

Policies, Performance and Prognosis beyond Pandemic Pandemonium and Panics

April 2020



Arnab Das
Global Macro
Strategist, EMEA

Arnab has 28 years of investment industry experience. He is a member of Invesco's Global Investor Forum Advisory Council with a focus on global macro and emerging markets, and previously served as Head of emerging markets macro research for Invesco Fixed Income. Prior to joining Invesco, he served as Co-head of Economic Research & Strategy at Roubini Global Economics; Co-head of Global Economics & Strategy, Head of Global FX Research, and Head of EM Economics & Strategy at Dresdner Kleinwort; and Head of EMEA Research at JP Morgan. He has also been a private consultant in global and emerging markets, as well as consulting with Trusted Sources, a specialist EM research boutique. Arnab's studies were in macroeconomics, economic history and international political economy. He received an AB from Princeton University and completed his postgraduate and doctoral work at the London School of Economics.

COVID-19 has pressured the global economy in an unprecedented way. What will be the lasting impacts?



In order to get a full picture of the impact of this global pandemic, Invesco's Global Market Strategy (GMS) Office has partnered with a wide range of experts across the firm who are analysing the issues from every vantage point:

- Our GMS colleagues across Europe, Asia and the US have been debating the global macro, asset class, and currency outlook.
- We have drawn on the expertise of Invesco's Chief Economist in London to gauge the monetary and fiscal policy response and the macro impact.
- Several Invesco investment teams have shared with us their market views, analysis and strategies.
- We've leaned on Invesco Public Affairs leaders in the US and Europe for insight into the government response.

A full list of contributors follows this analysis. We thank them all for sharing their perspectives and shaping this commentary.

By **Arnab Das** and the **Global Market Strategy Office**

The members of Invesco's Global Market Strategy (GMS) team in Hong Kong, Italy, London, Tokyo and New York recently shared their on-the-ground insights of the fight against coronavirus from a health care, monetary, and fiscal perspective. In this commentary, we take a deeper dive into the potential implications of the pandemic on US stocks and bonds, as well as the GMS team's view of asset allocation considerations.

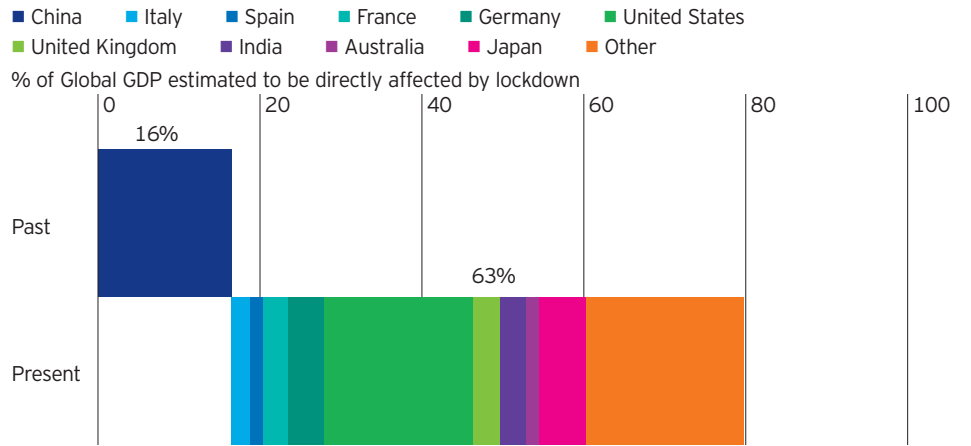
Q: Are we heading for a global recession, or are we in one already?

The world is fighting this pandemic with public health measures that directly reduce economic activity – social distancing, self-isolation, and contact tracing/sequestration – and have therefore affected household consumption and corporate spending in most of the world. Because of that, we are very likely headed for a global recession that is unprecedented in speed and depth. We think of the result as a recession in fast-forward with a financial panic in reverse:

- The recession in fast forward is a direct result of public health policies that have prompted sharp shifts in both household and corporate spending from discretionary and durables purchases, to basic needs and hoarding of cash and liquidity.
- The financial panic in reverse is due to the sudden realization that there would be sharp shifts and abrupt reductions in normal activity, instantaneously raising the risk of cascading defaults and mass bankruptcies.

A rough estimate is that between half and two-thirds of global GDP has been, is now already, or soon will be under significant recessionary pressures from lockdowns – given the levels of discretionary spending by households and corporates around the world.

The article is intended only for Professional Clients, Qualified Clients/Sophisticated investors and Qualified Investors (as defined in the important information at the end); for Institutional Investors in Australia; in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong; for Qualified Institutional Investors, pension funds and distributing companies in Japan; for Institutional Investors and/or Accredited Investors in Singapore; for certain specific Qualified Institutions/Sophisticated Investors only in Taiwan and for Institutional Investors in the USA. The document is intended only for accredited investors as defined under National Instrument 45-106 in Canada. **It is not intended for and should not be distributed to, or relied upon, by the public or retail investors.**

Figure 1: As COVID-19 has spread across the map, lockdowns have followed

Sources: IMF, Oxford Economics, Haver Analytics, Invesco. GDP shares based on data for 2018

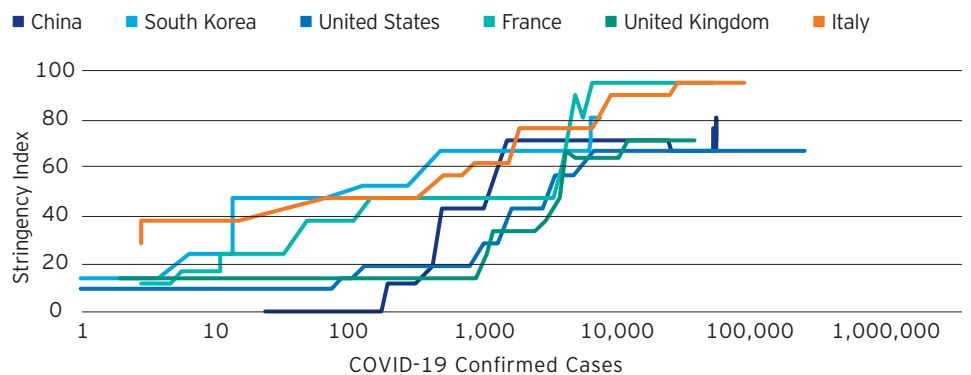
In short, we now see a steep, deep recession in the West and emerging markets (EM) as almost a given. This is in stark contrast to our forecast at year-end 2019, when we expected a gentle deceleration in activity for 2020, as gradually slowing consumption was offset by a partial recovery in global manufacturing, investment and trade thanks to improving US-China tensions.

Q: How long do you expect the recession to last?

Most people think of a recession as two or more consecutive quarters of negative growth. The US National Bureau of Economic Research (NBER) is charged by the US federal government for formal business cycle dating. THE NBER uses a broad range of indicators to formally declare a recession and bookmark its start and finish, usually with a lag – some recessions are over before they are formally declared while others last longer; some are shallow while others can be quite deep. Similar methodologies are now used in some other major economies.

Unlike most recessions, this one is likely to be a sharp global recession, concentrated in 2Q 2020 with risks that it lasts longer depending on the pace of global lockdowns.

- China, the first country to be hit by the coronavirus, was also the first to engage in an economic lockdown and the first to emerge after seeing its daily infections and fatalities collapse rapidly. A somewhat more moderate economic slowdown in other parts of North Asia (including Korea and Japan, among large economies) is already giving way to recovery there. That said, there is evidence of something of a second wave emerging in parts of Asia, requiring another round of partial economic lockdowns, which could slow the breadth of the recovery.
- Furthermore, sharp slowdowns in the West and many major EM countries are likely to constrain economic recovery in Asia, since after a slow and halting start, most Western governments and many EMs have been adopting China's strategy of regional or national economic lockdowns, at varying paces (as opposed to Korea's mass testing and contact tracing as a way of isolating the already infected and those likely to become infected themselves or pass on the virus).

Figure 2: EU, UK, and US have followed China's lead and adopted economic lockdowns

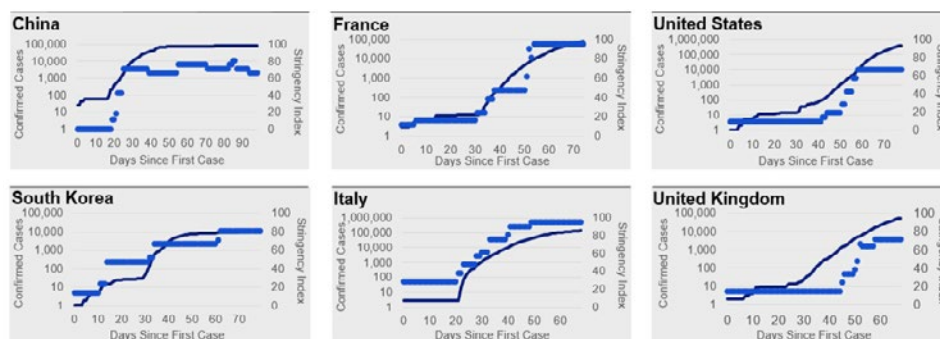
Note: The Stringency Index tracks policies such as school closures and travel bans, and financial indicators such as fiscal or monetary measures. Horizontal scale is logarithmic with a factor base of 10. Source: University of Oxford, Blavatnik School of Government, Oxford COVID-19 Government Response Tracker, Invesco. Data as at 8 April 2020.

There is some risk that the current lockdowns may need to be extended into or through Q3, or that a new lockdown may be necessary in Q3 or Q4 if the threat of a second wave of the pandemic persists. These risks imply that the recovery may flatten out after an initial bounce-back.

When lockdowns are released, pent-up domestic demand would come back online, but economic growth may continue to be constrained by a more gradual growth in international trade and investment. These effects would be felt sequentially around the world (since different countries experienced the pandemic and instituted lockdowns at different times).

Plus, domestic lockdowns may have to be released gradually, in a sequence that allows for low-risk groups or sectors to go back to business as usual before higher-risk categories. For example, mass testing and confirmation of immunity might allow for a “skeleton” staffing of businesses. Given the high uncertainties and variations in testing across countries, many governments may well choose to restrict travel from some jurisdictions longer than others, which could delay the recovery in sectors like airlines, hotels and in economies that are more reliant on tourism and trade – many in emerging markets.

Figure 3: Europe and the US fight to ‘flatten the curve’ of infections, while China and South



Note: The Stringency Index tracks policies such as school closures and travel bans, and financial indicators such as fiscal or monetary measures. Left-hand vertical scale in all charts is logarithmic with a factor base of 10. Source: University of Oxford, Blavatnik School of Government, Oxford COVID-19 Government Response Tracker, Invesco. Data as at 8 April 2020.

Q: What is your current growth forecast for the global economy?

We are working with scenarios for the global economy rather than trying to make precise national economic forecasts and adding them up for global growth. That's because these shocks to activity are taking place across national economies, sometimes simultaneously and sometimes in sequence across the global economy as the pandemic and the lockdowns spread.

- For the second quarter, our worst-case scenario is a 25% fall in global GDP (annualized), and our best-case scenario is a 15% fall.
- For 2020, our worst-case scenario is a 3.4% fall in global GDP (year-over-year), and our best-case scenario is a 2.3% rise – based on a rapid containment of the pandemic and a return to something like business as usual, unfortunately a scenario that is unlikely to materialize. To compare, the Global Financial Crisis resulted in a fall of roughly 1.8%.

Please note that these scenarios were calibrated a few weeks ago – but that is a very long time in a pandemic, and we will look to update these scenarios based on new information and data about the economic impact of the lockdown; the upside potential for partial, sequential releases of economic activity as epidemic curves are flattened around the world; and the downside uncertainties and risks associated with a second wave of the pandemic and the possibility of so-called “adaptive lockdown” strategies suggested by leading epidemiologists, which may involve periodic releases of economic activity as well as renewed, partial lockdowns. Some of these scenarios may validate recoveries in risk assets; others may include the potential for renewed pressures in some risk asset complexes.

Q: How has the global forecast changed in response to COVID-19?

At the end of 2019, our initial baseline global growth forecast for 2020 was a rise of 3%. At that time, we expected the global economy to decelerate gradually but to avoid a recession, based on two key developments: First, the expectation for improvement in US-China bilateral trade tensions; and second, the easing in global financial conditions. We expected that combination to meaningfully support manufacturing, investment, and trade.

Our views on global economic performance began to change once China imposed a lockdown on Hubei Province and then extended virus suppression efforts across more of the Mainland economy. Once the epidemic metastasized towards a pandemic in Italy and spread through the Eurozone (EZ), the United Kingdom, and the United States, we became seriously concerned that the main route to containing COVID-19 entailed shutting down most of the world economy. As major emerging markets beyond North Asia became embroiled, this view became inescapable.

We see these recessionary decisions as a large, upfront, societal life/health “insurance premium” in the form of foregone economic activity that governments in sequence decided must be paid to protect public health. (And, even if they didn’t act, the impact of the pandemic on public confidence and behaviour could have led to widespread panicky societal behaviour in any case, which may well also have imposed significant recessionary pressures on global growth, on top of significant losses of life and ultimately required social distancing in any case.)

Q: What impact has monetary and/or fiscal policy had on your growth outlook?

Monetary and fiscal packages are a very important stabilization tool: We expect them to cushion the fall in private spending, and therefore in global economic activity – but we do not and should not expect them to fully offset that fall.

- Monetary policy is the first line of defence, required to maintain financial stability so that fiscal policy can work and to maintain conduits for channelling savings and investment to borrowers and businesses that now need to issue debt or equity to refinance existing obligations and eventually to finance new activity and investment.
- Fiscal policy is much more important in this shock than in a conventional recession or even in a financial crisis. That’s because the larger size and role of the state, multiples of any single private economic actor, and its staying power as a permanent entity are necessary to underwrite the pause in private-sector activity now gripping so much of the world.

In private-sector-led, market economies, the public sector is only a fraction of the economy and cannot directly replace the private sector mathematically or conceptually. Indeed, even in “garden-variety” recessions, active monetary and fiscal policies cannot fully offset the fall in private activity – almost by definition, since there are contractions in spending and output during a recession.

We believe the role of the state to implement active fiscal and monetary policies will limit the extent of the damage from a recession. Without such an active role, it’s much more likely we could experience a depression (a multi-year recession with year-on-year declines in the size of the economy) – through both a reduction in economic activity as people and businesses hunker down, and a risk of cascading defaults by firms and households that could lead to a downward spiral.

Indeed, the Spanish Flu pandemic of 1918-1920 – which brought intense concentrations of deaths in many major economies in the West and in today’s emerging markets – probably contributed to the depression of the early 1920s. This was a time when the role of the state was much smaller in most economies, when social distancing and other elements of economic lockdown were practiced in many but not all US cities, and when some 50-100 million deaths occurred around the world with some evidence that illnesses contributed to reduced private spending and falling activity.

Q: What could worsen your recession view and growth forecasts?

Several challenges and risks could undermine economic or financial stability and threaten recovery in our view – but we believe they can all be avoided by policy choices. As a general statement, the more coordination and cooperation the world can muster when it comes to the weak links in dealing with the pandemic itself, as well as in the economic policy response, the better.

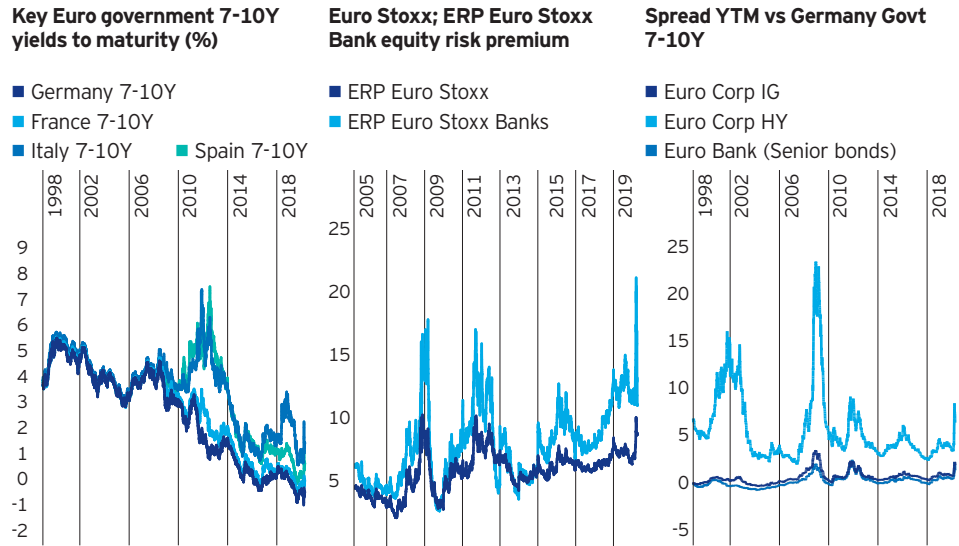
We were initially worried by some decisions by many governments that signalled they were putting narrow national self-interest first. These included targeted travel and export restrictions or even outright bans of essential medical equipment and pharmaceuticals, which ultimately signalled that information about the virus, its spread, and potential treatments or vaccination might be limited.

We were also concerned by the Russia-Saudi oil price war aimed at each other, at Iran, and at US shale. Lower oil prices would ultimately benefit consumers and importing countries, but in a locked-down global economy, such action would only be deflationary, threatening financial and economic destabilization through the potential for defaults and falling headline inflation.

Subsequently, however, we have been very encouraged by increasing signs of cooperation as the pandemic has spread, and by the shared adoption of lockdowns and stimulus in so many countries. Cooperation and coordination are returning to the fore on many fronts and among many countries, including equipment, information, and possibly even cooperation in the oil markets. Still, we will be monitoring several weak links closely.

EZ cooperation and coordination challenges. Dealing with the direct pandemic fallout presents a challenge, as well as the unfolding and potential fiscal and financial challenges. After a rocky start, the ECB has stepped up to the plate with strong policies, but efforts at a shared fiscal approach are facing difficulties already. For the EZ to function as a banking union, capital markets union, and fiscal union – all of which would ultimately be incredibly useful to support the monetary union – remains a hope rather than a reality. The crisis could yet make this more of a challenge, not least because Italy could see double-digit increases in its public debt ratios as a result of the economic recession alone, let alone any eventual fiscal stimulus efforts. Any such risks that point to a new EZ financial crisis must be headed off rapidly to prevent a recurrence of disintegration risks or fears for regional or global financial stability, as such fears could foment a crisis or undermine recovery down the line.

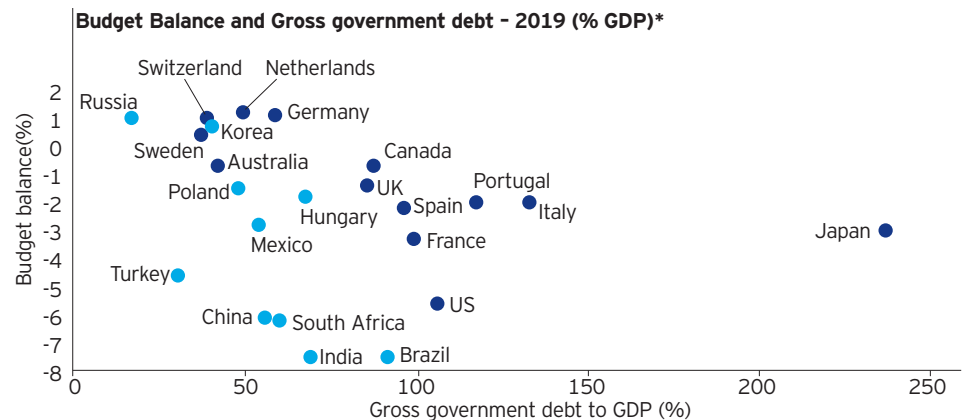
Figure 4: COVID-19 crisis raises urgency of EZ fiscal, capital markets, and banking unions



Source: Invesco calculations based on Bloomberg data. Bond indices ICE BofA ML, (German G4D0, French G4F0, Italian G4I0, Spanish G4E0, Government Bonds 7-10Y indices, the Euro Corporate Large Cap ERLO, the Euro Corporate High Yield HE00, the Euro Senior Banking EB3A debt indices; Equity indices are Euro Stoxx and Euro Stoxx Banks, data are sourced via Bloomberg. The risk-free rate used to calculate the ERP is the Generic 10Y Euro Government bond aggregate yield (GECU10YR). Data as at 25 March 2020. **Past performance is not a guide to future returns.**

EM illiquidity and solvency risks. Many EM countries may face severe refinancing risks because of the tightening in global financial conditions. Some that engage in lockdowns may see private and even fiscal solvency problems if the economic hits are deep or protracted. IMF lending and even Federal Reserve dollar swap lines could be brought to bear to head off such problems before they severely damage any EM economies or threaten global financial stability and economic recovery.

Figure 5: Developed market economies have more fiscal space than emerging market economies



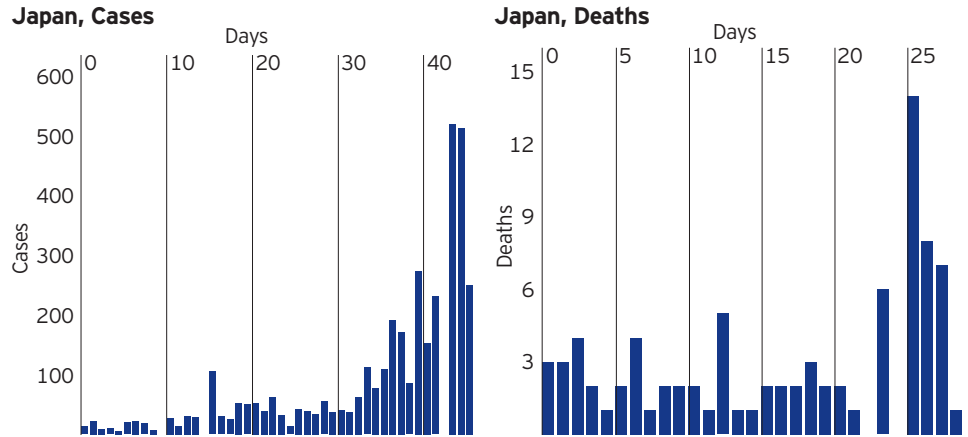
Source IMF Fiscal Monitor October 2019. *Dark Blue blob = Developed Markets, Light Blue blob = Emerging Markets. Invesco

Further pandemic problems. Second waves or mutations in the virus could mean a more protracted economic lockdown. There is some concern about second waves already emerging in some countries, primarily through travel. However, domestically driven second waves are also possible, for example, if not enough immunity is built up or an effective, tried, and tested vaccine is not ready soon enough and lockdowns are released too quickly.

More countries are flattening the curve – a very encouraging confirmation that the virus can be contained relatively quickly. As this unfolds and spreads across the world, plans for risk management and adaptability in releases of lockdowns will be crucial to maintaining confidence across firms, financial markets, and households and minimizing the danger of another round of near-complete lockdowns. Indeed, some countries – notably those that managed the first wave of the virus very well – are now seeing a moderate second wave and renewing partial lockdowns.

Figure 6: Second waves of the virus could require renewed lockdowns

Daily caseload and fatality numbers

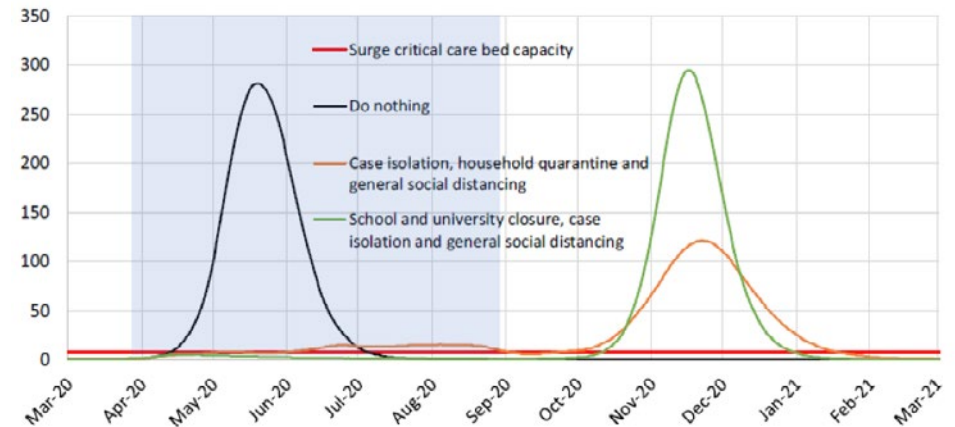


Note: "Day Zero" - thought to be January or February for most countries, is the date when "Patient Zero" is diagnosed - the first identified case in any given epicenter, from whom the epidemic within that epicenter is thought to propagate. The original "Patient Zero" and "Day Zero" have yet to be officially confirmed, but believed to be in Wuhan, Hubei Province, China dating from early December, though November, October or earlier depending on the source. Source: Bloomberg, Johns Hopkins, Invesco. Data as at 7 April 2020 and represent daily numbers

Indeed, epidemiologists have been concerned about the high risk of a second wave of infections that could overwhelm available health-care resources after lockdowns are released in Q2-3 or as the weather cools once again in Q3-4 and people come into closer contact more often. The public health policy prescription for this scenario is so-called "adaptive release" - a kind of on-off switch for lockdowns that could create the possibility of a W-shaped double dip or multiple mini-cycles.

Figure 7: Evaluating the possibilities of a second wave, and scenarios to fight it

UK public health policy scenarios - critical care beds occupied per 100k population



Source: Imperial College COVID-19 Response Team paper commissioned for HM Government and the White House Coronavirus Task Force, 16 March 2020; Invesco

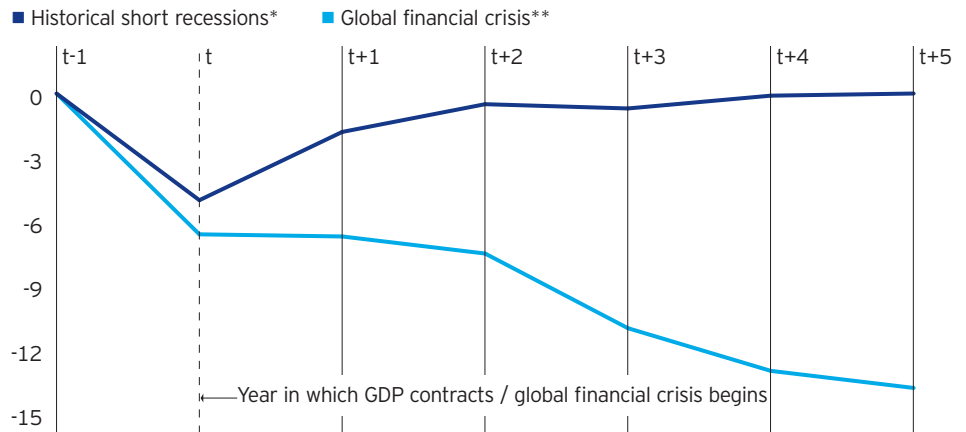
Q: What pattern would you expect for the recession and recovery?

There's a much-ballyhooed discussion about the potential shape of the recession and recovery, featuring a kind of "alphabet soup" of options: V-, U-, L- or W-shaped paths for the economy (any of which could follow the I-shaped free-fall into recession). This menu seems to offer an à la carte menu for everyone and anyone - inveterate bulls, grizzled perma-bears, self-styled realists, doomsayers - you name it.

We do agree that the shape of the recession and recovery is crucial for everyone. Governments, firms and households must plan policy, spending, and portfolio decisions. We would suggest that the shape and type of both the recession and recovery is perhaps as important as specific forecasts, and can provide a useful frame of reference for decisions.

By now it is all too clear that this recession will be much sharper than a typical recession, but the good news is that we do not expect a systemic financial crisis, unlike 2008-09, because of the proactive and outsized response of the Fed, US Treasury, and other major central banks and finance ministries. Even though this response has not been formally coordinated, these measures have coincided to put a floor under the global economy. But due to the specific challenges posed by the pandemic and the public health risk management considerations (which we discuss further below) we believe a “square-root” recovery may be a more appropriate metaphor than the V-shape of a garden-variety recession/recovery or the L-shaped financial crisis recovery.

Figure 8: V-, U-, L- or W-shaped recession and recovery? May be more like a square root
% gap from pre-recession cross-country GDP trend



Notes: *Classical “V-Shape” recession and recovery - the median of 410 short recessions over the last 200 years - GDP contracted in the prior calendar year (t-1 to t) before recovering to or above trend growth rate in the following year.

**Median across developed market economies which experienced systemic banking crises from 2007-08. Source: Oxford Economics, Haver Analytics, Maddison Project Database; Invesco. Latest available full year data for entire sample; wide sample of countries and short recessions includes countries experiencing recessions through 2018.

We would emphasize that a major shock like the pandemic and the recessionary policy response needs to be seen in terms of both the level and growth rate of the economy, and much more so than in a garden-variety recession. Figure 8 illustrates the concept in terms of both the level and growth effects across many typical recessions and the 2008-09 financial crisis.

The dark line shows a V-shape as the economy shrinks as the central bank tightens, restricting demand and pressuring the economy to contract. It then recovers with above-trend growth and closes the gap with the trendline level of GDP as (mainly) monetary policy is eased and private demand rebounds strongly. This dark line represents the median performance of over 400 recessions over the last two centuries across a wide range of countries. GDP tends to trough in a year and to recover over a few years, with very little if any permanent loss in output relative to the trendline of the GDP level because GDP growth rises above potential for a time, as underutilized resources are put back to work on the supply side as the demand side comes back.

The bright line shows the median of developed market economies hit by the systemic financial crisis of 2008-09. This is more like an L-shape, as the trend growth rate of the economy slows due to balance sheet constraints on both the demand and supply sides of the economy. The sad reality is that the level of GDP does not recover to its prior trendline because trend growth remains lower than it was before the crisis, for many years.

We would expect the pandemic to have an effect worse than a typical recession – clearly we are seeing a much sharper, deeper contraction in activity – but not as bad as a systemic financial crisis for the world economy as a whole (though individual economies may still have domestic systemic financial crises, particularly in emerging markets, and there is some risk of an EZ crisis).

Hence the “square-root recovery.” Our intuition is that demand falls very sharply due to economic lockdowns, and pent-up demand and supply are gradually but not completely released over time. But soon the growth rate levels off, because both public and private balance sheets, burdened by heavier debt loads in a smaller, slower-growing economy, must be repaired over time, weighing on trend growth (but not as much as after 2008-09, because this is not an economic or financial crisis but a public health crisis).

Q: What could improve the forecasts?

Containment and treatment. A rapid containment of the pandemic and earlier-than-hoped-for vaccination or treatment would clearly help with an earlier-than-expected economic release. It is also possible that accelerated, mass testing and information about widespread or so-called “herd immunity” might allow infected but immune parts of the population to be released from lockdown, shortening the full impact of the lockdown phase from a calendar quarter or more, to perhaps several weeks.

Sizeable, coordinated fiscal stimulus. If a large economy such as China, or better yet a combination of many economies, joined in a coordinated fiscal stimulus as the lockdowns are released, we could see the global economy recover significantly in the short term. Indeed, the G20 undertook such stimulus after the Global Financial Crisis, and China was a major contributor then as well as after its own devaluation in 2015. However, the appetite for such debt-financed growth is low both in China and other major DM and EM economies because overall public and private debt ratios are now high across the world.

Structural reforms. A cyclical recovery could be given longer legs and a stronger medium-term outlook through structural reforms that build confidence in the future. Health and other forms of social insurance improvements in the United States, as well as public health capacity improvements in the US, UK, and India, for example, could increase household and corporate confidence and lead to stronger animal spirits during the recovery. Greater investment in infrastructure and education to compensate for the effect of lockdowns on basic and higher education should also raise potential growth post-pandemic.

Q: Given pandemic prognosis, policies, and prospects, what do you expect to see in specific markets?

We believe that oil as a commodity and oil companies have been exceptionally undervalued due to the joint negative demand shock of the pandemic and the negative supply shock of the oil price war. While we do not expect a rapid resolution of either issue, we do see a precedent in the 2014 Saudi-Russia oil price war, which also took place at a time of weak demand (albeit not as weak as now). The global supply glut was eventually and gradually fixed as OPEC+ coordination with Russia was established. Signals point to the same happening again.

The coming quarters may well see continued market volatility amid fundamental macro and firm-level pressures. Corporate credit (high grade, high yield and EM) faces significant challenges. We would expect downgrades to continue, with the risk that “fallen angels” that fall below investment grade could cause some capacity and digestion problems in the smaller high-yield market over time. And defaults are likely to continue in many challenged sectors – including EM corporate credit, where refinancing pressures may also become an issue. Pressure on earnings and dividends is likely to be a challenge in many equity markets – particularly in the EU and UK. Corporate consolidation is likely to be a theme, and both dividends and buybacks are likely to become much less of a support for US equities.

Looking out further ahead, as the world economy normalizes post-pandemic into 2021, bond yields are likely to rise further, the US dollar to weaken further, and risk-asset risk premia and volatility to moderate. This process is already underway in much of DM, especially in US equities, but it probably will go further as the public health and the private economy eventually recover from the pandemic. This time around, though, we would expect EM to continue to lag across the board, given the significantly greater public health policy challenges, fiscal and external financing pressures, and general growth pressures many of the major EMs are likely to face.

Q: In closing, how about the major themes and longer-term outlook?

Over the coming years, we would expect the landscape of the global economy to change significantly because major structural changes that were already underway before the coronavirus crisis will very likely continue and in some cases be accentuated by the confirmation that extreme events are possible and that therefore greater public, private, and portfolio “insurance” are useful.

We would expect the following seven major themes to come into sharper focus, which might well change the balance between the shares of labour income and capital returns in GDP. We expect each of these themes to be addressed in different ways in different countries and sectors, pointing to a somewhat more bottom-up and less top-down investment environment – which would therefore be more alpha-rich and less beta-dominated over the long run. All this points to a more joined-up role between asset allocation and selection, complete with a rising role for country- and stock-picking in the long run.

Public health and insurance. The pandemic has fuelled an appetite for a kinder, gentler form of capitalism that includes better, more efficient, more inclusive, and more substantial public health resources and policies in many Western and EM countries. Past crises, particularly financial crises, have precipitated increases in “self-insurance” through, for example, higher household savings rates, higher levels of official foreign exchange reserves, and more restrictive regulatory policies. We may well see public and private behavioural change due to the extreme social, economic, and political impact of the pandemic.

Climate change. The abrupt slowdown and shift in activity from discretionary spending including air travel, domestic transport, and commuting have sharply cut carbon emissions at least for a time. But the issue of climate change is very likely to return to the fore as the world economy recovers. The pandemic crystallizes the very real possibility of extreme events that are far beyond abstract or local, for COVID-19 is the first major pandemic in a century and arguably the first major shock to hit almost all countries almost all at once. It is conceivable that some countries begin and other redouble efforts to insure against and prevent the extreme downside risks and uncertainties of climate change.

Inequality and demographics. Relatedly, improving income, regional, and age-based inequality is likely to continue to be a major issue in the West and in many EMs. Evidence of the need already abounds. We see it in the UK's Brexit vote and the goal of "levelling up" disadvantaged, "left-behind" areas and sectors. Another example is the US political focus on "red states versus blue states" – which may be crystallized by COVID-19's hit to wealthy, well-heeled and -travelled, ageing, and urban elites, and exacerbated by the economic impact on gig-economy workers without much of a social safety net. And we see this need illustrated by China's efforts to shift manufacturing and industry from the coast inland.

"The Fourth Industrial Revolution." This revolution will probably continue unabated because of the enhanced impact and importance of the digital economy to managing extreme events and crises. It is conceivable that customers, policymakers, and corporate management make a concerted effort to harness technology proactively to help manage or prevent crises as has occurred reactively in this coronavirus crisis. Many ideas are within reach, such as refining 3D printing for specialized or mass-produced equipment, as well as mobilizing big data, models, and AI for safeguards and social services instead of mainly for monetizing personal data and for "surveillance capitalism."

The future of the euro. The architecture of the Eurozone remains incomplete. We hope the Princess von der Leyen, who has promoted the idea that her presidency would see a "geopolitical" EU Commission, takes the lead in making the most of this crisis – the third in a decade that threatens the euro – and fixes the house rather than adding more members, rooms, or roles (such as further internationalizing the euro to challenge the dollar). We doubt that the EZ should offer the euro to the world as a dollar alternative, even though the world might like one because of unpredictable US policies and politics. If there are doubts about the cohesion of the Eurozone every time there is a major crisis and there are constraints in providing internal financing within the EZ, graver doubts might surround EZ willingness to provide financing to the rest of the world in a crisis.

The future of emerging markets. Challenges to rapid and sustained EM growth have been magnified by the pandemic. According to the International Institute of Finance, the COVID-19 crisis has precipitated the largest, fastest single episode of capital outflows from EM equities, sovereign debt, and corporate debt with significant pressure on EM currencies and official FX reserves. Private and official-sector estimates for the financing gap – the excess of external financing needs for debt rollovers and net external and budgetary financing over available committed resources (including domestic EM sources) run as high as US\$2.7 trillion, compared to some US\$1 trillion of usable IMF lending capacity. Indeed, some 80 countries have reportedly already approached the IMF with funding feelers. The pandemic is already thought to be running rampant in some major EM economies including Turkey. India may have far higher numbers of cases than reported and is thought to have experienced as many as half of the global fatalities in the 1918-21 Spanish Flu pandemic – a national trauma which intensified the struggle for independence because of the lack of a concerted public health response.

These COVID-19 challenges come on top of slowing trend growth for the globe and for EM countries, the Fourth Industrial Revolution, and partial reversals in globalization. All of these issues threaten the EM growth and catch-up model, which has worked in all the EM countries that have closed the income, wealth, and capital asset risk-premium gap with DM countries – namely shifting workers from agriculture to manufacturing and services. Trade barriers and technology might limit export prospects. Supply chain concentration risks may induce both DM governments and multinational corporates to diversify away from concentrated sources of supply in the major EMs like India, Turkey, Mexico, and others.

Globalization, geo-economics, and geopolitics. Trade and investment barriers have risen because of US-China, US-EU, and US-EM geo-economic tensions as well as outright geopolitics – rivalry with China, the cost of defending Europe and parts of Asia. Some of these shifts and tensions are structural and may well be intensified by COVID-19, which has exposed the weakness of US public health policies. Indeed, it is conceivable that the US may move towards a higher tax burden both to finance the cost of economic rescue programs and to improve and extend health care benefits. Beyond navel gazing, it is conceivable that the US may focus more financial and institutional resources on nation-building at home, perhaps at the expense of a more narrowly defined set of national interests, relying more on allies for "burden sharing" when it comes to geopolitics and greater symmetry in market access.

The lack of diversification and margin for error in just-in-time, concentrated supply chains and the concentration of specific technologies such as generic pharmaceuticals, 5G, robotics, and AI point to greater political demands for re-shoring and diversification of sources of supply. Import substitution policies, as the jargon has it, may boost growth in the short term but only seems to work in the longer term if at least competitive domestic markets are maintained in each industry which benefits from the protection of tariffs and the shelter of public policies for encouraging targeted industries. Picking winners is hard to do, and protecting losers is too often the result. The key for investors may be to pick industries and firms whose cashflow and earnings are cushioned by competitive advantages rather than specific political motivations or support – even as the politics of many sectors changes in response to the COVID shock or geopolitical shocks.

The solution and the issue across all these themes is the policy choices made by individual countries, both to manage the COVID crisis and to bolster investment and growth prospects in the long run. We expect very different choices based on the political, social, and economic structure and constraints in each country, which we expect will contribute to further shifting the market focus from buying or selling the market across EM to picking and choosing structural and tactical over- and underweights.

GMS Office Contributors:



Kristina Hooper
Chief Global Market
Strategist

Kristina has 25 years of investment industry experience. Prior to joining Invesco, she was the US investment strategist at Allianz Global Investors. Prior to Allianz, she held positions at PIMCO Funds, UBS (formerly PaineWebber) and MetLife. She has a BA degree cum laude from Wellesley College; a J.D. from Pace University School of Law; an MBA in finance from New York University, Leonard N. Stern School of Business, where she was a teaching fellow in macroeconomics and organizational behavior; and a master's degree from the Cornell University School of Industrial and Labor Relations, where she focused on labor economics. She holds the Certified Financial Planner, Chartered Alternative Investment Analyst, Certified Investment Management Analyst and Chartered Financial Consultant designations.



Brian Levitt
Global Market
Strategist -
North America

Brian has 20 years of investment industry experience in the asset management industry. In April 2000, he joined the firm, starting in fixed income product management and then transitioning into the macro and investment strategy group in 2005. He earned a BA degree in economics from the University of Michigan and an MBA with honors in finance and international business from Fordham University.



David Chao
Global Market
Strategist, Asia Pacific

David has over 15 years of investment industry experience across Asia Pacific and North American markets. Prior to joining Invesco, David led the Foreign Direct Investment Advisory unit for United Overseas Bank in Hong Kong. He started his investment career in New York with Goldman Sachs, and later spent over 5 years as an equity analyst with Balyasny Asset Management and Visium Funds. David holds a Bachelor of Arts cum laude in International Political Economy from Cornell University as well as a Masters in International Affairs from the University of Hong Kong. He is currently the Vice Chair of the Trade and Investment Committee of the American Chamber of Commerce in Hong Kong.



Tomo Kinoshita
Global Market
Strategist, Japan

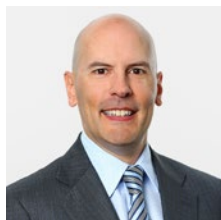
Tomo has 33 years of investment industry experience. Before joining Invesco, he served as a consultant to the World Bank, head of Asia economic research at Nomura Research Institute, and then as Chief Economist at Nomura. He holds a bachelors degree in economics from Kyoto University and a masters degree in economics from Northwestern University.



Paul Jackson
Global Head of Asset
Allocation Research

Paul has 34 years of investment industry experience. Prior to joining Invesco, Paul worked at Société Générale in both Paris and London, holding positions as Macro Specialist Sales, Equity Strategist and Head of Research.

He started his career at Morgan Stanley in London where he worked in Corporate Finance and Equity Research before transferring to New York where he joined Morgan Stanley Asset Management as portfolio manager. He holds a BSc in Economics from the London School of Economics and a Master of Philosophy in Economics from Oxford.



Talley Léger
Investment Strategist

Talley has 19 years of investment industry experience. Prior to joining Invesco, he was the founder of Macro Vision Research and held strategist roles at Barclays Capital, ISI, Merrill Lynch, RBC Capital Markets, and Brown Brothers Harriman. He is the co-author of the revised second edition of the book, *From Bear to Bull with ETFs*. He earned an MS degree in financial economics and a Bachelor of Music from Boston University. He is a member of the Global Interdependence Center (GIC) and holds the Series 7 registration.



Timothy Horsburgh, CFA
Investment Strategist,
North America

Tim has 10 years of investment industry experience. In 2010, he joined the firm, serving as a capital markets analyst before becoming an investment strategist. Tim holds a bachelors degree in economic and government from Cornell University. He is a CFA charterholder.



Ashley Oerth
Investment Strategy
Analyst

Ashley is an Investment Strategy Analyst. In this role, she develops and communicates economic outlooks and investment insights, with a particular focus on macroeconomic concepts and modeling. Additionally, she researches and creates thought leadership pieces to help articulate the firm's thematic viewpoints.

Ms. Oerth joined Invesco when the firm combined with OppenheimerFunds in 2019. She began her career with OppenheimerFunds in 2016 and worked with the investment strategy team. Previously, she worked at High Frequency Economics as Research Coordinator.

Ms. Oerth earned a BA degree in economics and political studies from Bard College at Simon's Rock in Great Barrington, Massachusetts. She also completed the Bard Globalization and International Affairs program (BGIA) as part of her studies. She holds the Series 7 registration.

With special thanks to:

John Greenwood, Chief Economist

Adam Burton, Assistant Economist

Luca Tobagi, Strategist, Multi-Management, Invesco Investment Solutions

Andy Blocker, Head of US Government Affairs

Jennifer Flitton, Vice President of Federal Government Affairs (US)

Elizabeth Gillam, Head of EU Government Relations and Public Policy

Graham Hook, Head of UK Government Relations and Public Policy

Investment risks

The value of investments and any income will fluctuate (this may partly be the result of exchange rate fluctuations) and investors may not get back the full amount invested.

Important information

The article is intended only for Professional Clients and Financial Advisers in Continental Europe (as defined below); for Qualified Investors in Switzerland; for Qualified Clients/Sophisticated Investors in Israel, for Professional Clients in Dubai, Ireland, the Isle of Man, Jersey and Guernsey, and the UK; for Institutional Investors in Australia; in New Zealand for wholesale investors (as defined in the Financial Markets Conduct Act); for Professional Investors in Hong Kong; for Qualified Institutional Investors, pension funds and distributing companies in Japan; for Institutional Investors and/or Accredited Investors in Singapore; for certain specific Qualified Institutions/Sophisticated Investors only in Taiwan and for Institutional Investors in the USA. The document is intended only for accredited investors as defined under National Instrument 45-106 in Canada. It is not intended for and should not be distributed to, or relied upon, by the public or retail investors. By accepting this document, you consent to communicate with us in English, unless you inform us otherwise.

The article is marketing material and is not intended as a recommendation to invest in any particular asset class, security or strategy. Regulatory requirements that require impartiality of investment/investment strategy recommendations are therefore not applicable nor are any prohibitions to trade before publication. The information provided is for illustrative purposes only, it should not be relied upon as recommendations to buy or sell securities.

For the distribution of this document, Continental Europe is defined as Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Spain and Sweden.

The article is written, unless otherwise stated, by Invesco professionals. The opinions expressed are those of the author or Invesco, are based upon current market conditions and are subject to change without notice. This article does not form part of any prospectus. This article contains general information only and does not take into account individual objectives, taxation position or financial needs. Nor does this constitute a recommendation of the suitability of any investment strategy for a particular investor. Neither Invesco Ltd. nor any of its member companies guarantee the return of capital, distribution of income or the performance of any fund or strategy. Past performance is not a guide to future returns.

This article is not an invitation to subscribe for shares in a fund nor is it to be construed as an offer to buy or sell any financial instruments. As with all investments, there are associated inherent risks. This article is by way of information only. This document has been prepared only for those persons to whom Invesco has provided it. It should not be relied upon by anyone else and you may only reproduce, circulate and use this document (or any part of it) with the consent of Invesco. Asset management services are provided by Invesco in accordance with appropriate local legislation and regulations.

Certain products mentioned are available via other affiliated entities. Not all products are available in all jurisdictions.

Restrictions on distribution

Israel

This document may not be reproduced or used for any other purpose, nor be furnished to any other person other than those to whom copies have been sent. Nothing in this document should be considered investment advice or investment marketing as defined in the Regulation of Investment Advice, Investment Marketing and Portfolio Management Law, 1995 ("the Investment Advice Law"). Investors are encouraged to seek competent investment advice from a locally licensed investment advisor prior to making any investment. Neither Invesco Ltd. nor its subsidiaries are licensed under the Investment Advice Law, nor does it carry the insurance as required of a licensee thereunder.

This publication is issued:

- in **Australia and New Zealand** by Invesco Australia Limited (ABN 48 001 693 232), Level 26, 333 Collins Street, Melbourne, Victoria, 3000, Australia which holds an Australian Financial Services Licence number 239916.

The information in this document has been prepared without taking into account any investor's investment objectives, financial situation or particular needs. Before acting on the information the investor should consider its appropriateness having regard to their investment objectives, financial situation and needs.

This document has not been prepared specifically for Australian investors. It:

- may contain references to dollar amounts which are not Australian dollars;
- may contain financial information which is not prepared in accordance with Australian law or practices;
- may not address risks associated with investment in foreign currency denominated investments; and - does not address Australian tax issues.

- in **Belgium, Denmark, Finland, France, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain and Sweden** by Invesco Asset Management SA, 16-18 rue de Londres, 75009 Paris, France. Authorised and regulated by the Autorité des marchés financiers in France.

- in **Austria and Germany** by Invesco Asset Management Deutschland GmbH, An der Welle 5, 60322 Frankfurt am Main, Germany.

- in **Dubai, Jersey, Guernsey, Ireland, Israel, the Isle of Man and the UK** by Invesco Asset Management Limited, Perpetual Park, Perpetual Park Drive, Henley-on-Thames, Oxfordshire, RG9 1HH, United Kingdom. Authorised and regulated by the Financial Conduct Authority.

- in **Canada** by Invesco Canada Ltd., 5140 Yonge Street, Suite 800, Toronto, Ontario, M2N 6X7.

- in **Hong Kong** by INVESCO HONG KONG LIMITED 景順投資管理有限公司, 41/F, Champion Tower, Three Garden Road, Central, Hong Kong.

- in **Japan** by Invesco Asset Management (Japan) Limited, Roppongi Hills Mori Tower 14F, 6-10-1 Roppongi, Minato-ku, Tokyo 106-6114; Registration Number: The Director-General of Kanto Local Finance Bureau (Kin-sho) 306; Member of the Investment Trusts Association, Japan and the Japan Investment Advisers Association.

- in **Singapore** by Invesco Asset Management Singapore Ltd, 9 Raffles Place, #18-01 Republic Plaza, Singapore 048619.

- in **Switzerland** by Invesco Asset Management (Schweiz) AG, Talacker 34, 8001 Zurich, Switzerland.

- in **South Africa** by Invesco Asset Management Limited, Perpetual Park, Perpetual Park Drive, Henley-

- in **Taiwan** by Invesco Taiwan Limited, 22F, No.1, Songzhi Road, Taipei 11047, Taiwan (0800-045-066). Invesco Taiwan Limited is operated and managed independently.

- in the **US** by Invesco Advisers, Inc., Two Peachtree Pointe, 1555 Peachtree Street, N.E., Suite 1800, Atlanta, GA 30309.