government's corporate-bond-buying program (through exchange-traded funds and individual bonds) and the reduced probability of downgrades (Figure 11).

In recent weeks, high-yield bond spreads have retraced much of the widening we saw in March due to the improved economic outlook. However, they remain high risk: spreads are still higher than their long-term average driven by concerns about insolvencies and defaults particularly in stressed sectors.

Figure 11: Financial Conditions



Source: Bloomberg, as of June 30, 2020

Foreign Trade (strong)

The current account deficit is now 2.1% of GDP (compared with 2.3% in the first quarter). It's expected to remain 2.1% for the year, lower than the 2.5% forecast 12 months ago and the long-term average deficit of 3.3% of GDP. This longer-term improvement is supportive of markets from a risk perspective.

The current account deficit improved despite the appreciation of the U.S. dollar over the past few years, which has made U.S. exports less competitive.

According to trade-weighted dollar indices, the U.S. dollar has gained against currencies of both advanced and emerging-market economies (Figure 12). Most of the gains were recorded during the flight-to-quality rally of the past few months.

In the second quarter, as markets stabilized and investors moved into risk assets, the U.S. dollar gave up much of its appreciation against developed and emerging market currency baskets. This should make U.S exports more competitive.

Government/Fiscal Policy (accommodative)

Fed spending continues to fill part of the void created by the pandemic shutdown and the growing deficit, and government debt continues to support markets and risk sentiment.

As of June, the U.S. government has deployed almost US$3 trillion, or 14.8% of GDP, in fiscal spending in response to the COVID-19 lockdown. This is above the 12.1% average for pandemic spending in G20 countries. Of course, the U.S. doesn't have the same social safety nets or automatic fiscal stabilizers as many developed countries.

The federal deficit was forecast to hit 9.9% of GDP this year based on the latest data but is now expected to surpass 17.0% — significantly higher than the 10% deficit in 2009. Federal debt is forecast to jump from 80% of GDP to above 100% by year end.

Figure 12: External Trade Account

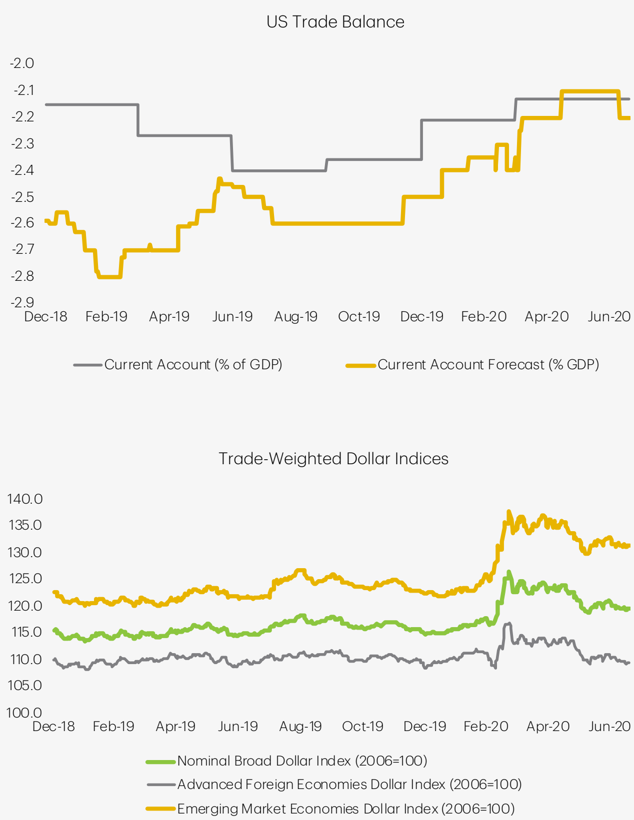
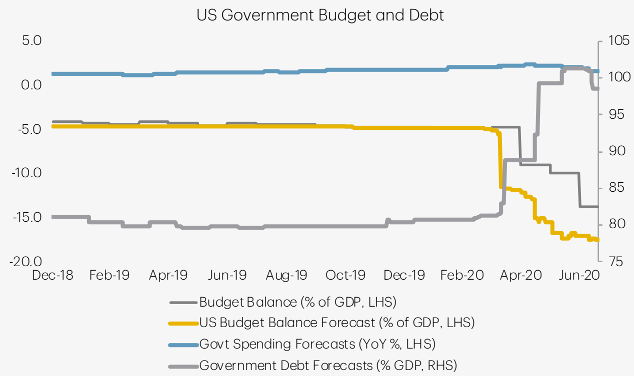
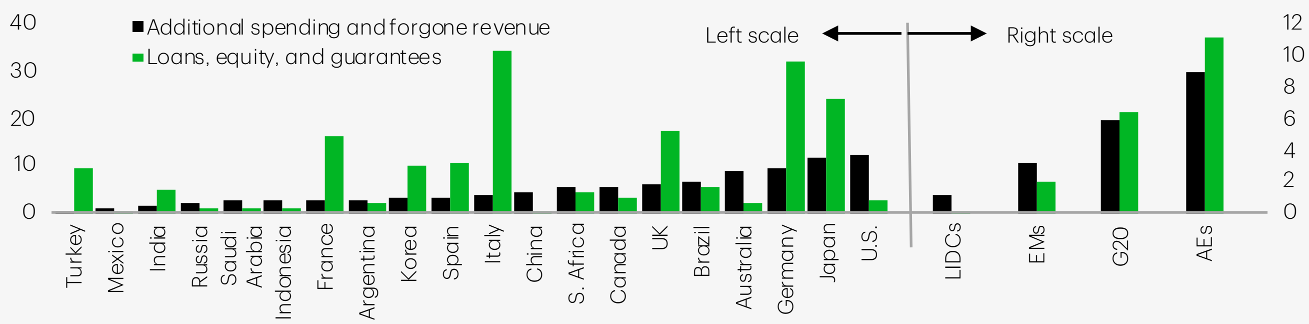


Figure 13: U.S. Government Account and Pandemic Spending



Source: Bloomberg, as of June 30, 2020

Summary of Fiscal Measures in Response to the COVID-19 Pandemic (percent of GDP)



Note: Data are as of June 12, 2020. Country groups are weighted by GDP in purchasing power parity-adjusted current US dollars. Revenue and spending measures exclude deferred taxes and advance payments. For details, see the Fiscal Monitor Database of Country Fiscal Measures in Response to the COVID-19 Pandemic. AEs = advanced economies; EMs = emerging markets; G20 = group of twenty; LIDCs = low-income developing countries. Sources: National authorities; and IMF staff estimates.

Monetary Policy (accommodative)

The Fed's actions and the liquidity injection into financial markets prompted the remarkable recovery in equity and credit markets in the past quarter.

Since cutting rates to almost zero in March, the Fed has maintained its accommodative policy stance and indicated it will keep policy rates within their lower bounds until 2022 and possibly beyond.

For the first time, the Fed is directly impacting corporate balance sheets by purchasing investment-grade corporate credit and recently downgraded sub-investment-grade credit. Fed purchases have been focused mainly on U.S. Treasury bonds and agency mortgage-backed securities (MBS), continuing with the asset-purchase framework it adopted after the GFC.

The Fed's balance sheet has ballooned by over US$2.7 trillion since the start of 2020 to almost US$7.0 trillion and could breach US$10 trillion.

The accompanying chart (Figure 14) shows an increase in the Fed's balance sheet to unprecedented levels after recent announcements. The Fed was initially buying US$75 billion of government bonds a day and is now purchasing US$80 billion per month. It's buying agency MBS at an average pace of US$40 billion a month and has purchased over US$1.9 trillion so far. As part of the Fed's corporate credit facility lending program, it has purchased more than US$42 billion in investment-grade and sub-investment-grade bonds.

The monetary base has ballooned by over 50% in the past year.

M1 and M2 measures of money supply have grown by 33% and 11%, respectively, in the past year, marking the largest rise in M1 and M2 in any one-year period since 1960.

Risk Sentiment (neutral)

After years of relative calm, implied volatility for equities spiked to above 80 points in mid-March, and while it has dropped since then — helped by improved risk appetite, the bounce in equities and tightening credit spreads — it's still high.

Implied volatility for U.S. stocks, using three-month, six-month and even 12-month forward options, remains above 30 points at end June, suggesting investors expect volatility to continue well beyond the next 30 days that's embedded in the standard Volatility Index (VIX).

Figure 14: U.S. Monetary Base and Central Bank Stimulus

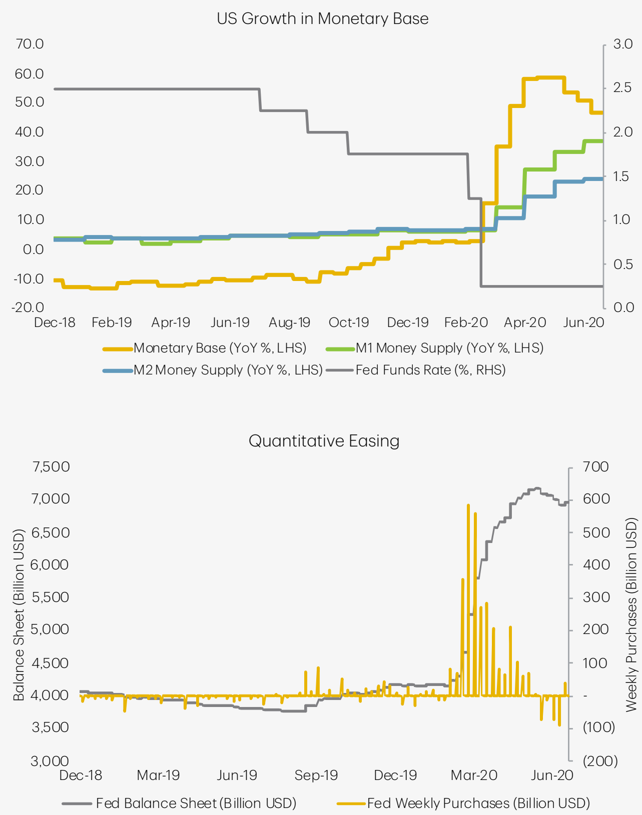
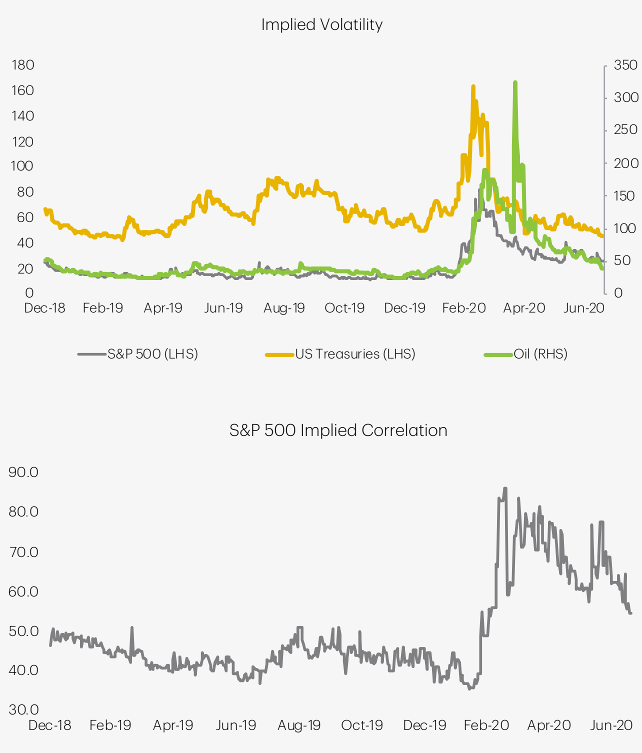


Figure 15: Implied Volatility and Correlation



Source: Bloomberg, as of June 30, 2020

The MOVE Index has dropped from a peak of 160 in early March to 54 at the end of June — leaving it unchanged from April and slightly higher than 12 months ago. This means investors expect U.S. government bond markets to remain calm over the near term, an expectation that's driven by the Fed's massive daily Treasuries purchases.

Implied volatility for oil has plummeted since the first quarter, when it hit a 20-year high after short-dated WTI oil futures fell well below zero. WTI has bounced back as economies reopen and demand improves, but it's still down by more than 35% for the year. WTI ended the quarter just below US$40 per barrel, down from US$61 per barrel at the start of 2020. The oil VIX is still high relative to historic numbers indicating investors are on the watch for more turbulence going forward.

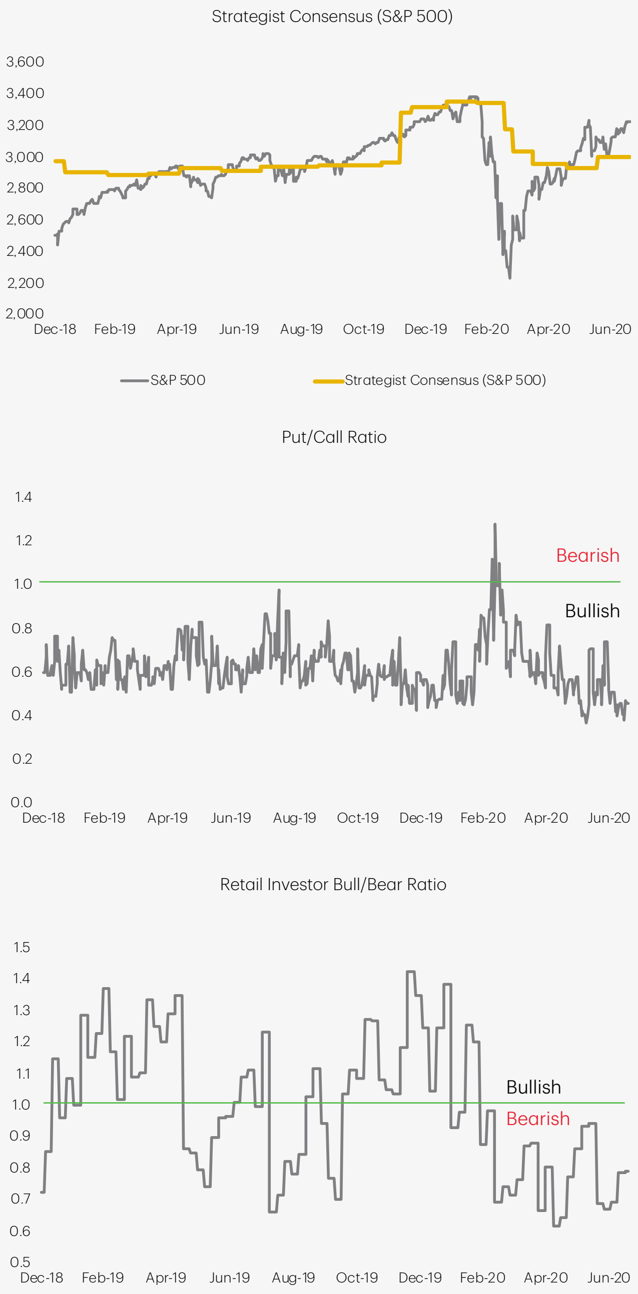
Implied correlations for S&P 500 stocks stand at about 60%, down from a high of about 80% in the first quarter but still higher than the long-term average of 50%. This suggests investors expect stocks — regardless of quality or other characteristics — to move moderately in tandem in the near term, and implies that owning a broad set of stocks isn't expected to provide much diversification benefit. This is what we've observed during past sell-offs and was, indeed, the case in the first quarter.

Consensus estimates by investment strategists (as compiled by Bloomberg) are somewhat neutral, since they expect the S&P 500 Index to end the year down 3% from the current level.

Although demand for put options fell after March, indicating an increase in bullish sentiment, at the end of the second quarter the put/call ratio rose towards average levels, reflecting a tapering of that bullish sentiment.

U.S. retail investment advisors — bullish in May and early June — finished the quarter with bearish sentiments outnumbering bullish by 2 to 1. On average, investor sentiment has been bullish. □

Figure 16: Investment Strategy and Retail Investor Consensus



Source: Bloomberg, as of June 30, 2020

Market Performance

Canadian Indices ($CA) Return	Index	(%) 1 Month	(%) 3 Months	(%) YTD	(%) 1 Year	(%) 3 Years	(%) 5 Years	(%) 10 Years	(%) 20 Years
S&P/TSX Composite (TR)	55,943	2.46	16.97	-7.47	-2.17	3.91	4.45	6.35	4.80
S&P/TSX Composite (PR)	15,515	2.12	15.97	-9.07	-5.29	0.73	1.29	3.23	2.12
S&P/TSX 60 (TR)	2,732	2.20	14.99	-6.26	-1.38	4.84	5.23	6.68	4.75
S&P/TSX SmallCap (TR)	841	5.63	38.52	-14.28	-10.07	-4.51	-0.16	1.51	0.03
U.S. Indices ($US) Return									
S&P 500 (TR)	6,352	1.99	20.54	-3.08	7.51	10.73	10.73	13.99	5.91
S&P 500 (PR)	3,100	1.84	19.95	-4.04	5.39	8.56	8.49	11.64	3.86
Dow Jones Industrial (PR)	25,813	1.69	17.77	-9.55	-2.96	6.53	7.94	10.20	4.63
NASDAQ Composite (PR)	10,059	5.99	30.63	12.11	25.64	17.88	15.07	16.91	4.76
Russell 2000 (TR)	7,343	3.53	25.42	-12.98	-6.63	2.01	4.29	10.50	6.69
U.S. Indices ($CA) Return									
S&P 500 (TR)	8,656	0.81	15.80	1.69	11.94	12.55	12.71	16.88	5.48
S&P 500 (PR)	4,225	0.66	15.23	0.68	9.74	10.34	10.42	14.48	3.43
Dow Jones Industrial (PR)	35,177	0.52	13.14	-5.10	1.05	8.28	9.86	13.00	4.20
NASDAQ Composite (PR)	13,708	4.77	25.49	17.62	30.82	19.82	17.12	19.88	4.33
Russell 2000 (TR)	10,007	2.34	20.48	-8.70	-2.77	3.68	6.15	13.31	6.25
MSCI Indices ($US) Total Return									
World	9,432	2.69	19.54	-5.48	3.40	7.29	7.50	10.57	4.87
EAFE (Europe, Australasia, Far East)	7,688	3.44	15.08	-11.07	-4.73	1.30	2.54	6.22	3.37
EM (Emerging Markets)	2,323	7.40	18.18	-9.67	-3.05	2.27	3.24	3.63	6.93
MSCI Indices ($CA) Total Return									
World	12,854	1.50	14.83	-0.83	7.67	9.05	9.42	13.38	4.44
EAFE (Europe, Australasia, Far East)	10,477	2.24	10.55	-6.69	-0.79	2.96	4.37	8.92	2.94
EM (Emerging Markets)	3,165	6.16	13.53	-5.23	0.95	3.95	5.08	6.26	6.50

Currency									
Canadian Dollar ($US/$CA)	73.38	1.17	4.10	-4.69	-3.97	-1.62	-1.75	-2.48	0.41
Regional Indices (Native Currency, PR)									
London FTSE 100 (UK)	6,170	1.53	8.78	-18.20	-16.91	-5.51	-1.10	2.30	-0.11
Hang Seng (Hong Kong)	24,427	6.38	3.49	-13.35	-14.42	-1.76	-1.43	1.95	2.09
Nikkei 225 (Japan)	22,288	1.88	17.82	-5.78	4.76	3.62	1.95	9.04	1.24

Benchmark Bond Yields	3 Months	5 Yrs	10 Yrs	30 Yrs
Government of Canada Yields	0.21	0.37	0.53	0.99
U.S. Treasury Yields	0.15	0.29	0.66	1.41

Canadian Bond Indices ($CA) Total Return	Index	1 Mo (%)	3 Mo (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
FTSE TMX Canada Universe Bond Index	1,208	1.69	5.87	7.53	7.88	5.28	4.20	4.63
FTSE TMX Canadian Short Term Bond Index (1-5 Years)	762	0.53	2.15	4.04	4.47	2.95	2.12	2.55
FTSE TMX Canadian Mid Term Bond Index (5-10)	1,306	1.02	4.79	8.25	8.09	5.14	4.02	4.95
FTSE TMX Long Term Bond Index (10+ Years)	2,145	3.53	11.17	11.35	11.96	8.30	6.99	7.44

HFRI Indices ($US) Total Return (as of March 31, 2020)								
HFRI Fund Weighted Composite Index	14,285	1.94	9.08	-3.43	-0.54	2.13	2.33	3.72
HFRI Fund of Funds Composite Index	6,256	1.59	7.48	-1.97	0.09	2.12	1.41	2.75
HFRI Event-Driven (Total) Index	15,843	2.63	9.69	-6.68	-4.89	0.52	1.92	3.95
HFRI Equity Hedge Index	21,735	2.72	13.33	-3.19	0.78	3.03	3.10	4.56
HFRI Equity Market Neutral Index	5,532	0.16	1.70	-1.82	-0.96	1.17	1.73	2.44
HFRI Macro (Total) Index	15,155	-0.19	0.76	-0.87	0.65	1.41	0.71	1.28
HFRI Relative Value (Total) Index	12,149	1.75	6.41	-4.19	-2.37	1.61	2.42	4.37
HFRI Indices ($CA) Total Return (as of March 31, 2020)								
HFRI Fund Weighted Composite Index	19,451	0.53	4.70	1.31	3.43	3.74	4.12	6.33
HFRI Fund of Funds Composite Index	8,518	0.18	3.16	2.85	4.09	3.73	3.19	5.34
HFRI Event-Driven (Total) Index	21,572	1.21	5.28	-2.09	-1.09	2.11	3.71	6.56
HFRI Equity Hedge Index	29,594	1.29	8.78	1.57	4.81	4.65	4.90	7.19
HFRI Equity Market Neutral Index	7,532	-1.23	-2.39	3.01	3.00	2.77	3.51	5.02
HFRI Macro (Total) Index	20,635	-1.57	-3.28	4.01	4.67	3.01	2.48	3.83
HFRI Relative Value (Total) Index	16,543	0.34	2.13	0.52	1.53	3.21	4.22	6.99

Sources: TD Securities Inc., Bloomberg Finance L.P. TR: total return, PR: price return, as of June 30, 2020

Appendix A

Glossary of Terms

Bloomberg Financial Conditions Index: This index tracks the degree of financial stress using money-market spreads, bond-market spreads, broad equity prices, and volatility trends relative to historical values. Here, a positive value means relatively easy financial conditions while a negative value means tighter-than-average conditions. The average is based on pre-GFC financial conditions from 1994 to 2008.

Bond duration: Bond duration is a way of measuring how much bond prices are likely to change as interest rates move. In more technical terms, bond duration is measurement of interest rate risk or sensitivity.

Capacity utilization: Measures how close an economy is operating relative to its estimated maximum sustainable productive output without causing strains on existing resources.

Headline consumer price index (CPI): Measure of the average change in the price for a basket of goods and services bought by consumers between two time periods. It is a measure of inflation that is based on prices for food, clothing, shelter, utilities, transportation fees, etc. Monthly price changes are seasonally adjusted to remove the effects of seasonal variations.

Core consumer price index (CPI): This measure of inflation is the same as Headline CPI but excludes food and energy prices because these tend to be very volatile and may have an outsized impact on the overall inflation calculation.

Conference Board Consumer Confidence Index: The confidence index is based on surveys of consumers' perceptions of current business and employment conditions, as well as their expectations for six months hence regarding business conditions, employment, and income. The index is normalized to its value in 1985.

CBOE equity put/call ratio: A measure of market sentiment based on the trading volume of put option contracts compared to call option contracts. A value above 1.0 means more investors are trading put options than call options, which imply investors are bearish about the market. A value of below 1.0 means more investors are bullish.

Current account balance: The current account is a country's trade balance plus net income and direct payments. The trade balance is a country's imports and exports of goods and services. The current account also measures international transfers of capital. A current account is in balance when the country's residents have enough to fund all purchases in the country. Residents include the people, businesses, and government while funds include income and savings and purchases include all consumer spending as well as business growth and government infrastructure spending. The goal for most countries is to accumulate money by exporting more goods and services than they import – this state is called a trade surplus.

Federal Reserve Bank of Chicago's weekly National Financial Conditions Index: This measure combines risk, credit, and leverage indicators to provide a sense of how loose or tight financial conditions are across money, debt, and equity markets. It shows the standard deviations of indicators relative to their historical data going back to 1971. A value of 0 signifies average financial conditions, while a positive value means tighter than average, and a negative value means looser than average.

Fiscal stimulus: In a recession, the government may decide to increase borrowing and spend more on infrastructure spending. The idea is that this increase in government spending creates an injection of money, also known as fiscal injection, into the economy and helps to create jobs.

Household debt service ratio: Measures the percentage of disposable personal income that's required to service debt payments (both mortgages and consumer debts). This measure provides an indication of the carrying cost of household debt.

Initial jobless claims: A weekly government report that measures the number of individuals seeking government unemployment benefits for the first time.

Industrial production: Measures the real output of the manufacturing, mining, and electric and gas utilities industries.

Implied correlations: Represent market expectations of diversification or dispersion across a basket of S&P 500 stocks. Implied correlations are calculated using single-stock option contracts and option contracts on the S&P 500. A higher number means options investors expect stocks within the S&P 500 to move in tandem with each other, while a lower value means investors expect greater dispersion in performance.

Implied volatility: A short term measure of risk sentiment based on transactions in the options market. The VIX Index measures expected volatility for the S&P 500 equity index while the MOVE index measures expected volatility for US Treasury bonds. There is also a VIX Index for expected volatility in oil prices that is based on option contracts on the United States Oil Fund (USO).

Investment-grade and high-yield bond spreads: The difference between the yield on an investment-grade or high yield corporate bond versus the yield on the 10-year treasury bond. These measures represent the embedded risk in corporate bonds. Spreads are narrower when investors are willing to take on more risk and wider when investors are not willing to take on more risk.

LIBOR/OIS spread: This measure illustrates the relationship between liquidity in financial markets and stress in the short-term funding market for secured and unsecured lending. A wider spread indicates high interbank borrowing costs.

Monetary base: The monetary base refers to that part of the money supply which is highly liquid (i.e. easy to use). The monetary base includes notes and coins in circulation along with commercial bank deposits with the Central Bank. In the money multiplier model, an increase in the monetary base can lead to a bigger proportional increase in overall money supply. This is because if banks see an increase in their deposits, they can lend out a bigger sum of money and keep the same proportion in reserve.

M1 money supply: M1 money supply includes coins and currency in circulation—the coins and bills that circulate in an economy that are not held by the government treasury at the central banks, or in bank vaults. Closely related to currency are funds held in chequing accounts, also known as demand deposits. These items together—currency, and chequing accounts in banks—make up the definition of money known as M1, which is measured daily by the central banking system.

M2 money supply: A broader definition of money, M2 includes everything in M1 plus other types of deposits including; funds in savings accounts, money market funds as well as funds invested in certificates of deposits (less than $100,000). In short, all these types of M2 are money that we can withdraw and spend, but which require a greater effort to do so than the items in M1.

National Association of Home Builders (NAHB) Housing Market Index: This index measures home builders' view on current and future (6 month forward) residential house sales, based on monthly surveys. A reading of above 50 means homebuilders on average have a positive outlook on home sales; a value below 50 means they have a negative view.

Purchasing managers' indexes (PMIs): A monthly measure of the business outlook of purchasing managers across primary industries. PMIs provide an indication of business conditions and health of the economy on a forward-looking basis. PMIs are completed for both manufacturing and service sectors. A reading of above 50 means purchasing managers expect an expansion in the economy while a measure below 50 means they expect contraction.

Retail investor bullish/bearish ratio: A measure of investor sentiment based on the proportion of investment advisor (retail investors) that have a positive outlook on the US market compared with those that are pessimistic about the market. The outlook horizon is the next 6 months. A higher ratio means that more retail investment advisors are bullish than bearish and vice versa.

S&P/Case-Shiller Composite Index: A monthly composite that measures single-family home prices across the US. It seeks to measure changes in the total value of all existing single-family housing stock. Note that sales of new homes are not included in the index. The index is normalized to have a value of 100 for January 2000.

Term premium: The term premium is the compensation investors require for holding a long-term bond compared to rolling over a series of short-term bonds with lower maturity.

10-Year U.S. yields: The return on 10-year US government bonds, which are historically used as benchmark interest rates. They represent the prevailing borrowing costs and the expected returns from risk-free rates.

10YR/2YR and 10YR/3M spreads: These spread measures represent the difference in yield between shorter-term government bonds and longer-term government bonds. They provide an indication of the shape of the yield curve. Historically a negative spread between 10-year and 2-year government yields has been considered a signal for recession.

Trade-weighted dollar index: This index tracks the value of the U.S. dollar against a basket of currencies (where weights are calculated using trade data).

Unemployment rate: Measure of the number of unemployed as a percentage of the active labor force (people 16 years of age and older). This measure is also seasonally-adjusted.

Yield curve: Illustrates the tradeoff between yield and term of a type of bond. In general, short-term bonds carry lower yields as the longer we commit funds, the more we should be rewarded for that commitment, or rewarded for the risk we take that the borrower may not pay us back. This is reflected in the normal yield curve, which slopes upward from left to right on the graph as maturities lengthen and yields rise. There are times, however, when the curve's shape deviates, signaling potential turning points in the economy.

End Notes

1. https://www.worldometers.info/coronavirus/
2. https://blogs.imf.org/2020/06/24/reopening-from-the-great-lockdown-uneven-and-uncertain-recovery/
3. Winter Landscape with Pink House. Lawren Harris, 1918. TD Bank Art Collection. Oil on canvas.
4. Composition 1952, Jean-Paul Riopelle, 1952. TD Bank Art Collection. Oil on canvas.
5. Trouble Don't Last Always. Jeffrey Gibson, 2019. TD Bank Art Collection. Acrylic on canvas, glass beads, artificial sinew, custom wood frames.
6. JP Morgan
7. Even though Growth has outperformed Value for well over a decade, it is not considered a compensated factor since there is no empirical evidence that it generates a return premium over time.
8. Facebook, Amazon, Apple, Netflix, Google (now Alphabet), and Microsoft
9. The FAANGM stocks have increased their forward earnings by 95% since the start of 2015, compared with a negative of 1.9% for the rest of the S&P 500.

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