

Nicolo G. Torre
Ph.D. CFA
Managing Director

Archan Basu
CFA
Member of Advisory Board

Market Commentary

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With markets having settled up while the pandemic continues to rage, now is an especially opportune moment for careful consideration of goals, circumstances and trade offs, both within our broader lives and in our portfolios.

Major Developments

Worldwide the Covid pandemic continues to be the dominant development. This disease has proven difficult for policy makers to get their minds around. It combines moderate infectiousness, moderate lethality and moderate resistance to control to create the largest public health challenge in a century. It is because its impact comes from a combination of elements rather than from a single extreme element that it has generated policy debate, indecision and lack of an effective response. Nowhere has this lack of effective response been more on display than in the United States. Home to only 4% of the world population, the United States yet manages to host 33% of the world's cases and a similar proportion of its fatalities.

Deaths per 100,000 Population:

Loose Control:

Tight Control:

Entity	Deaths/100k	Entity	Deaths/100k
USA	21	India	0.11
Sweden	26.88	Denmark	8.5
New York City	41.47	San Francisco Bay area	4.73

Source: Johns Hopkins Coronavirus Resource Center, as of April 30 2020

Market Index	April 2020	Jan-Apr 2020
S&P 500	+12.8%	-9.3%
MSCI EAFE	+6.5%	-17.8%
MSCI Emerging Markets	+9.2%	-16.6%
Bloomberg Barclays US Aggregate Government	+0.6%	+8.9%
Bloomberg Barclays US Aggregate	+1.8%	+5.0%
Bloomberg Barclays US High Yield	+4.5%	-8.8%
B of A / Merrill Lynch European Non-Financial High Yield const	+6.2%	-9.3%
JP Morgan EMBIG	+2.2%	-9.8%

At this point the data is in and the correct approach should no longer be a matter of debate. Swift application of tight lock down is required to get control of the disease. The below table (using data from Johns Hopkins' Coronavirus Resource Center as of April 30) shows three similarly matched governments one of which followed the path of early tight lock down and the other which did not. In each case the loose approach has resulted in a massive increase in mortality.

These pairs have been chosen with some care. India and the USA are both large federal democracies with considerable internal diversity. Denmark and Sweden are both Nordic social welfare democracies with sizes comparable to individual US states. The San Francisco Bay Area and New York City are both large metropolitan regions whose strong international connections made them among the first US localities to experience outbreaks. Interestingly, each entity following the loose control approach enjoys certain natural advantages over its paired opposite which advantages might have been expected to generate a better outcome. The USA is far richer than India; Sweden enjoys a lower population density than Denmark; and New York City has a centralized government whereas the Bay Area is an economic unity without a centralized government. Yet in each case natural advantages have been unable to offset the damage done by incorrect policy choices.

Once tight lock down is applied, it requires between two and three months to halt community spread of the disease. Thereafter lock down procedures can be eased gradually if continuing tight control is exercised over borders to prevent reintroduction of the virus and an intensive program of test and trace, and if necessary local lock downs, is in place to control sporadic outbreaks. While no country has entirely succeeded with this program to date, enough success has been achieved by New Zealand, Taiwan and Australia to indicate that this program can succeed on a larger scale than a city. The cost of control is high – about 10% of GNP. The cost consists almost entirely of lost economic productivity with medical and health measures being a trivial component of total cost. While 10% of GNP is a major expense, it is one which most governments with strong credit can finance.

The USA is approximately following this program. Tight lock downs were ultimately implemented by state governors in most of the country. The Federal government has enacted and partially distributed a combination of relief packages amounting to about 15% of GNP. However, there is no consensus on releasing the lock down. The President has been pushing for early release and encouraging civil disobedience in some states where the governors are following a more cautious approach. Some state governors have responded with a release in lock downs that, in our opinion, are premature and likely to result in re-ignition of the epidemic in their states. States that are following a more cautious approach, despite its heavy economic costs, will naturally want to protect the investment they have made. We expect them to impose border controls and to require out of state visitors to comply with their test and trace regimes. Frictions in interstate commerce, broken supply chains and general desynchronization among the different regions will slow economy recovery and will increase the costs of lost productivity.

States that experience re-ignition of the epidemic are likely to be forced into expensive costly lock downs with reduced support from the Federal government. Accordingly we are increasingly cautious about the economic outlook for the second half of 2020.

The inability of the United States to coalesce around a common policy despite a direct threat to life and economy will have been noted by our adversaries. We are exhibiting greater political weakness than they could have anticipated. Once released from their own epidemic burdens, we may see greater boldness in our adversaries's probing of our international posture. It is becoming increasingly clear that China knowingly covered up the epidemic in January with the result that it increased to a pandemic.

China may face reprisals from the rest of world in consequence. Currently China is dealing with this issue in an aggressive rather than conciliatory manner. The international political outlook is generally moving towards increased tensions.

Domestically the most significant event of the month was a statement by the Republican leader of the Senate, Mitch McConnell, that the states and cities could file for bankruptcy as the Federal government would not be providing them with financial relief. McConnell's ire was directed in particular at certain Democrat led entities that, in his opinion, had allowed public service pension obligations to grow out of bounds. This statement has a number of extraordinary features. First, municipal bond holders are a core Republican constituency. Second, the Republican party has been for decades the champion of local and state government in contrast to Federal government. Third, public service pensions are the primary capital asset of their holders. Labeling certain capital assets as "Democratic" and therefore okay to liquidate is to invite future reprisals against "Republican" capital assets. It would be surprising to see the Republican party launching such class warfare. Indeed McConnell walked his statement back a few days later and its imprudence may reflect the stress level in government circles rather than a major shift in Republican policy.

We would be wise, however, to pause for a moment to consider the state of municipal credit. It has been widely stated that states are not allowed to file for bankruptcy. This is a careless statement which could lead to the false conclusion that state bonds are default free. Under the constitution the Federal government has responsibility for bankruptcy and it has created specialist courts to administer bankruptcy law. Chapter 9 of the Federal bankruptcy code is available to subsidiary municipal governments (cities, counties, special revenue areas) if their controlling state permits its application.

About half the states allow their municipal subsidiaries to file under the Federal chapter. The states themselves, however, are sovereign entities. They can simply refuse to pay their debts. The Federal courts are, by the 11th amendment to the constitution, closed to bondholders seeking to compel a defaulting state to pay. The bond holder can seek redress in the defaulting state's courts but can expect no relief there. Thus, there is basically no legal redress from a state default. However, the state's desire to issue bonds in the future is sufficient inducement that they treat default as a step to be taken in only the gravest circumstances. No state has defaulted in over a century. Currently states are experiencing severe shrinkage in tax revenues from personal income tax, sales tax, gasoline excise tax, oil royalties and various user fees. At the same time health care costs are rising, so the states and some municipal governments are under increasingly severe pressure. To deal with this situation the Federal Reserve has extended a credit facility to the states and twenty largest city and county governments. Accordingly we do not expect any bankruptcies in this group of governments. Smaller cities and counties are mostly reliant on property taxes. Here there may be collection problems, but an acute crisis is not expected.

Municipal revenue bonds, however, may present credit problems. While water and power revenues will hold up, revenues at sports arenas, hospitals, and airports are all under pressure. Defaults should be anticipated in weaker credits in these highly impacted sectors. Finally McConnell is correct that public service pensions are often underfunded and overpromised. However, this is a slow moving problem requiring local solutions. We do not think there will be a meaningful effort at reform in this area during a health crisis.

To summarize, the Covid epidemic continues to stress the world in unexpected ways. Much is unsettled, including even things that had seemed quite set.

Market Review

April followed a bruising first quarter: the S&P 500 Index had peaked near 3,400 in mid February, then plunged to 2,300 on March 23, before ticking modestly upwards in a move that resembled an effect of quarter-end rebalancing (ie purchases of stocks made to restore their proportion in a balanced portfolio). While many still hoped for a sharp ("V-shaped") economic recovery, prognostications for continued market pain seemed a reasonable wager.

That gloomy backdrop made April's robust market performance an especially positive surprise: the S&P 500 ended above 2,900, rising +12.8% over the month, bringing its year-to-date return to -9.3%. This quick recovery from the prior quarter's -20% loss (definitionally a bear market), and moreover from a viscerally felt -33% peak-to-trough decline, provided ongoing respite from worsening economic and public-health news. So investors in US equities benefited rather directly from government stimulus.

Other stock markets rallied as well, albeit less convincingly: the MSCI EAFE index of developed international stocks rallied +6.5% over April, while MSCI's Emerging equity index rallied +9.2%.

These returns and their corresponding year-to-date tallies (MSCI EAFE -17.8%, MSCI Emerging -16.6%) continued a now multi-year pattern of US stocks dominating their international counterparts.

Within that overall pattern, nuances of region and timing produced a relatively attractive -4.5% year to date return for China's CSI 300 index, following its own sharp April rally.

In bond markets, US treasury yields inched further lower from 0.70% to 0.64%, delivering total returns (as measured by the Barclays US Aggregate Government index) of +0.6% in April and +8.9% year to date. The Bloomberg Barclays US Aggregate index (which also draws in investment grade corporate and agency bonds) and its High Yield (or so-called junk bond) counterpart both rose in April, by +1.8% and +4.5% respectively, for year-to-date returns of +5.0% and -8.8%.

All of this is a continuing testament to the remarkable power of the US Federal Reserve, whose broad support of the capital markets now explicitly extends to even low rated corporate debt. With the Fed's buying activity being mirrored world-wide, assets as far afield as European high yield bonds and emerging country debt rose +6.2% and +2.2% respectively in April, paring their year-to-date losses to -9.3% and -9.8%. (as measured respectively by B of A/Merrill Lynch Euro Non-

financial HY constrained, and JP Morgan EMBIG index). And in a further sign of market relief, the US dollar lost further strength relative to its panic-driven March highs.

Market volatility (as measured by the CBOE Volatility index, or VIX) told a similar story: having risen from a quiescent 14 at the beginning of the year, to highs in the 80s in March (matching the October 2008 level), it receded further in April, declining down to the low 30s. However these are still considered elevated levels, having previously been seen in 2010-'11, as markets emerged from the global financial crisis, while Europe still teetered, and S&P downgraded US treasuries. All of which suggests that forward caution remains amply warranted today.

Oil flared up in April, with astonishing reports of its price briefly reaching a NEGATIVE \$37 per barrel. Already under pressure from a weakening global economy, crude oil prices had halved in March (from \$44 to \$20 per barrel of West Texas Intermediate, or WTI) as brooding Saudi frustration toward Russian drilling gave way to an open price war. Now with economies in free fall, and an overwhelming majority of internal combustion engines idling in lockdown, there were few buyers for cheap oil, and even fewer places to store it. So what do opportunistic, albeit sadly underinformed, investors do?

Apparently they googled "oil eff" and piled into OIL, to the tune of \$1.6 Billion in flows during the third week of April alone - thereby unwittingly obligating themselves to deliver some tens of millions of barrels of WTI to a designated storage hub in Cushing, OK. Sometimes ownership proves a liability, and you actually have to pay someone to cart away your "asset" - or in this case, assume your delivery obligation while rolling your futures contract. Investors in OIL witnessed -300% decline in one day.

Harm was thankfully localized as OIL represented smallish allocations in its owners' portfolios: an expensive education in the perils of owning exotic alternative assets. Drama notwithstanding, oil closed the month flat.

Gold moved more decisively thru April, from \$1600 to \$1700 per troy ounce, resuming a pattern of inflation concern that has afflicted markets since at least December. Over a history that stretches far - indeed, into distant antiquity - current levels of gold price have only ever been seen in 2011-'13. As was then true in the immediate aftermath of the global financial crisis, we are now again caught between fears of both deflation (think falling oil and airline ticket prices) in the near term as economic activity cools, and longer-term inflation (as the Treasury's humming presses devalue the money they print). Gold holdings are but an imperfect solution to this recurrent quandary, as is Bitcoin (up +33% in April, 20% year to date).

In short, financial markets saw a broad reversion toward optimism in April, with a few weak signals of continued concern.

Outlook

As states contemplate reopening, markets stare at a fork in the road. "Don't fight the Fed" implies no retesting of March lows. So pundits have busied themselves rationalizing current valuations (\$150 in normalized earnings per share, times a forward Price/Earnings multiple of 20, implies an S&P

500 index level of 3,000) while allowing for an orderly rotation of profits, say from GM to Tesla, or mall operators to Amazon. Yet the sinister still lurks: with Covid-19's public-health and economic trough still likely months away, on both a global and US basis, have we really seen the worst in the markets? This then is the risk management question of the moment.

When legendary investor Warren Buffet reliably held court in early May, at Berkshire Hathaway's annual shareholder meeting in Omaha, NE, he reprised his 2008 message that investors shouldn't ever bet against America. With Berkshire's own holdings concentrated in consumer, bank, and airline stocks, their Q1 loss of -\$50 Bn was unsurprising. What did surprise analysts was Buffett's reticence to spend down his cash hoard (currently \$137 Bn) relative to his decisive, uplifting 2008 purchases. Perhaps Buffett, ever cautious risk manager who understands above all that cash is king in crisis times, remains less sanguine than most.

Many 401(k) savers wished, from mid-February thru the March lows, that they had adjusted their portfolios to lock in some gains rather than greedily letting them ride. At least they didn't face the public embarrassment of CalPERS, the nation's leading public pension plan, whose managers famously gave up \$1 Billion in proceeds by prematurely unwinding hedges deemed "too expensive" by their recently hired Chief Investment Officer. A majority of asset allocation funds, too, emerged bruised. Yet it already seems that investors, having enjoyed a few weeks of reprieve, are too quickly forgetting those uncomfortable, yet important existential questions.

In short, we fear the stock market may be expressing the view of its society: an impatience to return to normal, an over-optimistic view that the pandemic will soon be a non-event. Not that we exactly disagree, though we do point to changes in the long term fortunes of sectors, and in a quickening of some adverse sector trends (per our March 2020 commentary) of political turmoil and possible peak oil. Above all, we urge caution and prudence.

Guidance

Prudence suggests that investors take a disjoint (some may say "barbell") view of the market: yes it may continue riding upward with Fed inducement and government relief, while allowing for modest rotations toward businesses poised for the post-Covid world. Think delivery drones and work-from-home, not restaurants and office towers. A possible infrastructure bill, wished for since at least '08, could further accelerate that. Meanwhile do not skimp on safety: double-digit (and rising) unemployment implies rainy-day funds must extend longer, taking priority even over the retirement nest. Balanced portfolios should explicitly be geared to the possibility of either scenario.

In practical terms this means jettisoning a simplistic (linear or continuous) view of the portfolio's return prospects, and focusing explicitly on goals and scenarios instead. This is particularly hard to do while broadening focus to the entirety of what matters, rather than looking at a specific account or objective in isolation, as many investors and their advisors do. And of course details will depend on each investor's specific circumstances. We would check that liquidity cushions are adequate; we continue to view bonds as a liquidity reserve and favor modest duration against the risks (arguably closer to symmetric than the consensus view) of interest rate movements. And while always sensitive to valuations, per our March 2020 commentary, and now per the recent lesson in OIL, we would remain slow to bottom fish.

The principles of risk management extend naturally to one's broader life as well. To risk-proof any business or activity, it helps to add redundant people in case some fall sick; extra credit lines we expect to never use; parts inventory instead of just-in-time supplies; local manufacturing instead of shipping across oceans; and personal protective equipment galore. At home this can mean: stocking up the pantry, allowing extra time for every trip, prioritizing longer-term tasks, checking on those less fortunate, and enjoying the gifts of being near loved ones.

To conclude: now is an especially opportune moment for careful consideration of goals, circumstances and tradeoffs, both within our portfolios and in our broader lives.

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