

The US Economy: "Emergency Brake Pulled!"

For what it's worth, the US economy entered the pandemic crisis growing at a modest pace of 2.1%. Relative strength in personal consumption expenditures was offset by a deceleration in federal government expenditures. It is safe to say that relationship has dramatically reversed.

This quarter-end is particularly awkward for genuinely data-

driven analysts, because little has been published yet that conveys the impact of fully stopping productive activity in the world's largest economy. Lacking data, we are forced to rely on narrative logic which, like an emergency brake, is both useful and perilous (more on that later). Initial jobless claims for the week ending March 28th soared to 6.6 million, far exceeding the median estimate of 3.5 million in the Reuters poll. The median estimate for the following week stands at an additional 5 million. Narrative comparisons to the Great Depression abound.





Relief is on the way; the Fed acted quickly to provide liquidity for fixed income markets and stimulate activity through credit, to the extent that can work under a big demand shock. A \$2 trillion fiscal stimulus package is more promising, distributing relief directly to most individuals, many smaller businesses, and large companies in highly-impacted sectors. While combatting the problem at hand, a combination of big spending, lost tax revenue, and contracting economic production (GDP) has serious long-term implications.

Unlike Hoover and FDR, Mr. Trump does not enter this crisis with a balanced budget and clean balance sheet. We noted in our June 30, 2018 issue that Congressional Budget Office projections showed public debt approaching record levels (established at the end of World War II) by 2028, notwithstanding some fairly rosy assumptions. Chief among those assumptions is the absence of recession for 10 more years, doubling the record for post-war expansions. The current recession will most certainly be extreme in magnitude although uncertain in length; Conference Board estimates currently lean toward a year-over-year contraction in real GDP of nearly 6% for 2020. Modeling that along with a partial recovery leads us to anticipate debt to GDP reaching record levels this year and, absent austerity measures, dwarfing those levels over the next decade. That is without rising inflation and long-term interest rates, which one might reasonably expect.

That is also absent other, unanticipated problems. For example, an untimely price war between Russia and Saudi Arabia placed additional downward pressure on oil prices, which fell 66% over the quarter. In the old days this would have been good news, but now the US is an exporter with a highly leveraged shale industry. Falling crude now means higher unemployment and credit losses for those that have financed the industry. The collapse began in January, long before a US economic shutdown was anticipated.

Inflation remains a likely sequel, with the Fed fighting an increasingly difficult battle to keep long rates under control, and the US public fighting to keep hard-won benefits like Social Security and Medicare.



The US Bond Market

News of the SARS-CoV-2 outbreak started to weigh on the yield curve in January, pushing the 10-year yield 41 basis points lower for the month. The first few weeks of February proved calmer until confirmed cases of the novel coronavirus began to appear across the world. The 10-year rallied another 38 bps in February, closing the month a quarter point below the 1.37% nadir set in July 2016. As the narrative tipped past outbreak and into pandemic, the market entered full-on flight to safety mode. Investors rotated out of stocks and into Treasuries during the quarter amid concerns that the virus could reduce economic growth and weigh on corporate profits. On March 9th, the 10-year touched its current historical (and historic) intraday low of



0.32%, to settle at 0.54%. Those looking to safeguard their investment over a longer horizon were briefly treated to a 30-year Treasury yield of a miserly 0.70% before it settled at 0.99% at the end of the day.

US Bond Index Returns				
<u>Bimbrg Barclays</u>	<u>1Q20</u>			
Aggregate	3.15%			
Short Gov't	1.57%			
Interm. Gov't	5.18%			
Long Gov't	20.63%			
TIPS	1.69%			
Municipal	-0.63%			
Interm. Credit	-2.35%			
Long Credit	-4.65%			
High Yield	-12.68%			
(CS) Lev. Loan	-13.19%			
MBS	2.82%			

Long government debt soared. MBS also notched gains and investment-grade corporates suffered only moderate losses. Corporate issuance, particularly high yield, issuance posted strong volumes in January and healthy numbers in February. Then the bond market seized up at the end of February and liquidity briefly vanished. The Fed has taken remedial steps including \$700 billion of quantitative easing, and announcing its intention to buy IG corporate ETFs. By the end of the quarter, investors were ready to take risks again. A large junk bond auction from Carnival went oversubscribed multiple times over. AA credits offered some excitement but ultimately accomplished little. The ICE BoA AA Corporate index ended 2019 with an effective yield of 2.40%, fell to 1.68% in early March, rose to 3.56%, and closed Q1 at 2.42%.

Before pandemic panic, investors were already anxious over a preponderance of BBB paper (52%) in the Aggregate Bond Index and the potential for downgrades in that credit segment to impact investment grade portfolios. Food conglomerate Kraft Heinz became the third-largest high yield bond issuer in February after being downgraded by credit ratings

agencies. Once the pandemic hit, plunging yields and oil prices weighed on financials and energy debt. Most sectors moved in tandem, other than Homebuilders.

The last time credit spreads blew out like this was in February 2016, also amid a crash in oil prices and fears of global economic slowdown. Corporate yields have quickly spiked above levels seen then, though CCC and lower credits remain below 2016 wides. Against the Great Recession, yields would be unimpressive but for the steepness of ascent.

Years of low interest rates and easy credit allowed companies across the board to borrow big, building a record \$10 trillion mountain of debt. Nowhere is this truer than the \$1.2 trillion in leveraged loans. In our 4Q 2019 US Bond recap we highlighted the immense growth and deteriorating quality of this asset class. The lowest quality debt - B3 or lower - made up 38% of the market compared with 22% in 2008. This quarter, leveraged loans were the worst performer of the US fixed income indices shown above. Energy, the hardest-hit sector is a small component of the loan market. Still, leveraged loan portfolios may be in for more losses as prices can tank well before companies run out of cash.

Although not as pervasive nor dire as the mortgage-backed security ("MBS") situation of 2008, the impact of coronavirus similarly threatens



to undermine the key assumption that allows CLOs to turn risky loans into triple-A-rated investments. As with MBS, CLOs rely on diversification of loan holdings to secure higher credit ratings on repackaged securities. While not as large as the subprime-mortgage market that felled the US economy a dozen years ago, the CLO trade has become a big business. Financial engineers have manufactured more than \$700 billion of CLO debt in the US and Europe in recent years and, despite lessons from 2008, risks may be understated. A 2017 study of 136 postcrisis CLO deals found that default correlation assumptions should have been three-to-four times bigger than those used by S&P [Nickerson].

The US Stock Market

The US stock market set more records in 1Q – only this time to the negative. The Dow posted its worst quarter since 1987, closing at 22,197. The VIX surpassed its credit crisis peak, reaching an all-time high of 83, not surprising in a roller-coaster quarter where trading circuit breakers were tripped on multiple occasions and the S&P 500 recorded both its worst 1-day drop since 1987 and its best 3-day run since 1933.

While the magnitude of the negative performance across benchmark indices makes it difficult to believe, some stocks had positive returns for the quarter. Select firms, notably in the communication

US Stock Indices - Total Returns						
Large-cap Stocks	<u>1Q20</u>	Mid-cap Stocks	<u>1Q20</u>			
S&P 500	-19.60%	S&P Midcap 400	-29.70%			
Russell 1000	-20.22%	Russell Midcap	-27.07%			
Growth	-14.10%	Growth	-20.04%			
Value	-26.73%	Value	-31.71%			
Broad Markets		Small-cap Stock	S			
S&P 1500	-20.57%	S&P Smallcap 600	-32.64%			
Russell 3000	-20.90%	Russell 2000	-30.61%			
Growth	-14.85%	Growth	-25.76%			
Value	-27.32%	Value	-35.66%			

services (e.g., Netflix, T-Mobile), consumer staples (e.g., Clorox, JM Smucker, Kroger), health care (e.g., Regeneron Pharmaceuticals, Gilead Sciences, Eli Lily), and IT (e.g., Citrix Systems, Nvidia, ServiceNow) sectors, were able to buck market trends. Ultimately, as investors tried to predict who would benefit from a nation sheltering in place, the best-performing sectors were largely predictable.



Plagued by both a significant drop in demand and a price war between Saudi Arabia and Russia, the energy sector erased all memories of the December rebound in commodities. The financial sector was also challenged. Pressure from lower interest rates was exacerbated for some banks by loan exposure to the oil & gas industry, where defaults are predicted to rise as global travel restrictions remain in place.

It may be difficult to remember, but trouble was brewing even before a pandemic was declared. Predictions of a US recession were on the rise, and the outlook for global growth was already bleak, driven by uncertainty on Brexit fallout, a slowdown in China, and geopolitical concerns in the Middle East. Coming off impeachment hearings and entering an election year, US politi-

cal instability was in the mix as well. Corporate earnings were relatively flat, with companies in the S&P 500 reporting 4Q earnings growth of 0.9% year-over-year. This was an improvement over the -1.7% growth rate estimated at the close of that quarter. For 1Q 2020, earnings growth is predicted to come in at -5.2% YoY. While 1Q revenue for this cohort is still expected to grow, the estimated increase of 2.0% YoY will be below the 5-year average of 3.5%. Further out things get worse. Currently, a first-ever double-digit decline in YoY earnings is forecasted for 2Q 2020, with almost half the predicted drop coming from the oil & gas and airline industries [FactSet].

One surprising phenomenon in 1Q was the increased dominance of the growth sector. Across all market caps, growth outperformed value by at least 10%. This flies in the face of conventional wisdom, which says investors will move to more solid, value-oriented companies in a broad market downturn. However, the trend may support the increasing asser-

tions that a fundamental shift has occurred in the business environment. Traditionally defined as companies with low P/E and P/B, value stocks have been largely underperforming growth stocks since the credit crisis. At guarter-end, the Russell 3000 Growth Index bested its value counterpart by 5.2% over 10 years. Since the credit crisis, low interest rates, low taxes, and low wage growth have combined to support corporate profits, creating a backbone for growth. In addition, the expensing of assets (vs. capitalization) has been increasing. This leads to important investments (e.g., intellectual property, patents, R&D, IT, etc.) being absent from the book value of a company, which has a cascade impact on other financial data used by index providers to sort firms into growth and value constituents. Perhaps these labels are losing their meaning, a question we explore in "The In's and (mostly) Out's of Style-Pure Funds" in the December 31, 2017 issue of our Market Recap.



International Markets

Global markets have shown us time and time again that during crisis periods all correlations go to one. With the global economy coming to a halt, international equities and commodities mirrored the sell-off in US markets. Central banks swiftly cut policy rates and launched sizable programs to support financial markets.

Europe

The depth of economic impact is uncertain, but a recession is the foregone conclusion. According to the IMF, nonessential services shut by government decree account

Foreign Stock & Bond Indices - Total Returns						
MSCI Broad Indices	<u>1020</u>	Barcap Global Indices*	<u>1020</u>			
MSCI ACWI ex-US	-23.36%	Global Aggregate	-0.33%			
EAFE (Developed)	-22.83%	Pan-Euro	-3.49%			
Emerging Markets	-23.60%	Asian-Pacific	-0.82%			
		Eurodollar	-0.10%			
MSCI Regions		Euro-Yen	1.04%			
Europe	-24.33%	Other Currencies	-14.59%			
Japan	-16.79%	* Unhedged				
Pacific ex-Japan	-27.60%					
Latin America	-45.62%					

for a third of output. Every month that these industries remain closed translates to a 3% fall in annual GDP. To allow the worst hit economies some fiscal freedom, the European Commission activated an "escape clause" that allows EU countries to run deficits in excess of 3% of GDP irrespective of whether they are on track to meet medium-term budget targets.

EU policy makers looked willing to work together until there came growing calls to issue "corona bonds." First floated by Italian PM Giuseppe Conte, "corona bonds" worth up to $\in 1$ trillion would be issued to fund economic stimulus and backed collectively by member governments. The idea garnered favor among those who see it as the only source of immediate funding for debt-burdened economies like Italy. Critics believe that it would lead to large fiscal transfers between member states – something many EU members have steadfastly opposed.

Eurozone services PMI for March slumped to a reading of 26.4, the worst-ever in history. To contain the financial fallout, the European Central Bank announced a \in 750 billion bond-buying program to help reduce financing costs for member nations. It also removed a crucial self-imposed provision – to not buy more than a third of any country's eligible bonds.

Put in place to ensure that the ECB does not directly fund national governments, the removal is expected to prop up beleaguered sovereign credit and to backstop markets in Italy and Spain.

Another effect of the global shutdown is a stronger US dollar. Although US rates are now near zero and the Fed is adding hundreds of billions to money supply every month, the trade-weighted dollar index hit multi-year highs in March. The risk of default across global supply chains has skyrocketed as continued factory closures and disruptions lead to missed payments. BIS data shows that dollar loans dominate international balance sheets; without production and sales, companies cannot earn enough USD to service their debt.

In such a situation, international central banks must step in and provide dollars from their reserves to domestic banks and businesses to



prevent a domino effect on defaults. The rush for cash may best be highlighted by the sharp decline in the amount of US Treasuries held at the Federal Reserve by foreign central banks. The last two weeks of March saw foreign institutions selling over \$200 billion in Treasuries to fund domestic dollar demand. Understanding the growing risks, the Fed reintroduced dollar swap lines to fourteen central banks.

Americas

Mexico will be confronted by the virus on a number of fronts. The threat of a dramatic economic slowdown in the US, to which Mexico exports 80% of its goods and services, will most-likely push the Mexican economy into a recession. Officials anticipate a significant drop in tourism, which accounts for around 9% of GDP. With virtual shutdowns of the cruise and airline industries, Mexico will be vulnerable well into the first half of 2020. Barclay's recently lowered its 2020 growth estimate for Mexico to -2.0% from +0.5%.

Mexico also remains exposed to the negative impact of oil prices. As the price war between Saudi Arabia and Russia raged on, the collapse in oil prices took an 18% bite out of Mexico's budgetary funds resulting from oil sales. With Brent Crude prices down around 40% since late February, on top of a global slowdown, the economic threat remains elevated. Mexico did hedge a portion of budgeted oil revenue at the equivalent price of \$49 per barrel, although the actual amount hedged is unknown. However, analysts believe that the hedge used has a year-long term, which means it won't payout until 2021, providing virtually no support during the peak of the crisis this year.



On March 13th, the Bank of Canada cut its benchmark interest rate by 0.5%, in lock-step with other central banks, citing the anticipated negative repercussions from the pandemic. On March 27th, at an emergency meeting, the central bank, again, slashed rates by another 50bps to 0.25%, aiming to support the economy and the financial system. The Committee also launched a Commercial Paper Program to help restore a key source of short-term funding for businesses and said that it will begin acquiring government securities in the secondary market until the economy recovers.

South America will face lower export revenues from a drop in commodity prices and reduction in export volumes, especially to China, Europe and the United States (key trade partners). The sharp decline in oil prices will hit the exporters especially. In Central America, a slowdown in the United

States will lead to a reduction in trade, foreign direct investment, and tourism flows. Key agricultural exports (coffee, sugar, banana) and trade flows through the Panama Canal could also be adversely affected by lower global demand.

Asia

China ended 2019 with consumer inflation rising at its fastest rate in nearly a decade, while the country's economic growth of 6.1% had been at its lowest level in three decades. After cutting the bank reserve ratio three times in 2019 to boost economic activity, China eased its monetary policy again in the new year. The People's Bank of China reduced required reserves by half a percentage point, releasing 800 billion yuan (\$115 billion) into the financial system.

Both the manufacturing PMI and non-manufacturing PMI collapsed in February but rebounded back in March. The Statistics Bureau said the rebound reflected resumption of work after over a month of forced closures. Unfortunately, even though factories opened for business, consumers are reluctant to spend. With buyers canceling orders, companies are cutting workforce and further reductions are possible.



Consumer inflation rose to its highest level in more than eight years, driven by the Lunar New Year, which normally boosts demand for consumer goods, and by the coronavirus outbreak. In January, the consumer-price index climbed 5.4% from a year earlier, the highest reading since October 2011. Food prices rose 20.6%, accelerating from a 17.4% increase in December. In February, the CPI climbed 5.2% as slower growth in nonfood prices outweighed the impact of mounting food inflation. Food prices surged 21.9%, hitting the highest level since April 2008. The producer-price index fell 0.4% in February from a year earlier, resuming a six-month-long stretch of deflation that was interrupted only by a 0.1% uptick in January. Industrial prices climbed out of the deflationary territory, rising for the first time in seven months.

The government has been rolling out many measures to help companies restore operations, including slashing rents and social insurance payments and increasing lending to small firms. The central bank lowered benchmark lending rates while injecting large amounts of liquidity into the financial system so banks can more easily lend to businesses. China's Politburo recently announced increasing the fiscal deficit and issuing more government bonds and local government debt to stimulate demand. China's State Council said it would offer fresh funds for banks to lend and let local governments issue more bonds. It also said that it would extend tax waivers for purchases of electric vehicles for two more years in a bid to boost auto sales. Despite the measures, China's economic growth rate target for 2020 will most likely be unachievable.

To fight the prospect of deep economic stagnation in Japan, emergency monetary stimulus was announced by the BoJ in an effort to ease the strain on corporate funding and help calm financial markets. The BoJ will boost its ETF purchases to an annual ¥12 trillion (\$112 billion), doubling from the current ¥6 trillion level while promising to lift its targets for commercial paper and corporate bond purchases by ¥2 trillion. It also announced a new tactic: providing loans of about ¥8 trillion with corporate debt as collateral, an interest rate of 0%, and maturities of up to one year.

About half of Japanese firms saw their output and sales slide during February. Around two-thirds anticipate the impact from the pandemic to last several months, or longer. A Reuters Corporate Survey found 42% of Japanese firms suffered profit declines of up to 30% in February. Many companies have had supply chains affected by the epidemic and are considering contingencies, for example, like moving production to factories in Vietnam and Thailand.

Prime Minister Shinzo Abe has said the government is ready to unveil its "boldest-ever" stimulus package including cash handouts to struggling households and small companies. Part of the package will be funded by money set aside under a

previous stimulus plan worth ¥26 trillion (\$239 billion), which was created in December to head off economic damage to the economy from the U.S.-China trade war. Most the spending will be financed by issuing deficit-covering bonds, which would add to a debt burden already twice the size of Japan's \$5 trillion economy.

Focus On: The Power and Peril of Narrative

Once upon a time, fast-food chain A&W sought to compete directly with McDonald's uber-successful Quarter Pounder with Cheese. They came up with a simple idea: sell a third-pound burger that is otherwise the same. A&W was offering a bigger burger, fresh not frozen, for the same price as McDonald's. Despite an expensive advertising campaign, sales were disappointing. The A&W one-third-pound burger was underselling the McDonald's one-quarter-pound burger.

A&W hired a marketing firm to figure out why this seemingly foolproof strategy was failing. The answer, however disheartening, was that the average consumer perceived the quarter-pounder as being the better value because they thought a third-pound burger was smaller, following the correct, but misapplied logic that 4 is greater than 3. The moral of the story is that perception sometimes matters more than reality.

Powerful narratives are not necessarily the most accurate or truthful. A powerful lie can spread far more virally than many a truth. Truth often lacks the lavish satisfaction of knowing who to blame and the tidy coincidence of a Seinfeld episode.

In finance, narratives do not just have the power to explain events, they shape them as well. The pen is mightier than the sword. But, is history truly written by the victor? Or, is the victor the one whose version of the history endures?

A Narrative Tapestry

The Great Depression, Great Recession, Dot-Com Bubble, and Taper Tantrum are names that remind us of lessons as powerful as those conveyed by the tales of *Hansel and Gretel* and *Jack and the Beanstalk*. The SARS-CoV-2 pandemic has already been coined "The Great Cessation." Together, these events form a rich market history guiding today's investors.

People rely on analogies to navigate the complex and unfamiliar, such as macroeconomics (or fractions). Sticking with your investments despite losses is easier when 2008-2009 provides a recent reminder that doing so is the prudent action. During the Great Recession, investors watched stocks drop more than they ever had in such a short time period. There

was no direct analogy. There was no confidence that stocks would stop declining. The last meaningful analogy, at the time, seemed to be the Great Depression – hardly encouraging. It took a massive effort from the Fed to craft a successful narrative for liquidity to return to markets and for our financial machine to resume its rumbling progress.

The current pandemic has been drawing comparisons to the Spanish Flu Contagion of 1918 – 1920. While the fact that it overlapped with a second catastrophic event (i.e., World War I) makes it difficult to isolate the impact of either, investors' reactions to the events leading up to the first World War seem to parallel our current situation. In 1914, the



assassination of Archduke Ferdinand received global news coverage. Yet, equity and fixed income investors failed to take notice for several weeks. Eventually the market did sell off, finding a bottom 6 months later. Stocks had their ups and downs during the "war to end all wars." By the end, in 1918, US equities were well ahead of where they had started, as has been the case for nearly every war. The rally continued into the summer of 1929.

The Great Depression provides a wealth of economic and financial lessons, but two facts stand out. First, the Great Depression was a slow-moving disaster. Stocks did not lose 89% overnight. It took 3 years of declines to accumulate that magnitude of loss. Second, from their 1929 peak, a full quarter-century passed before stocks made back all they had lost. Most money is invested with a shorter horizon than 25 years.

Comparing the Great Depression to the crashes of Black Monday and the Kennedy Slide, we see that all were on a similar path until 1 year



after the initial downturn. A key difference is that the Great Depression was not a singular event, like the other two. Already under stress, the economy was unable to recover once the Dust Bowl took hold in the summer of 1930.

On February 21, 2020, the S&P 500 index closed near its recent record high. On the following Friday, the index closed 11.5% lower. The novel coronavirus threat was telegraphed, though not heeded, well in advance. As they often do, stocks rebounded from a brief



trough before ultimately finding a lower panic point near two-thirds the highwater price.

Up to this point, the market crash looks much like the Great Depression and Black Monday. Yet, those two stories played out quite differently. The Kennedy Slide, despite also being known as the Flash Crash of 1962, saw a more gradual dip in prices but then followed a similar trajectory to Black Monday. In contrast, the Dot-Com Bubble, Great Recession, and unimaginatively named 1973-1974 Crash seem to follow an entirely different narrative. A simplistic explanation for why the first 4 crashes look different from the latter 3 is the presence of a tipping point. By this reasoning, the latter part of the Great Recession fits the top chart, at the point where important financial institutions suddenly became insolvent. World War I would also likely match the first set, but exchanges shuttered for months, denying us the relevant data.

When Narratives Compete

Trading volumes in March were higher than at any point in nearly 10 years. It is often remarked - markets hate uncertainty. Yet, exchanges would die without it. Financial markets are not like other more utilitarian economic markets. They thrive when narratives compete. Price volatility creates opportunities, especially under irrational fear or greed. Investors do not sell Visa and buy Mastercard because they enjoy owning the stock itself. They do so because they expect Mastercard to outperform Visa. When every investor believes the same thing, prices move to equilibrium and no one has reason to trade because everyone agrees prices are about where they should be.

Politicians, news outlets, and others subject to the popular whims of an audience have discovered that appeals on fear, greed, and other base emotions are a winning strategy over reality. Truth can be hard to determine, difficult to understand, and impossible to prove; it is neither sufficient nor necessary for a narrative to prevail. News stories used to start with researching the facts and publishing those most scintillating. Now they seem to start with research on what the audience finds scintillating and run with what is merely believable.

The third largest equity decline in Q1 was Monday, March 9. Mid-day, the World Health Organization tweeted "...the threat of a pandemic has become very real." Investors were already digesting a major event. Saudi Arabia had been aggressively pushing for Russia and other Oil Producing and Exporting Countries (OPEC+) to sharply cut supply to support oil prices, which had declined 25% year-to-date on anticipation of global economic slowdown. Over the weekend, it became clear Russia was not going to follow along. In a calculated response, Saudi Arabia (the largest oil-producing country) cut prices and promised to increase output. This action pushed oil down another 25% on March 9. This failing of OPEC+ to support oil prices should have sent stocks rallying on Monday's open. Cheap oil is an economic boon, yet the market seemed more concerned that something unexpected had happened. It was obvious why oil prices were in free fall. Yet, investors reacted as if oil prices were dropping purely on economic outlook. The wrong narrative won.

The following Monday something similar happened. March 16th was the second biggest drawdown for the S&P 500 in Q1. The day before, the Fed decided to cut the overnight target rate to a range of 0 to 0.25%, just days ahead of their scheduled meeting. Again, lower rates are a boon to equities, but the market focused on the possibility that the Fed was able to see how much worse the pandemic was shaping up to be than the market was pricing in already.

Weighing the Narratives

Every stock, every investment strategy, every financial crisis has competing narratives. Sometimes simple logical reasoning is enough to isolate the only plausible narrative. This can be the case during a bubble or other mass delusion, but often a more sophisticated analysis is required. In the near-century since the Great Depression, there has been time to carefully examine and understand the narratives that contributed to, ruled, and eventually worked to resolve the Great Depression. However, in the moment, the initial market crash was viewed in kind to the ongoing Great Cessation.

Once we have defined the competing narratives, we can translate them to causal diagrams. Then we can test the causal or, at least, correlative relationships to see which narrative appears to be a more accurate representation of reality. An initial read of the markets and economy at the time of the Great Depression would have presented a relatively simple causal diagram. Stocks were overvalued into a bubble, which subsequently popped and created a run on cash. Government intervention was thought to be the remedy that would reverse market collapse.

Before the proponents of market intervention could be proven right or wrong, the Dust Bowl derailed the attempt to stimulate a quick rebound in markets and the economy. This one-two punch caught the economy off guard in a fragile state. This speaks to the root cause of many recessions – short-sighted fiscal policies forgo stocking a winter store in times of plenty. Although there is a question of when, policy-makers would do best to remember winter is coming.

You Can't Boil Water with a Thermometer

The stock market is many things: a massively successful wealth generating engine, a productivity multiplier, and a positive feedback loop governing capital deployment. It is also a barometer for the economy, but it is not the economy itself. Economic strength and weakness obviously impact market prices, but the opposite is only somewhat true. All else equal, corporations would prefer to issue stock at higher prices, and the opportunity to do so, even if it goes unused, presents a compelling reason for companies to maintain an expansionary stance. This is true, on average, but individually companies grow and contract for many reasons both systemic and systematic. The aggregate of all of these idiosyncratic and cooperative factors gives us our total economic growth and aggregate expectations gives us our stock market index prices.

Narratives are not only limited in their power to affect reality, but also in how efficiently they spread. Even narratives that are accurate and useful often end up ignored or discarded. Narratives take time to spread, time to win over people, and even more time to reach widespread agreement. Financial markets, economies, and communities are all made up of people, and people are slow to change their minds, if they ever do. When a shock happens to any of these systems, it can take years to fully resolve. People also have heavily ingrained biases. We are products of our environment. Although we believe we make our choices in life thoughtfully and independently, it is clear that the political, religious, moral, and cultural views that surround you, particularly in childhood, heavily influence which narratives you adopt later in life.

Narratives have many flaws - inaccurate or irrelevant information. Above all, they are incomplete. A causal diagram of COVID-19's impact on stock market returns here ignores independent factors that impact stocks. It avoids this complexity, attempting to capture only critical elements. Our diagram shows that COVID-19 has a direct impact on market returns, but this is only in the short term. In the long term, structural unemployment created by the pandemic will be what impacts stocks. While monetary and fiscal stimulus can't slow COVID-19, they are effective tools for addressing unemployment and pumping up stock prices, to an extent.



Of course, the pandemic does not exist in isolation and, more importantly, may not be the only catastrophic event on the horizon. Although it seems most probable that this market crash will follow the trajectory of Black Monday and The Kennedy Slide, the path of the Great Depression should not be dismissed too quickly. Just as COVID-19 came out of seeming-ly nowhere, there are countless other potential risks that threaten knockout before the economy finds firm footing again.

Is There a Happily Ever After?

Narratives help us rationally navigate life's decisions when we lose our sense of normalcy. In times of crisis, ensuring that a doomsday narrative does not take over is paramount. As bad as the economy might get, the thing to fear is fear itself. Once a negative feedback loop is established, a downward spiral in prices cascades through markets and the economy. A few bankruptcies in 2008 had a severely chilling effect on market participants. Liquidity disappeared. Many of the banks that required bailouts would not have needed them if everyone had simply believed there was no danger of bankruptcy.

Finding answers requires critical analysis of the available information, of which we are in constant overload. Everyone you have never heard of has access to a digital platform capable of reaching billions of people. It is impossible in this age to critically analyze all the information presented to you. We believe that our decisions are logical, but many are based on the narratives that we hear about the most or that resonate with us. Consider a person's opinion on many apolitical matters can be accurately guessed solely on their political party affiliation. And, of children who know their mother's affiliation, less than a quarter do not adopt that same party [Ojeda]. FYI, that is not more than a third.

At present, the thinking appears to be that if we continue to support the economy with every tool in our fiscal and monetary arsenal, everything will be fine. After trillions of dollars in stimulus and liquidity injections, what if we hit a second, unrelated catastrophe? How many more trillion-dollar gambits can we afford and what will result in the aftermath?

