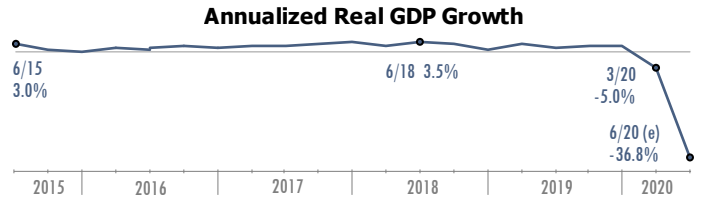
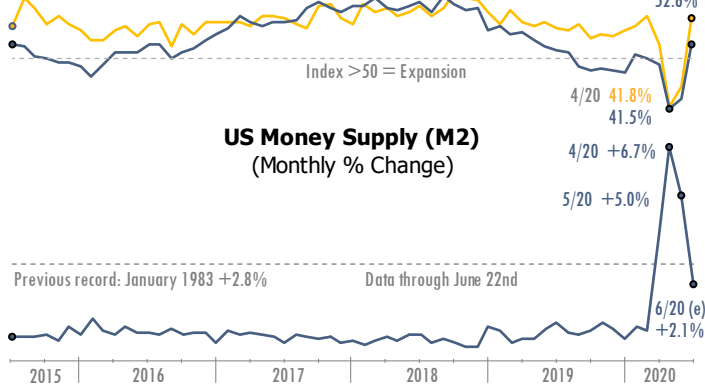


# MARKET Recap

## The US Economy: “Stocks Lap the Real Economy”

The economic contraction for Q2 has yet to be measured, but there is a strong consensus that the number will be astounding. Among the more widely followed statistical models, the Atlanta Fed’s GDPNow projection bottomed on June 4<sup>th</sup> with a Q2 annualized growth rate of -53.8%. That unofficial forecast improved steadily through June, as data began to reflect both gradual reopening activities and adaptive behaviors.

Following the July 1<sup>st</sup> release of the ISM Manufacturing Report, the GDPNow model stood at -36.8%. No one knows where the final GDP number will land, but a few things are clear. First, an enormous amount of real value was destroyed by the initial COVID-19 shutdown. Second, that initial event appears to have found a trough at the end of May. However, threats remain from continued propagation of wave 1 through the southern, central, and western US, along with some major population densities worldwide. The probability of subsequent waves remains considerable.



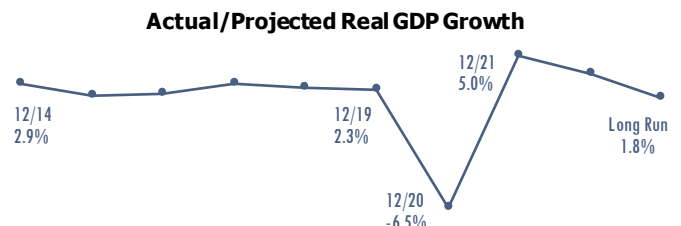
Against this backdrop, the US stock market posted torrid gains for the quarter, paring year-to-date losses to -3.08%. Many have pointed out the disconnect, for which there are a number of contributing explanations, but truly unprecedented monetary expansion by the Federal Reserve is the primary cause. Fundamentally, the stock of a company is worth the present value of all future earnings of that company. Earnings are depressed now and in the foreseeable future – but stock prices are also impacted by the discount rate used to translate future earnings to present value. The (some-what) unintended consequence of monetary expansion is to lower that discount rate, inflating the stock market.

The mathematics of discounting determines how much in future earnings is recognized in today’s value and how much will be recognized in future years through additional returns. As the discount rate falls, more future earnings accrue to current shareholders. That’s particularly good for tech firms and other high-growth companies, who expect a greater proportion of their earnings to occur in the future. However, all other things being equal, a lower discount rate means that less future earnings will accrue to shareholders in subsequent years. In the long run, only real earnings matter.

Said differently, you cannot create value by changing interest rates, you can only alter how value is distributed between present and future investors. Valuation gains “borrowed” through rate reductions will be “paid back” through forgone returns in the future. In contrast, demand destruction due to the pandemic represents a real, actual loss of value. The Fed’s bet, apparently, is that the real impact of the virus on growth and interest rates is temporary (note the lack of change in their long-term projections).

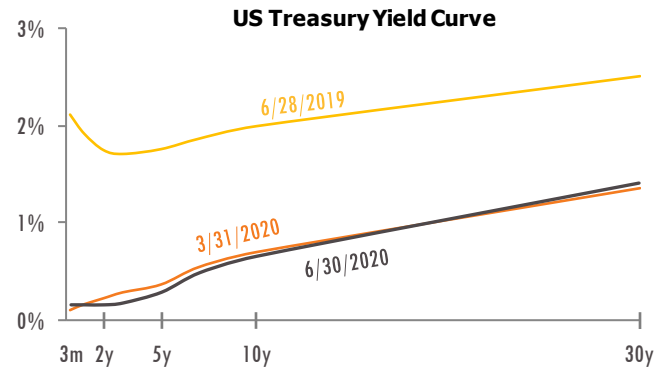
This suggests the best-case scenario for stocks is restoration of real earnings growth (e.g., via a vaccine) accompanied by rising rates in 2021 – which means most of the value of a vaccine has already accrued to today’s shareholders. With rates near zero, the ability to borrow additional returns in the event of a contingency is limited.

	Federal Reserve Survey Pre- and Post-Correction					
	2020 Median			Longer Run Median		
	12/19	6/20	Δ	12/19	6/20	Δ
Change in Real GDP	2.0	-6.5	-8.5	1.9	1.8	-0.1
Unemployment	3.5	9.3	+5.8	4.1	4.1	0.0
PCE Inflation	1.9	0.8	-1.1	2.0	2.0	0.0
Fed Funds Rate	1.6	0.1	-1.5	2.5	2.5	0.0



## The US Bond Market

On May 7<sup>th</sup>, the 2-year key rate hit its new historical low of 0.13%. The previous low of 0.16% was set in September 2011, as markets began to accept a lower-for-longer outlook. The curve is now perfectly flat between the 3-month and 2-year maturities, both closing the quarter at 0.16%. Longer-term rates retain a more normal slope, perhaps comforting those who place stock in the predictive power of an inverted curve. The 30-year yield has held in there, resisting a Q2 push back towards its historical low of 0.99% set in March. By one perspective, the positive slope and incrementally higher yield versus Q1 point to a more optimistic economic outlook or resumption in risk appetites. By a more honest perspective, there is little optimism in a 30-year rate that stands one-and-a-quarter percentage points lower than its prior historical low, established in 2008. With rates, as with the pandemic, there is no light yet at the end of this tunnel.



US Bond Index Returns	
Bimbrg Barclays	2020
Aggregate	2.90%
Short Gov't	0.13%
Interm. Gov't	0.55%
Long Gov't	0.28%
TIPS	4.24%
Municipal	2.72%
Interm. Credit	6.67%
Long Credit	11.08%
High Yield	10.18%
(CS) Lev. Loan	9.71%
MBS	0.67%

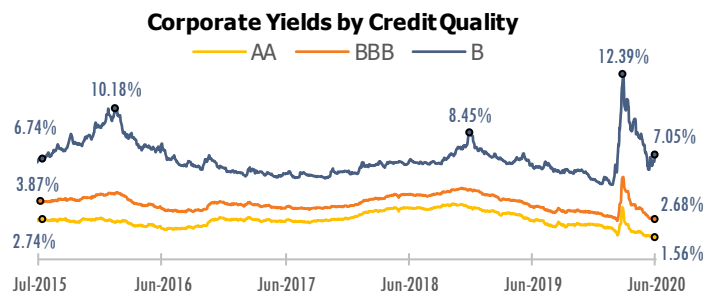
US government debt indices enjoyed positive, but modest gains for the quarter. Meanwhile, credit spreads contracted violently through the first week of June, continuing the trajectory set in the last week of March. AA spreads declined by nearly 100 bps. June brought some stability to fixed income markets, though high yield spreads widened moderately as signs of increasing coronavirus infections emerged, AA corporate spreads traded below 1% throughout the month. The Federal Reserve's aggressive measures to restore liquidity seem to have had the intended effect.

With a large number of "fallen angels" absorbed into below-investment-grade, high yield managers are having to study up on a lot of new names. Along with the spike in issuer credit downgrades, bankruptcy filings are piling up. Hertz, Gold's Gym, Neiman Marcus, J.C. Penney, Whiting Petroleum, and J. Crew are among the first major corporate casualties of the pandemic. Investors face numerous pitfalls with various industries trading at steep discounts. Debt from any retailer is certainly suspect; many started underwater before drowning in the pandemic. However, homebuilders, retailers, lodging, oil producers, live entertainment, and many other industries are teetering as the pandemic draws on without end in clear sight. The common themes are manifold: those sensitive to the pandemic in the narrow sense of relying on foot traffic, in the broad sense of being sensitive to cyclical demand, or simply unable to tolerate such a massive interruption in their operations or supply chain.

Outside of issuers that fall victim to those themes, plus the usual smattering of unrelated implosions, many companies have enjoyed a combination of tailwinds this year. Culling the herd in any industry can benefit the survivors. Restaurants that survive the pandemic will likely see demand return to normal before competition does. Retailers however may find the pandemic is simply a catalyst for their eventual demise, much like the Great Recession proved to be for newspapers.

Fiscal and monetary stimulus has benefitted many companies that were impervious to, or even helped by, the pandemic. This year, investment grade corporate debt has been issued at more than double the pace of last year. A record of monthly high yield issuance came to market in June. The rise in supply has been driven by a confluence of liquidity needs from companies under stress, an apparent bottoming out in rates, and a resumption in risk appetites.

The Secondary Market Corporate Credit Facility (SMCCF) started purchasing corporate bond exchange-traded funds (ETFs) on May 12<sup>th</sup>. In the first week, the SMCCF purchased \$1.6 billion of 15 different ETFs, about one-quarter of which was high yield. As of June 16<sup>th</sup>, the facility held \$6.8 billion in ETFs, with 12% being high yield. An update to the program, as expected, expanded these purchases to include individual corporate bonds starting June 16<sup>th</sup>. Only the first two days of transactions have been disclosed, and they totaled \$429 million split among more than 80 issuers, with only 3% high yield. The SMCCF is designed to purchase up to \$250 billion in debt, so it is just getting started. The doubly-large Primary Market Corporate Credit Facility (PMCCF) began its purchases on June 29<sup>th</sup>.



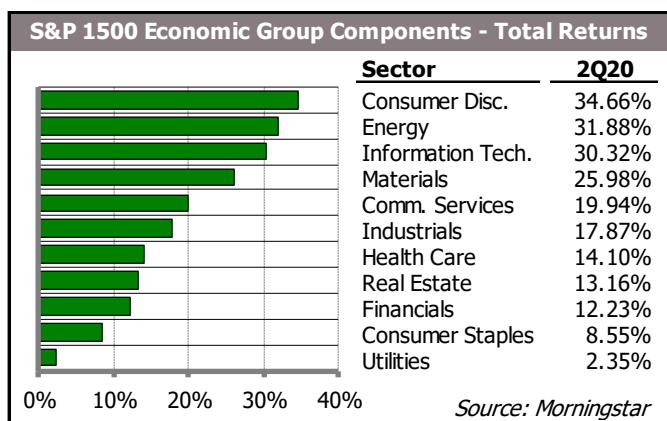
## The US Stock Market

The US stock market continued its trend of record-setting quarters. Propelled by unprecedented Fed asset purchases, the S&P 500, the Dow Jones Industrial Average and the Nasdaq Composite all posted their best quarters in over 20 years amid a broad-based rally.

These strong returns belie the bumpy road to get there. While down from its March highs, Q2 market volatility was well above the average for the past two decades and twice the average since 2015. However, the quarter closed strong, with stocks rallying on May data. Positive signals included better-than-expected employment, increased retail sales, and a spike in home sales.

In addition, Fed Chairman Jerome Powell and Treasury Secretary Steven Mnuchin testified before the House Financial Services Committee on June 30th acknowledging a “bounce-back in economic activity” and articulating a commitment to support businesses and households through the -19 crisis even as some of the early relief programs are set to expire. Balancing this, largely ignored by the market, was a warning from Mr. Powell that a resurgence of infections could “undermine public confidence, which is what we need to get back to lots of kinds of economic activities that involve crowds.”

US Stock Indices - Total Returns			
<b>Large-cap Stocks</b>	<b>2Q20</b>	<b>Mid-cap Stocks</b>	<b>2Q20</b>
S&P 500	20.54%	S&P Midcap 400	24.07%
Russell 1000	21.82%	Russell Midcap	24.61%
Growth	27.84%	Growth	30.26%
Value	14.29%	Value	19.95%
<b>Broad Markets</b>		<b>Small-cap Stocks</b>	
S&P 1500	20.77%	S&P Smallcap 600	21.94%
Russell 3000	22.03%	Russell 2000	25.42%
Growth	27.99%	Growth	30.58%
Value	14.56%	Value	18.91%

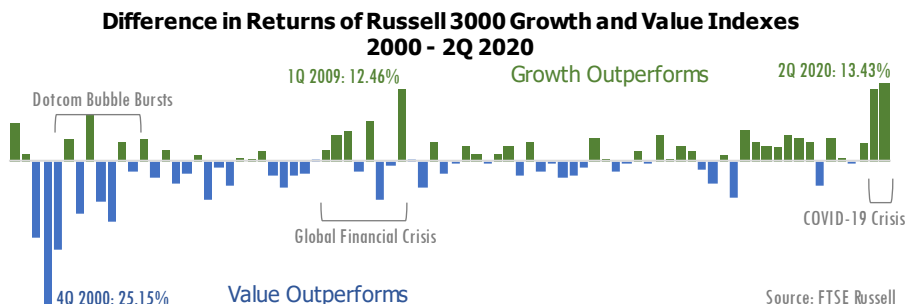


The Energy sector rebounded from a dismal Q1 with oil prices rising from an unprecedented low in April as Russia, OPEC and other producers cut output to balance decreased demand. Exxon Mobil and Chevron, the two largest constituents in the S&P 1500 Energy index by weight, posted Q2 returns of 20.1% and 24.9%, respectively, as both companies maintained their dividends and appear to be poised to benefit from widespread industry bankruptcies. In some ways, outperformance by the Energy sector was counter-intuitive, with the rise in oil prices insufficient to save many debt-laden shale drillers like industry pioneer Chesapeake Energy, which filed for Chapter 11 bankruptcy protection on June 28<sup>th</sup>. With the return to risk-on sentiment, sectors that are traditionally seen as ballast to portfolios, like Utilities and Consumer Staples, were the worst-

performing. As further evidence of the return to a risk-on environment, small- and mid-cap stocks outperformed their large-cap peers across 6 of the 11 sectors, with the largest differences of 20% and 40% seen in the Consumer Discretionary and Energy sectors, respectively. The Financials sector, one where small and mid caps did not outperform large caps, struggled for another quarter, facing the dual challenges of a low interest rate environment and COVID-19 fallout in personal and business finances.

Despite stellar returns for the quarter, corporate earnings in the companies that make up the S&P 500 are estimated to fall by 43.8% in Q2. If this materializes, it will be the largest year-over-year drop in earnings for this cohort since a Q4 2008 decline of 69.1% [FactSet]. Analysts slashed their earnings estimates over the quarter, and the aggregation of median Q2 EPS estimates (or “bottom-up EPS estimates”) for all companies in the index came in at -37.0%, the largest decline since FactSet began tracking this data in 2002. Interestingly, the sectors seeing the largest drops in bottom-up Q2 EPS estimates were Energy (-488.0%) and Consumer Discretionary (-122.5%), the top-performing sectors for the quarter, suggesting a disconnect between the market and the economy.

Growth stocks extended their dominance over value through all market caps, both in duration of the run and in the magnitude. While a bit surprising in the prior quarter, with the Fed flooding the market with liquidity it seemed a fait accompli in Q2. We have commented on the mounting growth trend in past issues of this newsletter and observe that such style ascendency is not unprecedented in either duration or magnitude. What remains to be seen is what catalyst will eventually reverse the trend.



## International Markets

After the fire-sale of assets in Q1, global markets also posted a sharp recovery. Many sectors registered their best quarter in decades, buoyed by an avalanche of liquidity from central banks and governments. The run-up highlights the confidence investors have in the ability (and willingness) of the central banks of major, developed economies to do whatever it takes to support the recovery and keep markets afloat.

Developing countries, on the other hand, lack the benefit of gigantic balance sheets while dealing with the slow-down. Major EM central banks launched large liquidity programs to support local currency bonds – the risk going forward is of material currency depreciation if fiscal and corporate solvency doesn't improve quickly.

In the fixed income universe, yields on EM debt have fallen from a peak of over 6.0% to around 4.5% at the end of Q2. Although the inevitable drop in economic growth will lead to another round of EM sovereign debt defaults in 2020, the consensus expected default rate is around 3%, which is still far below US high yield default expectations of 8%.

In Q2, the relative weakness of the US dollar was also favorable for EM equities – if yields stay low and the Fed continues to provide dollar liquidity globally, the asset class may be supported in spite of the high weight to financials and cyclicals within EM indices.

### Europe

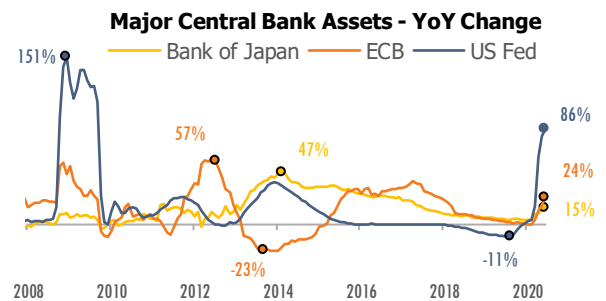
Eurozone economies have been emerging from lockdown with no evidence, so far, of a second wave of infections. Containment measures have eased significantly and high frequency economic indicators were reflective of a rebound in activity. What is surprising is that the economies might still have been contracting in June – Eurozone flash composite PMI rose sharply to 47.5 in June from 31.9 in May, but any reading under 50 signifies a fall in output.

Most European bourses mirrored the US in Q2 and recorded double digit gains, although the degree of recovery varied materially across countries. The strongest gains were registered in Germany, where the DAX index rose 24% over the quarter, paring year-to-date losses to around -6%. The size of Germany's fiscal stimulus program signaled a sharp U-turn in policy from a government often criticized for its austerity. The package, estimated to cost over €450 billion combines tax cuts, direct payments to citizens and government spending. The laggard among the continent's major indices was UK's FTSE 100 which registered Q2 returns of 8.8%. The extended lockdown and the lack of clarity around reopening hurt performance near the tail-end of the quarter.

A boost for EU member states going forward is the potential coronavirus recovery package of €1.8 trillion. This deal, under negotiation in Q2, includes €500 billion in grants for economies hardest hit by the pandemic. Even as the market awaited clarity over final deal terms, yields on lower quality European sovereigns fell significantly; having peaked at 2.90% in March, Italian 10-year yields declined to 1.21% by the end of Q2. Similarly, the 10-year in Greece fell to 1.22%, from a high of 4.16%. Yields now signal a sustained belief that governments will have easy access to capital for the foreseeable future, no matter what their economic health was before the pandemic struck.

With pre-crisis interest rates already in negative territory, many were worried about the European Central Bank's (ECB) ability to support the economy in case of a major slowdown. But the ECB has been swift in launching new tools and moving away from rate-oriented policies. It aggressively bought sovereign debt through its emergency asset purchase program. To further support the recovery, in Q2 the ECB increased the size of the program from €750 billion to €1.35 trillion, even as its assets jumped to over 50% of Eurozone GDP. At this stage, the "Japanification" of the EU seems inevitable – any indication of moving away from sustained, structurally low rates and quasi-permanent quantitative easing could affect market stability.

Foreign Stock & Bond Indices - Total Returns			
MSCI Broad Indices	2020	Barcap Global Indices*	2020
MSCI ACWI ex-US	16.12%	Global Aggregate	3.32%
EAFE (Developed)	14.88%	Pan-Euro	4.71%
Emerging Markets	18.08%	Asian-Pacific	0.85%
		Eurodollar	3.38%
		Euro-Yen	0.08%
		Other Currencies	9.47%
MSCI Regions			
Europe	15.26%		
Japan	11.61%	* Unhedged	
Pacific ex-Japan	20.19%		
Latin America	19.10%		





## Americas

Canada's economy recorded its largest drop ever, shrinking by 11.6% in April, following March's contraction of 7.5% as COVID-19 lockdowns began. Statistics Canada reported that all 20 categories the data agency tracks were lower, and they added up to the biggest monthly plunge since record-keeping began in 1961. Although the overall drop was precipitous, economists had expected a 13% contraction.

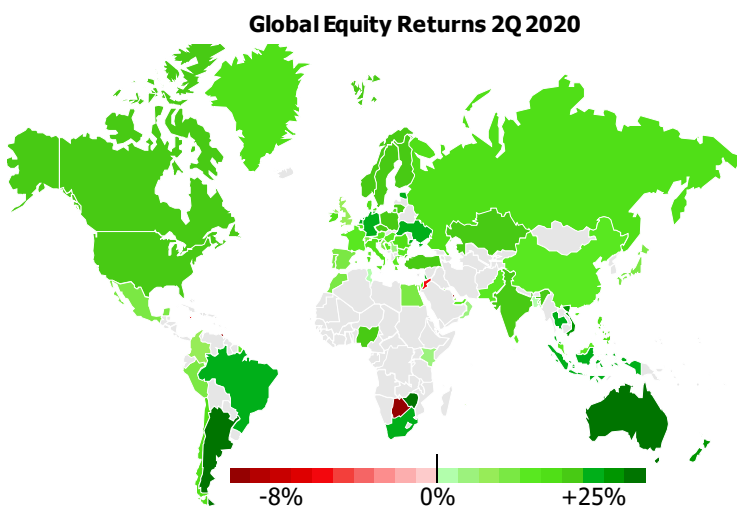
In May, the Canadian statistics agency estimated a modest 3% rebound in GDP as the phased reopening of the economy, oil price recovery and historic fiscal and monetary stimulus are creating a growth environment. While April data suggested a market trough, 290,000 jobs were added in May, recapturing only around 10% of jobs lost in prior months but suggesting a nascent recovery might be underway. The MSCI Canada Index rose 20% in the quarter, recapturing a good share of its losses from earlier in the year as stimulus measures took root.

As governments across the globe were ramping up efforts to stave off flailing economies, Mexico's president Obrador responded with less aggressive measures. Economists estimated Mexico will only modestly increase spending, by less than 1% of GDP, which pales in comparison to many large countries. A number of Mexico's Latin American neighbors have taken more comprehensive steps to stave off economic decline. Chile, Peru and Brazil have all passed rescue packages valued at 8-12% of their economies. The country's top business lobby group, the Consejo Coordinador Empresarial, and a business group representing industrial firms, Canacindra, were critical of the Obrador government's response, expecting more stimulus more quickly. However, in June, the peso fell to around 22.2 per dollar as Mexican oil re-bounded to around \$30 per barrel, and the 10-year government bond yield fell to 5.97% from 7.30% at the end of Q1. Mexican markets rebounded around 11% as markets steadied.

## Asia

China's economy shrank 6.8% in the first three months of 2020 compared with a year earlier, the first such contraction since Beijing began reporting quarterly gross domestic product in 1992.

Starting in April, economic activity showed some signs of improvement as the country began returning to work, though rising joblessness continued to weigh heavily on consumer spending. Industrial output was up 3.9% from a year earlier, recovering from a 1.1% fall in March. However, unemployment increased to 6.0%, off the record high of 6.2% in February but much higher than the 5.2% at the end of 2019. It dropped again to 5.9% in May. Retail sales were down 7.5% YoY, a great improvement from the 16% decline in March, and improved further in May when they were down 2.8%.



Even though factories have been resuming production, manufacturing purchasing managers index slipped to 50.8 in April from 52.0 in March. However, the index climbed to 50.6 in May, and then to a three-month high of 50.9 in June. The nonmanufacturing PMI jumped to a seven-month high of 54.4, from 53.6 in May, suggesting an improvement in services and construction activity. Both indexes have now logged four consecutive months above 50, indicating expansion.

Policymakers rolled out modest stimulus measures during the quarter. They said they would extend electricity rebates and tax breaks for small businesses through the end of the year and postpone the repayment of principal and interest on existing loans to smaller businesses until the end of March 2021. They urged the nation's biggest state banks to increase lending to small firms by 40%

from a year earlier, versus a 30% target last year. The government also said it would transfer the proceeds of local government special-purpose bonds and treasury bonds to local governments to boost employment, consumption, and investment that were severely hit by the coronavirus pandemic. Beijing will also give a boost to infrastructure spending by increasing national rail capital funds by 100 billion yuan (\$14.05 billion) this year.

A recovering economy and easier financial conditions led to a jump in Chinese shares. The flagship Shanghai Composite Index increased by 8.2%, to 2984.6, during the second quarter and continued rising to 3332.38 in July, the Index's highest level since early 2018. Brokerages, banks, miners, aviation companies and developers led the rally.

## Focus On: The Evolving Tools of the Federal Reserve

In 2008, US monetary policy was aggressive compared to the Fed's past responses and then-current responses overseas. The set of tools created to address the Great Recession in 2008 has been dubbed the "Bernanke Put," and it is back in action for 2020. Although Bernanke, Yellen, and Powell have their differences, together they define a new era for Fed action. The Fed has a difficult task in promoting maximum employment, stable prices, and moderate long-term rates. Over the past decades, confidence in the central bank has been earned through a prudent balance between these conflicting objectives. Yet, dovish accommodation has now been the prevailing policy since 2008. If the legacy of this era is to further solidify that confidence, a hawk will need to emerge from the Fed when the time comes - one who is ready to act with same degree of strength, ingenuity, and responsiveness as the doves have.

### The Fed's Dual Mandate



Hawkish attention to the threat of inflation

&



Dovish support for maximum employment

### Modern Tools for a Modern Economy

While the Fed's post-2007 monetary policy tools are unorthodox, they are not unprecedented. Open market operations extended into buying longer-term US Treasury debt in the 1930s to combat the Great Depression. In 1961, Operation Twist similarly flattened yields by selling short-dated Treasuries against long-dated purchases. The op was thought ineffective; the curve did not stay flat long enough to confer economic growth. However, the tactic was revisited in 2011.

Still, 2008 was the first instance of true large-scale asset purchases (LSAPs). The Fed began purchasing obligations beyond the federal government's own. The US was only outdone by Japan in terms of timing and scope, which included corporate bonds and exchange-traded funds. Many central banks, notably the European Central Bank (ECB), were more hesitant to deploy QE, which was suspected to potentially cause runaway inflation in the long term. After the success gained by the Fed, QE seemed like a magic bullet. In 2020, it took almost no time for the Fed to devise and implement an unlimited QE plan. Do the concerns that caused hesitation around QE in 2008 no longer apply just because we now have anecdotal evidence that QE can function to support a weak economy while not necessarily leading to an inflation overrun?

Another major initiative incepted in 2008 was the Term Asset-Backed Securities Lending Facility, referred to as TALF. This tool was launched so quickly they forgot two letters. The TALF program buys select securities within a predesignated set of asset-backed obligations that are experiencing abnormal illiquidity. Along with new QE, the Fed announced a TALF 2.0, upon which eligible securities reverted back towards relatively normal yields.

In total, the Fed lists 17 specific monetary policy tools on their website that are currently in use. The majority of these are facilities with specific mandates to provide targeted liquidity, mainly through loans. Some are carryovers or reinventions of tools deployed for the Great Recession, but many launched in 2020, including the Paycheck Protection Program Liquidity Facility. Some of the listed tools have expired. The most recently retired is required bank reserves. This tool has been in use to varying degrees for the entire existence of the Fed. After 2007, the Fed extended this tool to further require excess reserves. Yet, in March of this year, the Fed decided to henceforth abolish all reserve requirements.

One tool is conspicuously missing from the Fed's list despite its critical role since 2007. It is perhaps too basic for the Fed to recognize as a policy tool; nevertheless, everyone else does. Forward guidance has proved a stabilizing and supportive force on markets and the economy. Notably, it affords Fed control within the confines of zero-interest-rate policy (ZIRP).

### I'll Gladly Pay Tuesday for a Hamburger Today

Whether the Fed's approach since Ben Bernanke is ultimately deemed prudent or irresponsible may take many decades to decide, and many more to re-decide. If the Fed is indeed sowing the seeds of inflation with landmark monetary stimulus alongside monumental fiscal stimulus, we may not see the bitter fruit borne out for some time. Regardless of the outcome on inflation, monetary and fiscal stimulus provided today is borrowed from presumed wealth generated tomorrow. Fiscal stimulus borrows against future taxes and monetary stimulus borrows against future market gains.

In the truest sense, the Fed does not create economic value. It does not generate goods or services counted in GDP. However, it is a valuable and instrumental part of our economy as a facilitator or magnifier of value generation. Fed policies are not zero-sum games with equal winners and losers. Fed action, when successful, can produce an overall benefit for the economy. When markets begin to panic, liquidity can evaporate. Ensuring that markets continue to function by injecting liquidity prevents value destruction. Further, smoothing economic cycles supports growth by reducing market volatility and the cost of raising capital. It is efficient for capacity to match demand. In a volatile economy, capacity tends to lag demand as companies are risk-sensitive to potential economic contractions; mismatches thus become probable.

The immediate impacts on financial markets of the Fed's 2020 stimulus are now unfolding. Under a theoretical permanent ZIRP, the present value of all future earnings would be undiscounted. A dividend paid on common stock in year 2320 would be worth the same as a dividend paid in 2020. In reality of course, tomorrow is promised to no one, so investors would still apply a discount for uncertainty of future earnings proportional to time. Yet, the Fed has an answer for that too: forward guidance. All of this is a boon to investors today, but promises an erosion to future expected returns.

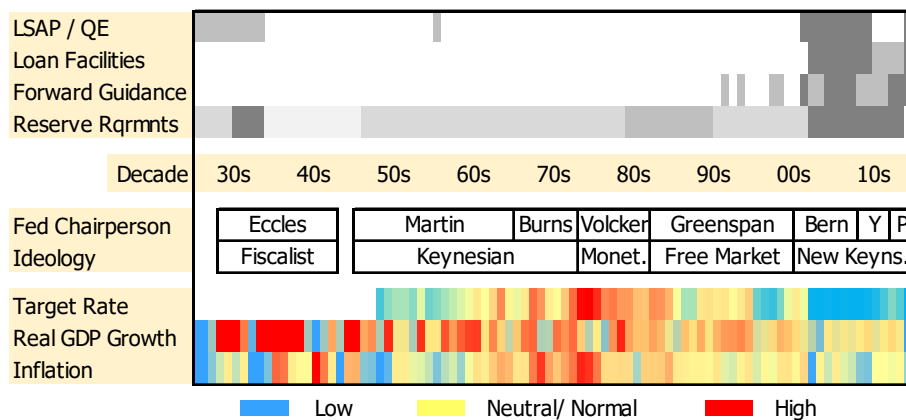
### A Path of Stumbles and Successes

Naturally, much of the Fed's modern policy is founded on the preceding era, over which former Fed Chairman Alan Greenspan presided. Mr. Greenspan's economic views are best-described as multi-denominational, though he received criticism for focusing more on controlling prices than on achieving full employment. With Mr. Greenspan, an important use of his discretion was the perception and fact that he was committed to giving financial markets a soft landing amidst national and international turmoil. Critics of his approach referred to this support as the "Greenspan Put." Proponents say he avoided a second Great Depression by injecting liquidity after the 1987 Black Monday crash. The idea that the Fed, embodied by Alan Greenspan, would always be there to put the bottom to the market and to keep that bottom within investor's reach was seen by some to have paved the way for the dot-com crisis and, later, the explosion in subprime lending that led to the financial crisis and the Great Recession.

Where Mr. Greenspan departed markedly from today's Fed was his lack of transparency: no press conferences and no announcements of rate hikes. Fed analysts started looking for signs in everything, even scrutinizing the way Mr. Greenspan carried his briefcase. If it bulged and tugged on his arm, he might be armed to persuade colleagues into another rate move. Mr. Greenspan's reputation also produced a peculiar power dynamic. The interaction between former President Bill Clinton and Mr. Greenspan was characterized not by presidential control, but by Fed control of the president. This era was marked by one of the most noticeable periods of fiscal and monetary cooperation in the nation's history.

Preceding Mr. Greenspan was Chairman Paul Volcker, another inflation hawk and iconoclast. Where Mr. Greenspan walked into a fragile market, Mr. Volcker inherited runaway inflation. If a pitcher relieves another pitcher mid-inning, the previous pitcher is still on the hook for the number of batters he allowed to reach base. Similarly, when a Fed Chairperson finds themselves embattled with economic disaster, it may be the failing of previous leadership. What counts is whether they make the most of the situation as they take the mound or pitch themselves out of the inning.

Volcker was handed over an economy on a downward spiral. In hindsight, this has been blamed on the Fed's earlier Keynesian adherence to the Philips Curve informing overly accommodative monetary policy. Volcker took the radical step of switching Fed policy from targeting interest rates to targeting the money supply. He fought inflation with contractionary monetary policy and courageously doubled the fed funds rate from 10.25% to 20% in March 1980. Even after inflation had peaked, he refused to lower interest rates as quickly as President Reagan wanted. That extreme and prolonged interest rate rise, called the Volcker Shock, ended inflation. Volcker used the independence he created for himself to prescribe painful economic medicine in the quest of longer-term stability and the greater good. His tough medicine led to not one, but two, recessions before prices finally stabilized.



Volcker's tenure at the Fed didn't just represent policymaking revolution, it also changed the way economists thought about the economy. Prior to Mr. Volcker, relatively few economists believed monetary policy was responsible for inflation. After, most economists started considering alternative ideas being promoted by monetarists such as Milton Friedman. Now, some of these ideas have been laid to rest. With the abolition of reserve requirements, the Fed has abandoned the monetarist school of thought. Although the

change coincided with pandemic-induced stimulus, the stage for this adaptation was set in January 2019, when the Fed formally adopted the "abundant reserve" framework in use since 2008. The Fed now controls the money supply through the interest on excess reserves exclusively, detaching target rate tuning from balance sheet girth.

## Bending in the Wind

The Pavlovian Greenspan and current Fed eras have trained markets to pivot from fear to greed at a record pace. Under a bit of hyperbole, it seems we are approaching a time when Fed support is a given whenever prices are about to fall, and so they never do. To the contrary however, Mr. Powell has given investors reason to doubt a "Powell Put" exists.

Mr. Powell has shown flexibility to be dovish or hawkish, as circumstances require. His hawk-like inflation focus during a series of rate hikes through 2018 concerned stock market bulls. Yet, he abruptly paused in favor of patience. Rate cuts followed in the second half of 2019. When the pandemic hit in 2020, his reversal proved prudent. Still, the Fed's record after Chairman Volcker leaves some doubt on whether they will dampen the upside as fervently as the downside.

Fed policy also has to account for fiscal policy and consumer behavior. Some economists see Fed intervention as disruptive to the latter. Austrian economist F.A. Hayek showed that changes in price are an essential element in communicating the state of the economy. Just as trees grow with the wind to avoid breaking in the storm, people adjust spending habits to perceived changes in wealth or income. It is a basic argument that condemns price distortion because this enables less informed market participants to make poor financial decisions. In contrast, Keynesian theory argues households adjust expenditures based on actual income. The aforementioned monetarist, Milton Friedman, showed this to be false.

The Fed actions since 2008 most closely align with new Keynesians. Whatever the long-term ramification of the Fed's monetary policy, they would say it beats the alternative. Monetarists, though at odds with Keynesians, would also praise most of the Fed's actions. They would support even-stronger QE, as it directly infuses the economy with "high-powered" money. To forestall inflation, they would support an expedient and well-telegraphed reduction in the monetary base post-crisis. Finally, the new classical school would find the Fed's response far too aggressive for their taste. They would condemn LSAPs as poisoning financial markets with opacity of price distortion. They would warn of market bubbles created in the wake of monetary stimulus, much as they attribute the Great Recession to the Fed's enabling of lax credit.

Possibly, none of the established schools of economic thought have the power to explain the implications of QE. Cui and Sterk claim just that, and offer a model to show a simple QE regimen is effective at stabilizing the economy, as monetarists claim, but has the undesirable side effect of reducing aggregate social welfare due to widening the wealth gap.

## Finding Confidence in Uncertainty

The tools the Fed uses are limited by the disconnect between theory and practice. In theory, the Fed could promote a v-shaped recovery by adjusting the inflation target higher. This would communicate a dovish commitment to lower-for-longer rates. Yellen appeared open to the idea. However, Mr. Powell has pointed out that many countries, including the US, have been having trouble meeting a 2% inflation target since 2008. If the inflation target were upped to 4% from the current 2%, as some economists have lauded, Mr. Powell contends that investors would write it off as a hollow promise.

In the end, no economic model will be 100% accurate or serve effective policy in every situation. The economy and financial markets are complex and chaotic. Furthermore, models are subject to human errors in judgment and execution. Not long ago, an Excel formula typo called question to an entire economic premise supporting austerity measures enacted by the EU, among others. In 2010, economists Reinhart and Rogoff showed that once a country's debt-to-GDP ratio exceeds 90%, lower growth results. A 2013 paper by Herndon, Ash, and Pollin corrected for the Excel error, as well as cherry-picking and questionable weighting. Their result: no such link exists. Reinhart and Rogoff stand by their conclusion.

New or revised economic theories from several schools of thought continually compete for a say in monetary and fiscal policy. The Fed's response to the global financial crisis bolstered its reputation. Confidence in and reliance on the Fed has never been higher from investors, politicians, and the populace at large. The tools they have put to use in 2020 evidence that, as does the decisiveness and intensity of their recent actions. Let's all hope their faith is not misplaced.

The Fed's current actions require confidence that unabashed fiscal and monetary stimulus will be matched by equally fervent fiscal and monetary restraint when the time comes. The longest tenured Fed Chair, Bill Martin, recited a sobering description of the Fed in his 1955 "Punch Bowl" speech. When the party is really warming up, the Fed is the chaperone who takes the punch bowl away. This is the ultimate lynchpin that prevents capital markets from succumbing to a tragedy of the commons.

---

## Bellwether Consulting LLC

PO Box 31, Millburn, NJ 07041

[www.bellwetherconsulting.net](http://www.bellwetherconsulting.net)

Copyright © 2020 All Rights Reserved.

