

Bracing for the Worst; the Coronavirus Market Effect

Coronaviruses, named for their crown-like shape, are common in many animal species, including cows, camels, cats, and bats. On rare occasion, these viruses can infect humans. The coronavirus that emerged in early January in Wuhan City, China made the jump to humans. The new virus now has a name: "coronavirus disease 2019" or COVID-19. For much of January, COVID-19 was largely contained within China, where much of the region was in lock-down mode. As of Tuesday, the virus had surfaced in 30 countries around the world. On January 30th, the World Health Organization (WHO) announced that the outbreak was a "public health emergency of international concern" and the following day the U.S. Health and Human Services Department declared a public health emergency. Yesterday, officials from the Center for Disease Control (CDC) urged the public to prepare for the inevitable spread of the virus, warning that "it's not a matter of if, but when" COVID-19 spreads throughout the U.S. In a closed door briefing to U.S. Senators, CDC officials stressed that there was a "very strong chance of an extremely serious outbreak in the U.S." The dire warning from the CDC along with the rapid spread of the virus in South Korea, Italy and Iran has rattled the financial markets.

This largely unexpected spread of COVID-19 sparked a stock market plunge that by yesterdays' close had shaved nearly 2500 points off the Dow's record high from just two weeks earlier. A massive flight-to-quality drove bond market yields on the intermediate and long end of the curve to record lows. The question at this point has become: *is this a panic response or legitimate market reaction?* The answer is unknowable. There's a massive range of outcomes to the virus threat. A number of individual Fed speakers last week downplayed the threat, characterizing the virus as "likely to be a short term disruption," "not a point of concern," and a "high probability of only a temporary shock." The Fed wants all this to be true. They don't want to cut rates again unless they absolutely have to. On the other hand, a Bloomberg News review of virus evidence on the ground indicated "it's too early to tell precisely, but it's going to be bad." And on the extreme end, a professor of epidemiology and Director of the Center for Communicable Disease Dynamics at Harvard University yesterday predicted the virus "will ultimately not be containable" and within a year could infect up to 70% of the population.

On Monday, the WHO director-general told journalists that COVID-19 was not yet a pandemic while the UN secretary-general said "it is still possible to contain the virus." To a degree, China has proven this to be correct as the number of new cases in Wuhan City is declining. However, Wuhan City realized the magnitude of the problem early and took immediate action in shutting its borders and treating those infected. Relatively few countries are capable of responding in this draconian manner. The World Health Organization recently wrote it was more concerned about those countries with weaker health infrastructures. This scary point was hammered home last week when Turkey quickly closed its border with Iran after learning of a growing number of cases in Qom, an Iranian city of religious significance with a population of over a million and an estimated 22.5 million annual visitors.

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Admittedly, while the number of infections and fatalities pales in comparison to the seasonal flu and is less deadly than the 2003 SARS virus, COVID-19 is still an unknown and countries around the world are exercising extreme caution. Although completely warranted, the effect of this caution on the global economy is likely to be severe. Bloomberg estimated that China is operating at 40-50% of its normal capacity, and almost a third of U.S. factory inputs come from China. This sounds like an obvious problem, but it's actually worse if you think about it. According to CNBC, China exports \$70 billion worth of car parts globally with 20% going to the U.S. If you're missing a part or two, you can't build the vehicle. On a related note, car sales in China were reportedly down 92% during the first two weeks in February. This makes perfect sense and is emblematic of dramatic slowdown in Chinese economic growth. For countries relying on Chinese factories, the disruption in supply chains will only get worse as inventory stores are depleted. Apple has already warned shareholders that it will likely miss second quarter revenue guidance due to coronavirus, while Procter & Gamble warned that disruptions to supply and demand due to the outbreak would "materially" affect the company's quarterly results. The bottom line is the second largest economy, providing the majority of materials and parts to factories and businesses all around world is essentially quarantining itself ...and no one really knows how or when this crisis will play itself out. It's like throwing a handful of sand into the gears of the global economy...and the global economy was already sputtering. GDP growth in the 19 country Eurozone grew by just +0.1% for the fourth quarter and +0.9% year-over-year as growth in both France and Italy unexpectedly contracted. The threat of global recession is real.

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COVID-19, has driven intermediate and long government bond yields to record lows. Goldman Sachs has lowered its first quarter GDP forecast three times in the last three weeks and is now expecting the virus to cut domestic growth by eight-tenths of a percentage point. Although at this point Fed officials do not intend to cut the overnight target at the March 18-19 FOMC meeting, the yield curve is now severely inverted, the dollar is near a three-year high and the futures market is indicating quarter point cuts at the June and September Fed meetings. Bond yields could easily fall further if virus concerns intensify. COVID-19 is the ultimate economic wildcard. There is no consensus, so economies around the world have little choice but to brace for a worst case outcome. Like the SARS virus, it could fizzle out in a matter of months or it could drag the global economy into recession.

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Status of the Coronavirus Impact on the US Municipal Bond Market

Market sentiment seems to ebb and flow where this topic is concerned, but recent news out of Iran and Italy—coupled with everything we have seen and heard from China—do not bode well for world economic growth prospects. Growth is likely to slow. On top of that, the CDC's warning of COVID-19 spreading to the U.S. raises more questions.¹ What happens in the U.S.? How long until China growth recovers? There are still more questions at this point than answers.

Typically, the U.S. municipal bond market is pretty resilient when faced with obstacles such as this. Below, we review a few of the municipal sectors that could be potentially impacted by the financial slowdown and other elements attributed to the COVID-19 outbreak. The end effects could be considerably higher to U.S. municipal credit if there ends up being a sizeable outbreak in the U.S.

US State and Local Government

States where tourism is a substantial part of the economic engine could be exposed to some credit deterioration if the outbreak is not contained in a matter of months. Tourists from China and Hong Kong made up about 1% of Hawaii's visitors in 2018, but 17.8% were from other Asian countries (mostly Japan). This data tells us that the exposure to China for Hawaii is not significant, but the impact could deepen if the outbreak spreads, especially to Japan.²

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Global supply chains are currently being disrupted and companies are reporting how expectations for their individual businesses could be re-shaped in coming quarters. The extent of the municipal credit impact from the supply chain disruption will of course depend on how long the disruption lasts and the industries most impacted. For example, it could be a hit for some areas in the Midwest U.S. if the automotive industry is not able to operate close to its capability.

Worldwide oil demand could fall as a result of declining economic activity. If oil prices drop severely and this condition continues for a long period of time, state and local governments that are exposed to the oil sector could be influenced.

There could be an impact to state and local government pension assets. Most plans use assumed investment rates near 7%. In recent decades, public pension plans have increased their exposure to more volatile asset classes hoping to meet their return targets. The recent equity market volatility highlights the potential risk state governments now face in trying to meet those return targets.

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US Airport Sector

The 2003 SARS outbreak curbed airline activity, but the sector regained its strength in a timely fashion. When considering the current circumstances, we see that Chinese visitors make up only a small portion of enplanements at most U.S. airports. In Los Angeles, Chinese visitors account for nearly 2% of enplanements, but then after that, the exposure of Chinese visitors is about 1% or less in the rest of the U.S. It is really only if the outbreak continues to worsen, there is an extended period of time that travel is restricted, and/or if the virus spreads to other countries, that we could see enplanements dip meaningfully and potentially impact airport sector credit quality.³

US Health Care

We are not currently seeing an immediate credit impact on this sector. But, former U.S. Food and Drug Administration Commissioner Scott Gottlieb predicts hospitals could experience a shortage of medicine and hospital necessities because U.S. Health Care is "precariously dependent on China" for supplies.⁴ If there is a large outbreak in the U.S., there will be a priority for health care workers to have access to N95 respirator masks, which exposes the problem that they are manufactured in China and have not been stockpiled.⁵ Earlier this week, President Trump sent a \$2.5 billion budget request to Congress for money to help fight COVID-19.⁶ However, much of those funds would go toward the development of a vaccine, rather than stockpiling of supplies.

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US Higher Education

There does not seem to be a notable, immediate credit impact brewing in higher education. The list of what we are seeing here is small and very limited in severity as to its potential influence on credit quality. For example, a very small but growing list of U.S. universities are canceling international study abroad programs because of COVID-19.⁷ What is the exposure for U.S. higher-ed enrollment from Chinese students? There were about 360,000 Chinese students enrolled in 2017-2018,⁸ out of almost 20 million enrolled in all U.S. colleges and universities.⁹ While that does not

seem like much, international students have increasingly become important revenue generators for higher education institutions. Therefore, this is news we will watch closely, especially because we have assigned a “Negative” outlook to the U.S. Higher Education sector.¹⁰

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US Ports

China accounts for an increased amount of U.S. imports and exports, compared to when the 2003 SARs outbreak - potentially making the slowdown in China more influential on U.S. ports. Ports on the U.S. west coast are most exposed to trade with China, especially Los Angeles and Long Beach. However, the risk of falling volume is mitigated by the contract structures in place which should allow the credit profiles to maintain their strong credit quality, according to a February Moody's analysis.¹¹

Market Indications as of 2:20 P.M. Central Time

DOW	DOWN 29 to 27,051 (HIGH: 29,551)
NASDAQ	UP 59 to 9,025 (HIGH: 9,817)
S&P 500	DOWN 8 to 3,120 (HIGH: 3,386)
1-Yr T-bill	current yield 1.25%; opening yield 1.32%
2-Yr T-note	current yield 1.16%; opening yield 1.23%
5-Yr T-note	current yield 1.15%; opening yield 1.18%
10-Yr T-note	current yield 1.33%; opening yield 1.35%
30-Yr T-bond	current yield 1.82%; opening yield 1.83%

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¹ [Coronavirus Live updates: U.S. Officials Warn Americans to Brace for Likely Outbreak](#); New York Times; Feb 25, 2020.

² [Coronavirus outbreak will hurt tourism in Hawaii, Guam, and CNMI; risk to Hawaii is less than in the territories](#); Moody's Investor Service; Jan. 29, 2020.

³ [Drop in demand for travel to China is mildly credit negative for US airports](#); Moody's Investor Service; Jan 31, 2020.

⁴ [McCaughey, Betsy; US wildly dependent on coronavirus-plagued China for basic health care needs](#); New York Post; Feb 19, 2020.

⁵ [Thompson, Dennis; Coronavirus: Are U.S. Hospitals Prepared?](#); U.S. News and World Report; Feb 18, 2020.

⁶ [Cook, Nancy and Caitlin Emma; Trump sending coronavirus budget request to Congress](#); Feb 24, 2020.

⁷ [Guzman, Francisco and Joe Sutton; A growing list of US colleges are canceling study abroad programs because of the coronavirus](#); CNN.

⁸ [Institute of International Education via: Trade war: How reliant are US colleges on Chinese students](#); BBC News.

⁹ [National Center for Education Statistics online database](#) accessed on Feb 26, 2020.

¹⁰ [Municipal Bond Sector Credit Outlooks](#); Hilltop Securities; August 26, 2019.

¹¹ [Ports will manage coronavirus disruption barring widespread outbreak](#); Moody's Investor Service; Feb 18, 2020.

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