

March 31, 2020

Dear Clients:

In a time of disorienting ‘firsts’, we will add ours to the list: since 1972, this is the first quarter where we have been unable to actually travel North, East, South or, *especially*, West of the Hudson. We cannot of course imagine that any of you on the receiving end of this are not under similar house-bound circumstance, so we will not add further to this introductory caveat. We will also assume that you, as we, have spent an unhealthy amount of time subsumed by this global viral news creep. We will make our best effort to avoid any retelling or speculation outside the bounds of our pay-grade, but the tri-peaks of the virus and the economic and financial waterfall embodies cause and effect and is therefore unavoidable.

Covid-19 has stunned a disbelieving world. While a few governments responded with reasonable urgency, too many inexplicably seemed to hope that the crisis would remain in that far-off place and resolve itself. By the time we understood the gravity of the situation, it had already become a pandemic that spread as quickly as an airplane flight. So, as the virus inflicts its toll, life as we know it has come to a halt and business activity, incomes, and asset values of every kind have plunged. Overnight, things that are valued are in surplus, including oil, while the once mundane facemask has become rare and precious. Probably the most valuable commodity? Distance and the ability to stay more than a coughs-length away.

The global economy is in a precarious condition. Governments have shut down critical segments of the economy to slow the spread while fiscal authorities are implementing massive stimulus programs. We know well of course that printing money is no substitute for a vaccine but then the charge of Treasury and the Fed is the economy’s financial plumbing, not virology. With the helping liquidity hand of government, we are left to wonder what kind of economy we will have after restrictions are lifted. How strong and how long the duration of a rebound should we realistically expect? Which direction for inflation? Much depends on which of the virus’ two economic shocks outweighs the other: supply or demand. And over-arching it all is the psychology of consumers: how long will it take to re-emerge with confidence? With this construct in mind and an unforgettable Q1’20 at its close, we provide our annotations for this, our first quarterly letter **West of the Hudson**™ in 2020.

- Redundancy v. Fragility

We begin at the exit of our Q4 2019 letter where we emptied our notepad from two weeks in China just prior to the Christmas holiday as riots still gripped Hong Kong. In that letter, we scrutinized the forced dis-integration of global trade and its consequent socio-economic and financial impact. Yet here we are -- the very next quarter -- and we must walk-through an entirely unanticipated condition: bearing witness to a near-total freeze in global and inter-regional trade...in under *ten* weeks. As you well-know, the results have been sudden and profound. We are unapologetic globalists (like the companies in which we invest) and believe that the potency and potential of innovation in goods and services is magnified by global competition. With that said, what we are currently confronting is central to this trade freeze: the virus has exposed the lack of supply-chain redundancy and the fragility of just-in-time perfection.

We do have to rehash *some* of the China data because, well, it is *material*. China represents 35% of global manufacturing output and is the world’s largest exporter of goods -- totaling ~\$2.5 trillion in 2018 (McKinsey). These goods include 40% of all exports of textiles/apparel, 26% of furniture and 55% of all computers (UBS). And the country produces 80% of global smartphones and tablets. There’s still no single nation that can match China’s advantages as a manufacturing base and it is uniquely integrated

with the world. Despite U.S. efforts to pare back this interdependence, it remains at the center of a dizzying network of supply chains optimized overwhelmingly -- we are learning -- for *efficiency*, not *resilience*.

Automobiles and electronics production -- industries not usually associated -- share this important trait: they are highly choreographed processes that depend on getting thousands of components in the right place at the right time. Any bottlenecks or disruptions cause delays that cascade across the supply chain. Apple and other technology leaders warned of growing bottlenecks more than a month ago. Wuhan (aka China's "Motor City") is the leading source of U.S. car-part imports (\$12 billion in 2018 -- a third of China's export total) so it is little wonder the automotive sector is *the* U.S. industry most hobbled by China's virus-fight.

Most industries manage inventory based on just-in-time models, and nearly all are reporting virus-related supply shocks. A Dun & Bradstreet survey reports that 938 of the Fortune 1,000 companies queried have *at least* one tier 1 or 2 supplier with disrupted operations. Another survey by the Institute of Supply Management (ISM) is similar: ~75% of companies reported supply-chain disruptions due to virus-related restrictions stating, "Global supply chains are impacting most, if not all, of the manufacturing industry sectors. Suppliers continue to struggle to deliver and concerns about current and ongoing reliable Asian supply dominated the comments from panelists."

Thirty years of cutthroat global production economics have pushed supply chains to become ever more complex, with the winners often measured in mere basis points of profitability. Supply redundancy is a luxury that comes at a cost, which is how Procter & Gamble boasts this statistic: 17,600 of its SKU's rely on materials from China. We do not recall any management discussions where this risk was flagged. Jeep Cherokee, the most "American-made" automobile in 2019, is entirely produced with non-American parts across a vast swath of facilities, many responsible for a discreet process. They are not alone as thousands of companies over the decades have pushed the cost envelope, prioritizing the lowest price over location. The result is what we see now -- a proliferation of chokepoints.

It's not just China of course: Taiwan dominates semiconductor fabrication and Japan, as we saw last summer in its dispute with South Korea, dominates chipmaking materials. All of these manufacturing centers are vulnerable to epidemics, natural disasters, political spasms or geopolitical disruption. However, if we take away nothing else from this mother of all black-swan events, it's that China is the most tightly concentrated matrix of supply chain risk there is and will broadly remain the topic of focus for a long-time to come. The benefits of geographical production diversification have become very clear.

- Supply and Demand

At its most basic, what we require in life must travel from where it's made to where it's needed, and it is alarming that nearly every step along this path is showing signs of virus-related stress. There are many thousands of supply chains in constant motion, but none more vital than the staples of things we *need* (food, pharmaceuticals, gas, electric) and non-vital discretionary stuffs, or things we *want* (apparel, electronics, appliances, cars).

The first shock of this pandemic has been the imbalance between supply and demand. We have too much of what we don't need right now, like oil -- companies keep pumping and adding to supply while demand has fallen with nobody driving or flying; and too little of what we do need now -- like ventilators, face masks, and hand sanitizers, for which we lack sufficient production capacity.

1. Supply

The central nervous system of global consumption and *the* front-line data point for global GDP *potential* is the number of cargo ships at sea and the number of containers on those ships. With shipping data

providing ample evidence that a global slowdown in trade was already underway, we came into 2020 thinking only about the hefty costs to retrofit exhaust systems to comply with new maritime regulations. Shipping volumes from China plummeted in February as factory shutdowns halted industrial production. As the impact of the virus swept across supply chains, containers were idled at a record pace as hundreds of sailings were canceled on major trade lanes connecting Europe, America, and China (the biggest exporter of manufactured products *and* largest importer of raw commodities). According to marine data provider Alphaliner, a record two million containers of seaborne shipping capacity were idled in February -- greater than the 1.5 million containers of capacity idled in all of 2009 during the financial crisis.

Supply in China was first throttled by quarantines that kept workers from returning to factories. Ports were open, but trucks couldn't get to the cargo terminals as a result of virus-related transportation restrictions. According to a Chinese Commerce Ministry survey of 7,000 companies, 90% of exporters reported difficulty shipping goods. This caused a cascade of chokepoints as unloading holdups in China and delays on the return of vessels left shippers waiting for hundreds of thousands of containers to move their products back West. The combination of port congestion and interrupted sailings squeezed space on China-bound vessels and created an imbalance of the 40-foot long refrigerated containers used to ship fruit, meats and other perishables on the three-week voyage across the Pacific. Many are still stuck on the China side and, as the disease has gone global, Chinese ports have begun to quarantine incoming ships for fourteen days, further exacerbating this crunch.

China makes up close to one-third of total shipping activity and it is reported that container volumes from China at the U.S. west-coast ports (L.A., Long Beach, Oakland) have fallen 35% year over year. Given the large multiplier effects from the consumer spending decline in U.S. retail, travel, restaurants, and entertainment, one can only imagine what March looks like.

As an aside, if airlines weren't already reeling from a collapse in travel, the parallel breakdown in commercial shipping has been felt in this air node as well because "belly cargo" on commercial flights accounts for more than half of all air freight tonnage.

2. Demand

The combination of the quarantine and social distancing has forced tens of thousands of businesses to close their doors. But when consumers are eventually given the all-clear signal to go out, will everyone rush to the malls, restaurants, and theaters? There is sure to be a post-pandemic, get-out-of-the-house demand boom and the Small Business Administration's "paycheck protection program" ensures at least *some* money in people's pockets as we struggle to bridge lost incomes. So, if this predicament is not long lasting, a reasonably quick economic re-opening is possible. However, the worry is that the shutdown lasts longer than the SBA consumer loan and unemployment continues to rise sharply as employers are forced to cut payrolls even at the cost of repaying their SBA business loan.

The fact is, revenue has virtually ceased for many brick and mortar retailers in the U.S. and several have announced they will be unable to meet the April rent payment. Major restaurant chains and clothing stores have entered into talks with landlords for deferrals or other payment plans. According to current data, as many as 630,000 retail outlets have closed their doors. Retailers represent the country's largest employer base with ~4.5 million employed. There are also in excess of 900,000 restaurants at risk -- food prep, including fast food is the second-most populous U.S. industry.

Maintaining essential supply chains and consumer services will be a top priority in the time ahead, but how does that happen with no flow of goods, consumers, or the physical presence of employees? No matter how robust and no matter how automated logistics and transportation networks have become, it takes armies of workers to operate and maintain them. Warehouses still employ workers; truckers go from one node to the next; stockers and cashiers must maintain the critical services -- the list goes on.

We would be remiss if we didn't mention the demand-destruction in oil as the virus has crushed our ability to consume the stuff. Despite the resulting -66% YTD commodity price collapse, U.S. gasoline consumption was -37% in March. The energy industry isn't as large a contributor to the economy as it once was and lower prices -- even of this magnitude -- are not a positive today as the loss in industry income has more than off-set any consumption gains.

3. Imbalances

When it comes to food supply and demand, only the United States can meet its needs to support its population. We boast the largest uninterrupted, fertile land-mass on Earth but that leaves A LOT of mouths to feed outside our borders.

And, in recent weeks and amid fears of shortages, countries have begun to adopt measures to secure their own food supplies. Russia, the world's largest wheat exporter, has halted exports of all grains. Kazakhstan and Kyrgyzstan have followed suit, while Vietnam has similarly frozen rice exports. In Europe, concerns over the agriculture sector revolve primarily around labor shortages. France has encouraged the unemployed to join the agriculture industry ("agricultural patriotism"); while Germany extended work visas in an effort to keep its farming workers. And, while it is still early, there is already noise surrounding worker safety among South American food pickers and their "availability" for the upcoming harvest. None of this is historically unique to the EU, Russia or Vietnam and the closing of borders and seizing food supplies is part of their histories. It is nonetheless going to take getting used to.

- Leverage Kneecap

Not only were supply and demand thrown for a tailspin, but so was the financial plumbing that permeates most facets of our economy. Asset markets ceased to function in an orderly fashion as forced sellers of both liquid and illiquid assets clogged the financial pipes. The results were unforgettable.

What is most important right here and right now is how to deal with the massive debt load in the business sector. We are going into a period where everything is pretty well shuttered and there are no cash flows to service this mountain of debt. Not defaulting is most important. Guess who is holding onto this corporate debt? It's not just the banks, who have \$2.4 trillion of commercial and industrial loans on their books. Private pension funds hold nearly \$1 trillion of corporate bonds. State and Local pension funds have \$470 billion. The mutual fund industry is sitting on \$2.4 trillion. ETFs have nearly \$550 billion of exposure. Life insurance companies hold over \$3 trillion. Can you imagine the knock-on impacts from a wave of corporate debt defaults, not just what it means directly for the real economy via the loss of output and employment, but all these entities who own the debt (as an asset on their balance sheet).

-- David Rosenberg, Chief Economist & Strategist, Rosenberg Research, 03/26/20

Severe economic downturns have been described as capitalism's sorting mechanism, revealing weak business models and stretched balance-sheets (Warren Buffet likes to say that "when the tied goes out, we'll see who is wearing pants"). The extreme nature of this period has been met by an equal degree of balance-sheet lack-of-preparedness, especially among businesses that depend on people being out and about -- restaurants, hotels, entertainment, sports, airlines. The Fed kept the cost of capital so low for so long that few businesses in any industry were without some amount of debt on the balance sheet. Too often, this debt was reallocated to share-buybacks (which produces no debt-servicing income) and M&A (which is hit or miss requiring exemplary execution in order to generate an attractive ROI). Classic cashflow producing investment has remained reasonably steady, but not commensurate with the amount of corporate debt.

No matter how cheap the borrowings, this debt has to be serviced and eventually re-paid -- the entire fixed income market is predicated on this obligation -- and it becomes a lot harder to make payments when a globally synchronized health crisis is killing sales and corporations are bleeding red ink. As we are witnessing, companies that are unable to access additional credit in order to pay their rent, make payroll, etc. have been forced to slash costs, close stores, lay off workers, cease investments, and even

declare bankruptcy. It is hard to get one's head around the fact that this has all occurred in the span of just a month or two. We understand the small local concerns being unable to make payments, but multinational chains?

In this regard, the economic collapse in trade, economies, and livelihoods is just half of the headline. The near-instant and breathtaking collapse in the financial plumbing is its twin. The collapse in asset values was so abrupt that, in terms of time value, the "great" financial crisis was a tortoise to this contagion's hare. The virus is the *ignition* of course, but the *tinder* of this financial melt-down is the leverage we are all well-aware is built into the home mortgages and business obligations that feed our vast financial debt syndicate. Especially in the hardest-hit industries, corporate balance sheets appear so optimized that they left nothing to fall back on, even for a few months judging by the number of hands needing assistance.

We have been fretting about unproductive debt in this communiqué for *many* years -- the financial crisis certainly shook the financial trees and required fantastic resources to repair. But the authorities (assisted by the very industry they over-see) engineered a recovery acting as a market participant, using their balance sheet to encourage debt accumulation, leverage, and risk taking. Rates have been so low in the past decade that even the shakiest companies found buyers for their debt as investors sought higher returns. And here we are eleven years later and U.S. corporate borrowings have surged 60% since 2009 (S&P Global Ratings) with \$4 trillion rated BBB (i.e. the low end of what qualifies as investment grade). BBB bonds made up 17% of global corporate debt in 2001 -- today they constitute 58% (BlackRock).

This moment is so much larger than 2009 of course -- the societal impact has been so joltingly swift as to expose a profound economy-wide brittleness that will require resources heretofore never imagined. The number of unknowns regarding the spread and duration of the virus makes it impossible to predict the real economic impact but leverage will beget more leverage. Some firms likely haven't felt the brunt of the shock yet because they have sufficient inventories or capital. But firms that were already struggling with supply chain disruptions because of the trade dispute (remember that?) will need to rethink how they do business, at least at the margins. Large firms that are considering repatriating production to the U.S. would face increased costs and may determine it isn't feasible. Small firms, with fewer resources, are even less able to absorb additional costs and are less flexible in pivoting to new suppliers.

- Conclusion

The volatility we see in financial markets reflects an extreme level of uncertainty about many things both simple and complex, and we have not likely arrived at a physical or psychological zenith. To be sure, we pen this as March unemployment figures are released and the markets focus on what is "safe" and what is exposed to supply chain disruptions, social distancing, and which monthly bills are in arrears (credit cards, utilities, mortgages). The hope is that the virus acts like the flu and the spread slows during the summer. Researchers have theories for why summer is a season unfriendly to the flu: both higher temperatures and increased UV radiation are considered inhospitable. Whether these theories apply here is unknown. The 1918 flu pandemic decreased enough by the summertime that it was thought to have been defeated only to return with brutal vengeance in the fall. We are hopeful that, come the writing of our next quarterly letter, we might all return to offices, restaurants, and maybe have the opportunity to walk down the Hi-Line. Perhaps sports leagues resume without crowds, and live TV programs without studio audiences. But, as our corner grocery store is currently doing, limiting the number of shoppers allowed in at once will likely remain in place. One-way aisles are being discussed.

Realistically, we will remain in some degree of total or pseudo isolation until its announced that a drug that can treat the virus (or at least mitigate the mortality feature) is in the pipeline. There will remain an uncomfortable time-lag before a vaccine (or vaccines -- the virus has mutated into eight strains) becomes widely available. Drugs and vaccines take so long to make because they are difficult to perfect. There are a series of methodical trials done to make sure they don't harm healthy people, to make sure they generate the desired antibodies, and to make sure those antibodies actually defend against the disease. These aren't overcautious bureaucratic safeguards; if researchers are making something that's going to be

pumped into the arms or swallowed by billions, of people, they want to make sure it's right. And if it is effective, normal life will eventually resume. The logistics of worldwide distribution is hard to fathom.

In terms of picking up the pieces and moving on however, we would like to end with this observation. Looking back on recent socio-economic tragedies, both the 2008 Sichuan earthquake and the 2011 Thailand floods wiped out critical infrastructure. Japan still has yet to fully recovered from Fukushima. But unlike natural disasters, conflicts and other destructive black swans, the fallout from this epidemic will be easier to manage. By this we mean factories and public transportation lines are closed but not buried under rubble or coated in radioactive fallout; hundreds of millions of people are stuck at home, but the labor force isn't decimated. The real adjustment is psychological -- we must adjust to a new post-pandemic normal that will in many ways be entirely different, but maybe not as much as we fear today.

For the past month, a vast fog has made that world difficult to see. The pandemic has rendered normal global events irrelevant. Something deadly is stalking the world and it respects neither power nor money. Governments are obsessed with protecting us, but in truth there is no protection except for what we provide ourselves. The infection cannot be destroyed yet and it will run whatever course it runs. Our bodies may or may not rally to overcome it and our will has nothing to do with what happens. One thing is for sure, however: what we learn we will all learn together.

From our families to yours, we wish you all peace and good health in the coming weeks and months.

Yours truly,



Hirschel B. Abelson
Chairman



Adam S. Abelson
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