

GVA Asset Management

Economy & Market Update – 2Q21

By: Lee R. Johnson, Jr., CFA | Chief Investment Officer | May 7, 2021

The Economy

We are one year into the pandemic and what a year it has been! Fortunately, we are all in a better place today than we were last year. Vaccines are rolling out, stimulus money is flowing, businesses are reopening, the consumer is spending, manufacturing is on the rise, and life as we know it is slowly getting back to normal. We still have a ways to go but all of this is a good sign. It's also nice to see the classic expansionary trend you would expect in this environment taking shape here. But as with all business cycles, we should also expect "ebbs" and "flows" as the economy recovers and different industries improve faster than others. There is plenty of data to review these trends and plenty of companies to analyze to get a feel for how the economy is doing. This is why economic data and the information it provides is such an important piece to the puzzle and why understanding it is key to the decisions investors make. Here at GVA Asset Management, we regularly review this information to formulate our own opinion of the future and then over or under weight exposures to asset classes or specific companies in our models in an effort to exploit opportunity. Presented here are several of the various economic indicators we use to evaluate that.

Economic Indicators

- **Economic Cycle** – according to Fidelity's institutional group, the US economy is in a late-stage recovery as it approaches the expansionary phase. Which makes total sense based on the information we are seeing daily in terms of jobs coming back, inflation picking up, and manufacturing rising. That and more details can be seen at the below link. This is great to see and is a welcome sign for the economy going forward. It also means companies that benefit from an economic recovery and expansion should do better during this period. Those companies are better known as "cyclical" companies who perform well during economic expansion but usually lag during recessions and challenging economic times.
https://institutional.fidelity.com/app/item/RD_13569_40890/business-cycle-update.html
- **Interest Rates** – interest rates remain at historic lows across the board on both short and long-term rates (see these links – short term: <https://www.ceicdata.com/en/indicator/united-states/short-term-interest-rate>, and long term: <https://data.oecd.org/interest/long-term-interest-rates.htm>). Mortgage rates, primarily driven by the bond market but also influenced by long term rates, are also at all-time lows (see this link: <https://www.valuepenguin.com/mortgages/historical-mortgage-rates>). And at the end of April, the Fed had their routine two-day meeting and provided new insight into the economy. They announced "indicators of economic activity and employment have strengthened" and that they would continue with their accommodative stance on monetary

policy in an effort to achieve maximum employment and sustainable inflation (targeting 2%).

<https://www.federalreserve.gov/monetarypolicy/files/monetary20210428a1.pdf>

This came with leaving the Federal Funds Rate unchanged at the 0-0.25% range. Now there has been a lot of talk lately about longer-term rates and the 10-year treasury yield going up to reflect expectations of higher inflation but that has since settled in at the 1.6% range indicating the market has priced in inflation at this time. And if you consider the 30-year historical average of 3% we are still well below that level (<https://www.macrotrends.net/2016/10-year-treasury-bond-rate-yield-chart>).

- **Gross Domestic Product (GDP)** – As of April 29th, real GDP (adjusted for inflation) for Q121 increased +6.4% following an increase of +4.3% in Q420. The increase in both numbers reflects increases in exports, nonresidential fixed investment, consumer spending, residential fixed investment, and private inventory investment. This is a great sign as multiple readings have shown rebounds in growth of GDP. <https://www.bea.gov/data/gdp/gross-domestic-product>

Another key point out of the Fed meetings is the projection they made for GDP which is also very optimistic. The Fed now sees real GDP to grow **6.5%** up from it's 4.2% forecast in December. This is yet another good sign for the economy.

The ingredients for strong GDP growth are certainly there: 1) pent up demand for travel, dining, movies, tourism and other consumer driven services, 2) elevated savings, 3) gains in real estate values from the boom in home prices across the country, 4) increases in household wealth from the stock market making new highs, 5) low-rate environment encouraging more borrowing and more spending.

- **The Federal Reserve (“The Fed”)**

Meeting calendars, statements, and minutes:

<https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>

Please see “Statement” section for executive summary and “Projection Materials” for projected assumptions and the “Dot Plot”.

Balance Sheet:

https://www.federalreserve.gov/monetarypolicy/bst_recenttrends.htm

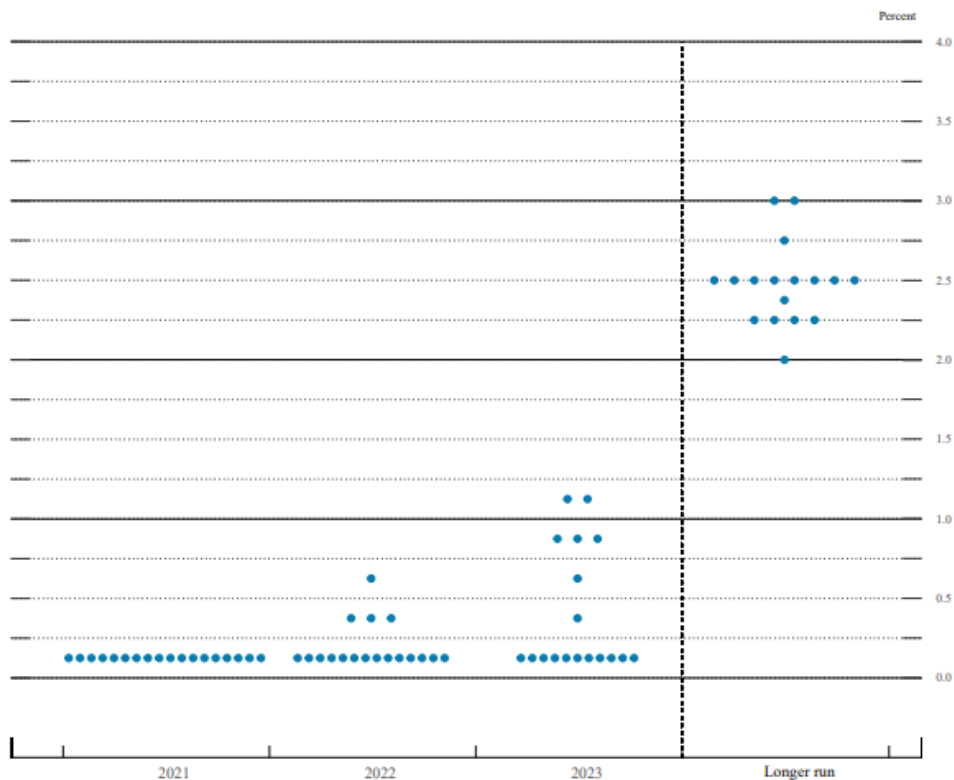
The Fed's balance sheet is primarily made up of government-backed securities and mortgage-backed securities. They are like Treasury bonds that each have different rules and mature at different times. It has certainly expanded over time and especially in this past year in reaction to the pandemic. This is certainly a concern as far as how much debt the Fed is taking on and should be monitored for when the Fed will begin “unwinding”. In other words, when it will *slow down* its rate of purchase of treasury bonds and mortgage-backed securities. However, that has not been

the case lately as it continues its purchase of Treasury securities at \$80 billion per month and MBS at \$40 billion per month. In any case, it is important to monitor the levels of the Fed’s balance sheet because it plays a very important role in the economy. This is because as the Fed adds to its balance sheet, it causes money to be injected into the economy which in turn helps spur business (through bank reserves).

As stated earlier, the Fed has repeatedly maintained an accommodative stance on the economy by keeping interest rates low. This is in an effort to boost borrowing, spending, and drive employment. And the Fed’s continuous approach to purchasing Treasuries and MBS is another classic maneuver to add to the country’s money supply, boost bank reserves and maintain a balance between borrowing and lending which is the lifeblood of our economy.

In summary, all of this is “dovish” or “accommodative” from the Fed which is a good sign for the economy and their prospects for future growth. But at the same time, we must be aware of the implications this particular stance from the Fed will have on future economic growth and how the stock market will price that going forward. One key element to that is their balance sheet but another and more commonly talked about is the famous “Dot Plot” which paints a nice picture of where the Fed committee members see interest rates going forward. According to the current chart, they are staying low for a while. Here is the latest chart, as of the March 17, 2021 meeting:

The “Dot Plot”



Now there is a fine line to be drawn here because as the economy heats up, the Fed plays an important role in controlling how fast it expands at the risk of rising inflation which if not kept in check can cause issues in an economy that is a rebound phase. I do not see that happening at this point because we are just at the beginning stages of recovery and expansion, but it still has to be monitored closely. And with the power of the US economy with so much pent-up demand it's likely a huge surge of economic activity will be seen beginning as early as this summer and certainly into the second half of the year. The Fed will no doubt be monitoring this very closely and making adjustments they feel is necessary. One sign of this that came out from the recent meeting was four of the committee members upped their forecast for when rates will go up from 2023 to winter 2022. That's a sign the committee is seeing a rebound in the economy earlier than expected.

But there is another point to make here and that is it's important to note that the dot plot shown is how the Fed sees it *right now*. They have no way to predict the future (nor does anyone for that matter) so all the Fed can do is act on the data and activity the economy gives us. This was on full display in Q418 going into 2019 when the trade war began heating up under Trump. At that time, announcements were coming out between the US and China that began spooking markets. But at the same time the Fed was in rate hiking mode yet they scaled that back when volatility began taking center stage in Q418 around the trade war. If you recall Trump made it very clear he disagreed with the Fed raising rates and eventually the Fed stopped. My point is this Fed is purely data dependent and although they are taking a dovish position now, they may very well end up changing their tune if the economy rebounds faster than they expect. Or if something else happens to spook markets (taxes?). We shall see. But the good news is we are trending in the right direction and the data certainly supports it.

- **Inflation** – I expect stronger inflation in 2021 and we have already been seeing that happen for example at the gas pump, building material prices surging, and food prices at grocery stores. This trend should certainly stay the course throughout 2021 and certainly into 2022 until the economy hits and sustains that coveted 2% level.
 - **Objective:** The Fed's objective for inflation is **2%***.
 - **Projection:** In its release on March 17, 2021, the Fed projected PCE inflation* (personal consumption expenditures) to be **2.2%** for 2021 and **2.0%** for 2022.
<https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm>
 - **Actual:** As of March 2021, the monthly PCE inflation* rate was **2.3%**, up from **1.5%** in February and up from 1.4% in January. <https://www.bea.gov/data/personal-consumption-expenditures-price-index>

**the Fed uses "PCE" inflation or the "personal consumption expenditure" price index. It is calculated by the Bureau of Economic Analysis and tracks the change in prices of goods and services by consumers across a*

broad range of goods and services. Inflation is then simply the percentage rate of change in the PCE index. In this report, all reference to inflation will be based on PCE. More information on the PCE can be found here: <https://www.thebalance.com/pce-inflation-how-it-s-calculated-why-the-fed-prefers-it-4004939>

Another popular measure of inflation is “CPI” or the Consumer Price Index. This is different from PCE inflation in that it measures the change in out of pocket expenditures for all urban households while the PCE measures the change in goods and services consumed by all households and nonprofit institutions serving those households. More information on the CPI can be found here: https://www.bls.gov/cpi/questions-and-answers.htm#Question_1.

As of April 13, 2021, the CPI increased 0.6% in March after rising 0.4% in February. The March increase is the largest rise since a 0.6% rise in August 2012. Over the last 12 months, the CPI increased 2.6%. Again, this is a good sign no matter which index you look at, it shows inflation is on the rise. <https://www.bls.gov/news.release/cpi.nr0.htm>

- **Neutral Rate (Current Monetary Policy and Effect on Interest Rate)** – The Neutral Rate is an inferred *theoretical* Federal Funds Rate where the monetary policy position taken by the Fed is neither accommodative nor restrictive. Essentially it is the interest rate that maintains full employment and price stability in the economy. The neutral rate is important as it can indicate whether the current monetary policy is accommodative, restrictive, or in-line.
 - Accommodative - Monetary policy is accommodative when the neutral rate is *greater than* the Federal Funds Rate. In this case, economic growth will tend to speed up, the unemployment rate should decline, and inflation should rise.
 - Restrictive – Monetary Policy is restrictive when the neutral rate is *less than* the Federal Funds. In this case, economic growth will tend to slow, the unemployment rate should rise, and inflation should remain level or decline.

Variable	Median ¹			
	2021	2022	2023	Longer run
Change in real GDP	6.5	3.3	2.2	1.8
December projection	4.2	3.2	2.4	1.8
Unemployment rate	4.5	3.9	3.5	4.0
December projection	5.0	4.2	3.7	4.1
PCE inflation	2.4	2.0	2.1	2.0
December projection	1.8	1.9	2.0	2.0
Core PCE inflation ⁴	2.2	2.0	2.1	
December projection	1.8	1.9	2.0	
Memo: Projected appropriate policy path				
Federal funds rate	0.1	0.1	0.1	2.5
December projection	0.1	0.1	0.1	2.5

Current Neutral Rate Outlook (as of March 17, 2021):

Currently, the Fed is reporting real GDP growth of 6.5%, PCE inflation of 2.4%, and a Fed funds rate of 0.1% meaning that the Fed is forecasting *nominal* GDP growth of $6.5 + 2.4 = 8.9\%$ for 2021. We conservatively estimate the neutral rate to be the level of nominal GDP growth minus 100 basis points. Therefore, our estimate of the neutral rate is 7.9% for 2021. The rule of thumb is whenever the neutral rate (7.9) is greater than Federal Funds Rate (0.1), monetary policy is *accommodative* and

rate cuts are not necessary (and vice versa). Therefore, given how low the Fed Funds Rate is right now the current rate environment suggests borrowing and lending is very

accommodative. This makes total sense for one given the pandemic we've been in and the economic shock that has resulted on top of all the stimulus money that has been injected into the system to help boost the economy to that 2% inflation range. I expect rates to remain very low at least into 2022 and as a result inflation will pick up in 2021.

<https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm> (see projection materials)

- **Jobs** (as of the latest jobs report released on May 7, 2021)

Unemployment & Participation Rate – current and past rates are:

Month	Unemployment Rate (%) ¹			Participation Rate (%) ²			Participation Rate/Unemployment Rate Ratio ³		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
January	4	3.5	6.3	63.1	63.4	61.4	15.8	18.1	9.7
February	3.8	3.5	6.2	63.1	63.3	61.4	16.6	18.1	9.9
March	3.8	4.4	6.0	63.1	62.6	61.5	16.6	14.2	10.3
April	3.7	14.8	6.1	62.9	60.2	61.7	17.0	4.1	10.1
May	3.7	13.3		62.9	60.8		17.0	4.6	
June	3.6	11.1		62.9	61.4		17.5	5.5	
July	3.6	10.2		63.1	61.5		17.5	6.0	
August	3.7	8.4		63.2	61.7		17.1	7.3	
September	3.5	7.8		63.1	61.4		18.0	7.9	
October	3.6	6.9		63.2	61.6		17.6	8.9	
November	3.6	6.7		63.2	61.5		17.6	9.2	
December	3.6	6.7		63.3	61.5		17.6	9.2	
Average	3.7	8.1	6.2	63.1	61.7	61.5	17.1	9.4	10.0

Sources: <https://fred.stlouisfed.org/series/CIVPART>; <https://fred.stlouisfed.org/series/UNRATE>

¹ the unemployment rate is the percentage of unemployed workers in the total labor force. It is calculated as the number of unemployed people divided by the total labor force (those who are employed or unemployed but looking for work). The lower the better.

² the participation rate is a measure of the total number of people either already working or available for work as a percentage of the total number of people who are eligible for work. In other words, it's the percentage of all people of working age (16+) who are employed or are actively seeking work. It is a measure of the amount of labor in an economy which is essential to production. The higher the better.

³ the participation / unemployment ratio can be used to measure the relative health of the job market across different periods of time. It accounts for differences in the participation rate, thus eliminating any distortions in the perception of the job market that may result from only looking at the unemployment rate. The higher the better.

Here is how to calculate both figures using April 2021 data:

	<u>Number (in millions)</u>	<u>Percent</u>
Population (P)	261,103	
Not in Labor Force	100,115	
Labor Force (LF)	160,988	61.7% = Participation Rate
Employed	151,176	
Unemployed	9,812	6.1% = Unemployment Rate

Source: <https://www.bls.gov/web/empsit/cpseea01.htm>

* the key difference between the unemployment rate and the participation rate is that the participation rate measures the percentage of Americans who are available to work while the unemployment rate measures those who are without a job. A high participation rate combined with a low unemployment rate is a sign of a good economy. In other words, a high participation to unemployment ratio and trending up.


There are a few observations here:

- **Unemployment** - It is hard not to notice the spike in unemployment in April 2020 resulting from the pandemic. We have however regained jobs much faster than initially expected and have maintained below the average for 2020 so far in 2021.

<https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>

<https://www.bls.gov/charts/employment-situation/civilian-labor-force-participation-rate.htm>

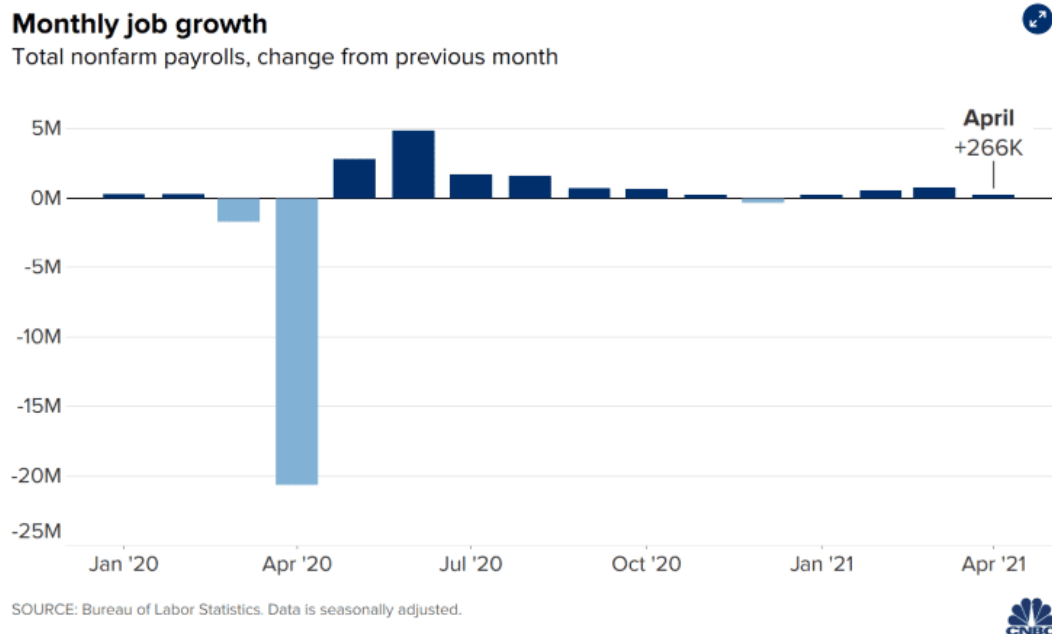
- **Nonfarm Payrolls** - job growth continues to recover despite one slip up in December when it posted a -306,000 decrease. The latest payroll projection for April 2021 projected nonfarm payrolls to increase by 266,000 and adjusted the March result from 916,000 to 770,000. Both results were a letdown, but it simply means not as many people are employed at this time as was expected however jobs are still growing.

Download:  [xlsx](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	19	212	235	314	101	236	60	126	233	204	132	202
2012	354	262	240	82	100	73	152	172	187	159	156	239
2013	191	278	139	191	222	181	112	242	187	225	264	69
2014	175	166	254	325	218	326	232	188	309	252	291	268
2015	191	271	71	284	331	174	302	125	155	306	237	273
2016	108	212	237	197	41	258	371	143	289	118	130	214
2017	197	183	139	220	141	211	228	190	42	249	196	179
2018	81	378	195	153	270	214	149	229	105	212	92	240
2019	237	-50	168	219	63	175	193	195	221	195	234	161
2020	315	289	-1683	-20679	2833	4846	1726	1583	716	680	264	-306
2021	233	536	770(P)	266(P)								

P : preliminary

Source: https://data.bls.gov/timeseries/CES0000000001?output_view=net_1mth



Source: <https://www.cnbc.com/2021/05/07/jobs-report-april-2021.html>

- **Jobless Claims** – There are two categories of jobless claims. *Initial claims* consist of people filing the first time, while *continued claims* consist of people who have already been receiving unemployment benefits.

Initial claims peaked in April 2020 at 6,149,000 while the number of *continued claims* peaked in May 2020 at 23,128,000. As of May 1, however, the number of Initial claims were down to 498,000 (-92%) and the number of continued claims were down to 3,690,000 (-84%).

Jobless claims are a leading indicator. Generally, when jobless claims are down the market goes up and when jobless claims are up the market moves down.

<https://fred.stlouisfed.org/series/ICSA> ; <https://fred.stlouisfed.org/series/CCSA>

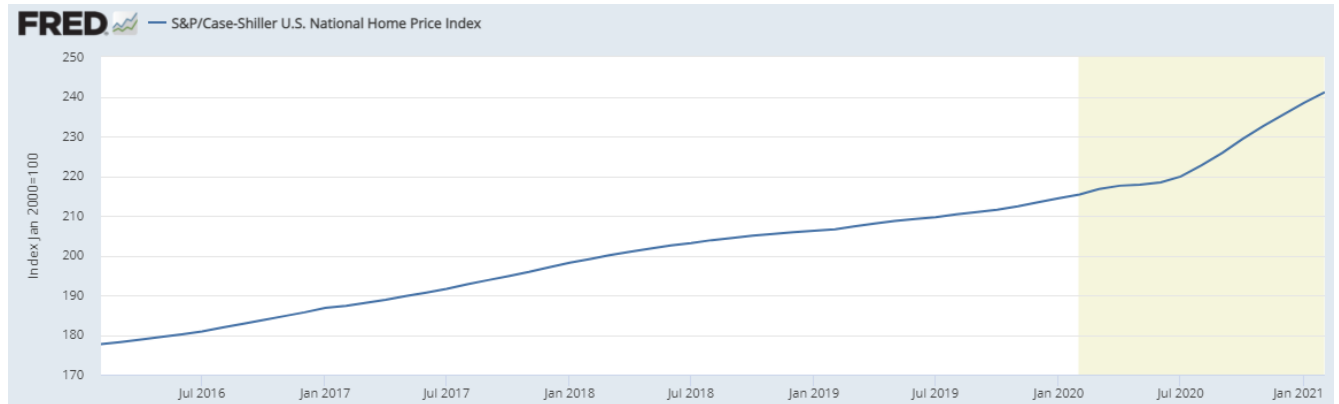
- **Hourly Earnings** - In the last twelve months ending in April 2021, average hourly earnings were up 0.3% versus a 4.2% gain in March and a 5.2% gain in both January and February. The Atlanta Fed’s wage growth tracker, which focuses on people who have kept working, shows average hourly earnings of workers up 3.5% on average in the past year versus 3.7% in the year ending in January 2020.
<https://beta.bls.gov/dataViewer/view/timeseries/CES0500000003> (select 12-month % change)
<https://www.frbatlanta.org/chcs/wage-growth-tracker.aspx> (select “hourly workers” under 12-month moving average).

- **The Fed**
As with their projection for GDP, the Fed remains optimistic on the jobs market too, seeing unemployment decreasing to 4.5% which is also an improvement from December when they forecasted 5%.

- **Leading Economic Indicators (LEI)** – The Conference Board Leading Economic Indicator Index is used to gauge where the economy is heading, while the Conference Board Coincident Economic Indicator Index measures current economic activity.
Conference Board Website: <https://www.conference-board.org/data/bcicountry.cfm?cid=1>
Press Release: https://www.conference-board.org/pdf_free/press/US%20LEI%20PRESS%20RELEASE%20-%20April%202021.pdf
 - The Leading Economic Indicator Index (LEI) was 111.6 in March 2021, increasing 1.3% from the previous month.
 - The Coincident Economic Index (CEI) was 104.0 in March 2021, increasing 0.6% from the previous month.
 - The LEI index remains above the CEI index which is a sign the economy is projecting expansion going forward.

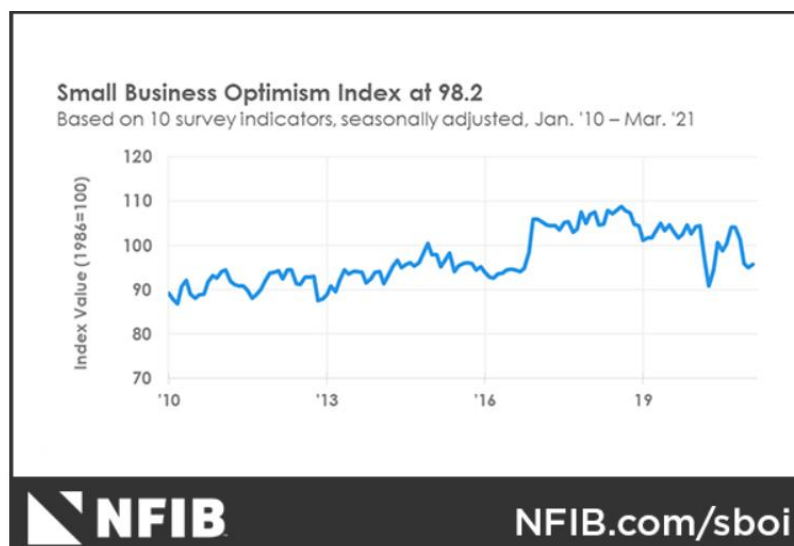
- **Housing**
 - **Housing Starts** – Housing starts occur when excavation begins for the footings or foundation of a building. In March 2021 housing starts reached the highest level in over a decade at 1,739. After seeing a sharp drop during the pandemic, housing starts have rebounded to the previous pre-pandemic record highs, signaling great strength in the housing market. <https://fred.stlouisfed.org/series/HOUST>
 - **Building Permits** – The number of new housing permits authorized follows a similar pattern as housing starts. Permits have rebounded to pre-pandemic highs and sat at a record high of 1,886 as of January 2021 but have since come down slightly to 1,759 as of March 2021 (-6.7%). <https://fred.stlouisfed.org/series/PERMIT>
 - **Case-Shiller Index** - The S&P CoreLogic Case-Shiller U.S. National Home Price Index measures the value of single-family housing within the United States. The index has remained unaffected by the onset of the Coronavirus pandemic, continuing its steady climb. This is indicative of the strength in the stay-at-home routine so many Americans converted to when the pandemic first hit and continue to do these days. Real estate values are increasing as a result.

Case-Shiller Index:



Source: <https://fred.stlouisfed.org/series/CSUSHPISA>

- **US dollar** – The US dollar has remained range bound in the 90 range since the beginning of the year. This is a weak position for the greenback. Treasury yields affect the dollar and as long as the 10-year stays steady at historical lows (or it falls), the dollar will remain weak. <https://www.dailyfx.com/forex/fundamental/forecast/weekly/usd/2021/04/17/US-Dollar-Outlook-Mired-by-Fall-in-Longer-Dated-US-Treasury-Yields.html>
- **Oil** – As of April 6, the front month futures price for brent crude oil settled at \$64.86, down from a high of \$71.38 on March 8 (it closed May 7 at \$64.82). Inflation expectations can be derived from oil prices and signs of inflation are certainly appearing that in the oil markets so it's not a stretch to think oil can go up. <https://www.eia.gov/outlooks/steo/marketreview/crude.php>
- **Oil Forecast** – The U.S. Energy Information Administration (EIA) forecasts lower oil prices later in 2021 as a result of rising oil supply that will slow the pace of global oil inventory withdrawals. The EIA also expects that high global oil inventory levels and spare production capacity will limit upward price pressures, leading to expected prices averaging \$56/b in the first quarter of 2021, \$52/b over the remainder of the year, and \$55/b looking forward into 2022. Looking back to 2019 and 2020, supply had fluctuated within normal limits in 2019 but when the pandemic hit in 2020 a glut ensued which caused prices to plummet. That is starting to ease as the economy reopens and therefore prices starting to come back up. <https://www.eia.gov/outlooks/steo/report/prices.php>
- **Small Business Optimism** – The NFIB Small Business Optimism Index looks to capture the trends of small business optimism based on surveys conducted of 10 indicators.
 - The Small Business Optimism rose 2.4 points in March to 98.2.
 - Despite the increase, small business owners remain pessimistic as they struggle to find qualified workers as they compete with increased unemployment benefits.

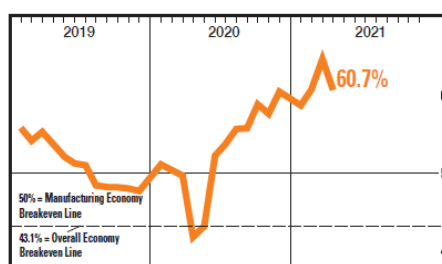


Source: <https://www.nfib.com/surveys/small-business-economic-trends/>

- **Manufacturing** – The Purchasing Managers Index (PMI) from the Institute for Supply Management (ISM) analyzes the amount of economic activity occurring in the manufacturing sector of the economy. A PMI greater than 50 signals and expansion in manufacturing, while a PMI less than 50 signals a decline.
 - For April 2021, the PMI index was at 60.7, a 6% decrease from the previous month and a 46% increase from the previous year. It clearly shows expansion with it being well above the 50 threshold.
- <https://www.ismworld.org/supply-management-news-and-reports/reports/ism-report-on-business/pmi/april/>

MANUFACTURING PMI[®] at 60.7%

Manufacturing grew in April, as the Manufacturing PMI[®] registered 60.7 percent, 4 percentage points lower than the March reading of 64.7 percent. Although the Manufacturing PMI[®] has cooled compared to March, it remains at historically high levels. The Manufacturing PMI[®] continued to indicate strong sector expansion and U.S. economic growth in April. Four of the five subindexes that directly factor into the Manufacturing PMI[®] were in growth territory.



The Market

The “market” in this context is broadly defined as the market of available investments between equities and fixed income. It generally has a life of its own – driven by constant buying and selling in the open market. Prices are based on buyer and seller preferences for the value of a particular security. Those preferences create a certain aspect of “perception” in the market. This perception also creates a “forward- looking” mentality where current prices are based upon the expectation of how the future will play out. This is generally 6 to 9 months out. And since no one can predict the future, the market naturally has an element of uncertainty built in. I call this the “perception” vs. “reality” conundrum. Over time, predictions play out and eventually become reality, but as new information comes in, that reality gets replaced with another round of perception about the future. And the cycle repeats. This is similar to the “ebb” and “flow” of the economic cycle, but it is even more prevalent in a “market” cycle. Because there is uncertainty involved about the future. We see this every day on CNBC when anchors and guests debate their interpretation of the market and express their opinions on where they see it going. But at the end of the day, investors have to draw a line and that’s where a direction is set, for better or worse. To help draw that line, investors review a variety of market data and metrics and we here at GVA Asset Management are no different. It just depends which metrics you use and how you use them to make decisions. This is how we try to find opportunity and make smart decisions. And then we try to exploit opportunity buy buying at a price we consider fair and selling at a price we don’t. We primarily focus on fundamentally strong, well-managed and competitively advantaged companies and we use a variety of metrics to determine that advantage. Shown here are some of the many metrics and indicators we use to do that.

Market P/E – The current P/E ratio of the S&P 500 is **44.97** (as of May 7, 2021). This is incredibly overvalued as compared to the historical average in the 20-25 range. Another way to look at P/E is “The Rule of 20” which states that stocks are fairly valued when the stock market’s P/E plus the rate of inflation add to 20. Or in other words, over 20 suggests stocks are overvalued, under 20 suggests stocks are undervalued. Right now, without even considering inflation, the P/E ratio of the S&P 500 is well above 20 which again indicates that stocks as a whole currently tend to be overvalued.

<https://www.multpl.com/s-p-500-pe-ratio>

Earnings Yield – another way to look at the P/E ratio is to invert it which converts the multiple to a “yield” or essentially the percentage income return on an investment. In other words, the “ROI. Typically, the term “yield” is synonymous with bonds because they are income generating so naturally investors tend to think of bonds in terms of how much “yield” they generate. For example, let’s assume you buy a bond for \$10,000 and that bond pays a 5% annual coupon. That would pay you \$500 every year. Or, in percentage terms, 5% (\$500/\$10,000). That 5% is commonly referred to as the “yield” on the bond. You can look at it the same way with stocks by using earnings yield.

As you would expect, the earnings yield uses *earnings* to calculate yield. This is a bottom-line measure which indicates the final profitability of a company and hence is a nice and easy way to

quantify “value” of a company. Therefore, earnings yield is commonly known as a valuation measure. And just like the bond example, you can think of it as the “ROI” on your investment. In other words, how much you would expect in return for paying a certain price for the company. Let’s look at an example.

Let’s assume a company reports quarterly earnings of \$1.32 per share in any given quarter. Assuming constant earnings over the coming year, projected annual earnings would be \$5.28 per share. The stock market then takes that earnings expectation and converts it to a price per share based on its interpretation of the results and future expectations of the company. In this example, let’s assume the market prices the company at \$87 per share. Therefore, the *earnings yield* of one share of stock would be 6.1% ($\$5.28/\87). Or put another way, if you buy one share of this stock, you would expect to receive the equivalent of 6.1 cents per year because 6.1% is 0.061 in decimal form. Now that’s not to say you will actually receive that 6.1 cents in your bank account the day after you buy the stock. That doesn’t happen because the company isn’t actually distributing the entire 6.1 cents. Instead it’s only distributing the *dividend* from that 6.1 cents. And banking the rest in reserves. The point is the company is generating a certain amount of money every year which the market is in turn placing a value on. And since *you* own one share of the company then *you* earn whatever the company earns every year so essentially *you* are earning back your investment as the company grows. Which is the “ROI” concept and why earnings yield is naturally a measure of value and a nice ratio to use for stock analysis. And at the end of the day, you can use the “yield” to compare to the fixed income market to determine if you are earning more yield with stocks or bonds.

The same analysis can be done to a market index to gauge how that market is valued as a whole. Again, this is just a quick and easy way to estimate value, but it is a commonly used valuation measure in the industry. For example, the S&P 500 index. You could take the S&P 500 P/E at any time (either forward or trailing) and invert it. Or you can take it one step further and use Enterprise Value and EBIT. Here are both results:

- Using trailing 12-month earnings – 2.3% and trending down
https://www.gurufocus.com/economic_indicators/151/sp-500-earnings-yield
- Using forward earnings – 4.48% trending up
https://ycharts.com/indicators/sp_500_earnings_yield_forward_estimate
- Using Enterprise Value and EBIT – $EV/EBIT = 26.48$, invert = $1/26.48 = 3.8\%$
<https://www.gurufocus.com/term/ev2ebit/SPGI/EV-to-EBIT/SP-Global>

The trailing 12-month result does not paint an accurate picture because earnings have been depressed during Covid. Plus it is a backward looking measure anyway. Forward earnings, however, are projected earnings and better to use as a predictor of future value. As a result, the forward earnings yield of 4.48% above lines up as a better indicator of value in the stock market. The 3.8% result using enterprise value and EBIT is also a better indicator because it removes the “noise” from

the income statement and focuses solely on the operations of the companies in the S&P 500. In any case it's very clear that stocks are yielding more than bonds these days (the 10-year yield is in the 1.6% range) so equities are definitely the favored group at this time. Which also makes sense as to why the stock market is making new all-time highs.

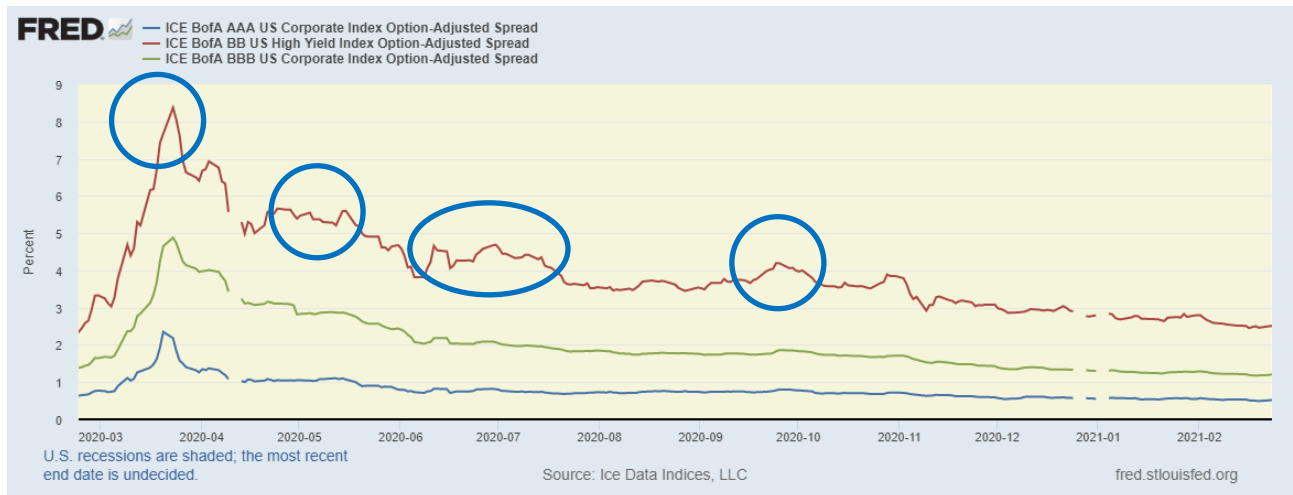
VIX and VVIX – The CBOE's Volatility Index (VIX) Vix Volatility Index (VVIX) both indicate a degree of volatility in the market. The VIX measures straight up volatility and the VVIX measures the rate of change of the VIX. Since the initial spike in volatility during the onset of the pandemic, both indices have reached a greater baseline level than before.

- The CBOE's Volatility Index (VIX) measures the market's volatility expectations for the next 30 days
 - The VIX had been trading in the 12 to 15 range before the pandemic and hit as high as 53 during the pandemic but now finds itself trading pretty steady these days around 19. It has picked up since mid-April but is still in a fair zone given markets are trading at all-time highs these days. (<http://www.cboe.com/vix>)
- The CBOE's Vix Volatility Index (VVIX) is an indicator of the expected volatility of the 30-day forward price of the VIX (i.e. the rate of change of the VIX).
 - The VVIX also follows a similar pattern where it previously traded around \$90 to 100 before the pandemic, hitting as high as 157 during the pandemic, and again hit 157 just this past January but has since come down to the 110 range. Which again has been pretty steady since the end of April. Longer term, the VVIX has traded around the 80-90 range so with it being above 90 at this time, there is a signal of potential bumpy road ahead which also makes sense given the markets are trading at all-time highs. <http://www.cboe.com/products/vix-index-volatility/volatility-on-stock-indexes/the-cboe-vvix-index>

- **Moving Average Indicators**

- 200 Day Moving Average – The 200 Day Moving Average of the S&P 500 was 3,670 on 5/5/21. The current price of 4,162 was above the moving average, indicating an uptrend.
- 50 Day Moving Average - The 50 Day Moving Average of the S&P 500 was 4,020 on 5/5/21. The current price of 4,162 was also above the moving average, indicating an uptrend. [https://www.barchart.com/stocks/quotes/\\$SPX/technical-analysis](https://www.barchart.com/stocks/quotes/$SPX/technical-analysis)
- Both of these results simply indicate the market's momentum to the upside at this time which confirms the trends we've been seeing as the market makes new all-time highs.

- **Yield curve** – 10 Year treasury yield minus 2 Year treasury yield.
 - The interest rate spread between the 10 year and 2 year treasury yield was 1.49 on 4/30/21. The spread has consistently risen since the onset of the pandemic. This indicates a steepening yield curve which makes sense as inflation expectations increase on the long end. <https://fred.stlouisfed.org/series/T10Y2Y>
- **Value vs. Growth** – Value has led the way early this year, but Growth continues its strength in the long term. Their returns as of 5/5/21 are:
 Growth – Russell 3000 Growth - Return: 5.0% YTD, 43.36% 1-Yr
<https://finance.yahoo.com/quote/%5ERAG?p=%5ERAG>
 Value – Russell 3000 Value - Return: 16.4% YTD, 48.58% 1-Yr
<https://finance.yahoo.com/quote/%5ERAV?p=%5ERAV&.tsrc=fin-srch>
- **Credit Spreads** – a “credit spread” is the difference between the yield on a low-quality bond (such as high yield) and the yield on a high-quality bond (such as the US treasuries). A chart and table of these different spreads is presented below (data sourced from “FRED” or Federal Reserve Economic Data). The data presented is the “Option Adjusted Spread” or “OAS” which provides for additional clarity in the bond market because options (such as prepayment on mortgage backed securities) are considered in the spread calculation to better identify the cash flows and default probabilities of the bond market.



Sourced data for the chart information:

- <https://fred.stlouisfed.org/series/BAMLC0A1CAAA>
- <https://fred.stlouisfed.org/series/BAMLH0A1HYBB>
- <https://fred.stlouisfed.org/series/BAMLC0A4CBBB>

OAS	2/24/21	3/23/20	5/15/20	6/30/20	9/24/20	2/23/21	5/4/21
High Yield	2.45	8.37	5.6	4.69	4.2	2.51	2.40
IG AAA	0.65	2.18	1.07	0.81	0.78	0.52	0.49
Difference	1.80	6.19	4.53	3.88	3.42	1.99	1.91

This provides interesting information about where the market may be heading because spreads in general reflect investor expectations of future risk.

For example, when spreads go down or “tighten”, this generally means lower risk is perceived in the market because investors do not demand as much yield when they think risk is low. Conversely if an investor perceives risk in the market to be high, they will demand a higher yield for their investment.

If we look back over the past months to November 2019 (before the onset of the pandemic) we can observe various trends to explain what happened to try and understand where risk is currently perceived both now and into the future. Looking at the data, the high yield spread peaked in March with several “bumps” post March, but each time it was lower than the previous high as it slowly declined back towards a new baseline level. This indicates the amount of perceived risk in the market has slowly decreased over time, which makes sense as we have learned more about the virus and have made steps on the vaccine front. The resulting level for high yield (2.40) has pretty much returned to its level from last February before the onset of the pandemic (2.45) as well as the spread between high yield and investment grade which is closing in to its previous level at 1.91 (vs 1.80 before the pandemic). This indicates lower perceived risk in the fixed income markets as the spreads converge. This convergence effect can also be seen in the difference between the yield spreads going down from yield spreads just a few short months ago as well.

Convergence or Narrowing (“lower perceived risk” or “risk on”): when spreads converge, the yield is relatively low on high yield (BB) and high on investment grade (AAA/BBB). This signals a reduced perception of risk at the current time as investors feel more comfortable investing in high yield bonds which causes their price to go up and yield to go down which causes a convergence towards investment grade bonds. Because of this, high yield bonds do not need to offer as high of a yield, leading to the convergence. In this case, investors are opting to sacrifice the safety of investment grade bonds for the increased yield of high yield bonds (hence a “risk-on” signal from the bond markets).

Divergence or Widening (“higher perceived risk” or “risk off”): When spreads diverge, the yield is relatively high on high yield (BB) and low on investment grade (AAA/BBB). This signals an increased perception of risk at the current time and to compensate for that risk, high yield bonds must pay a higher yield to attract investors. Many investors will opt to sacrifice some of the extra yield they could get with high yield bonds to instead have the added safety of investment grade bonds (hence a “risk-off” signal from the bond markets).

Spreads can also be used as a valuation measure to seek value in the fixed income space. Since the price of a bond is inversely related interest rates of bonds are inversely related to prices of bonds then if a spread of a certain bond is higher than another, that means the price is lower and is there for trading at a discount.

- **Put/Call ratio** – The Put/Call Ratio measures market sentiment by looking at the volume of calls and puts. A high Put/Call ratio signals a bearish sentiment, while a low Put/Call Ratio signals a bullish sentiment.
 - The Put/Call ratio was 0.88 on 5/5/21. This signals that the market has a more bullish sentiment as there are more calls than puts. The Put/Call has consistently been more bullish over the last month. https://markets.cboe.com/us/options/market_statistics/daily/
- **Small/Mid/Large** – All three categories have been trended upward this year with Small cap stocks leading the way in returns as of 2/23/21.

Small – Russell 2000 - Return: 13.80% YTD, 78.02% 1-Yr

Mid – Russell Midcap - Return: 13.04% YTD, 61.73% 1-Yr

Large – Russell 1000 - Return: 10.98% YTD, 50.85% 1-Yr

<https://www.ftserussell.com/products/indices/russell-us>

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5. **Russell 1000 TR USD** - The index measures the performance of the large-cap segment of the US equity securities. It is a subset of the Russell 3000 index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership.
6. **CBOE Volatility Index (VIX)** - Created by the Chicago Board Options Exchange (CBOE), the Volatility Index, or VIX, is a real-time market index that represents the market's expectation of 30-day forward-looking volatility.
7. **CBOE Vix Volatility Index (VVIX)** - The CBOE's VVIX measures the volatility of the price of the VIX. In other words, VVIX is a measure of the volatility of the S&P 500 index and alludes to how quickly market sentiment changes.
8. **S&P 500 TR USD** - A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the U.S. stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core S&P 500 ETF.