MARKET OUTLOOK
Q2 2020

The financial market outlook is based on current market conditions. There is no assurance that such events or projections will occur and actual conditions may be significantly different than that shown here. The potential for profit is accompanied by the possibility of loss.

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INTRODUCTION

Get the investment intelligence you need

RAKBANK has tied up with Principal Portfolio Strategies to produce periodical investment publications to update its clients of current Investment market conditions, asset class performance and investment outlook. The objective of these publications is not to serve as an investment advice but as an independent view on investment markets.

Principal – your trusted investment partner

Principal Portfolio Strategies is a subsidiary of the Principal Global Investors, LLC - a wholly-owned, indirect subsidiary of Principal Financial Group, Inc. Listed on the Nasdaq Global Select Market under the ticker symbol PFG, Principal Financial Group, Inc. is a member of the Fortune 500 and a leading global financial institution offering a wide range of financial products and services through a diverse family of financial services companies.

Principal Portfolio Strategies provides you with access to multi-asset investment solutions spread across 4 centers of excellence, namely Investment Strategies & Research, Manager Research & Investment Support, Portfolio Management and Client Solutions. Using a proprietary process, Principal offers investors access to strategies with the benefits of cost effectiveness, customization and flexibility. They deploy the expertise of 31 investment professionals with an average of 17 years investment experience to achieve this.

Todd Jablonski, CFA
Chief Investment Officer
22 years of industry experience
10 years of firm experience

Binay Chandgothia, CFA
MD, Portfolio Manager, Head of Asia
27 years of industry experience
20 years of firm experience

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MD, Portfolio Manager
18 years of industry experience
9 years of firm experience

MD=Managing Director.

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OUR PROPRIETARY INDICATORS

Growth despondency amidst COVID-19 uncertainty

Fundamentals

- Data weakened due to COVID-19 related disruption and more is to come. A deep contraction in global activity in 2Q 2020 is now our base case.
- PGAA's Global Manufacturing PMI index rose (China was strong) but remained in contractionary territory. Financial conditions tightened considerably while bottom-up earnings revisions turned weak. Macro-economic surprises, however, held up well.
- Global inflation moved down as base effects receded. Our leading inflation indicator predicts a meaningful decline.

Valuations

- US Treasuries valuations spiked while investment grade (IG) and high yield (HY) spreads widened.
- Global equities made their way into the cheap zone. Only US growth and large caps remained expensive.

Technicals

- Implied and realized cross-asset volatilities shot up towards global financial crisis (GFC) highs.
- Appetite for cyclical risk is appallingly low but hedge funds and volatility have cut risks while rebalancing flows should turn positive for risk assets.

As of 31 March 2020. Source: Bloomberg, Principal Global Asset Allocation. These are the current views and opinions of Principal Global Asset Allocation and is not intended to be, nor should it be relied upon in any way as a forecast or guarantee of future events regarding particular investments or the markets in general. See important information section for further details.[1] 3 month weighted moving average.[2] 3 month weighted moving average as of prior month. [3] 10 year rolling z score.

		INDICATOR	Mar. 2020	Feb. 2020	Dec. 2019	Read YTD
Macro and bottom up	1	PGAA Global Financial Conditions Index	-0.06	0.35	0.45	↓
	2	PGAA Global Inflation Index[2]	2.70%	2.60%	2.10%	↑
	3	PGAA Leading Industrial Production Indicator[1]	47.30	47.70	47.00	↑
	4	PGAA Global Manufacturing PMI Index	48.10	47.00	48.50	↓
	5	PGAA Global Economic Surprise Index[1]	-0.17	-0.04	0.28	↓
	6	PGAA Global 3-month Earnings Revision Ratio	0.38	0.43	0.43	↓
	7	PGAA Global 3-month EPS change (in USD)	-7.00%	-2.00%	-1.00%	↓
	8	Global 2020 EPS growth expectation	-1.00%	8.00%	10.00%	↓
	9	Global Credit Rating Upgrade/Downgrade Ratio	0.23	0.57	0.73	↓
Valuations	10	PGAA Equity Valuation Composite (MSCI ACWI)	0.70	-0.20	-0.90	↑
	11	PGAA 10-yr Treasury Valuation[3]	-3.00	-2.20	-0.80	↓
	12	PGAA Investment Grade Spread[3]	3.90	-0.50	-1.40	↑
	13	PGAA High Yield Spread[3]	3.30	0.20	-1.20	↑
Technicals	14	PGAA Cross Asset Volatility Index	131.00	100.00	52.00	↓
	15	PGAA Cyclical Risk Environment Index	-1.99	-1.29	-0.80	↓
	16	PGAA Reflation Positioning Indicator	-0.40	-0.40	-0.23	↓

MARKETS IN TURMOIL

The coronavirus pandemic shakes markets and the global economy to their core

The SARS-CoV-2 virus and the illness it causes, COVID-19, radically affected the global investment outlook and economy in 1Q 2020. The global response to the health crisis hit risk sentiment ferociously in the quarter as governments began to implement strict containment measures. Investors, in turn, quickly processed a newfound probability of imminent, deep recession.

Markets responded with remarkable speed; higher risk, cyclical asset classes (equities and credit) corrected sharply amid large outflows and defensive, anti-fragile assets (Treasuries, gold, and USD) gained asset flows and increased weights in portfolios. Notably, investors just experienced the abrupt, painful end of the equity bull market that started in 2009, the result of an exogenous threat that likely didn't exist before late 2019.

- **Global infection rates grew** exponentially during the period, laying bare the manifest risk of a highly communicable virus within a globalized world economy. The enormous psychological and economic implications of the pandemic will remain market forces for some time, even as China and Korea offer case studies in successful containment. Social distancing appears to be helping flatten the curve alongside quarantines, restrictions on movement, restrictions on assembly, and country lockdowns.
- **Financial conditions tightened considerably** despite sizeable and necessary actions from global central banks to ease policy rates and seek to ensure orderly markets. Credit spreads, momentum, and volatility moved unfavorably in March. Of note, our financial conditions index (FCI) is still some distance from the lows of the 2009 global financial crisis (GFC), and we do not expect to revisit those levels.
- **Realized volatility** took off like a rocket across multiple asset classes amid indiscriminate selling and re-rating of global growth expectations. The annualized trailing 10-day standard deviation of the MSCI ACWI Index (local currency) closed the quarter at 57.6%, a 108.5% increase from the prior month and the highest reading since the end of 2008. On the fixed income side, the Bloomberg Barclays Global Aggregate Index had a 15.0% standard deviation by the same measure – its highest since March 2009.

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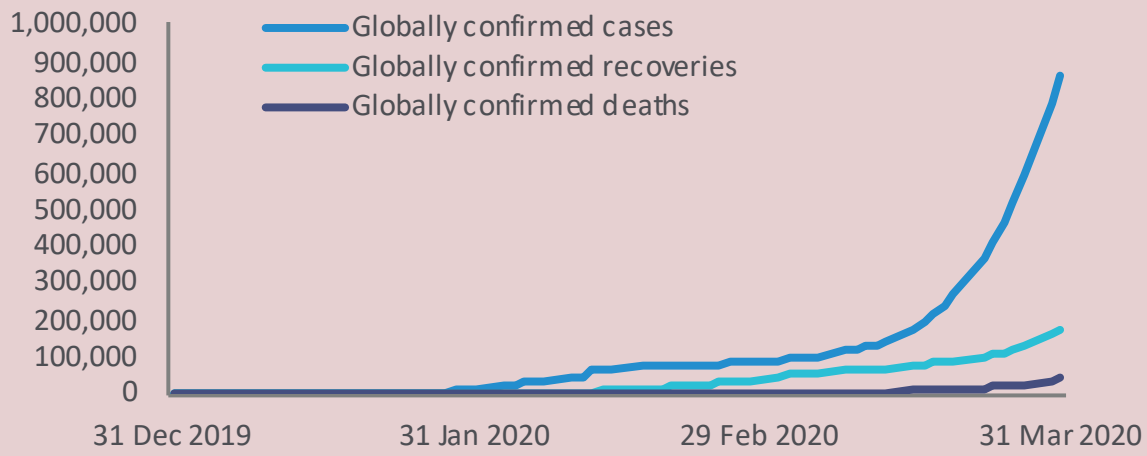
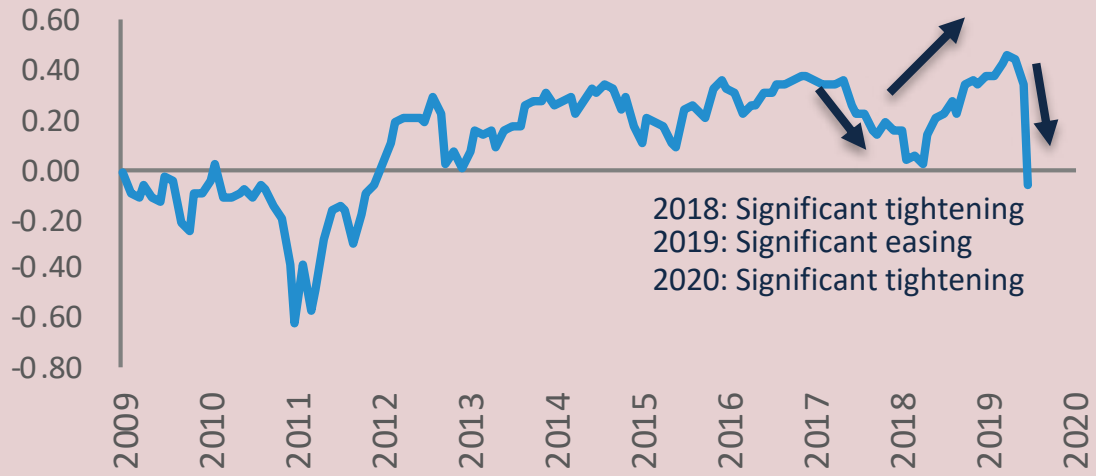
Global COVID-19 Infection Rates



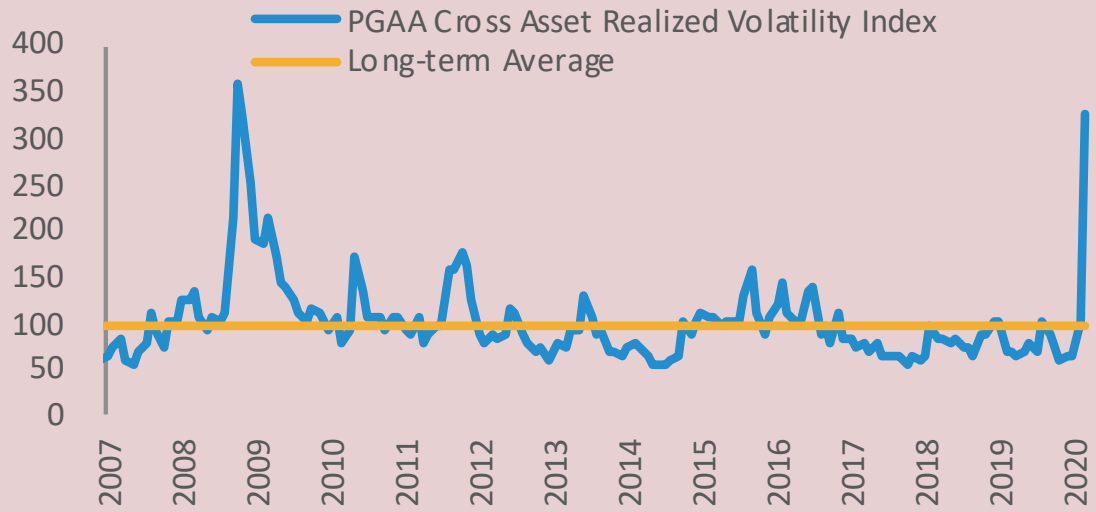
Source: Bloomberg.

PGAA Global Financial Conditions Index



Source: Bloomberg/FactSet/Principal Global Asset Allocation (PGAA). Higher=Easier financial conditions.

PGAA Global Cross Asset Class Volatility



Source: Bloomberg/FactSet/Principal Global Asset Allocation.

FINDING A PATH FORWARD

It's not too early to discuss adding risk to portfolios: A pre-condition checklist

COVID-19 wasn't on investors' radar screens at the start of 2020. Amid the ongoing human crisis, shrinking global economy, and abundance of negative returns, however, the disease and its impact on portfolios have moved front-and-center. We expect economic activity will take a severe hit in 2020 as the global pandemic roils further, unemployment rolls grow longer, productive capacity is reduced, financial systems are strained, and consumption is sharply curtailed. Yes, the outlook isn't rosy.

That said, wise investors no doubt appreciate that often, the best time to add portfolio risk is when it's most uncomfortable. Throughout the quarter, we've been asked frequently: Is it time to add risk? What could cause risk assets to rally? We expect fresh episodes of volatility and a re-testing of market lows, but note there's been substantial progress on several fronts of our six-item checklist for risk appetite to return meaningfully.

1. **Positive progress on the virus** has to be a necessary condition for risk appetite to return meaningfully. Positive surprise on treatment and vaccine breakthroughs is an underappreciated potential outcome.
2. **The extreme re-rating of growth expectations** is not yet complete. Bottom-up fundamental estimates haven't capitulated, nor have share buyback cessations and dividend cuts been absorbed by investors.
3. **Massive monetary stimulus** has been delivered in our view. The playbook from the GFC has been more than fully re-implemented, unlocking US$6 trillion of asset purchases from leading central banks.
4. **Global fiscal policy response** has been adequate to date, and we believe there's more on the way. In our topical research, we track an impressive litany of government spending plans but note execution risks abound.
5. **Valuations** appear decidedly attractive for long term investors, bordering on the extreme in certain areas (small caps and credit spreads). Ambiguity on fundamentals and catalysts remain.
6. **Positioning** has lightened considerably as systematic and risk-parity investors have moved. Risk appetite could expand as central banks proceed with corporate bond (and ETF) buying.

As of 31 March 2020. Source: Bloomberg. These are current views and opinions of Principal Global Asset Allocation. Returns greater than one year are annualized. Index shown for comparison purposes only. It is not possible to invest directly in an index.

Returns		Total return				
		1-month	3-month	1-year	3-year	5-year
GLOBAL EQUITIES						
Developed (local currency)						
S&P500-US	USD	-12%	-20%	-7%	5%	7%
Nasdaq-US	USD	-10%	-14%	1%	10%	11%
Russell 2000-US	USD	-22%	-31%	-24%	-5%	0%
DAX-Germany	EUR	-16%	-25%	-14%	-7%	-4%
FTSE100-UK	GBP	-14%	-25%	-22%	-8%	-3%
CAC 40-France	EUR	-17%	-26%	-18%	-5%	-3%
ASX 200-Australia	AUD	-21%	-24%	-18%	-5%	-3%
Nikkei 225-Japan	JPY	-11%	-20%	-11%	0%	0%
Emerging (local currency)						
MSCI China	USD	-7%	-10%	-6%	7%	4%
Shanghai Composite	CNY	-5%	-10%	-11%	-5%	-6%
India-Sensex	INR	-23%	-29%	-24%	0%	1%
Korea-Kospi	KRW	-12%	-20%	-18%	-7%	-3%
Brazil-BOVESPA	BRL	-30%	-37%	-23%	4%	7%
Russia-RTSI$	USD	-22%	-35%	-15%	-3%	3%
MSCI: TR net (US$)						
MSCI ACWI	USD	-14%	-21%	-11%	2%	3%
MSCI EAFE	USD	-13%	-23%	-14%	-2%	-1%
MSCI Europe	USD	-14%	-24%	-16%	-2%	-1%
MSCI AsiaPac xJ	USD	-14%	-21%	-15%	0%	1%
MSCI EM	USD	-15%	-24%	-18%	-2%	0%

Change in rates from quarter-end		31 Mar '20	Change vs. quarter end			
			1-month	3-month	1-year	5-year
GLOBAL FIXED INCOME						
Key policy rates						
US-Fed Funds	USD	0.25%	-1.50%	-1.50%	-2.25%	0.00%
UK Bank Rate	GBP	0.10%	-0.65%	-0.65%	-0.65%	-0.40%
ECB Ref Rate	EUR	0.00%	0.00%	0.00%	0.00%	-0.05%
China 7-day Rev Repo	CNY	2.20%	-0.20%	-0.30%	-0.35%	-1.35%
10 year sovereign yields (%)						
USA	USD	0.67%	-0.48%	-1.25%	-1.74%	-1.25%
UK	GBP	0.36%	-0.09%	-0.47%	-0.64%	-1.22%
Germany	EUR	-0.47%	0.14%	-0.29%	-0.40%	-0.65%
Japan	JPY	0.02%	0.18%	0.03%	0.10%	-0.38%
China	CNY	2.59%	-0.15%	-0.56%	-0.48%	-1.04%
Brazil	BRL	8.62%	1.94%	1.83%	-0.35%	-4.43%
Mexico	MXN	7.02%	0.27%	0.21%	-1.10%	0.99%

ROLLICKING $ AND DROWNING CRUDE

Safe haven currencies ruled the roost

- Extreme risk-aversion caused by COVID-19 made investors flock to safe haven currencies. The best performing currencies during 1Q 2020 were JPY, CHF, USD, and HKD. All other 26 currencies dropped against these.
- Growth and commodity proxies were clobbered. The worst performers were Brazilian Real, South African Rand, Russian Ruble, and Mexican Peso who suffered 3-sigma drops exceeding -25% in magnitude. Emerging market (EM) currencies had a quarter to forget with the Bloomberg EM Carry Index posting a -13% return (its worst percentile since 2005).
- On the developed market (DM) side, growth proxies (i.e. NOK, AUD, and NZD) were hammered. The US$ gained +18% against the NOK, also a 3-sigma move.
- High yielding EM currencies are cheap on real effective exchange rates. The US dollar (US$) is now among the three most expensive currencies on that front.
- Implied currency volatility shot up, well beyond long-term averages.

COVID-19 + OPEC dealt a hammer blow

- Crude oil and industrial commodities were drowned in a sea of worries. The Goldman Sachs Commodity Index tanked (-41% return) for the quarter. All the commodities in our dashboard posted negative returns, except precious metals.
- Oil was hammered on worries linked to growth and oversupply. The OPEC pivot from 'price-defense" to "market-share defense" was ill-timed, coming at a time when growth was under serious question due to COVID-19 related disruptions. Oil demand is highly likely to take a serious knock, saddling the market with a massive surplus unless supply responds (Will we see a deal after all from OPEC+Russia?) or a new demand source comes up.
- Gold defied the fall, attracting safe haven investment demand. Silver and platinum dropped as their industrial demand outlook worsened. Even for gold, while recessionary environments tend to support prices, almost half their demand is linked to economic growth (industrial and jewelry) which will be threatened if growth declines significantly.
- Base metals were weak on demand woes as industrial activity took a hit.

Returns		31 Mar '20	Total return			
			1-month	3-month	1-year	5-year
Currencies and commodities						
Currencies						
DXY Index		99.05	1%	3%	2%	0%
BB Asia $ Index		101.33	2%	4%	5%	2%
BB LatAm $ Index		42.11	14%	22%	28%	12%
USD/EURO		1.10	0%	2%	2%	-1%
USD/GBP		1.24	3%	7%	5%	4%
USD/AUD		0.61	6%	15%	16%	4%
Yen/USD		107.54	0%	-1%	-3%	-2%
CNY/USD		7.08	1%	2%	6%	3%
Commodities						
GS Commodity Index	USD	256	-29%	-41%	-41%	-8%
Nymex Crude	USD/bl	20	-54%	-66%	-66%	-16%
Brent Crude	USD/bl	23	-55%	-66%	-67%	-16%
Gold	USD/toz	1,583	1%	4%	22%	6%
Silver	USD/toz	14	-14%	-21%	-6%	-3%
Copper	USD/T	4,947	-12%	-20%	-24%	-4%
Aluminum	USD/T	1,514	-11%	-16%	-20%	-3%
Corn	USc/bu	341	-7%	-12%	-4%	-2%
Soybean	USc/bu	886	0%	-6%	0%	-2%

As of 31 March 2020. Source: Bloomberg. These are current views and opinions of Principal Global Asset Allocation. Returns greater than one year are annualized. The risk of investment losses in trading in futures, CDX, CDS, and swaps, can be substantial. You should therefore carefully consider whether such trading strategy is suitable for you in light of your financial condition. The high degree of leverage that is often obtainable in this trading can work for or against the investor. Futures can utilize leverage. The use of leverage can lead to large investment losses as well as gains.

US equities

COVID-19 hammers US equities, bringing massive volatility and respiratory distress

It would be difficult to conceptualize a more inauspicious start to the 2020's. US equity investors approached 2020 with high hopes for strengthening global growth, +9% S&P 500 earnings growth and +5% revenue growth, and for the first half of 1Q '20, that outlook weakened but remained a base case. From mid-Feb forward however, COVID-19 fears marauded across the equity landscape as investors abruptly realized the risk wouldn't be isolated to Asia.

- US stocks delivered one of the sharpest drawdowns in recorded history in the back half of 1Q 2020 as cascading lock downs and stay-at-home orders shuttered wide swaths of the world's largest economy. In the 23 trading days following the 19 February 2020 high, the S&P 500 produced an excruciating -33.9% price return, invoking comparisons to the Crash of '87, Global Financial Crisis, and Great Depression.
- Perhaps more notable than the size of the negative return was the sudden eruption of long-dormant equity volatility. On an implied basis, the VIX Index achieved a high of 82.7% on 16 March 2020, a six-fold increase from year-end levels. On a realized basis, the annualized trailing 10-day standard deviation of the S&P 500 closed the quarter at 72.2%, a level almost twice that at the end of February 2020 and just shy of risk levels achieved in 2008.
- Large-cap stocks markedly outperformed their mid- and small-cap brethren during the quarter. The Russell Top 200 Index produced a -18% total return (TR) during the quarter, beating the Russell MidCap by 9 percentage points (ppt) and small-cap Russell 2000 by 13ppt as investors preferred the earnings transparency and secular growth features of mega-cap tech firms.
- Defensive sectors such as Health Care, Consumer Staples, and Utilities held up far better than cyclical sectors, particularly Financials (-32%) and Energy (-51%). Energy stocks halved in the quarter behind simultaneous supply increase from OPEC+ and demand decrease for the world's most traded commodity.
- Investors no doubt see rock-bottom valuations in areas of the market, but value traps abound. 2020 earnings per share (EPS) estimates will likely fall as analysts process the scope and impact of economic inactivity.

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Returns		Total return				
		1-month	3-month	1-year	3-year	5-year
GLOBAL EQUITIES						
United States						
S&P 500	USD	-12%	-20%	-7%	5%	7%
MSCI USA	USD	-13%	-20%	-8%	4%	6%
Russell 3000	USD	-14%	-21%	-9%	4%	6%
Russell Top 200	USD	-11%	-18%	-4%	7%	8%
Russell MidCap	USD	-19%	-27%	-18%	-1%	2%
Russell 2000	USD	-22%	-31%	-24%	-5%	0%
S&P 500 GICS sectors						
Info Technology	USD	-9%	-12%	9%	16%	15%
Health Care	USD	-4%	-13%	-3%	6%	4%
Financials	USD	-21%	-32%	-19%	-4%	1%
Consumer Disc	USD	-13%	-20%	-12%	4%	6%
Comm Services	USD	-12%	-17%	-5%	-4%	0%
Industrials	USD	-19%	-27%	-21%	-4%	1%
Consumer Staples	USD	-6%	-13%	-3%	0%	2%
Energy	USD	-35%	-51%	-54%	-24%	-17%
Utilities	USD	-10%	-14%	-5%	3%	5%
Real Estate	USD	-15%	-20%	-14%	0%	0%
Materials	USD	-14%	-27%	-18%	-5%	-2%

Source: Bloomberg.

MSCI US style factor returns		1-month	3-month	1-year	3-year	5-year
Momentum	USD	-11%	-15%	-4%	10%	10%
Value	USD	-16%	-26%	-17%	-2%	2%
Growth	USD	-10%	-14%	2%	11%	10%
Quality	USD	-9%	-15%	1%	10%	10%
Min Vol	USD	-12%	-17%	-7%	6%	7%

Source: Bloomberg.

Fundamentals		Sales growth		Earnings growth		Dividend
		2019	2020	2019	2020	Yield-2020
S&P 500	USD	5%	2%	1%	0%	2%
MSCI USA Large Cap	USD	4%	2%	0%	1%	2%
MSCI USA Mid Cap	USD	-4%	0%	-2%	-1%	2%
MSCI USA Small Cap	USD	7%	0%	-2%	-5%	3%

Source: Bloomberg.

Valuations		Price to NTM EPS	Price to Book	Composite	Composite 3-month change	Composite % times cheaper
MSCI USA Large	USD	15.4	3.0	0.1	1.7	40%
MSCI USA Mid	USD	14.9	2.2	1.1	2.1	6%
MSCI USA Small	USD	16.0	1.5	1.4	1.5	3%

Source: FactSet.

Ex-US equities

They all went down!

- The global equity bull run that started in 2009 came to an abrupt end on growth concerns triggered by COVID-19. The irony lay in the fact that we had started the year with visible signs of global growth improvement.
- The onset of concerns triggered ferocious selling and led to large drops as volatility surpassed even global financial crisis (GFC) levels. Global equities posted -35% to -40% returns from 52-week highs at one point. Thin liquidity compounded woes as price insensitive investors (volatility targeters, risk-parity, and momentum strategies) were forced to cut risk from their portfolios.
- Not one market could defy the fall. The median local currency return was -24%, the worst for any quarter since the GFC. In a way, markets followed the COIVD-19 cycle—those coming out of the virus crisis (China, both onshore and offshore) faced smaller drawdowns, those running into it (Europe and India) faced larger drawdowns. Countries with weak fiscal positions (Brazil, India, and Argentina) and those with significant exposure to global commodities (Brazil, Mexico, and Russia) were hit the hardest, both from an equity and a currency perspective. Japan outperformed as the country's central bank (Bank of Japan) stepped up its equity purchases through ETFs.
- As markets fell, late cycle sectors like energy and financials suffered. Value stocks (which have a large exposure to late cycle sectors) and small caps were particularly weak.
- The 2020 EPS growth estimate for MSCI AC World ex-US was cut to -6% from the previously estimated 7%. Further reductions in earnings growth estimates are almost certain.
- Most ex-US market valuation levels (based on historical metrics) are attractive, though markets may still decline further. The market bottom will most likely be reached after the COVID-19 curve is truly flattened in US. Other conditions for a market rally, such as sharply lower growth expectations, sizeable monetary and fiscal stimulus, and sizeable risk reduction, are already in place.

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Returns		Total return				
		1-month	3-month	1-year	3-year	5-year
GLOBAL EQUITIES						
Countries						
DAX-Germany	EUR	-16%	-25%	-14%	-7%	-4%
FTSE100-UK	GBP	-14%	-25%	-22%	-8%	-3%
CAC 40-France	EUR	-17%	-26%	-18%	-5%	-3%
ASX 200-Australia	AUD	-21%	-24%	-18%	-5%	-3%
Nikkei 225-Japan	JPY	-11%	-20%	-11%	0%	0%
MSCI China	USD	-7%	-10%	-6%	7%	4%
Shanghai Comp	CNY	-5%	-10%	-11%	-5%	-6%
India-Sensex	INR	-23%	-29%	-24%	0%	1%
Korea-Kospi	KRW	-12%	-20%	-18%	-7%	-3%
Brazil-BOVESPA	BRL	-30%	-37%	-23%	4%	7%
Russia-RTSI$	USD	-22%	-35%	-15%	-3%	3%
MSCI AC World ex-US	USD	-14%	-23%	-16%	-2%	-1%

Source: Bloomberg.

Style factor returns		1-month	3-month	1-year	3-year	5-year
Europe style factors						
Momentum	USD	-9%	-15%	-4%	3%	3%
Value	USD	-19%	-31%	-25%	-7%	-5%
Growth	USD	-10%	-18%	-6%	3%	2%
Quality	USD	-9%	-18%	-4%	3%	3%
Min Vol	USD	-10%	-17%	-8%	2%	2%
Emerging market style factors						
Momentum	USD	-17%	-24%	-14%	1%	0%
Value	USD	-18%	-28%	-25%	-6%	-3%
Growth	USD	-13%	-19%	-10%	2%	2%
Quality	USD	-14%	-22%	-15%	-2%	-1%
Min Vol	USD	-12%	-20%	-18%	-1%	-2%

Source: Bloomberg.

Fundamentals		Sales growth		Earnings growth		Dividend
		2019	2020	2019	2020	Yield-2020
MSCI World ex USA	USD	1%	-3%	-4%	-6%	4%
MSCI EM	USD	-7%	0%	-14%	4%	3%
MSCI AC Asia Pacific ex JP	USD	-4%	2%	-11%	4%	3%
MSCI Europe	EUR	2%	-5%	1%	-8%	5%
MSCI Japan	JPY	2%	1%	-14%	4%	3%

Valuations	Price to NTM EPS	Price to Book	Composite	Composite 3-month change	Composite % times cheaper
MSCI World ex US	11.9	1.3	1.3	1.4	8%
MSCI EM	10.5	1.4	0.8	1.2	13%
MSCI AC Asia ex JP	11.5	1.4	0.7	1.1	20%
MSCI Europe	11.9	1.5	1.1	1.5	11%
MSCI Japan	11.9	1.1	0.8	0.6	9%

Source: FactSet.

US fixed income

ZIRP and a global recession emerging

In response to the economic disruption caused by COVID-19, global central banks expanded monetary policy through lower rates, broad-based bond buying, and loan programs to businesses. The Federal Reserve (Fed) returned to ZIRP (zero interest rate policy), moving their target rate back to 0.00%-0.25%. Many governments also implemented fiscal policies to help lessen the impact to individuals, through direct payments and expanded benefits.

This disruption and related government policies led to a US Treasury (UST) rally and a widening of credit spreads. For the quarter, USTs returned +8.20% and contributed to a positive return for the US Aggregate Index and US MBS Index. The widening in spreads led to negative returns for investment grade corporate (IGC) and high yield corporate (HYC) indexes.

IGC Option Adjusted Spread (OAS) widened +179 basis points (bps), ending the quarter at +272 bps. HYC OAS widened +543 bps, ending the quarter at +880 bps, widening followed credit quality.

The UST curve rallied ~130 basis points for the quarter, and while inflation remains elusive, expectations have materially increased for a recession, followed by accommodative policy driven inflation to support a recovery.

Fundamentals > Beta

Spreads for IGC and HYC bonds have returned to levels not seen since the financial crisis of 2008. While the two asset classes look attractive based on spread, the potential for prolonged stress exits. The duration of the pandemic is the primary unknown, with the time needed to reach economic normalization a close second.

With the recent rate rally, we maintain a preference for corporates over government securities, and expect accommodative policy to persist well past the time medical professionals indicate the virus is under control.

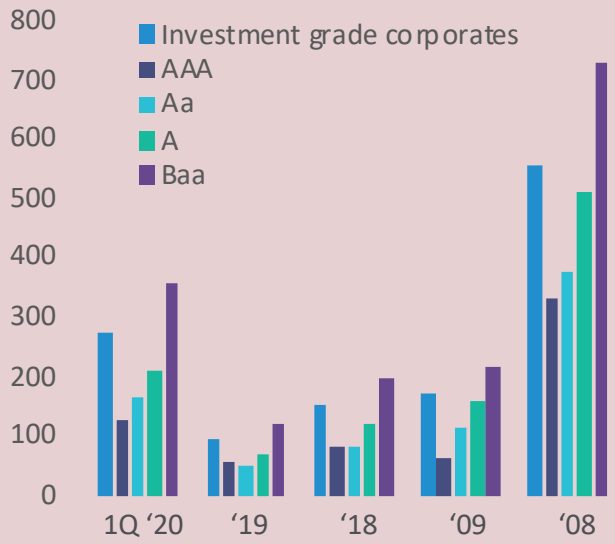
Within corporates, we believe security selection will be more important over the next 12 months than it has been over the past 12 months as the expected recession will weigh heavily on over levered firms and those affected by lower consumer demand, such as the oil industry and discretionary sectors.

We continue to hold a bias for duration underweight as our rate expectations are anchored at current levels. A passive approach to the corporate sector will deliver a nice coupon return while the disruption will give active managers the opportunity for alpha by avoiding downgrades and bankruptcies. Until there is consensus from the medical community that the virus is under control, we recommend investors tread cautiously.

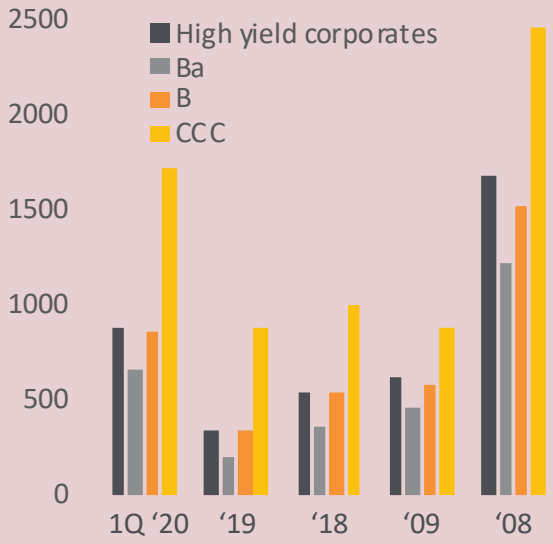
Returns		Total return					
		1-month	3-month	YTD	1-year	3-year	5-year
US FIXED INCOME							
US Aggregate	USD	-1%	3%	3%	9%	5%	3%
US Treasuries	USD	3%	8%	8%	13%	6%	4%
US MBS Fixed Rate	USD	1%	3%	3%	7%	4%	3%
US $ IG	USD	-7%	-4%	-4%	5%	4%	3%
US $ HY	USD	-11%	-13%	-13%	-7%	1%	3%

US corporate spreads

Investment grade



High yield



US Treasury yield curve

US Treasuries rallied ~130 basis points across the curve.

As of 31 March 2020. Source: Bloomberg. These are current views and opinions of Principal Global Asset Allocation. Returns greater than one year are annualized. Y=year.

Ex-US fixed income

Hyper-active central banks, stress for credit investors

- Global monetary policy eased dramatically. 23 out of the 31 central banks we track cut rates in March (some more than once) which took the cut-hike scorecard to 34:2 for the last 3 months and 84:6 for the last 12 months. The rate cuts were accompanied by balance sheet expansion, relaxed capital requirements, lowered reserve ratios, and suspension of some accounting rules. Details provided in the Extraordinary times require extraordinary actions section in pages 12-14.
- Global 10-year sovereign bond yields fell much less than US Treasuries. Based on PGAA's yield composites, developed market (DM) ex-US yields declined -25 bps and emerging market (EM) yields -14 bps in 1Q 2020 while the 10-year Treasury yield collapsed -125 bps. US relative carry was the highest among DMs at the end of 2019 while its rate cuts were the deepest, explaining the lag in ex-US markets during 1Q. Combined with adverse currency effects (US$ strength), this resulted in mediocre relative returns for global government bonds vs. US Treasuries (3% vs. 8%).
- Investors reduced exposure to credit products as growth anxiety heightened. Forced sales amidst thin liquidity put incessant upward pressure on spreads. Global IG spreads ended 115-171 bps wide of their medians since 2009 and HY spreads 349-844 bps! Asian HY spread widened to 452 bps over US HY (median = 38 bps). Spreads finished the quarter at their widest since the GFC, having pierced the levels reached during both the 2011 Euro-area crisis and the 2015-16 deflationary bust.
- High Yield underperformed massively. In the EM world, ICE BofAML Corporate Plus Index delivered -8.4% of which IG Corp was -5.5% and HY Corp -15%. Within IG, bonds rated A-AAA delivered -0.30%.
- Spread products are undoubtedly attractive based on valuations. Compared to sovereign bond yields, they look even more so. However, fundamentals are worsening. The global credit rating upgrade/ downgrade ratio dropped to just 0.23 (as low as it was during the GFC). Defaults are likely to rise. HY faces a potential supply of $600 billion bonds downgraded from BBB to BB+ or lower. While we like credit, a defensive stance is more appropriate in security selection.

As of 31 March 2020. Source: Bloomberg. These are the current views and opinions of Principal Global Asset Allocation and is not intended to be, nor should it be relied upon in any way as a forecast or guarantee of future events regarding particular investments or the markets in general. Returns greater than one year are annualized. Index shown for comparison purposes only. It is not possible to invest directly in an index. m=month.

Returns			Total return				
		31 Mar '20	1-month	3-month	1-year	3-year	5-year
GLOBAL FIXED INCOME							
Markets							
Global Govt Bonds	USD		0%	3%	7%	4%	3%
Global Corp Bonds Investment Grade (IG)	USD		-7%	-6%	1%	3%	2%
Global High Yield (HY)	USD		-13%	-14%	-8%	0%	3%
Asia $ IG	USD		-4%	-1%	6%	4%	4%
Asia $ HY	USD		-16%	-15%	-11%	-1%	3%
EM $ IG	USD		-7%	-5%	1%	3%	3%
EM $ HY	USD		-15%	-15%	-8%	0%	4%
Spreads (bps)							
3m $ LIBOR-OIS	USD	138	115	103	117	116	124
NA CDX 5y IG CDS	USD	113	47	68	50	47	49
Europe 5y IG CDS	USD	96	31	52	31	22	40
Asia 5y IG CDS	USD	140	82	80	-	-	29
JPM EMBI Index	USD	577	223	300	204	246	167

Option Adjusted Spreads (bps)

Time Periods	US IG Corp	Euro IG Corp	Asia IG $	EM IG $	US HY Corp	Euro HY Corp	Asia HY $	EM HY $
31 Mar '20	316	242	282	372	896	780	1386	1168
1m change	185	127	135	186	395	371	754	588
3m change	215	148	158	222	536	472	826	674
6m change	194	130	145	205	494	414	766	603
12m change	189	117	145	201	491	388	886	685
24m change	199	145	148	217	524	465	987	812
36m change	192	122	149	209	504	423	998	713
High	316	337	298	372	896	974	1386	1168
Low	91	75	111	127	328	233	321	320
Median	145.5	127.5	166	211	480	431	542.5	635
Current-Median	170.5	114.5	116	161	416	349	843.5	533
Current-Low	225	167	171	245	568	547	1065	848

Asian fixed income

Carry advantage but uncertain outlook

Our belief, coming into 1Q 2020 was that an environment of anchored sovereign yields would support Asian $ fixed income. We expected credit fundamentals to remain stable with default risks being largely idiosyncratic. However, COVID-19 turned the economic outlook on its head, making a deep recession in 2Q 2020 the base case. We expect large scale rating downgrades and defaults. 47% of the Global IG Corporate Index (ICE BofAML) was in BBB names, i.e. $5.2 trillion out of a total of $11.1 trillion as of 31 March 2020. Assuming 10% of these get downgraded to BB, it will force migrate $520 billion into the Global HY Index, whose current market cap is $1.8 trillion.

Investment Grade

Asian IG spreads widened less than US IG in 1Q 2020. They are fairly valued relative to their US counterparts but cheap relative to their own history. Within Asian IG $ Index (ICE BoFAML), 41% of the index is in BBB names, less than the global IG index. While spreads were attractive, the yield to worst (YTW) of 3.3% for 5.3 years duration and A- average rating is low due to very low underlying US$ Treasury yields. China dominates the index at 48% of the total weight.

High Yield

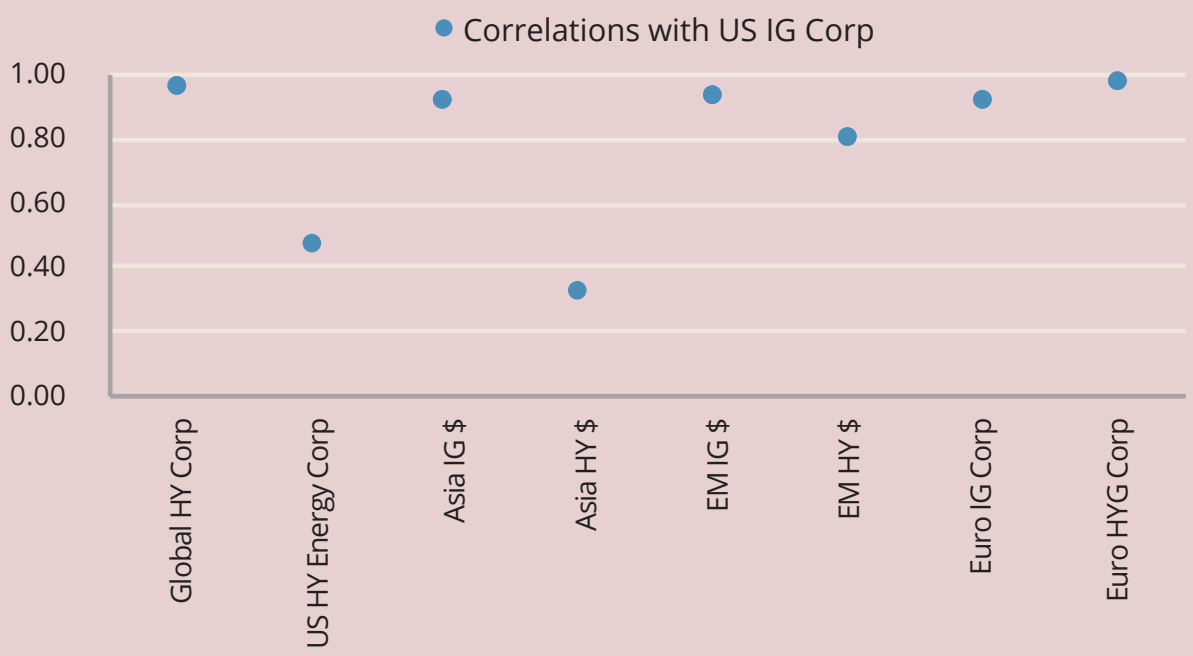
Asian High Yield, on the other hand, widened considerably more than US and Euro HY during 1Q 2020, making them attractive relative to both their history and other HY markets. A YTW of 14.2% for 2.5 years modified duration and B1 average rating compares favorably with US HY (YTW 9.2%, 5.2 years, and B1) or Euro HY (YTW 6.9%, 4.1 years, and BB3). But it does suffer from a very large exposure to China (63%) and Chinese property (51%).

Looking ahead, US and Euro IG will compress well before Asian IG due to buying support from US Fed and ECB. Chinese names should do relatively well given substantial policy easing. Also, it is ahead on the COVID-19 cycle. While HY looks attractive, one has to be very conscious of idiosyncratic risks pertaining to countries with less ability to support impacted sectors and companies.

As of 31 March 2020. Source: Bloomberg. Spreads are from ICE BofaML fixed income indices. These are the current views and opinions of Principal Global Asset Allocation and is not intended to be, nor should it be relied upon in any way as a forecast or guarantee of future events regarding particular investments or the markets in general.

Relative Option Adjusted Spreads (bps)				
Time Periods	Asia IG – US IG	Asia HY- US HY	EM IG – US IG	EM HY - US HY
31 March 2020	-34	490	56	272
1-month change	-50	359	1	193
3-month change	-57	290	7	138
6-month change	-49	272	11	109
12-month change	-44	395	12	194
24-month change	-51	463	18	288
36-month change	-43	494	17	209
High	67	490	135	454
Low	-34	-323	34	-16
Median	19.5	38	58	125
Current-Median	-53.5	452	-2	147
Current-Low	0	813	22	288

Option Adjusted Spread vs. Government bonds in basis points



Extraordinary times require extraordinary actions

Key central banks in action

The world of central banking was filled with emergency stimulative actions as panic engulfed the global economy in the first quarter. 23 out of the 31 central banks we track cut rates in March (many of them more than once) which took the cut-hike scorecard to 84:6 for the last 12 months. The Danish central bank was an exception, hiking +15 bps to -0.60%, to alleviate pressure on its currency which maintains a peg with the euro. Complimenting the rate cuts were relaxed capital requirements, lowered reserve ratios and a possible cessation of certain accounting rules in the weeks to come as desperate efforts were made to ensure flow of capital to the impacted sectors. Fiscal taps were opened simultaneously. Highlights of monetary and fiscal announcements are below:

Region	Monetary	Fiscal
United States of America	• **Two emergency cuts (-150 bps), Fed funds target rate moved to 0-0.25%. Discount window cost cut to 0.25%**. Negative rates unlikely based on economic forecasts. • Reserve requirement ↓ to zero; ↓ capital and liquidity buffers. • **Initial $700 billion asset purchases ($500 billion Treasuries, $200 billion MBS) made open-ended** with $600 billion purchases the week of 23 March. Agency CMBS included. • **$300 billion in new financing through three new facilities:** US Treasury to put $10 billion equity in each Special Purpose Vehicle (SPV) under Exchange Stabilization Fund (ESF). 1. Primary Market Corporate Credit Facility (PMCCF) till 30 Sept. 2020: Fed to provide secured funding that invests in bonds or loans issued by US companies with a minimum rating of BBB- and a maximum maturity of 4 years. Issues to be at market rates and issuers to pay a commitment fee at 100 bps to the SPV. 2. Secondary Market Corp Credit Facility (SMCCF) till 30 Sept. 2020: Fed to provide secured funding to an SPV that invests in bonds (IG, maximum maturity 5 years) or bond ETFs (US IG or government bonds). 3. Term Asset-Backed Securities Loan Facility (TALF): Fed to provide secured funding to an SPV that will make available 3-year non-recourse loans to borrowers against eligible new ABS. Initial target: $100 billion. • **Other facilities announced:** 1. Main Street Business Lending Program (MSBLP): Fed to set up MSBLP to support lending to eligible small-and-medium sized businesses. 2. Commercial Paper Facility (CPFF) for a year: Fed to provide secured funding to an SPV (Treasury: $10 billion equity capital) investing into commercial paper issued by US companies and municipal bonds, including asset-backed commercial paper, with a min rating of P1/A1 at overnight index swap (OIS) plus 110 bps. Downgrades from P1/A1 to P2/A2 investment allowed once at OIS+200bps. 3. Money Market Liquidity Facility (MMLF): Fed to extend secured loans to institutions against high quality liquid assets bought from money market mutual funds (MMMFs) up to a year of maturity, including single state and tax-exempt municipal MMMFs. Cost will be Primary Credit Rate (PCR) for government obligations, PCR+25bps for municipal papers and PCR+100bps for others. 4. Primary Dealer Credit Facility (PDCF): To provide funding to primary dealers. 5. Expanded repo program: T-bill purchases extended to securities of all maturities. 5. Swap lines at much lower cost with 14 central banks and 84-day swaps.	• **Phase 1:** $8.3 billion in health care spending. • **Phase 2:** $105 billion under "Families First" Act: 1. $105 billion tax credit for paid sick and family sick leave. 2. Deferred federal income tax from due 15 April to due 15 July. • **Phase 3: CARES Act totaling $2.4 trillion** with unprecedented coordination between US Treasury and Fed. Details: 1. **$730 billion fiscal stabilizers:** • $292 billion through $1200/$2400 checks to individuals/families, plus $500 per child. • $125 billion through unemployment insurance: $600 per week for max 16 weeks to add to state unemployment insurance. Actual number will depend upon the no of jobless claims filed and their duration. • $153 billion in permanent tax provisions. • $163 billion in temporary tax provisions. 2. **$480 billion direct spending programs:** • $340 billion via Federal Agencies. • $140 billion via state/local support. 3. **$849 billion loan programs:** • $454 billion to various Fed lending facilities which could create 10x the impact. • $349 billion in small business administration guarantees. • $29 billion for airlines/air cargo companies. • $19 billion for defense (Boeing). 4. **$352 billion through employer payroll tax deferment** for FY2020 & FY2021 and payable in installments from FY2022.

Key central banks in action (continued)

Region	Monetary	Fiscal
United Kingdom	• **Cuts totaling -65 bps,** policy rate at 10 bps. • Removal of countercyclical capital buffer of 1% to create £190 billion of bank lending and suspension of bank stress tests. • £200 billion of flexible government bond buying program. • Targeted Long-Term Refinancing Operations (TLTRO) style funding to banks for 4 years at 5% of a bank's real economy loans at policy rate plus spread (spread=0 for banks that don't shrink lending, and 25 bps for those that do). Banks can avail additional refinance by increasing lending at 5x net lending increase to SMEs and 1x to non-SMEs. • A cheap lending program for COVID-19 impacted companies.	• **£20 billion (0.70% GDP)** of direct spending • **£330 billion (11% GDP)** of guaranteed loans for businesses. • Government to pay **80% of worker salaries that firms cannot afford to keep up to £2500** for a minimum period of 3 months.
Euro Area	• **Unchanged rates (deposit rate at -0.50%).** • Looser bank capital norms and easier collateral standards. • A new **flexible Asset Purchase Program worth €120 billion** to be executed in 2020. • **Pandemic Emergency Purchase Program (PEPP) worth at least €750 billion** in 2020 with flexibility on timing, sector (government vs corporates) and quantum. Greece included. • Funding to banks meeting lending criteria at main refinancing rate less 75 bps (-0.75%). • Germany and France let banks tap capital buffer; All of Europe may ultimately allow it.	• **Germany €156 billion (0.4% GDP)** in supplementary budget; **€100 billon (0.25% GDP)** stabilization fund that can take equity stakes; **€400 billon (1.2% GDP)** in corporate guarantees. • **Italy €25 billion (0.80% GDP)** to spur lending of €250 billion. • **France is working on €40 billion (1.5% GDP).**
Japan	• **Unchanged rates (cash rate -0.1%)** but negative rates not applicable to deposits by companies impacted by COVID-19. • **Upper limit for annual purchases of assets ↑ by ¥8.1 trillion (US$77 billion)** comprising ETFs (¥6 trillion to ¥12 trillion), REITS (¥90 billion to ¥180 billion), commercial paper (¥2.2 trillion to ¥3.2 trillion) and corporate bonds (¥3.2 trillion to ¥4.2 trillion). Bank of Japan already owns 50% of Japanese government bonds and 5% of Topix market cap through ETFs and Japanese REITs. • Several rounds of unscheduled QE in JGBs already.	• Phase 1 and 2 were just **$5 billion.** • **Phase 3 could be $280 billion (5.5% GDP).**
Australia	• **Cuts totaling -50 bps to 0.25%,** 3 year yield capped at 0.25% and sovereign bond purchases activated.	• **US$10.5 billion (0.70% GDP).** More to come.
New Zealand	• **Cuts totaling -75 bps to 0.25%** and US$17 billion worth asset purchases over 12 months.	• **US$7 billion (4% GDP).**
Canada	• **Cuts totaling -150 bps, policy rate at 0.25%.**	• **US$57 billion (3.5% GDP)**
Norway	• **Cuts totaling -125 bps, policy rate at 0.25%.**	• **US$10 billion** (loan program). Guarantees to airlines for US$550 million. • Payroll tax cut likely.

Key central banks in action (continued)

Region	Monetary	Fiscal
Sweden	• **Liquidity support: It has vowed to not use negative rates again.**	• **US$29 billion (5.5% GDP).**
Switzerland	• No change (they are already at -75 bps).	• **CHF 42 billion (6% GDP),** 50% in liquidity support and loan guarantees.
Poland	• **Policy rate -50 bps to 1%.**	• **US$16 billion (2.8% GDP).**
Czech Republic	• **Policy rate -50 bps to 1.75%.**	• **US$4 billion (1.5% GDP).**
China	• Reserve requirement ↓50-100 bps, an additional 100 bps for qualified joint-stock banks, unlocking US$ 80 billion of funding. • **Reverse repo ↓ -20 bps to 2.20%.**	• **Existing stimulus 3% GDP.** • **Large package announced on 27 March:** 1. Special treasury bond issuance (only the 3rd time in 23 years) to finance spending. 2. Enhanced bond quotas for local & muni govts. 3. Expansion of fiscal deficit.
India	• **-75 bps repo rate to 4.4%; -90 bps reverse repo rate to 4%.** • Liquidity measures: 5% GDP in -100 bps cash reserve ratio to 3% ($17 billion), significant increase in bond purchases under TLTROs and higher refinance to banks at a lower rate. • FX swap auctions to provide US$ liquidity. • Relaxation of liquidity and deferment of capital buffer ratios. • Moratorium on term loans and deferment of working capital interest for a certain period without attracting NPL provisions.	• **US$22 billion (0.8% GDP)** to support the poor. Provinces announced additional measures.
Hong Kong SAR	• **Cut in policy rate in line with the US rate.** • Capital buffers waived to free US$6 billion of lending power.	• **US$15 billion (4% GDP),** includes resident payouts.
South Korea	• **Policy rate -50 bps to 0.75%.** • $60 billion swap agreement with US Fed. • Subsidized lending (at 0.25%) to SMEs under the fiscal program of support to them. • Unlimited liquidity to financial institutions through weekly repo operations for 3 months.	• **US$65 billion (4% GDP).** • An emergency fund US$80 billion of which $16 billion to buy bonds/ commercial paper, $9 billion for stock markets, $15 billion for credit to weak companies, and $40 billion to support SMEs.
Taiwan	• **Policy rate -25 bps to a record low of 1.125%.** Liquidity program: 1% of GDP for banks.	• **Plans for US$6 billion (2% GDP).**

Key central banks in action (continued)

Region	Monetary	Fiscal
Singapore	• **Unprecedented lowering of the midpoint of its currency band to current levels and lowering of slope to zero,** implying weaker exchange rate to support growth.	• **US$38 billion (11% GDP).**
Indonesia	• **Policy rate -25 bps to 4.5%** and reserve requirement -50 bps. Repo facility term extended to 12 months and more frequent FX swap auctions to alleviate US$ shortage.	• **US$25 billion (2.5% GDP).** Budget deficit cap relaxed to 5% GDP, up from 3%. 2020 corporate tax rate cut to 22% from 25%.
Philippines	• **Policy cut -50 bps to 3.25%,** reserve requirement -200 bps, US$6 billion of security purchases, and regulatory relief measures.	• **US$0.6 billion (0.20% GDP),** additional spending likely.
Malaysia	• **Policy rate -25 bps to 2.5%;** reserve ratio to 2% from 3%.	• **US$4.6 billion (1.2% GDP).**
Thailand	• **Policy rate -25 bps to 0.75%;** $30 billion liquidity mechanism for bond markets.	• **US$12.7 billion (2.5% GDP).**
Brazil	• **Policy rate -50 bps to 3.75%;** multiple FX swaps to manage burgeoning US$ demand.	• **US$ 36 billion (2.2% of GDP).**
Chile	• **Cut totaling -125 bps; policy rate at 0.50%.**	• **US$12 billion (4.7% of GDP).**
Mexico	• **Policy rate -50 bps to 6.5%.**	-
Peru	• **Policy rate -100 bps to 1.25%.**	-
South Africa	• **Policy rate -100 bps to 5.25%.**	• **US$2 billion (0.6% GDP)** likely.
Turkey	• **Policy rate -100 bps to 9.75%.**	• **US$15.4 billion (2% GDP).**

LOOKING AHEAD

Growth

With COVID-19, recession has become our base case. Our economists expect the US economy to contract -2% annualized in 2020, with growth contracting in each of the first three quarters before recovering in the fourth. The maximum pain will be felt in 2Q 2020 with a contraction of -10.5% (annualized, quarter over quarter (QoQ)). Peak to trough GDP decline is forecasted at 3.8% vs. a decline of 4% during the financial crisis. This time, it will happen in three quarters vs. six back then. Downside case: A more prolonged COVID-19 impact, with a peak-to-trough GDP contraction of -5.2% lasting five quarters and a -2.7% hit to growth in 2020 including a contraction of -12% (annualized, QoQ) in 2Q 2020. Upside case (small probability): COVID-19 turning into a seasonal flu with resumption of economic activity in the middle of 2Q 2020, causing 2020 GDP to contract just -0.8%.

Pain is expected to be felt globally. Europe will most likely enter a deep recession this year (Germany forecasts a contraction of -5% in 2020) but Japan and China may start recovering in 2Q 2020. Emerging markets may likely see output hits to their own COVID-19 cycles. The world economy looks headed for the next recession.

Inflation

One-off effects pushed inflation higher recently, both within DMs and particularly in EMs. However, the steep drop in global commodity prices and sharply lower growth imply much lower readings in coming months, as is being predicted by PGAA's leading inflation indicator.

Valuations

Equity valuations are in cheap territory despite recent earnings cuts. Equity yields relative to risk-free rates show markets as attractive. While 10-year yields are suppressed, even if we peg them at more normalized levels, equities look cheap.

Corporate spreads widened dramatically in March 2020 and entered the deep value zone. While we expect ratings downgrades and defaults to rise, central bank intervention (both the ECB and Fed will likely buy significant chunks of IG bonds) will start creating the much needed base.

For FX, the US$ entered the "expensive 3" club, based on purchasing power parity. Valuations, combined with shrinking interest rate differentials will make it a steeper climb higher for the greenback. However, we realize that COVID-19 uncertainty may keep the US$ well bid for some more time. A weaker dollar would benefit risk assets in emerging economies.

Monetary policy & financial conditions

Global monetary policy has never been easier, both in terms of policy rates and in terms of central banks' will to use their balance sheets. Yet, fears of a deep recession have considerably tightened the spread, equity and volatility components of our financial condition indices. As the announced monetary and fiscal measures work their way through, we expect a positive impact on spread (tighter), equity (higher), and volatility (lower) which may start easing financial conditions. While that is our base case, uncertainty will likely remain high as long as visibility on containing the virus in the US is low.

Market sentiment

Systematic and risk-parity investors have reduced risk positions considerably. Many momentum strategies are now short risk assets. Hedge fund beta to equities has reduced a fair bit. We believe rebalancing flows from global multi-asset strategies to be meaningful for risk assets. Assuming $4 trillion of such AUM, flows into equities for MSCI ACWI could be about $170 billion. A nearly similar amount of money could flow out of sovereigns. Yet, some large sovereign wealth funds representing countries primarily dependent on oil revenues are likely to sell financial assets to fund domestic budgets.

Key market risks

At this stage, the key risks we envision are:

- COVID-19 takes much longer to contain despite quarantines.
- Bankruptcies pick up dramatically despite the promise of aid by governments.
- Global governments remain divided. While central banks are working together, more coordination among heads of governments is needed.
- The US election cycle creates volatility, especially if markets start pricing in control of all three branches held by one party (that hasn't been a great period for markets historically).
- From a longer-term perspective, socialization of economic activity through government aid will have strings attached. It could come with stricter laws on buybacks, distributions, leverage, etc.

Global asset allocation

Our investment outlook

Asset Allocation: Often, the best time to add portfolio risk is when it's most uncomfortable. Rock-bottom valuations in areas of the market prompted our preference to move to an overweight equity bias and a corresponding underweight preference to alternatives, while maintaining fixed income at neutral.

Within equities, we reduced our preference for Japan to neutral as the market held up relatively well during the drawdown. We also reduced our preference for emerging markets to neutral from overweight on the expectation that developed markets economies will likely experience a quicker recovery. Within the space, we maintain an overweight to Asia ex Japan, expressed through a preference for China and South Korea.

Within **US fixed income,** we reduced Mortgages to underweight given elevated valuations, while raising our preference for US investment grade corporate bonds to overweight. We retain our

ASSET ALLOCATION	Investment Preference Less < < Neutral > > More
Equities	● ● ●→● ●
Fixed Income	● ● ● ● ●
Alternatives	● ●← ● ● ●
EQUITIES	
US	● ● ● ● ●
Large Cap	● ● ● ● ●
Mid Cap	● ● ● ● ●
Small Cap	● ● ● ● ●
Ex US	● ● ● ● ●
Europe	● ● ● ● ●
Japan	● ● ●← ● ●
Asia ex Japan	● ● ● ● ●
Emerging Markets	● ● ●← ● ●

Key: ● → ● indicates a change in preference from the previous quarter (light brouwn) to the current quarter (darker brouwn).

As of 31 March 2020. Alternatives asset classes include REITs, international real estate, MLPs, commodities, TIPS, multi-alternatives, and cash. Allocations across the investment outlook can be proportionately adjusted so magnitudes across categories do not have to net to neutral. These are the current views and opinions of Principal Global Asset Allocation and is not intended to be, nor should it be relied upon in any way as a forecast or guarantee of future events regarding particular investments or the markets in general.

overweight to preferred securities on better valuations and moves by several financial sector companies to preserve capital by postponing or withdrawing stock buybacks. Within ex-US fixed income, we double downgraded our preference to underweight emerging market bonds given our expectation that the environment will remain particularly challenging for them.

Within Alternatives, we have an underweight preference for risk reducers like cash to fund equities. We expanded the coverage of the space three distinct categories: (1) Return Enhancers – Asset classes like private equity and private debt whose expected return is higher than that of a multi-asset portfolio benchmark (2) Risk Reducing – Asset classes like cash and hedge fund-of-funds which have a lower risk (standard deviation) than the selected benchmark, and (3) Real Assets – Asset classes tied to the economics of underlying real assets, such as commodities and real estate.

FIXED INCOME	Investment Preference Less < < Neutral > > More
US	○ ○ ○ ● ○
Treasury	○ ● ○ ○ ○
Mortgages	○ ●← ● ○ ○
Investment Grade Corporate	○ ○ ●→ ● ○
High Yield	○ ○ ● ○ ○
Preferreds (Debt & Equity)	○ ○ ○ ● ○
Ex US	○ ● ○ ○ ○
Developed Market Sovereigns	● ○ ○ ○ ○
Developed Market Credit	○ ○ ● ○ ○
Emerging Markets	○ ●← ○ ←● ○
Alternatives	
Return Enhancing	○ ○ ● ○ ○
Risk Reducing	○ ● ○ ○ ○
Real Assets	○ ○ ○ ● ○

BIOGRAPHIES

Todd Jablonski, CFA — Chief Investment Officer

Todd is the Chief Investment Officer at Principal Global Asset Allocation, a specialized investment boutique within Principal Global Investors that engages in the creation of asset allocation solutions. He is responsible for investment management, product development, and risk management across the boutique. Todd serves as a Co-Portfolio Manager on our target risk asset allocation suite as well as our active multi-asset high income ETF strategy. He joined Principal in 2010 and has been in the investment industry since 1998. Todd is a member of PGI's Operating Committee and helps to shape and execute the vision and strategic planning for the firm. Previously, he was an Executive Director and Portfolio Manager for UBS, and a Vice President and Portfolio Manager for Credit Suisse. He received an MBA from New York University with a concentration in quantitative finance and a bachelor's degree in economics from University of Virginia. Todd has earned the right to use the Chartered Financial Analyst designation.

Binay Chandgothia, CFA — Managing Director, Portfolio Manager and Head of Asia

Binay is a Hong-Kong based Managing Director, Portfolio Manager at Principal Global Asset Allocation, a specialized investment boutique within Principal Global Investors that engages in the creation of asset allocation solutions. His entire career spanning 25 years has been in portfolio management, encompassing asset allocation, fixed income, and equities. Previously, Binay served as Chief Investment Officer for Principal Global Investors (Hong Kong) and Principal Asset Management (Asia) where he was responsible for overseeing investments in the Hong Kong region. He joined the Principal Financial Group in 2000 in India and has been in the investment industry since 1993. While in India he was the Deputy Chief Investment Officer of Principal's Indian Mutual Fund operations before relocating to Hong Kong in 2005. Prior to that, he spent 7 years in various portfolio management roles with India's largest banking group, State Bank of India. Binay has a post-graduate diploma in business management, equivalent to an M.B.A., from Xavier Institute of Management and a bachelor's degree in commerce from St. Xavier's College. He holds a Financial Risk Manager certification from the Global Association of Risk Professionals and has earned the right to use the Chartered Financial Analyst designation.

Greg Tornga, CFA — Managing Director, Portfolio Manager

Greg is a Managing Director and Portfolio Manager at Principal Global Asset Allocation, an investment boutique within Principal Global Investors that engages in the creation of asset allocation solutions. He is responsible for co-managing our target risk asset allocation suite, our first active multi-asset high income ETF, our Global Income strategy, and our target risk model portfolios, including a digital advisor solution. He joined Principal in 2011 and has been in the investment industry since 2002. Greg has extensive expertise in the fixed income market and was previously Head of Fixed Income and a Portfolio Manager at Edge Asset Management, another investment boutique within Principal Global Investors. Prior to Principal, Greg was a Senior Vice President for Payden and Rygel Investment Management in Los Angeles, where he served as the Head of Investment Grade Credit Strategy. His background also includes corporate finance roles in the Technology and Communication industry with Texas Instruments and Covad Communications. He received an M.B.A. from the Argyros School of Business and Economics at Chapman University and a bachelor's degree from the University of Michigan. Greg has earned the right to use the Chartered Financial Analyst designation.

IMPORTANT INFORMATION

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