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# GLOBAL MACRO SHIFTS

with Michael Hasenstab, Ph.D.  
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NAVIGATING UNCERTAIN WATERS:  
PREPARING FOR A POST-PANDEMIC WORLD

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# Global Macro Shifts

## Navigating Uncertain Waters: Preparing for a Post-Pandemic World

Global Macro Shifts is a research-based briefing on global economies featuring the analysis and views of Dr. Michael Hasenstab and senior members of Templeton Global Macro (TGM). Dr. Hasenstab and his team manage Templeton's global bond strategies, including unconstrained fixed income, currency and global macro. This economic team, trained at some of the leading universities in the world, integrates global macroeconomic analysis with in-depth country research to help identify long-term imbalances that translate to investment opportunities.



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# Overview

We are now in the early stages of a downturn that will be more profound, in terms of economic and social magnitude, than the global financial crisis (GFC). Global growth is expected to experience a contraction five times what was felt in 2008.<sup>1</sup> Meanwhile, growth in the US will likely double its 2008 contraction to the downside. Changes in public health strategies are likely to forever alter how business is done and society functions.

The policy response so far has been substantial from both the fiscal and monetary sides. However, already stretched deficits and central bank balance sheets across the developed world will likely present a constraint on stimulus efforts.

Moving forward will be challenging from an epidemiological and economic standpoint. Considering the potential paths ahead, we see a gradual reopening and recovery as the most likely scenario. Pursuant to this view, we see US unemployment spiking to levels unseen since the 1930s, and remaining elevated over the medium term due to delicate business dynamics that will be seriously tested during the lockdown period.

When we reach the other side of the public health crisis, several critical macroeconomic challenges will persist. In addition to elevated public debt levels and vastly expanded central bank balance sheets, the global economy will struggle to gain traction with sluggish demand from developed markets (DMs) and a more cemented move away from globalization. From this, we expect slower growth in global trade, as well as divergent paths among emerging markets, where those with fewer external vulnerabilities and more domestic resilience will lead the pack.

We are, furthermore, likely to emerge from this pandemic more polarized economically and politically, as wealth divides and populist tendencies continue to burgeon. Add to this the nascent inflationary pressures baked into swirling promises of endless money creation, and we end up with the picture of a future with highly uncertain economic outcomes. We may need to wait years, if not perpetually, for a return to normalcy.

In such an environment, with low and negative yielding debt piles growing around the world and shifting correlations between asset classes, we believe traditional investment positioning strategies should be reconsidered. We are shaping our investment approach to this crisis in two distinct phases. In this first phase, where economies reel from the impacts of lockdowns, we see value in traditional perceived safe-haven assets, such as the Japanese yen and the Swiss franc. This will be a period of marked difficulty for emerging markets. However, those economies will not all default, and as the more resilient markets start their road to recovery in the second phase, we believe new investment opportunities will emerge. We are currently preparing for the risks and opportunities that will arise in the post-pandemic world.

This edition of Global Macro Shifts begins with a discussion of the current global economic and policy backdrop. Section 2 discusses options for reopening economies and the likelihood of a gradual recovery from this crisis. Section 3 outlines the key risks the world will face once we emerge from the downturn. Section 4 describes the investment implications in this altered macroeconomic landscape, and Section 5 highlights the environmental, social and governance (ESG) impacts of the pandemic.

# 1. Where are we? Macroeconomic and policy backdrop

## Economic collapse (both supply and demand shock) and TGM estimate on growth

The world now faces a momentous crisis, gripped by an unprecedented sharp economic downturn whose only comparator in modern history is the Great Depression. The ongoing pandemic has already claimed the lives of at least 286,000 people globally<sup>2</sup> and shuttered international borders as well as cities and localities around the world. Even as the impact's magnitude begins to be better understood, the path to recovery remains as uncertain as the characteristics of the post-pandemic economy into which we are headed.

### GROWTH OUTLOOK THIS YEAR IS PROJECTED TO BE WORSE THAN DURING THE GFC

**Exhibit 1: Comparisons of global growth and US growth forecasts**  
April 2020

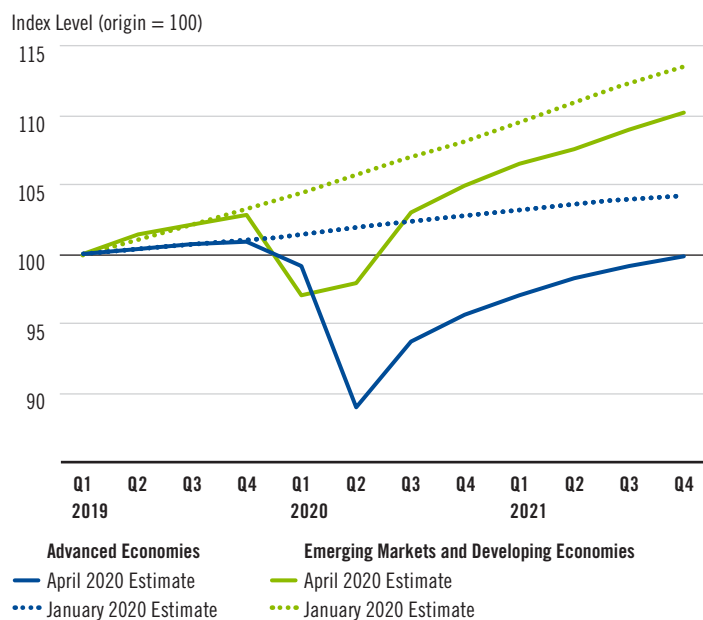
	Global growth (2020)	US growth (2020)	Main assumption/view
<b>IMF baseline</b>	-3.0% (6.3pp lower than previous WEO)	-5.9% (7.9% lower)	Pandemic fades in 2020's second half. Duration of shutdown is 1 quarter. Much worse is possible.
<b>OECD</b>	2% GDP drop per month of shutdown in general		About 30%~40% of sectors are affected by shutdown.
<b>Oxford Economics</b>	-2.8%	-6.9%	World growth bottoms in the second quarter of 2020 in baseline.
<b>Congressional Budget Office (CBO)</b>	—	-5.6%	US GDP finds a bottom in the second quarter of 2020 falling 11.8% quarter-over-quarter, or 39.6% year-over-year, and recovers strongly thereafter.
<b>GFC (worst)</b>	-0.6% (2009)	-2.6% (2009)	
<b>Great Depression (worst)</b>	—	-12.9% (1932)	

Source: IMF World Economic Outlook, April 2020; OECD; Oxford Economics April 2020 update; Congressional Budget Office (CBO) Budget and Economic Outlook (March 2020); Bureau of Economic Analysis.

The IMF's recent World Economic Outlook<sup>3</sup> highlights the harsh realities of this downturn. Under its baseline scenario, global growth is expected to be -3% in 2020, a much larger contraction than the -0.6% observed during the GFC. For the United States, growth is expected to fall by 6%, compared to a 2.6% drop in 2009 and a 12.9% fall in 1932. The Organization for Economic Co-operation and Development's (OECD's) view<sup>5</sup> is in line with this forecast. Based on sectoral analysis, the OECD concludes that each full month of lockdown could cause the GDP (gross domestic product) of most countries to fall by 2%. Similarly, we see the global economy facing a dramatic headwind this year that could drag growth 5% to 10% below trend, depending on the duration of the pandemic and associated lockdowns.

### THE IMF SEES A SLOW RECOVERY AHEAD

**Exhibit 2: Quarterly world GDP estimates**  
April 2020



Source: IMF, World Economic Outlook.

## Fiscal policy and central bank policy in implementation

In response to this crisis, policymakers around the world have unveiled substantial fiscal and monetary stimulus packages. However, in both arenas, limited policy space is likely to hinder the overall efficacy of the programs.

Starting with the fiscal side, it is critical to note that the headline figures announced by governments generally depict an inflated image of their respective package's actual immediate impulse. For instance, in Japan, a portion of the stimulus package includes already existing fiscal programs. In addition,

### APPROVED FISCAL STIMULUS MEASURES WILL LIKELY BE ENOUGH TO OFFSET ROUGHLY ONE QUARTER OF LOST ECONOMIC ACTIVITY IN MOST MAJOR COUNTRIES

#### Exhibit 3: Economic impacts of fiscal measures in major economies

May 2020

	% of GDP		First-Quarter 2020 GDP Loss	Fiscal Offset	Net Effect % of Annual GDP
	Fiscal Direct	Fiscal Indirect			
<b>United States</b>	8.5	3.7	1,358	2,006	3
<b>Germany</b>	4.5	29.6	236	395	4.2
<b>France</b>	1.9	13.9	165	123	-1.6
<b>Italy</b>	1.4	32.4	123	155	1.6
<b>United Kingdom</b>	4.5	15.7	166	203	1.4
<b>China</b>	2.6	0	885	366	-3.7
<b>Japan</b>	9.6	9.7	327	607	5.3
<b>Canada</b>	6.2	12.2	104	145	2.4
<b>Australia</b>	9.9	1.5	86	122	2.6
<b>India</b>	0.8	0.3	189	24	-5.4
<b>Norway</b>	3.7	6.2	20	16	-1.3
<b>Sweden</b>	2	6.5	31	16	-3
<b>Total</b>	<b>4.1</b>	<b>9</b>	<b>3,689.8</b>	<b>4,178.6</b>	<b>—</b>

Source: National ministries, IMF, TGM calculations.

## SO FAR, THE ACCUMULATED GLOBAL DIRECT FISCAL RESPONSE TO THE PANDEMIC HAS NOT REACHED LEVELS SEEN IN THE GLOBAL FINANCIAL CRISIS

#### Exhibit 4: Direct fiscal measures passed to date in 2020 vs. GFC

April 2020

Direct Fiscal Measures	Country	GFC % GDP	COVID Passed (cumulated) % GDP
<b>Weighted average (total)</b>		<b>5.9</b>	<b>4.4</b>
<b>G4 (US, CH, JP, Ger) weighted</b>		<b>7.1</b>	<b>6.4</b>
<b>North America</b>	United States	6.0	8.4
	Canada	2.9	6.2
<b>Latin America</b>	Brazil	3.7	2.2
	Mexico	2.0	0.0
	Argentina	0.0	1.2
	Chile	4.0	5.5
	Colombia	1.5	1.4
	Peru	1.7	4.1
<b>Europe</b>	European Union	0.3	0.3
	Germany	2.1	4.9
	France	1.3	1.8
	Italy	0.6	1.4
	Spain	8.1	1.7
	United Kingdom	2.2	4.6
	Sweden	2.5	2.0
	Norway	6.0	3.7
	Switzerland	1.5	6.0
	Poland	2.5	3.0
	Hungary	0.0	3.0
	Czech Republic	2.0	2.0
<b>Asia</b>	Russia	3.8	1.1
	Turkey	2.2	1.8
	China	12.5	2.5
	Japan	5.0	9.6
	India	5.0	0.8
	South Korea	5.0	0.6
	Taiwan	3.0	0.3
	Indonesia	1.4	3.3
	Philippines	2.6	1.3
	Thailand	17.0	2.4
Malaysia	10.4	2.5	
Australia	4.1	9.9	

Source: IMF and national finance ministries.

most countries have embraced various support measures—tax deferrals, loans, equity injections, and guarantees—that will have only indirect impacts on growth this year because they provide financing rather than directly increasing spending. In terms of direct fiscal spending, governments have so far approved measures totaling 4.4% of global GDP.<sup>6</sup> While considerable, this figure is still less than the 5.9% of GDP in additional direct spending allocated during the GFC years. Using a fiscal multiplier of 1 for direct measures and 0.2 for indirect measures, we estimate that the fiscal measures announced in larger economies will be enough in aggregate to offset the loss of roughly 1 quarter of annual GDP (see Exhibit 3). Note, however, that these measures will not fully avert a significant contraction in growth this year because the government payments are counted as transfers rather than spending under GDP accounting criteria. For the money to benefit GDP figures, it needs to actually be spent by the end consumer or business, which will take time with many economies currently shuttered.

On the monetary side, the existing low interest-rate environment preceding this pandemic has limited central banks' traditional policy response mechanism. During the GFC, the US Federal Reserve (Fed) cut its policy rate by a total of 525 basis points (bps). This time around, the Fed has cut by just 175 bps, leaving the federal funds target rate range at 0%–0.25%. Even this more moderate move is vastly larger than the responses from the Bank of Japan (BoJ) and European Central Bank (ECB), whose rates were already negative prior to the present slowdown. With no further space to act in the traditional channel, major central banks have doubled down on strategies of quantitative easing (QE) and other non-traditional policies. QE refers to the practice of expanding money supply and reducing longer-term interest rates through the direct purchase of government and other securities.

For its part, the Fed has already expanded its balance sheet at a fast pace. Its total assets have grown from US\$4.2 trillion in December (representing about 19.2% of GDP) to US\$6.7 trillion by mid-April (30.9% of GDP). Most of the expansion thus far can be explained by its “traditional” asset purchase program targeting Treasury and government sponsored enterprise (GSE) securities. The holdings of those have increased from US\$3.7 trillion in December (17.2% of GDP) to US\$5.6 trillion in mid-April (25.8% of GDP), surpassing their prior record in both nominal terms and relative to GDP (over 24%

of GDP in 2014). In addition to these programs, which are already reflected in the bank's balance sheet and which as yet do not have an official upper limit, the Fed has pioneered new measures to provide up to US\$2.3 trillion in loans to support the economy, of which only a portion is currently disbursed. This latter figure includes up to US\$750 billion allocated to purchase corporate bonds from issuers who are either investment grade or had been categorized as such as of March 22, 2020 (so-called “fallen angels”).

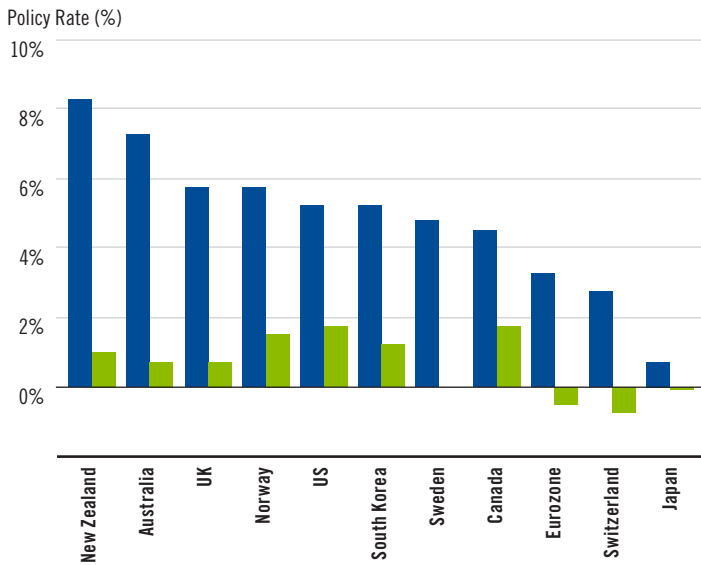
In Japan, the BoJ recently removed its annual purchase target on Japanese government bond (JGB) purchases—roughly ¥80 trillion (US\$743 billion)—implying that its purchases may now be unlimited. This does not necessarily imply a potentially massive increase in eventual purchases, as the BoJ had struggled previously to purchase the full allotted amount (actual purchases were only ¥20 trillion). Consequently, the target change may prove to be more of a semantic shift, as long as the BoJ is able to maintain the yield curve around its current levels. Still, this signals a more accommodative stance from the bank and is accompanied by other QE measures. Specifically, the BoJ doubled its target for planned purchases of exchange-traded funds (ETFs) (to ¥12 trillion annually), and increased its targeted holdings of corporate bonds to ¥4.2 trillion from ¥3.2 trillion previously and for commercial paper to ¥3.2 trillion from ¥2.2 trillion previously, with the additional purchases to continue until September.

Meanwhile, the ECB will provide support through additional asset purchases of €120 billion until end-2020 under an existing program. The bank also plans to launch an additional €750 billion asset purchase program of private and public sector securities (Pandemic Emergency Purchase Program [PEPP]) until end-2020. Complementing these measures, the ECB has expanded the eligible credit claims that a national central bank is able to use as collateral in the ECB repo operation. A reduction of collateral valuation haircuts has also been introduced to achieve the same goal. To further lessen the risk from potential credit-rating downgrades, the ECB will accept some junk-rated debt as collateral for loans to banks, as long as they were rated at least BBB– on April 7. The figures on the next page demonstrate the limited policy room among the worlds' major central banks, relative to their stance prior to the GFC, as well as the Fed's already vastly expanded QE program.

## MAJOR CENTRAL BANKS WITH LESS ROOM TO CUT RATES WILL TURN TO BALANCE SHEET EXPANSION

### Exhibit 5: Monetary policy rates heading into GFC and COVID-19 crisis

2008 (GFC) and 2020 (COVID-19)

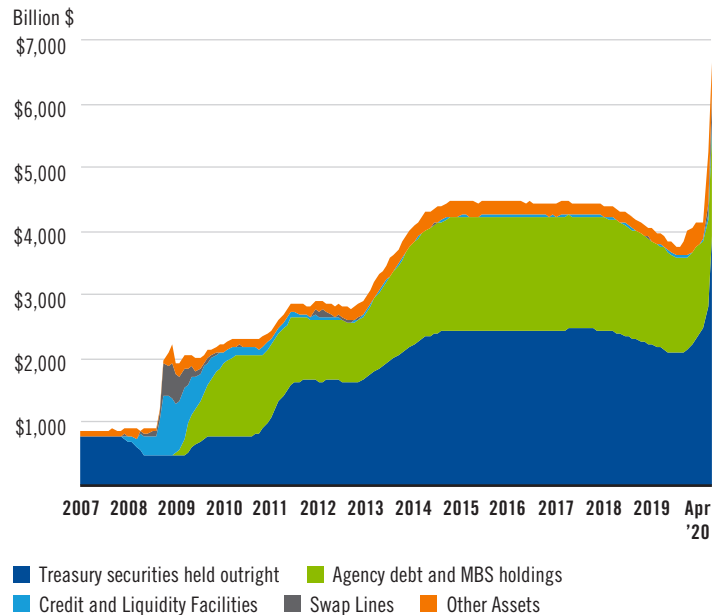


■ Monetary Policy Rates Entering into GFC  
■ Monetary Policy Rates Entering into COVID-19 crisis

Source: Bloomberg.

### Exhibit 6: Federal Reserve Board Assets

January 2007–April 2020



Source: Fed.

### Exhibit 7: Comparison of monetary responses between GFC and COVID-19

May 2020

	Rate Cuts		QE and Other Central Bank Programs	
	GFC	This Time	GFC	This Time
<b>US</b>	525 bps in total cuts	175 bps	US\$3.5 trillion in total assets held relative to 2007 level	Limitless balance sheet expansion. Expansion into new asset classes (e.g., ETFs and high yield), expanded credit facilities with US Treasury backing. Thus far, set up programs to extend credit by US\$2.3 trillion but another US\$2.2 trillion could be lent with additional US Treasury funds already committed.
<b>ECB</b>	From 4.25% to 1% (325-bp cut), LTRO (Long Term Refinancing Operations)	TLTRO (Targeted Longer-term Refinancing Operations) at rate as low as -0.75%	No programs announced	Increase bond purchase by €120bil/ PEPP (Pandemic Emergency Purchase Programme) at €750bil purchase. Collateral easing measures such as reduction in collateral valuation haircut. Eligibility of marketable assets used as collateral in ECB repo, as long as it was investment grade on April 7.
<b>Japan</b>	40-bp cut, \$ supplying program, no particular QE	No cut	20 trillion yen JGB purchase in 2009	Flexible QE by dropping 80 trillion yen target for JGB purchases. Expansion in various asset purchase programs, including commercial paper, corporate bonds, exchange-traded funds and Japan real estate investment trusts.
<b>China</b>	210-bp cut in 1-year lending rate, 200-bp cut in reserve requirement ratio (RRR)	35-bp cut in 1y MLF (Medium-term Lending Facility) rate, 100-bp cut in RRR	No programs announced	No programs announced

Source: Fed, ECB, BoJ, The People's Bank of China.



## 2. Reopening the economy

The root of this crisis is first and foremost a public health emergency. COVID-19 is a relatively fast spreading disease, with a long incubation period, that has a relatively high morbidity rate. COVID-19 is also a new disease, so people don't have immunity to it. Until a treatment or a vaccine is found and distributed widely to society, people will continue to use nonpharmaceutical interventions (NPIs) to reduce the spread of the disease and limit negative health care outcomes. Those NPIs have generally involved differing degrees of social/physical separation and the closure of significant portions of a country's economy.

At the time of this writing, there are several proposals to gradually reopen economies without unleashing a temporary new wave of cases that would overwhelm health care systems. In general, the reopening is set into several stages, starting from increasing the capacity of testing to a partial reopening. In the final stage, an economy will theoretically be fully reopened, but with a robust medical surveillance system put in place and potentially lingering limits on large gatherings.

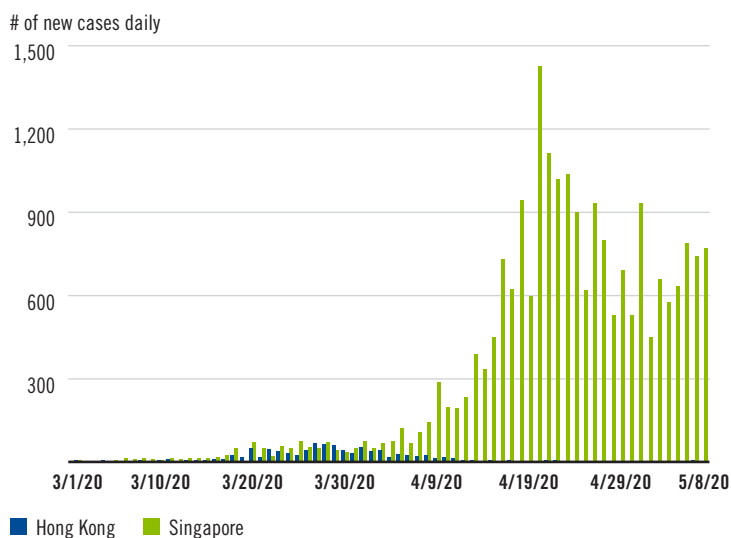
Currently, however, most countries, as well as most states in the US, do not appear ready to move into the latter stages in a safe fashion. This is largely due to insufficient testing and contact tracing capacity. For instance, in the US, public health experts argue that the level of testing would need to triple from average levels in April in order to safely reopen the economy.<sup>7</sup> This suggests that states that do reopen may be at a significant risk for a new wave of cases.

There is more than just epidemiological theory behind this assertion. During the 1918 flu pandemic, for example, the initial outbreak in the summer of 1918 was followed by the more devastating second and third waves (the second being the worst) in the fall of 1918 and the spring of 1919. Although there are certainly notable differences between that pandemic and the one we face today, this historical precedent lends at least some credence to the possibility of a similar trajectory occurring once again. In this present crisis, fears of a potential second wave have already prompted Singapore to add new strict lockdown procedures, after previously relaxing earlier distancing measures, only to see its number of confirmed cases jump.

### SINGAPORE COVID-19 CASES SPIKED IN MID-APRIL, WHILE HONG KONG REMAINED FLAT

**Exhibit 8: Daily new confirmed cases of COVID-19 in Hong Kong and Singapore**

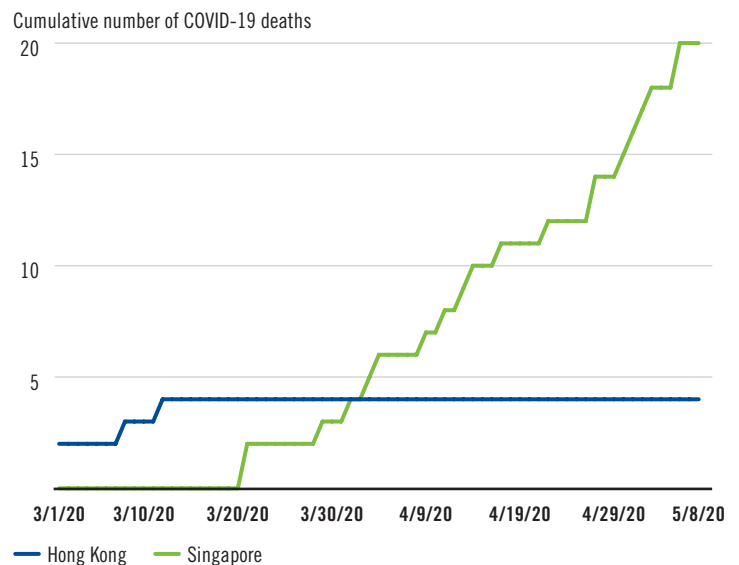
March 1, 2020–May 8, 2020



Sources: Bloomberg News, Johns Hopkins University.

**Exhibit 9: COVID-19 deaths in Hong Kong and Singapore**

March 1, 2020–May 8, 2020



Sources: Bloomberg News, Johns Hopkins University.

Policymakers are in a difficult position. There is a prevailing narrative that this situation represents a simple trade-off between lives and livelihood. However, a closer examination of the facts shows this narrative to be somewhat facile. There are nuances to both sides of this debate, and both options hurt peoples' lives. Tyler Cowen, a professor of economics at George Mason University, sums up the dilemma well: If we keep the economy closed at current levels, it will continue to decay, and at some point turn into irreversible, non-linear damage. No one knows when that point of irreversibility will be reached, or how to model the course of that process. That decay also will eat into our future public health capacities, and perhaps boost hunger, poverty, abuse and suicide. On the other hand, if we keep people locked up at current levels, fewer of them will be exposed to the virus, and in the meantime we can develop better treatments, and also improve testing and tracing capabilities. No one knows how quickly those improvements will come, or how to model the course of that process, or how much net good they will do. The relative pace of these two processes should determine our best course of action. However, given that no one knows with certainty the relative pace of these processes, it is challenging to discern the optimal path forward.<sup>8</sup>

## Growth path during the crisis and after

There are many reasons for the international economic recovery to proceed at a measured pace over the next months and years. As noted in the above sections, the source of the economic crisis is the ongoing health crisis. Until economies can safely move on to full containment and mitigation of the disease, social distancing measures and other restrictions will continue to weigh on growth.

At the onset of the shock, as social restrictions are first put in place, economies experience a sharp reduction in productive capacity as much of the labor force is required to stay at home. There is only limited room for policy action to ameliorate the impact of the shock to the supply of labor. The best policy can do is to provide funding for the health crisis and offer some subsistent support in the form of loans and lost income relief to provide a short-term buffer. Almost certainly, domestic production and income plummet.

As income drops, and given the nonpharmaceutical intervention (NPI) restrictions, domestic demand also contracts sharply. There is some room to alleviate this second-round impact on domestic output through aggressive policy action in alleviating credit constraints faced by households and businesses. This type of policy action works by helping achieve intertemporal borrowing through policy: the government

borrow today but pays back the debt by producing more tomorrow. However, if the shock lasts too long or if the recovery is not full, then the government's ability to redistribute income from the future to the present is compromised. The longer the health crisis lasts, the greater the costs. The further into the future and the shallower the bounce-back, the greater the resulting policy overhang.

The initial relaxation of NPI restrictions will undoubtedly bring short-term relief in terms of economic activity, prompting an initial burst. However, given the healthcare nature of the crisis the recovery will not be full. We will likely be stuck in a lower capacity economy for a while unless we risk a new wave of cases.

We see many domestic and international factors that will likely delay and dampen the recovery and thus blunt policymakers' ability to boost activity in the near term. We explore some of those below: slow employment recoveries during recessions and dampened business creation. Yet there are also other critical factors that are important to keep in mind. For one, the potential for added financial stress cannot be ignored. The Fed is able to help alleviate liquidity issues but is not in a good place to resolve solvency issues. The longer the crisis lasts, the greater the immediate costs, and the greater the risks of large-scale insolvencies. In addition, the biological nature of the present slowdown could have a more pronounced impact than prior recessions on reducing labor supply and increasing savings rates in the longer term, lowering growth potential. Indeed, pandemics have historically been associated with lower GDP growth for extended periods of time. Jordà, Sing and Taylor (2020) conducted an empirical analysis using data going back to the 14th century.<sup>9</sup> They found that following major pandemics there are economic impacts that persist for about 40 years, depressing the rate of return to capital through labor scarcity and greater precautionary savings.

Later, we explore further considerations regarding the global economy, such as the nature of the crisis that has resulted in a coordinated shock. During the GFC, China and emerging economies continued growing at a fast pace even as the United States and Europe fell into recession. China and other emerging markets (EMs) were able to support global demand and provide a pool of savings that the developed markets (DMs) could use to smooth out consumption. This channel of support is not available today as COVID-19 is hitting the whole world at once. Moreover, globalization is in reverse. The COVID-19 crisis has just accelerated the destruction of global value chains that began years before, as highlighted by the trade disputes between United States and the rest of the world.

### Slow employment recovery and dampened business creation

During the first few weeks of the COVID-19 crisis, 20.1 million people in the United States filed for unemployment claims, representing about 12.2% of the US labor force. On an immediate basis, this could push the unemployment rate well above 15%. A very recent study by Bick and Blandin<sup>10</sup> that attempts to replicate the monthly Bureau of Labor Statistics (BLS) employment survey using online responses covering the beginning of the shutdowns (March 29–April 4) found that the employment rate decreased to 60.7% from 72.7%, implying 24 million jobs lost. They further estimated that the unemployment rate increased to 20.2% from 4.5%.

There is a significant risk that those unemployed will remain so for a while. In the recent history of the United States, the unemployment rate has tended to rise relatively quickly during recessions but has taken much longer to decline to pre-crisis levels. During the 1990 recession, it took nine months for the unemployment rate to rise from 5.2% to 6.8%. It took 65 months to return to 5.2%. During the 2001 recession, it took 14 months for the unemployment rate to rise from 4.2% to 5.9%, and it did not regain its pre-recession level. During the GFC, it took 23 months for the unemployment rate to rise from 4.7% to 10%. It took 85 months to decline to 4.7% again. Notably, the peak in the unemployment rate generally comes after the National Bureau of Economic Research (NBER) has called an end each US recession. This time around, the specifics of the crisis, which require the gradual reopening of

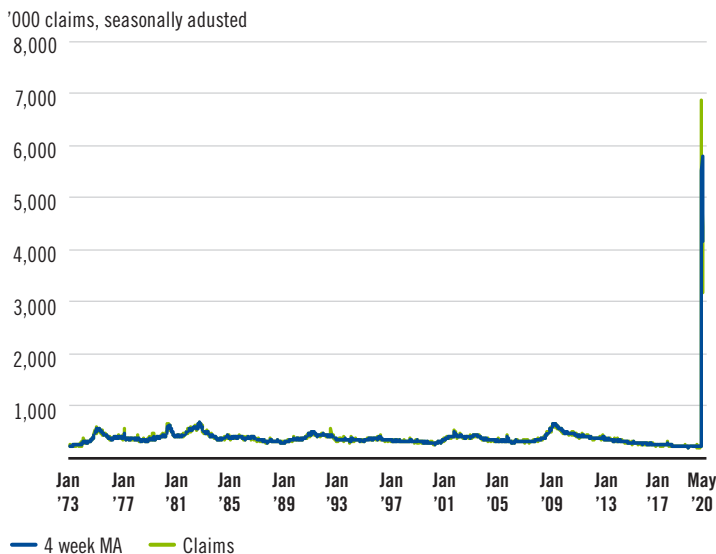
economic sectors, could exacerbate the labor market recovery beyond the historical pattern. For instance, as many as 51 million people would not be able to return to work if schools do not reopen, or if they choose not to send children to school due to safety fears.<sup>11</sup> For its part, the CBO estimates that unemployment will peak at 16% in the third quarter of 2020 and then decline gradually to 9.5% by the end of 2021.<sup>12</sup>

In addition, the nature of this downturn could lead to the destruction of many jobs. Many of the recent mass rounds of layoffs were identified as “temporary.” Looking ahead into an uncertain epidemiological horizon and unsure when demand will return, businesses large and small generally resorted to furloughs, rather than outright firings, to reduce their payroll costs. On the surface, this is a positive detail, as it preserves the possibility that this large chunk of American workers could return to their positions at the conclusion of this harrowing episode. But history and present economic conditions suggest a more sobering outlook. We estimate that despite the overwhelming share of “temporary” layoffs presently, assuming a one-month shutdown, the COVID-19 pandemic could lead to the permanent loss of 25.7 million jobs, representing 15.8% of the civilian labor force. A longer four-month shutdown would multiply job losses at small businesses, leading to an estimated permanent loss of 43.1 million jobs (26.5% of the labor force). In Exhibit 14, we outline how we end up at these figures.

### UNEMPLOYMENT IS REACHING LEVELS NOT SEEN SINCE THE GREAT DEPRESSION

**Exhibit 10: Initial unemployment claims**

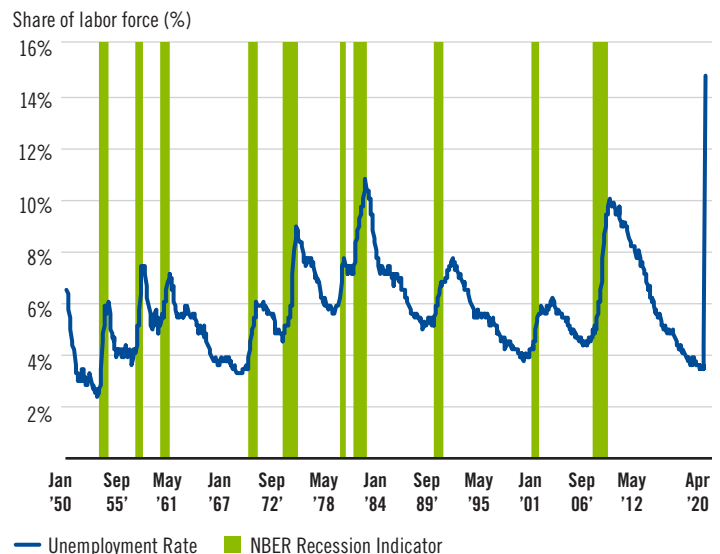
January 1973–May 2020



Source: U.S. Department of Labor.

**Exhibit 11: US unemployment rate**

January 1950–April 2020

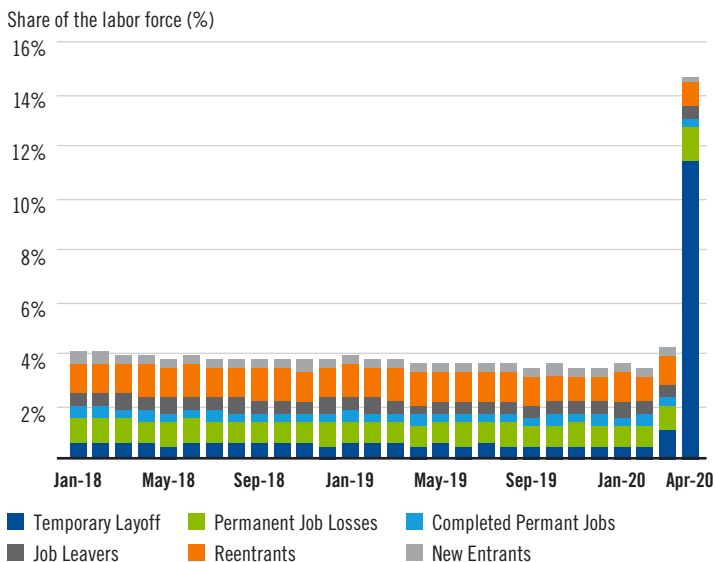


Sources: U.S. Department of Labor, Bureau of Labor Statistics, NBER.

## RECENT LAYOFFS HAVE BEEN BROAD-BASED, AND LARGELY CLASSIFIED AS “TEMPORARY”

**Exhibit 12: Reasons for unemployment**

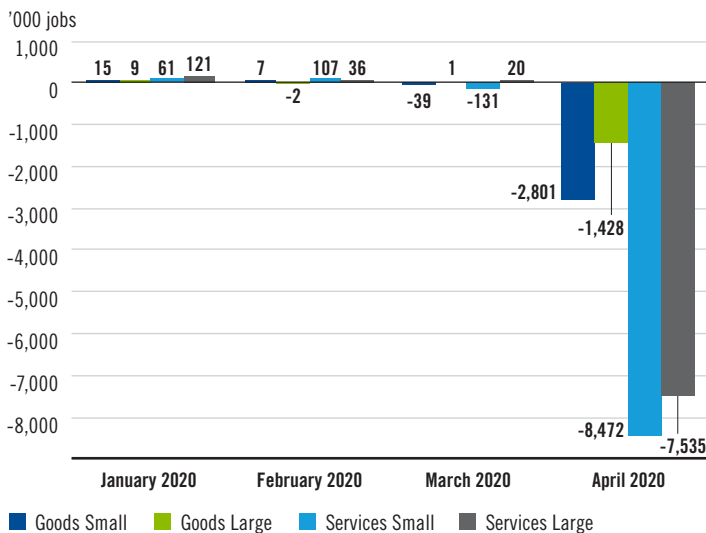
January 2018–April 2020



Source: U.S. Bureau of Labor Statistics, Current Population Survey.

**Exhibit 13: ADP private employment (one-month change)**

January 2020–April 2020



Source: ADP National Employment Report.

## TEMPORARY LAYOFFS MAY BECOME PERMANENT

**Exhibit 14: Estimate of gross jobs losses in the US due to COVID-19 crisis<sup>13</sup>**

May 2020

### Background

Many small businesses, which represent 47% of private sector payrolls, will not be able to survive a months-long closure. In a recent NBER paper surveying small businesses, researchers found that, at the onset of COVID-19 concerns in the US, the median firm with expenses over US\$10,000 per month had only enough cash on hand to last for two weeks. Three-quarters of respondents stated that they had only enough cash on hand to cover two months of expenses or less. That survey made participants aware of the recently enacted Paycheck Protection Program, and then asked them whether they thought their business would still be operational in December 2020. The average estimated firm survival rate across sectors for a one-month shutdown was just 72%. For a four-month shutdown, that figure dropped to 47%.

Large businesses are, on average, significantly more likely to survive this slowdown,

given their higher cash reserves and relatively ample credit lines. However, this does not mean that all of their currently furloughed workers will return after the crisis subsides. As we saw in the GFC and prior downturns, when large businesses emerge from recessions, their payrolls tend to be reduced from prior levels. Some key factors behind this pattern, besides the sluggish resumption in demand, are the acceleration in automation of routine jobs, as well as heightened outsourcing, in periods of economic downturn. Essentially, by forcing companies to more seriously consider cost-cutting measures, recessions can serve as catalysts for longer-term trends toward technological disruption and international labor arbitrage.

This time around, we expect to see some of these same factors at play, marking a continuation of the shift toward the digital economy and automation. In addition, intense pressures in the retail sector, which have been building for years, may

reach a breaking point for many companies that had weak financial positions coming into the pandemic. While it is true that curtailed immigration and deglobalization will likely limit the amount of jobs outsourced abroad, we still expect to see a significant level of domestic outsourcing.

### Methodology

To estimate the gross number of jobs that will be permanently lost as a result of this crisis, we begin by looking at small businesses. For this sector, we use the surveyed small business survival rates across various industries from the aforementioned NBER publication to determine small firm closures. For large business payroll figures, we replicate the industry-level percent employment fluctuation during the GFC, augmenting the historical change in industries that are more acutely impacted by the present conditions (food, accommodation, travel, retail, manufacturing and entertainment).

Sector	SMALL BUSINESS (0-499 EMPLOYEES)		BIG BUSINESS (500+ EMPLOYEES)			TOTAL IMPACT (GROSS)	
	Total Private Employment	% Small Business Employment	Impact on Employment ('000)	Impact on Employment ('000)	Impact on Employment ('000)	Change in Employment to Population Ratio	Change in Employment to Population Ratio
			1-Month Shutdown	4-Month Shutdown	1-Month Shutdown	4-Month Shutdown	
Accommodation and food services	13,702.1	62%	-2634	-5182	-570	2.00%	3.50%
Retail trade	15,403.6	32%	-1528	-3204	-2049	2.20%	3.20%
Healthcare and social assistance	20,700.1	57%	-2478	-6254	356	1.30%	3.60%
Construction	7331	84%	-1724	-3510	-282	1.20%	2.30%
Administrative, support, and waste services	9,055.3	33%	-837	-1733	-718	1.00%	1.50%
Manufacturing	12,783	42%	-1503	-3114	-3521	3.10%	4.10%
Transportation and warehousing	5,597.5	33%	-554	-1108	-1025	1.00%	1.30%
Arts, entertainment, and recreation	2,285.7	62%	-496	-779	-113	0.40%	0.50%
Wholesale trade	5,912.1	34%	-623	-1226	-355	0.60%	1.00%
Real estate and rental	1,731.5	66%	-297	-503	-58	0.20%	0.30%
Educational services	3,970.6	45%	-447	-983	29	0.30%	0.60%
Personal services	1,510.2	80%	-520	-725	-11	0.30%	0.50%
Professional, scientific, and technical services	9,730	59%	-1206	-2124	-186	0.90%	1.40%
Finance and insurance	6,481	30%	-428	-719	-316	0.50%	0.60%
Information	2,885	31%	-197	-465	-205	0.20%	0.40%
Repair and maintenance	1,368	81%	-332	-665	0	0.20%	0.40%
Management of companies and enterprises	2,443.7	12%	-88	-176	-11	0.10%	0.10%
Utilities	547	21%	-25	-60	-5	0.00%	0.00%
Mining, quarrying, and oil and gas	697	42%	-117	-205	-35	0.10%	0.10%
Agriculture, forestry, and fishing	2,263	95%	-602	-1247	-6	0.40%	0.80%
<b>Total Private</b>	<b>12,7703</b>	<b>47%</b>	<b>-16,635</b>	<b>-33,982</b>	<b>-9,082</b>	<b>15.80%</b>	<b>26.50%</b>
<b>Total Workforce (incl. public)</b>	<b>16,2537</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

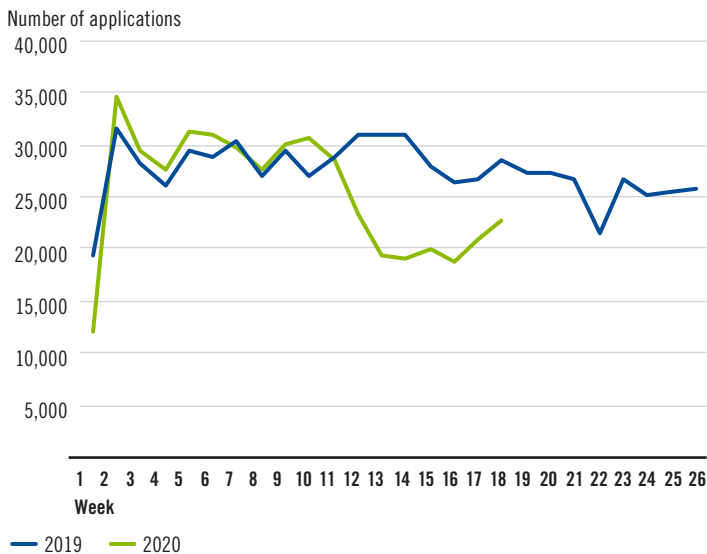
Source: BLS, NBER, TGM Estimates May 2020.

As jobs are removed from the economy, fewer jobs are being created, complicating prospects further. The recent deceleration in business formation should mean that employment figures are also substantially negative in net terms. During the GFC, high propensity business applications declined gradually and eventually slid by 24% below their pre-recession level in 2009. Business formation remained hampered even during the recovery and still ended 2019 13% below its pre-recession level. The latest quarterly adjusted data run through the first quarter of 2020, capturing only the beginning of the lockdown measures and the impact on business formation. Looking at higher frequency non-seasonally adjusted data, we find that high-propensity business applications<sup>14</sup> fell by 38% during the last week of the first quarter and the first week of 2020's second quarter relative to a year prior. It remains to be seen whether this sharp drop is only a temporary blip. However, we know from looking at the GFC that business formation is hampered by recessions and takes a while to come back.

Notwithstanding this negative outlook for the labor market, this downturn will likely have at least one positive impact.

### NEW BUSINESS FORMATION HAS SLOWED

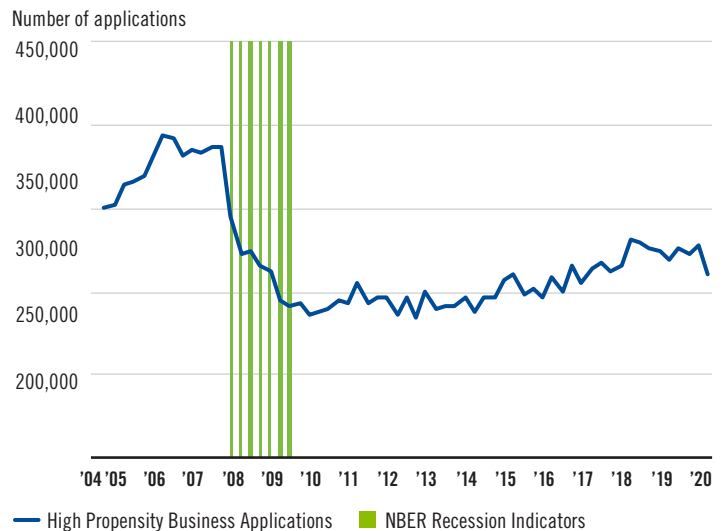
**Exhibit 15: US high propensity business applications (Weekly)**  
January 2019–May 2020



Sources: US Census Bureau, Business Formation Statistics.

The worldwide lockdowns have forced many people to work from home. In so doing, this crisis has helped realize the latent potential of online connectivity, which had previously been utilized only in certain pockets of the economy. Now, videoconferences are commonplace across industries<sup>15</sup> and companies which had not previously fully embraced remote work solutions are rethinking their strategies. For instance, Franklin Templeton's call centers and processing centers globally have shifted to work from home without any problem since the lockdown started. Looking at the overall economy (prior to the pandemic), estimates suggested that 37% of jobs in the United States—accounting for 46% of all wages—can be done at home.<sup>16</sup> Additionally, a recent study by macroeconomists found that during the coronavirus lockdowns so far, over 60% of the hours worked were from home, compared with roughly 10% in 2017–2018.<sup>17</sup> Now that this door of possibilities has been opened, it is highly likely more work will be done via online channels in the future, effectively cutting company operation costs as well as reducing transport-related greenhouse gas emissions.<sup>18</sup>

**Exhibit 16: US high propensity business applications (Quarterly)**  
Q3 2004–Q1 2020



Sources: US Census Bureau, Business Formation Statistics.

### 3. Where will we be post-virus?

We are living through an epochal moment in modern history. The pandemic has introduced a novel, synchronized global shock that will carry tremendous implications for prevailing economic and geopolitical regimes. Appreciating the weight of these shifts, we see several characteristics that are likely to be prominent in the post-coronavirus world: (1) fiscal and monetary positions stretched to new extreme levels; (2) stern headwinds to global growth—due to sluggish demand from DMs and a renewed move toward deglobalization—translating into divergent, varying performance among EMs; (3) heightened political and economic polarization around the world; and (4) an unprecedented level of money creation amid a low demand environment.

#### Even more stretched monetary and fiscal balance sheets

Heading into this crisis, debt levels and accommodative monetary stances were already stretched to unprecedented levels. As governments respond presently, we see those levels climbing further into uncharted territory.

#### PUBLIC DEBT LEVELS SET TO RISE ACROSS THE WORLD IN 2020

##### Exhibit 17: Growth and public debt-to-GDP ratios in major countries

April 2020

		United States	Germany	France	Italy	Japan	China
<b>Nominal Growth 2020</b>	y/y%	-6.1%	-6.7%	-6.9%	-8.9%	-5.0%	4.2%
<b>Primary Balance 2020</b>	% of GDP	-16.1	-4.9	-7.9	-4.8	-7.1	-10.3
<b>Debt 2019</b>	% of GDP	109.0	59.8	98.5	134.8	237.4	54.4
<b>Debt 2020</b>	% of GDP	133.2	69.3	114.3	153.2	257.4	62.1
<b>Current Account 2019</b>	% of GDP	-2.3	7.1	-0.8	3.0	3.6	1.0

Source: National agencies, IMF, TGM estimates.

#### CENTRAL BANK BALANCE SHEETS EXPECTED TO EXPAND FURTHER IN COVID-19 RESPONSE

##### Exhibit 18: Major central bank balance sheets (on a bond outstanding basis)

April 2020

		United States	Euro Area	Japan
<b>Balance Sheet 2019</b>	\$, euro or yen (billion)	4,166	4,692	480,000
<b>Expected Increase in QE 2020</b>	\$, euro or yen (billion)	6,200	1,100	80,000
<b>Nominal GDP Growth 2020</b>	%	-5.3%	-7.30%	-5%
<b>Balance Sheet 2019</b>	% of GDP	19.4	39.2	87.3
<b>Balance Sheet 2020</b>	% of GDP	51.3	52.2	107.2

Source: Fed, ECB, BoJ, IMF, TGM estimates.

Exhibit 19 illustrates how much debt can grow in the world's major economies as a result of fiscal stimulus spending as well as deflation of the economy. In the US, using the CBO's deficit and growth forecasts from April, debt-to-GDP would rise by another 20% of GDP from its already high level. Italy's debt would rise by a similar amount. In 2021, if the world economy follows the IMF's baseline recovery scenario, debt is expected to stabilize as the economy reflates, although fiscal balances are expected to remain in deficit. Some economies would fare better than the others depending on the speed of economic recovery as well as initial debt conditions. Also, twin deficit countries would have a harder time financing debt internally.

Central banks' balance sheets are also going to expand, although to differing degrees. In the US, there is some uncertainty regarding what the ultimate figure will reach, given that there is currently no set limit on future purchases of government securities and there is the potential for some funding lines to remain untapped. However, we estimate the Fed's balance sheet will grow by more than US\$6.2 trillion

by the end of 2020, bringing total assets to over US\$10 trillion. This assumes that the Fed will continue its public asset purchases at a quarter of the pace set in the first week of April for the duration of the year, and that all of its US\$2.3 trillion in available (but largely untapped, currently) lending funds are disbursed.

We expect the BoJ and ECB to continue expanding their balance sheets as well, but to a lesser extent. Including projected JGB and private asset purchases, we see the BoJ's balance sheet rising by more than 16% (¥80 trillion) in 2020. For its part, the ECB's additional asset purchase plans (outlined previously) are likely to add at least €1.1 trillion to its balance sheet this year, a more than 20% increase from end-2019.

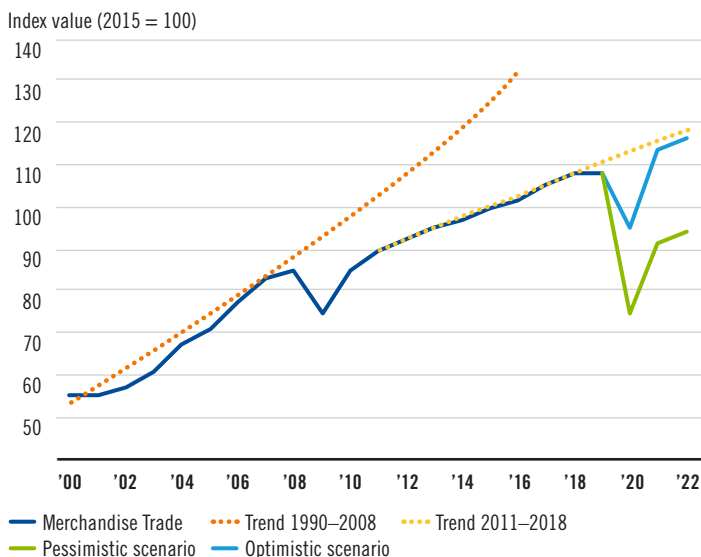
## Headwinds to Global Growth

According to the IMF's World Economic Outlook, the world economy, especially advanced countries, are expected to fall in a synchronized fashion from the Euro Area (EA; -7.5%) to the US (-5.9%) and Japan (-5.2%). The expected downturn for EMs is estimated to be less severe (-1% in average), largely because the IMF sees emerging Asia growing by 1%, driven by China, India and ASEAN.

However, the synchronized recession in EM Asia—which are export-oriented economies—and the rest of the world makes the recovery in the region very challenging. The growth in Asian economies is likely to be harshly constrained by external demand from advanced economies that are in most cases the

### SUPPRESSED DEMAND FOR FINAL GOODS IN DMs WILL DAMPEN TRADE VOLUMES

**Exhibit 19: World merchandise trade volume**  
April 2020



Source: World Trade Organization.

source of demand for final goods originating from EM economies. On the production side, the physical disruption in supply chains can be restored more promptly as some countries overcome the outbreak and ease lockdowns, such as we currently see in China. However, it will prove much more difficult to find buyers of their final goods should consumption fall by more than 30% for a prolonged time.<sup>19</sup> The World Trade Organization expects that the decline in trade volume will likely exceed the trade slump brought on by the GFC period.<sup>20</sup>

The duration of the outbreak, as well as the length of lockdown measures, is critical to EMs' ability to recover. Once a major EM exporter's production slows due to lower demand, the impact will reverberate to the entire supply chain, eventually posing downside risks to less developed economies through the manufacturing sector and commodity price channels. Across the EM universe, this will broadly exacerbate repayment metrics. However, it is important to keep in mind that some EMs with less external vulnerability are better situated than others to weather this storm.

For example, in Indonesia, although public external debt (at 17% of GDP) is among the highest relative to its neighbors, its gross public debt stock is on the low end of the regional grouping (just 30% of GDP). In addition, the country is a relatively closed economy, with gross goods and services exports amounting to 21% of GDP, compared with 60% in the Philippines and 65% in Malaysia. This, coupled with a low reliance on tourism and energy exports, helps make the country's balance of payments position less vulnerable to sharp deterioration in a shock event. Taken together, these factors contribute to the country's lower default risk heading into a major global recession.

Similarly, in Latin America, we see Mexico as having a low probability of defaulting during this crisis. To be sure, Mexico differs from Indonesia in that it is more exposed to international trade as a key supply chain partner with its North American neighbors. With high foreign participation in the local bond market, the country is also highly exposed to global financial flows. As such, Mexico will likely face pressures in the coming quarters, as weakening fiscal and economic performance could lead to foreign outflows and ratings adjustments. In turn, those aspects are likely to weaken the country's currency and increase long-term bond yields. But, with gross public debt currently at 54% of GDP (of which external debt is only 10% of GDP), there is ample room for this pressure to be absorbed before a restructuring needs to be considered.



This contrasts with a country like Ecuador, which has significant external vulnerabilities and limited room to expand its public debt load. As a dollarized economy that relies on oil for more than a quarter of its exports and a fifth of public revenue,<sup>21</sup> the government has little policy flexibility in navigating the present downturn—a reality made more unfortunate by the fact that Ecuador has so far had one of the highest number of COVID-19 fatalities per capita of any Latin American country.

Although the country’s gross public debt (estimated by the IMF at 49% of GDP in 2019) is roughly on par with Mexico, all of its debt is US dollar-denominated, compared with only a fraction in Mexico, as outlined above. Since assuming office in 2017, President Lenín Moreno has sought to achieve some fiscal consolidation in a bid to stem increased deficits that emerged after oil prices collapsed in late 2014. However, this moderate progress has not proved sufficient to weather the present downturn. The recent oil price decline due to the pandemic has since forced the government into a restructuring agreement for upcoming bond payments.

### The deglobalization acceleration

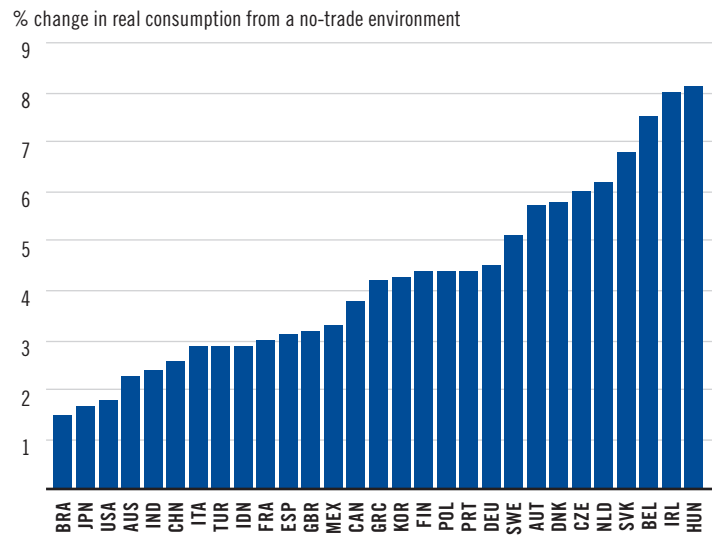
TGM believes that the crisis is likely to intensify and entrench already existing trends. The disruption of the supply chain has persuaded more US firms to make plans to relocate operations and rearrange global relationships, both for economic and national security reasons. A 2019 annual report from the U.S.-China Economic and Security Review Commission,<sup>22</sup> which warned Congress that US consumers, including the military, are “heavily dependent” on China for drugs and active pharmaceutical ingredients (APIs), argued that this “presents economic and national security risks.” According to data compiled by Bloomberg Intelligence, in 2019, Indian makers accounted for 47% of the US supply of hydroxychloroquine, a drug promoted by some as a potential (but unproven) drug to treat COVID-19 symptoms. Another report by the Congressional Research Service said that last year China supplied 30% of US imports of medical personal protective equipment.<sup>23</sup>

This concern regarding reliance on a foreign country can be summarized by Peter Navarro, US President Donald Trump’s economic advisor. During a White House press briefing he told the reporters that, “one of the things that this crisis has taught us is that we are dangerously overdependent on a global supply chain...Never again should we rely on the rest of the world for our essential medicines and countermeasures.” As a matter of fact, the worry is not limited to the US. As the coronavirus pandemic widens globally, more than 50 countries have export bans or restrictions on goods, from rice in Vietnam to face masks in Germany.<sup>24</sup>

Although there is certainly some benefit from the added security of more robust supply chains, there will be negative economic impacts from the broader shifts. To get a sense of the impact of deglobalization, we know that a small open economy (Ireland) is likely to be affected more than a large closed economy (the US). Economists have been estimating the “gain from trade.” For example, a 2014 paper by Costinot and Rodriguez-Clare shows that under a simple classic Armington model, the gain from trade (defined as the rise in real consumption relative to autarky) varies from 1.8% for the US to 8% for Ireland.

### TRADE IS A NET ECONOMIC BENEFIT FOR COUNTRIES

**Exhibit 20: Economic welfare gain from trade 2014**



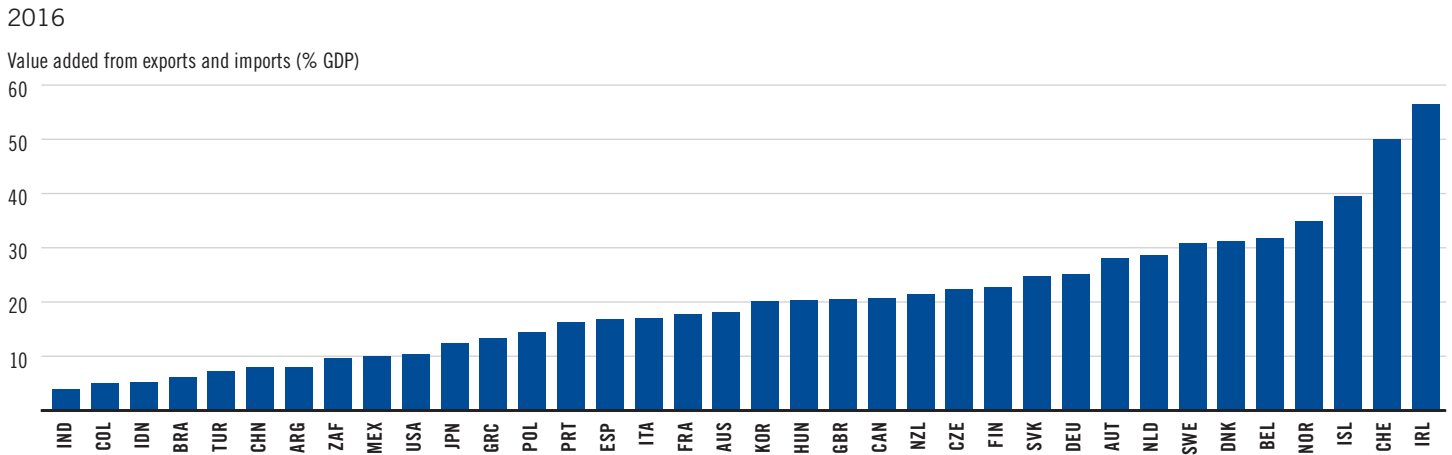
Source: Costinot, Arnaud and Rodriguez-Clare, Andres (2014). Trade Theory with Numbers: Quantifying the Consequences of Globalization. Handbook of International Economics, Volume 4.

Another way to look at this is how exposed a country is on trade (defined as the sum of exports and imports). Instead of looking at the gross exports/imports, we look into the value-added component, or the net value created domestically from exports after taking into account the imported component. The OECD provides the value-added dataset. The latest data is from 2016. This gives us a sense of how exposed a country is based on trade. Exhibit 23 shows a similar picture. Countries like India and the US do not rely heavily on trade. Countries like Ireland, on the other hand, are highly exposed during a trade shock. Again, deglobalization is posing a high risk to countries that are dependent on trade.

Perhaps even more importantly, globalization has allowed for the diffusion of ideas resulting in the spread of improved technology (broadly defined). Countries with greater exposure to

## COUNTRIES HAVE VARYING EXPOSURE TO FOREIGN TRADE

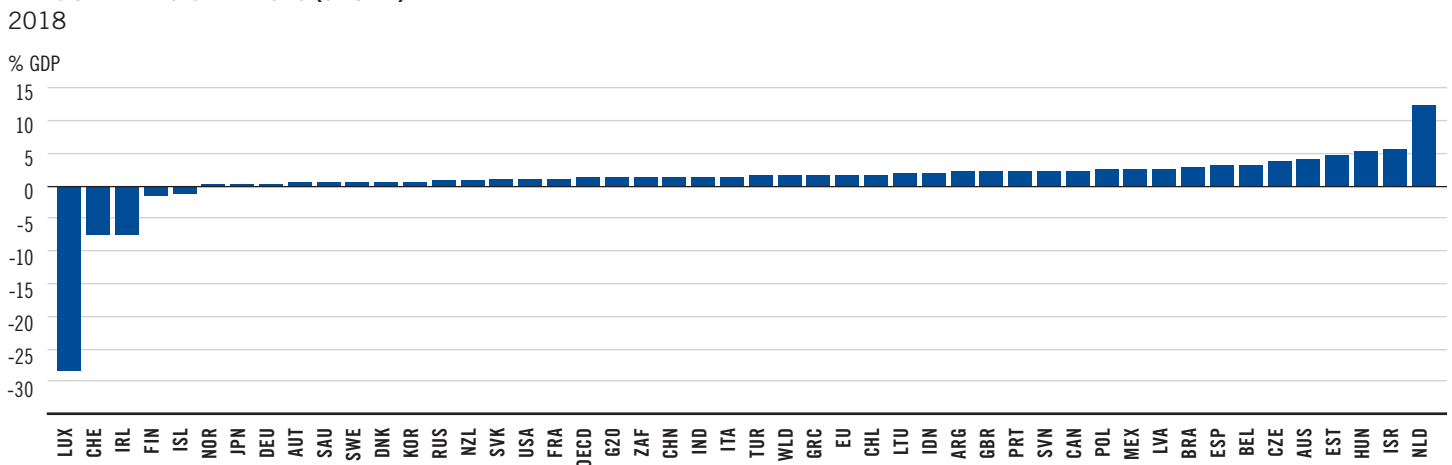
Exhibit 21: Value added from trade (% of GDP)



Source: OECD.

## FDI FLOWS ARE CRITICAL SOURCES OF FUNDING FOR MANY COUNTRIES

Exhibit 22: Inward FDI flows (% GDP)



Source: OECD.

foreign direct investment (FDI) experience gains because the workers learn better management and better ways of doing business, are more exposed to global contacts. The increased international contact leads to greater domestic innovation.

## Polarization

Just as this crisis is leading us into uncertain economic terrain, its effects will also manifest at a social and political level.

Over the past several decades, the United States has fallen further into deepening fractures amid a polarizing political environment. Leaving the evolution in media and rhetoric aside, this shift is made clear in electoral data. In the 2016 election, “more than 61% of voters cast ballots in counties that gave either [Hillary] Clinton or [Donald] Trump at least 60 percent of the major-party vote...That’s up from 50 percent

of voters who lived in such counties in 2012 and 39 percent in 1992...Of the nation’s 3,113 counties (or county equivalents), just 303 were decided by single-digit margins—less than 10 percent. In contrast, 1,096 counties fit that description in 1992, even though that election featured a wider national spread. During the same period, the number of extreme landslide counties—those decided by margins exceeding 50 percentage points—exploded from 93 to 1,196, or over a third of the nation’s counties.”<sup>25</sup>

The reality of polarization’s prevalence in our culture has also been made clear during our present predicament. Survey evidence has shown “substantial gaps between Republicans and Democrats in beliefs about the severity of COVID-19 and the importance of social distancing.”<sup>26</sup> After including controls, strong Democrats report engaging in 0.18 standard deviations more of a reduction in contact with others as

compared to strong Republicans. Strong Democrats hold beliefs that the risk of not socially distancing is 0.34 standard deviations larger as compared to strong Republicans.

In addition to an increasing bifurcation along party lines, the widening wealth gap and declining trajectory in social mobility have cemented strong anti-establishment sentiment, drawing support from both sides of the traditional political spectrum. This trend stands to intensify through the duration of the COVID-19 pandemic, as the virus and its corresponding lockdowns are slated to be significantly more harmful (in economic and health terms) to persons with fewer financial means.

In the United States, 90% of people whose income is in the top quartile have paid sick leave at work, compared with only 47% of those in the bottom quartile.<sup>27</sup> In addition, higher income workers are more likely to be able to work from home during the pandemic and much less likely to be unable to work at all. Meanwhile, lower income workers disproportionately face the difficult decision to either go to work and risk infection or shelter at home and fall behind on basic living expenses.<sup>28</sup> If the lived experiences of persons at the top and bottom of the income ladder were different before, they are likely much more divergent now.

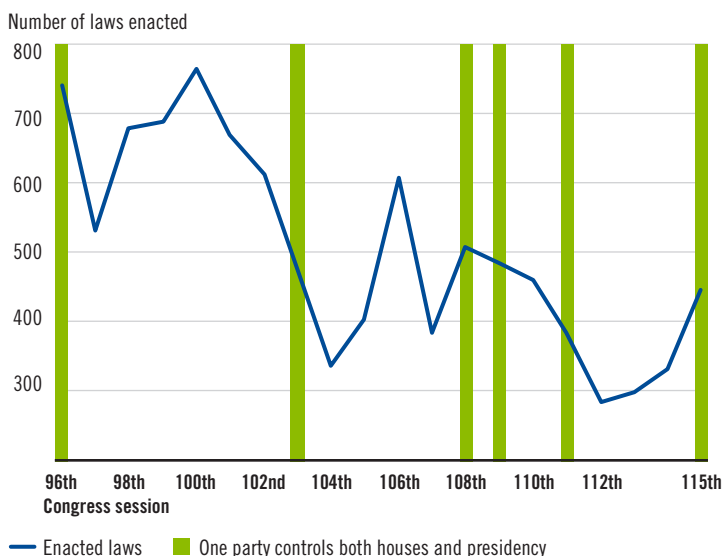
In short, rather than affecting all groups equally, the pandemic's health and economic impacts will be felt most acutely by those in specific cohorts and locations. This heterogeneous effect will likely serve to exaggerate already existing fault lines in society, whether in relation to political affiliation, wealth, race or place of residence (urban vs. rural).

American democracy is greatly weakened by continued political, economic and social polarization. These trends stoke animosity and foster partisanship in a system uniquely designed to require compromise and dialogue. Although Congress recently pushed through two massive bipartisan stimulus packages at a critical moment for the country, that comity unfortunately appears to be a mere aberration from the existing legislative reality which preceded and will likely follow this crisis.

When we look around the world, we see that these trends in the United States are more norm than exception. Prior to the pandemic, this pattern of polarization was repeated in various corners of the world. Examples of this are numerous, from the UK's Brexit situation, to Israel's repeated inability to form a government. Where political debate and compromise were once part of the governing process, they are now increasingly rare.

## DIVIDED GOVERNMENT INCREASINGLY HINDERS LEGISLATIVE AGREEMENT

**Exhibit 23: Number of laws enacted by past US Congress sessions**  
January 1979–January 2019 (96th Congress–115th Congress)



Source: US Congressional Record.

It is certainly true that world leaders can cooperate in critical moments. For instance, facing a low oil price earlier this year, the world's oil producers—not just OPEC and Russia, but also the G20 countries—met quickly to settle on a plan to cut global production. For its part, OPEC+ agreed to cutting oil production by 9.7 million barrels a day. The G20 is expected to cut by 5 million barrels a day. But, as with the US Congress's brief moment of bipartisanship in passing the recent fiscal stimulus measures, we expect that this joint coordination will not be long lived.

On the contrary, the current crisis will likely exacerbate misgovernment and polarization across the globe. Economics Professor Dani Rodrik summarizes our concern in his recent article "COVID-19 may well not alter—much less reverse—tendencies evident before the crisis." He notes, "Neoliberalism will continue its slow death. Populist autocrats will become even more authoritarian. Hyper-globalization will remain on the defensive as nation-states reclaim policy space. China and the US will continue on their collision course. And the battle within nation-states among oligarchs, authoritarian populists, and liberal internationalists will intensify, while the left struggles to devise a program that appeals to a majority of voters."<sup>29</sup>

## Geopolitical risk

The current relationship between the US and China is probably at a more contentious point than at any time in the past 40 years. The rise of China's economic and political power, along with the US inward retreat, has created a shift in the geopolitical balance. The world order, molded by the United States since WWII, is now being challenged. Now the two superpowers stand at a juncture as both sides reckon with their inherently adversarial, yet inescapable relationship. Unlike the United States' prior geopolitical foe, the Soviet Union, China is deeply integrated into the global economy, making it all but impossible for the US to embrace the same isolation-focused tactics it turned to during the Cold War. For instance, many of the United States' main allies, such as Germany and France, trade more with China than with the United States. This adds a deep layer of complexity to the new hegemonic regime.

Bouts of volatility between the two giants have been frequent. In addition to heated territorial disputes, trade tensions have dominated headline news for the past two years. Accusations of unfair trade, illegal technology transfer and the violation of intellectual property rights have ratcheted tensions on both sides. Nonetheless, the two parties were able to reach an agreement, if only in part. Phase 1 of their trade pact was completed in January of 2020, but just as the countries were reaching a second phase, the process was suddenly interrupted by the COVID-19 pandemic. The pandemic will likely widen the US-China divide while convincing other Asian countries that both powers are unreliable partners.

In Europe, political and economic cohesion is under renewed strain. One proximate cause is a new round of discussions regarding debt mutualization within the EA. The idea first came up during the 2010 euro debt crisis. This time, Italy and Spain have brought the idea of the "corona bond." Although the concept has some theoretical basis, it faces ample resistance from northern EA members like Germany and the Netherlands, who worry that the bonds' introduction would open the door to further mutualization down the road. Instead, the policies so far buffering the economies in the region remain nation-based. A comparison of Germany's and Italy's fiscal measures is striking. In Germany, the federal government has adopted a supplementary budget of 156 billion euros to support the economy (close to 5% of GDP). In contrast, in Italy, the epicenter of the crisis, the government adopted only 25 billion euros (about 1.4% of GDP) for emergency spending.<sup>30</sup>

The notion of common political values within the EA is also seeing cracks. Within the European Union (EU), countries like

Hungary have moved markedly away from the community's collective values. The country is currently facing Article 7 proceedings under the EU treaty, which is used when a country is considered at risk of breaching the bloc's core values. These proceedings have been in place since late 2018, but the tension with EU leadership has increased recently with a vote by the Hungarian parliament to allow the government to rule by decree without a set time limit. Other EU members have publicly expressed concern over this move.

Meanwhile, despite focus being diverted to the development of the pandemic over the past two months, other tensions around the world continue to simmer. We outline a few of these potential sources of volatility below:

- In the UK, Brexit negotiations remain ongoing. Although some initial guidance has been drafted, it is not entirely clear how the process will proceed. The deadline for the post-Brexit transition period on December 31, 2020, now seems unachievable. The next option is to request an extension of the transition period. June is the final month for Britain to request an extension.
- In North Korea, the first quarter of 2020 has seen an escalation in military drills and missile launches.
- The 2016 agreement between the EU and Turkey over the refugee crisis put a pause to the refugee issue, but it was far from a permanent fix. According to the United Nations High Commissioner for Refugees, there are currently about 3.6 million registered Syrian refugees in Turkey.<sup>31</sup> A recent deterioration of the relationship between the EU and Turkey over Syria and Libya has put strains on both sides. Repeated threats by Turkey's President Recep Tayyip Erdoğan that Turkey would "open the gates" and let the refugees enter the EU materialized on February 28, 2020, when the country opened its borders with Greece, setting the scene for a new refugee crisis.<sup>32</sup>
- Instability is a lingering risk in the Middle East. In the months preceding the COVID-19 outbreak, massive anti-government protests surfaced in Iran and Iraq. Anti-regime sentiment in Iran has continued to worsen since then, as the government's lax response to the virus made the country one of the early infection hotspots. In addition, even as immediate military tensions have cooled somewhat in Syria, we continue to see flare-ups as Russia and Turkey tussle over the control of border regions. At the same time, with oil prices down more than 50%, governments across the region will see dramatic reductions in revenue, forcing a scaling back of overly generous welfare systems, which

could foment some discontent. Overarching all of this, the broader conflict between Saudi Arabia's Sunni affiliates and Iran's Shi'a allies continues to fester, seeding direct confrontations and proxy conflicts in areas such as Lebanon and Yemen.

## Money creation consequences

We also must consider the risks posed by the continued rapid balance sheet expansion of the world's major central banks. While there are prevailing (sometimes divergent) theories on the impact of this policy move, it must be conceded that, at least in a modern context, the consequences of money printing are not entirely straightforward.

On one hand, our recent QE experience after the GFC, as well as Japan's experience for the past two decades, suggests that it is more than the increase in money supply that determines even nominal variables such as inflation, nominal wages and nominal interest rates. On the other hand, though, the post-war experience of monetary expansion that was meant to help the US Treasury finance debt proved to be a recipe for a spike in inflation over the long term. As Milton Friedman has documented,<sup>33</sup> inflation has become higher after the past three wars since the 1800s in the US.

Now, we are moving into somewhat uncharted territory. Even during the GFC and multiple QE expansions, the Fed never purchased more Treasury securities than the US Treasury issued. However, given the extremely accelerated asset purchase expansion during the current crisis and the unlimited nature of the program, it is possible that the Fed will be fully financing the US Treasury. Those accelerated purchases are leading to a sharp expansion of reserves held by the depository institutions at the Fed.

However, there are several caveats to consider regarding the idea that money printing will surely cause inflation in our investment horizon:

- First, as you can see in Exhibit 24, it takes a while before inflationary pressure builds up from 4 (post-Civil War) to 9 years (post-World War II).<sup>34</sup>
- Second, unlike war spending, pandemic spending is more or less disaster relief, and there is little evidence that money-financed spending this time will be large enough to offset the loss in demand this time. If we do not see excess demand during a period of pandemic spending, why should we believe this time will be different in terms of the ability of money stock to generate high inflation?

## PRIOR EPISODES OF MONEY CREATION HAVE EVENTUALLY LED TO INFLATION

Exhibit 24: Money growth and inflation during major wars

	World War II	World War I	Civil War
<b>Start of war</b>	Sept. 1939	July 1914	April 1861
<b>Price peak</b>	Aug. 1948	May 1920	Jan. 1865
<b>Money growth per year</b>	12.1%	12.9%	24.0%
<b>Wholesale prices inflation per year</b>	8.7%	15.3%	24.5%
<b>Ratio of money stock (peak/outbreak of war)</b>	2.75	1.96	2.32
<b>Ratio of WPI (peak/outbreak of war)</b>	2.13	2.32	2.32
<b>Inflation 1 year before outbreak of war</b>	-2.0%	2.4%	0.0%

Sources: "Price, Income, and Monetary Changes in Three Wartime Periods: Milton Friedman," *The American Economic Review*, Vol. 42, No. 2 (May 1952). <https://www.nber.org/chapters/c11389.pdf>; Federal Reserve Bank of Minneapolis. Consumer Price Index, 1800-. Retrieved from [minneapolisfed.org](http://minneapolisfed.org).

- Similarly, a recent study by macroeconomists<sup>35</sup> shows that a pandemic has a long-run impact of reducing real interest rates. According to the authors, it is mainly because of depressed investment opportunities due to excess capital (as past pandemics severely depressed life expectancy) or a higher desire to save. According to the authors, the impact is in contrast to the impact of war spending on real interest rates when capital is also destroyed.

The world we are most likely to face is that of more money, lower demand, and a less efficient global supply system, all of which signals that the rate of changes in the prices of goods and assets is highly indeterminate. At the same time, our political choice is also likely to play a significant role in shaping the potential economic consequences, whether the world chooses to save more to pay debt or would prefer to pay an effective inflation tax. This proceeding policy debate warrants a closer examination of what is likely to become a new favored instrument in central banks' toolkits in this recovery: helicopter money.

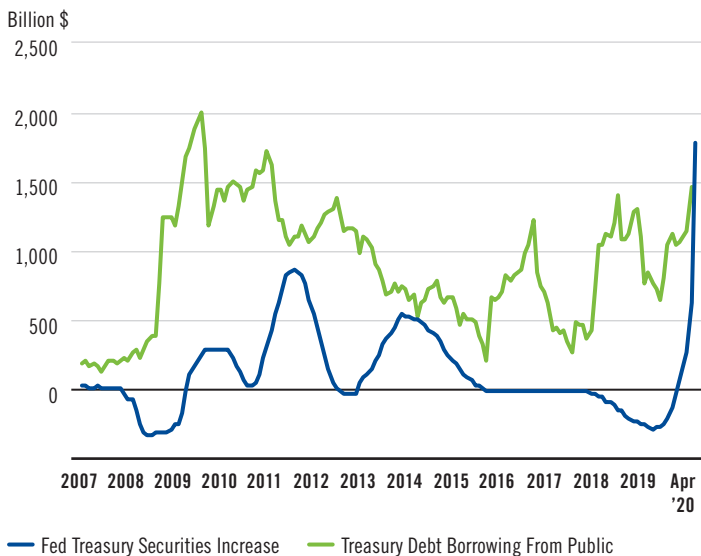
## HELICOPTER MONEY

The term helicopter money alludes to a proverbial "helicopter drop" of money, driven by expansionary fiscal policy, that is financed by a permanent increase in the money stock. In other words, it is fiscal spending financed by money rather than debt, or as former Fed Chairman Ben Bernanke refers to it: Money-Financed Fiscal Program (MFFP).

## THE FED IS NOW PURCHASING MORE TREASURIES THAN ARE BEING ISSUED, BOOSTING LIQUIDITY

**Exhibit 25: US Treasury borrowing from public vs. Fed purchases (12-month rolling)**

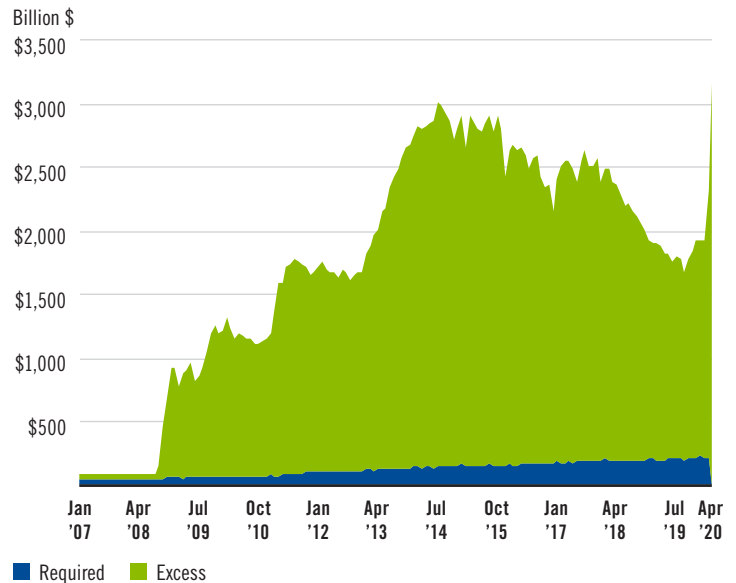
January 2007–April 2020



Sources: Fed; U.S. Treasury (Monthly Treasury Statement).

**Exhibit 26: Depository institution reserves**

January 2007–April 2020



Source: Fed.

### How does it work? Mechanisms and constraints

The merit of helicopter money is as a last resort policy option that enables fiscal spending when even unconventional monetary easing is no longer effective—i.e., when people are hoarding cash and the benefit of low interest rates has stopped working.<sup>36</sup> The strategy is particularly appealing because it has the potential to influence the economy through a number of channels. Of these four channels outlined below (from Bernanke), only the first two are targeted by a traditional fiscal stimulus measure, such as a tax cut.

- **Channel 1:** The direct effects of the public works spending on GDP, jobs and income.
- **Channel 2:** The increase in household income from the increased fiscal spending, which would induce greater consumer spending.
- **Channel 3:** A temporary increase in expected inflation, the result of the increase in the money supply. Assuming that nominal interest rates are pinned near zero, higher expected inflation implies lower real interest rates, which in turn should incentivize capital investments and other spending.
- **Channel 4:** The fact that, unlike debt-financed fiscal programs, a money-financed program does not increase future tax burdens.

Still, the constraints of helicopter money in the real world can be many. The policy requires a government to keep two key commitments: (1) to not reverse the monetary policy, ensuring its permanent impact on the money stock; and (2) to conduct the practice only for a limited time during a crisis. Both are promises perhaps easily made but certainly harder to keep. The fluctuations endemic to political cycles not only make these commitments challenging to hold in the longer term, but also call into question whether there can ever be a reliable guarantee that resources from helicopter money will be used efficiently.

### Benefits, costs and risks

Assuming these commitments can be made, there could certainly be economic benefits. In theory, successful implementation would lead to a jump in GDP growth, which would correspond with higher inflation and lower real rates. Additionally, a country's debt-to-GDP ratio would decline, given the higher nominal GDP, similar to what we have seen in Japan recently.

However, there are several risks to this targeted outcome:

- Perhaps most importantly, when past governments have tried to finance deficits by printing money, it has never worked. Instead it has tended to lead to economic debasement and runaway inflation, as seen in Germany during

the inter-war period in the 1920s, or Latin America during the 1980's. In the US, when the Fed yielded to political pressures to finance public spending in the early 1970's, the boosted money supply led to a sharp increase in inflation, which remained high until the 1980's.

- If the policy achieves no pickup in growth, but increases inflation, this will lead to higher nominal interest rates and a weaker currency, which will, in turn, have a tough impact on countries with short-maturity, inflation-linked, or hard currency-denominated debt.
- Since the 1990s, central banks around the world have sought to establish their credibility by rigorously focusing on controlling inflation. Yet the past three decades of work on that front could easily be undone if those same institutions shift their focus to stimulating growth, causing a persistent spike in prices.
- Finally, if helicopter money works effectively during a crisis, there could be support for its continuation into a non-emergency period. Any perception of a willingness to continue this sort of money financing indefinitely could lead to unflaggingly higher inflation expectations.

#### **MFFP during COVID-19: The beginning of helicopter money**

As recently as six months ago, prior to the pandemic, most serious policymakers considered helicopter money impractical. And yet, the current actions being taken by major economies seem to fit a substantial part of the policy's definition. Governments have implicitly crossed the line with drastically increased spending leading to massive projected deficits, which essentially requires financing from central banks.

As discussed in the previous section, the Fed has unveiled an unlimited QE program in which it may purchase more government bonds than the Treasury plans to issue this year. In effect, this represents a commitment to fully finance the government's deficit. For their parts, the BoJ and ECB have also been buying large quantities of government bonds through their respective QE programs. Considering these massive securities purchases, we may soon be reaching a point at which economic agents do not see any prospects in the foreseeable future for a reversal in increased debt holdings by central banks across the developed world.

The ECB's recent decision to lower its interest rate for its lending facility (TLTRO III) to -50 bps is also of note. For every 100 euros a monetary institution borrows from the ECB (with collateral), only 99.5 euros need to be returned at maturity. Although this is a short-term program,<sup>37</sup> its departure from precedent ought not be underestimated. Back in 2016, then ECB chief economist Peter Praet noted that helicopter money was indeed a theoretically possible and available instrument in the bank's toolbox. "The question is," he added, "if and when is it opportune to make recourse to that sort of instrument which is really an extreme sort of instrument."<sup>38</sup> In our view, we have reached that moment, and are likely to soon see the beginning of helicopter money's usage.

## 4. Investment implications

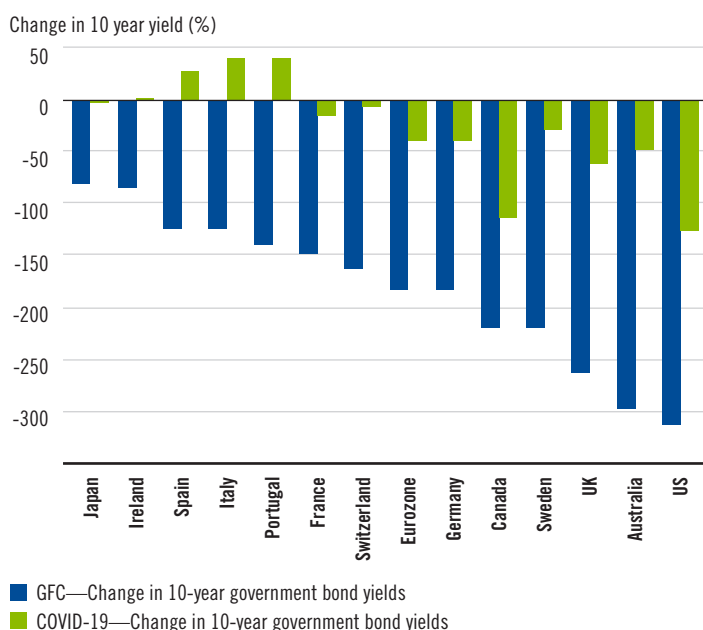
For decades many investors have trusted and relied on the diversification benefits offered by a 60/40 portfolio, comprised of a 60% allocation in equities and 40% in bonds. However, we believe there are two key risks to this perceived “rule” and that investors should take a more ex-ante approach when assessing risk management.

- First, with rates approaching zero in developed economies, the upside return potential is likely to be muted and therefore duration-focused strategies may not provide the same protection for investors as they did in past periods.
- Second, there is a likelihood that past correlations between asset classes may shift as we move forward. The eventual consequences created by overly accommodative central banks and increased spending, which has led to unfathomable fiscal deficits, may have negative impacts for equity and fixed income markets alike.

Traditionally, investment strategies have turned to government bonds as a stabilizer in periods of volatility. However, as the pool of low and negative yielding debt balloons and the

### BOND YIELDS HAD LESS ROOM TO RALLY DURING THE COVID-19 CRISIS THAN DURING THE GFC

**Exhibit 27: Change in local government bond yields (10-year bonds) during GFC and COVID-19 crises**  
May 2020



Source: Bloomberg.

negative correlation between stocks and bonds wanes, this stabilization role is called into question. As such, there is a need for investors to look for truly idiosyncratic alpha sources that can complement and diversify a portfolio that is positioned around the market beta. Fulfilling this criteria, we see value in select perceived safe-haven currencies, such as the Japanese yen and Swiss franc. These assets have, over recent history, proven to be uncorrelated to vulnerable asset classes, while helping to protect capital.

### Targeting EM Alpha

We also expect to find alpha within the EM sphere. During periods of crisis and extreme market volatility, differences across EMs potentially become more acute. Active management of EM fixed income investing has become increasingly relevant as performance is likely to be more differentiated based on an individual country’s economic fundamentals, fiscal conditions, governing capabilities and the quality of its public health system.

### Flexible and Opportunistic Strategies to Better Capitalize on Market Shifts

Unconstrained strategies often have the flexibility to reduce or increase portfolio risk based on market developments. This flexibility enables the team to shift from a defensive position and a reduced risk budget in the lead-up to a bear market, to quickly re-position for an eventual risk-on environment.

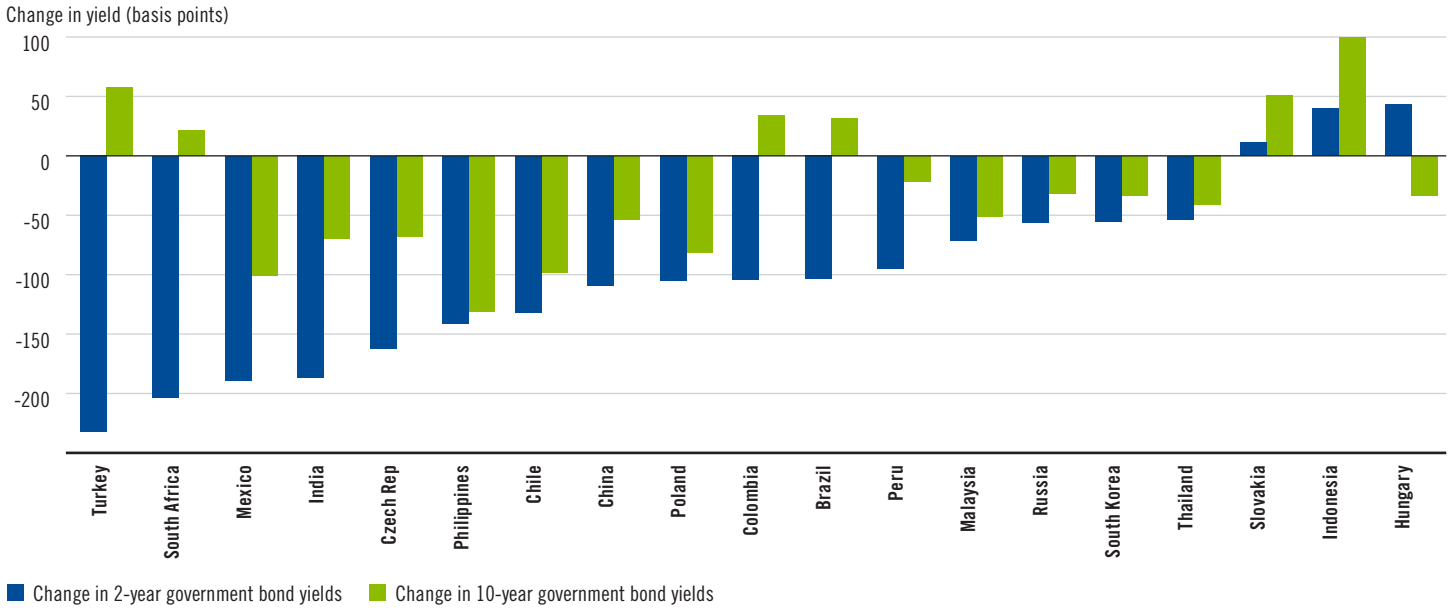
Hedging strategies, such as direct hedges or proxy hedges, can mitigate tail risks and/or reduce a specific undesired risk. For example, certain EM local government bonds may offer relatively higher yields and greater potential for capital appreciation than DMs, given the extra space to cut interest rates. Exhibit 28 shows the bond rallies and declining yields in a number of local-currency emerging markets during the COVID-19 crisis. However, the currencies can be vulnerable to depreciation during periods of crisis or heightened market volatility. Thus the direct or proxy hedging strategies can be beneficial. A short on the Australian dollar as a proxy hedge, for instance, can serve as an indirect hedge against beta risks in EMs, given Australia’s shared risk factors with EMs, such as linkages to China’s economy and commodity markets. A proxy hedge that’s short the Australian dollar can offset currency depreciations in higher-yielding commodity-producing countries like Brazil. Perceived safe-haven currencies can also help offset emerging market currency depreciations, as shown with the Japanese yen in exhibit 29.



**SELECT LOCAL CURRENCY BONDS HAVE RALLIED SHARPLY DURING THE COVID-19 CRISIS**

**Exhibit 28: Change in local government bond yields during COVID-19 crisis**

February 2020–May 2020

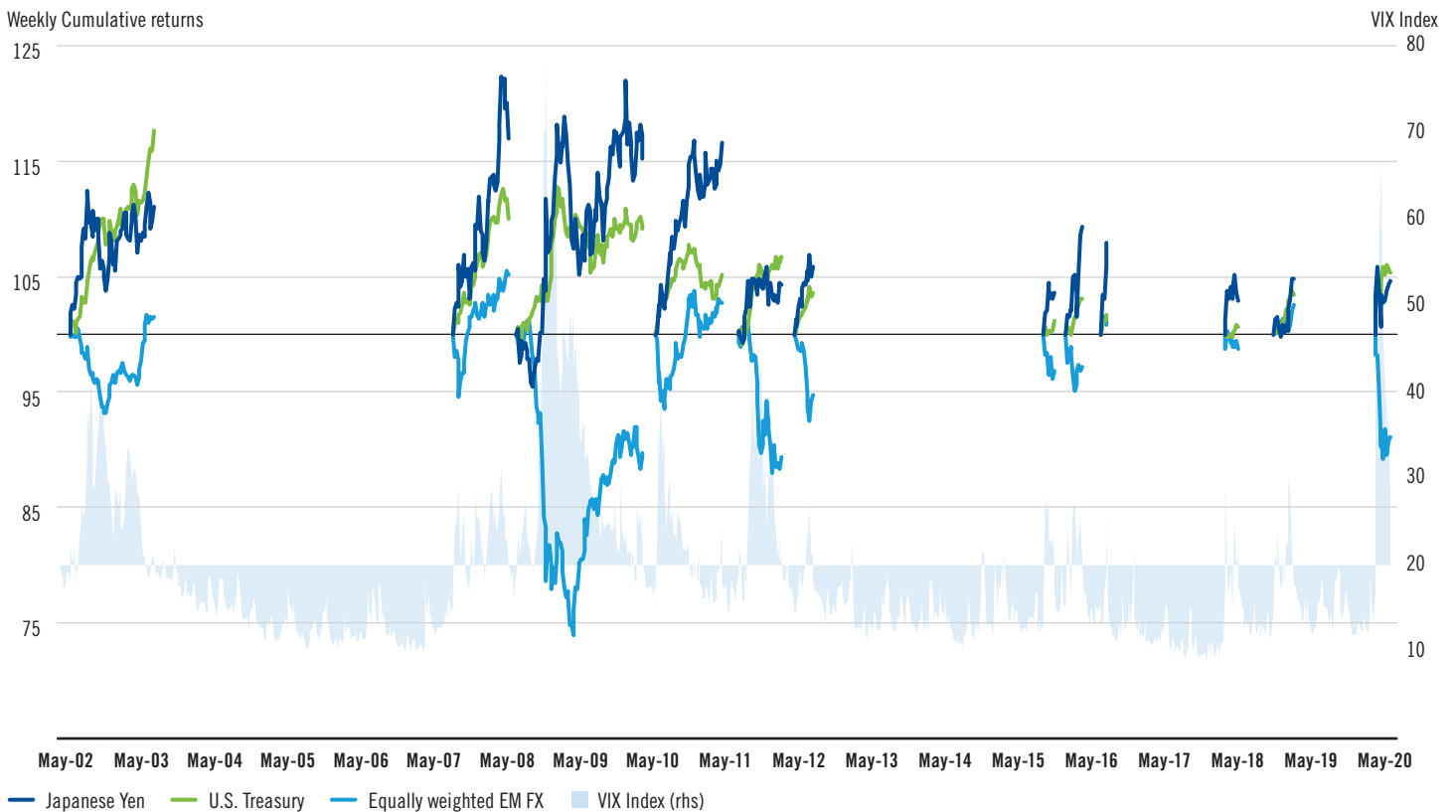


Source: Bloomberg. Past performance is not an indication or guarantee of future performance.

**THE JAPANESE YEN HAS BEEN AN EFFECTIVE HEDGE AGAINST GLOBAL RISK AVERSION**

**Exhibit 29: Japanese yen and US Treasuries compared with EM currencies during periods of extreme volatility)**

May 2002–May 2020



Source: Bloomberg. Past performance is not an indication or guarantee of future performance.

## 5. Environmental, social and governance implications

One of the few positive developments of this period has been the substantial reduction in carbon emissions globally following the implementation of lockdowns. During a four-week period beginning in February, China, the world's largest emitter, saw its emissions fall by 25%.<sup>39</sup> In Europe, the daily carbon emissions of the EU's twenty-seven member states have fallen by 58%<sup>40</sup> since the implementation of strict measures to curb the pandemic, including nationwide lockdowns. In the United States (the world's second largest emitter), the Energy Information Agency has predicted that national energy-related carbon dioxide emissions will fall by 7.5% in 2020, compared to a decrease of 2.7% in 2019. Although the majority of these gains may be lost after we emerge from the pandemic, absent government actions, a portion of this improvement in emissions is likely to persist regardless of policy decisions.

The past few months have been a test of the limits of online connectivity. While digital workplace options were available in a certain sliver of industries prior to this crisis, we should expect that sliver to wax in the wake of the pandemic. Teleconferencing is no longer a novelty; it has proven it can be a norm. As that side of the digital economy grows, we can expect to see a sizable reduction in travel-related emissions.

The pandemic's impact on markets is a reminder that environmental and social problems are financial risks that can be interconnected and need to be taken into consideration. Moreover, the present global fallout demonstrates the need to invest in resilience measures before a catastrophe strikes.

A focus on sustainability can help make portfolios more resilient. We believe the adoption of sustainable investing is a new phenomenon that will carry a performance advantage over years and decades. As such, TGM is prioritizing investments based on our ESG Index, which was recently expanded to include health security indicators.

# Conclusion

The economic implications of the global pandemic remain complex and uncertain, while the toll on individual lives remains an ever-present, expanding tragedy. There are a number of challenges and risks ahead for policymakers, business leaders and everyday citizens around the world. The magnitude of the damage and disruption can appear overwhelming at times, both on a macro scale as well in small everyday ways. However, it is crucial to continue to work toward a greater understanding of this moment, in order to construct a better understanding of where it will lead us.

Although there is still much uncertainty about the world's potential growth trajectory, our current research indicates that gradual re-openings and gradual recoveries are far more likely than a V-shaped recovery and a quick return to pre-crisis economic activity. This is in part due to the capacity constraints in reopening, as well as ongoing damage that is incapable of being reversed in the short run.

Critically, we also expect the crisis to exacerbate already existing pressure points in domestic and international communities, leading to heightened de-globalization, political polarization, and geopolitical risk, all of which create additional headwinds to global growth prospects.

These added strains will come as the governments of the world's largest economies increasingly embrace unconventional fiscal and monetary policies to stimulate growth. Central banks have notably rushed in to ease financial market stress by expanding purchases of assets ranging from sovereign bonds to non-investment-grade corporate debt, blurring the lines between financial market liquidity and private sector insolvencies. Longer-term inflationary pressures are likely to grow on massive fiscal spending and unlimited monetary accommodation.

Given these extraordinary conditions, we remain cautious on a number of elevated financial market risks, but optimistic for potential investment opportunities that may arise in the months and quarters ahead. A wealth of new information is being revealed daily in financial markets as various asset valuations shift with evolving economic conditions and unprecedented policy responses in ways that have not been previously patterned.

We are currently prioritizing perceived safe-haven assets, short-term USTs and elevated cash, along with higher-yielding bonds from a select set of relatively resilient emerging countries. We employed a similar playbook during the GFC, as we built a defensive stance heading into the peak of the crisis and then shifted to an opportunistic pursuit of price distortions in the early phases of the eventual recovery. However, we are currently still in the early stages of the pandemic's economic repercussions, in our view, with unfortunately much uncertainty and much economic complexity ahead. Nonetheless, we continue to glean new information and new insights amid the evolving crisis, as we monitor the global economy on a country-by-country basis to uncover the next opportunities that will arise in the post-pandemic world.

## Endnotes

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