ELEVATED INFLATION TEMPORARY OR LONGER TERM? AND WHAT IS THE IMPACT ON COMMERCIAL REAL ESTATE (CRE)

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Roman emperors debased their currency to fund major national expenditures. Nero (emperor 54-68 CE), debased the denarius[1] from 4.0 grams of silver to 3.8 grams in 64 CE – presumably to fund reconstruction of parts of Rome destroyed due to fire. During the reign of Marcus Aurelius (161-180) the denarius declined to 75% silver content, to help pay for wars and the devasting impact of the 15-year pandemic that claimed between 5 and 10 million lives. Caracalla (198-217) debased the currency to 38% silver content[2] in order to increase pay for soldiers.[3] The currency was further debased over the years and by 265 CE[4] the currency had only 5% silver[5] and prices skyrocketed 1,000% across the empire. The United States exists in a very different world than ancient Rome, however, inflation's ability to harm an economy is eternal.

Roman Denarius – photo credit Stewart Rubin

Inflation has been a very popular topic on recent corporate earnings calls[6] - and for good reason. The July 2021 Consumer Price Index (CPI) increased to 5.37% year over year, roughly equal to last month's increase of 5.39% – the highest level in 13 years. Another inflation metric is the Personal Consumer Expenditures (PCE) index. PCE grew at 4.2% year over year in July, while core PCE grew at a rate of 3.6%, the greatest increase in 30 years. Although core PCE is the Fed's preferred measure of inflation, its monthly data release lags the release of CPI with less granular detail. Our analysis will focus on the more in-depth and timely data available with CPI.

[1] In the Republican Era, this unit of Roman currency was set at 4.5 grams of silver per denarius

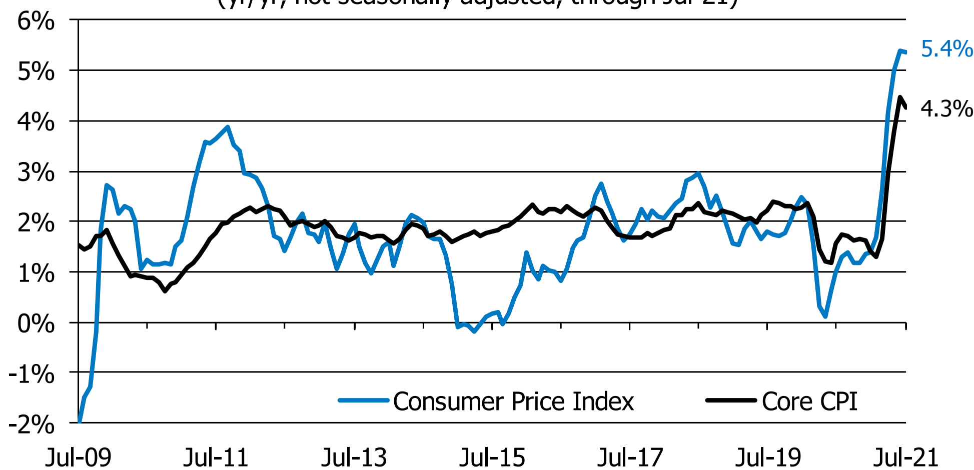
[2] Caracalla debased it from 55% silver content to 51% - but also created a new coin the *Antoninianus*, or double denarius, which only contained the weight of 1.5 denarius. Therefore, the total debasement can be calculated as follows: 51% x 75% = 38%

[3] He raised soldiers pay by 50% near 210 CE and he declared "nobody should have any money but I, so I may bestow it on my soldiers"

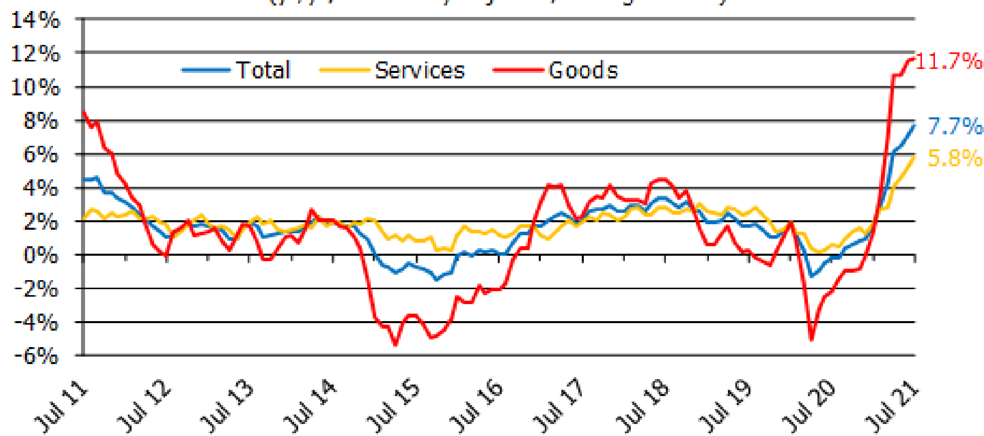
[4] During the reign of Gallienus, 253-268

[5] https://money.visualcapitalist.com/currency-and-the-collapse-of-the-roman-empire/

[6] Nicholas Jasinski "Inflation Is a Hot Topic This Earning Season. What CEOs Are Saying", Barrons, August 4, 2021



Similarly, the July 2021 Producer Price Index (PPI) increased to 7.7% year over year – the highest level since 12- month data was first introduced in November 2010.



S&P Global conducted a poll of 606 U.S. businesses and found that 33% noted that they will raise prices as opposed to 4% saying that they will cut prices. Amongst retailers, the number of those increasing prices was higher at 44%.

Unilever, a multinational consumer goods maker, is facing its most severe inflationary pressures in a decade, as the costs of raw materials, packaging and transport rise.[7] The consumer goods sector is suffering from surging transport and commodity prices, which has affected materials from palm oil to plastics. Unilever's CEO, Alan Jope, maintained that the price of palm oil, used in many of Unilever's personal care

[7] Judith Evans, "Unilever faces biggest cost rises in a decade, warns chief executive" Financial Times, July 22, 2021

products, was up 70% from the first half of last year, while soybean oil now costs 80% more, crude oil 60% more, and ocean freight 40% to 50% more.[8]

Jon Moeller, chief financial officer at Procter & Gamble, said in June that higher commodity and freight prices had added $600 million to the company's costs this year.[9] Sherwin-Williams SVP Jim Jaye stated in a July 27 earnings call that, "When we look at the basket, what we saw in the second quarter was the inflation being driven by higher costs for monomers, resins, solvents, and packaging materials.…We did guide here that we think the third quarter is going to be the highest year-over-year raw material inflation and only modest relief maybe in the fourth quarter"[10] Waste Management COO John Morris stated in a July 27 earnings call, "It's no surprise to anyone who follows economic indicators that most businesses are experiencing inflation in their costs throughout 2021, and our business is no exception, particularly with regard to labor."[11]

Will there be long term elevated levels of inflation or will it be transitory, as argued by Jerome Powell, Chair of the Federal Reserve? If it is more long term, what will be the impact on commercial real estate (CRE)?

In order to truly examine the potential for long term elevated levels of inflation it is important to analyze some of the sources of price pressure since some are transitory while others are more long term. We begin by examining possible causes of inflation in two major themes: cyclical and structural. Cyclical[12] causes include 1) Monetary Policy, 2) Government Spending and Borrowing, 3) "Return to Normal" inflation (Base Effect), 4) Consumer Expectations, 5) Supply Shortages, 6) Labor Costs, while structural factors include 1) Demographic Trends, 2) Monopolistic Pricing Power, 3) Technology – E-Commerce, and 4) Deglobalization. The structural inflationary factors have been accelerated by the pandemic, but they are slow moving and multi-decade themes. We then analyze the efficacy of CRE as a hedge against inflation. Finally, we examine how inflation in the cost of building materials may impact CRE.

Monetary Policy

Increased money supply could be a driving force of inflation. In fact, seminal economist Milton Friedman's core dictum was: "Inflation is always and everywhere a monetary phenomenon."[13] Since March 2020, the M2[14] has been growing at an elevated rate, reaching a peak of 27.1% year over year in February 2021. As of June 2021, it is $20.38 trillion, 2.4% higher than it was three months ago. The first chart below details how M2 has increased each month on a year over year basis over the past six years.

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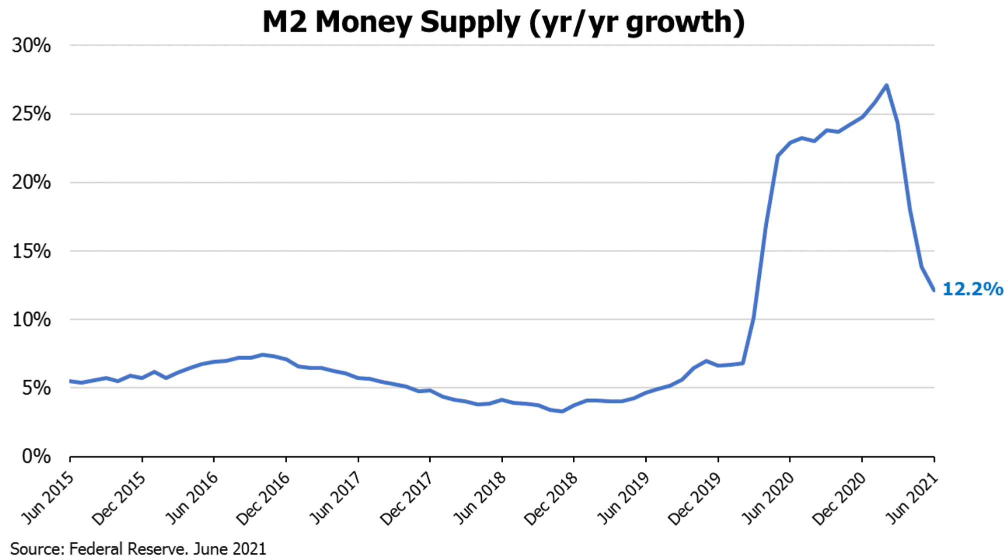
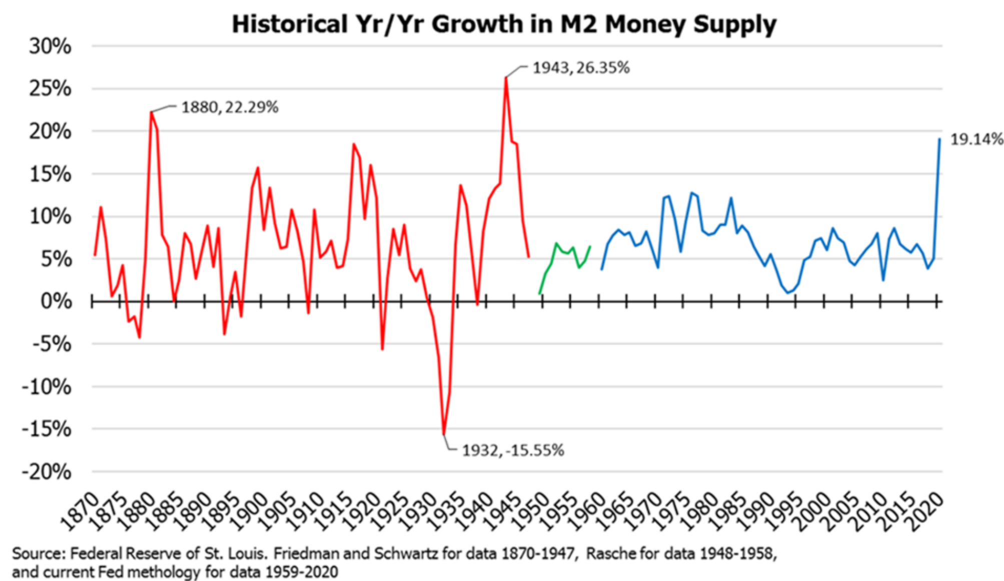
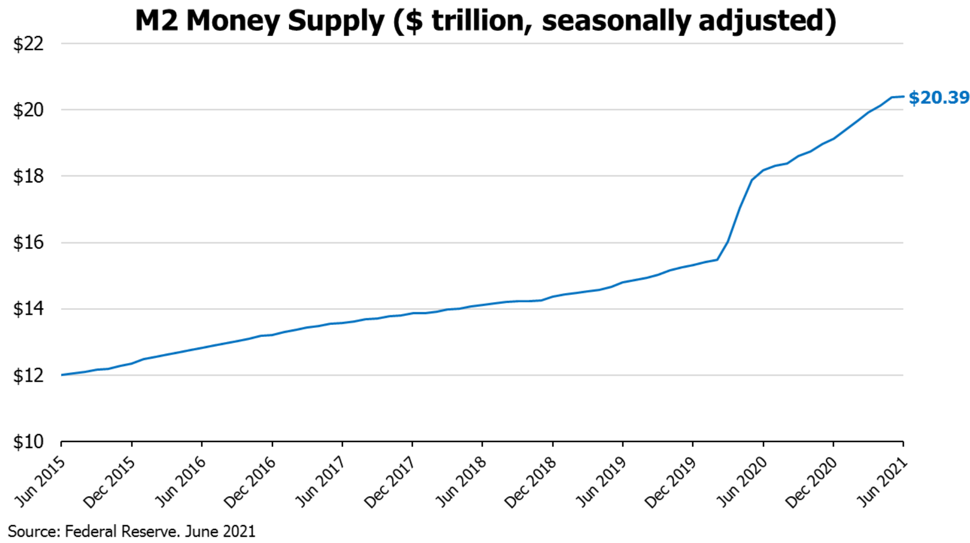
[8] IBID
[9] IBID
[10] Nicholas Jasinski "Inflation Is a Hot Topic This Earning Season. What CEOs Are Saying", Barrons, August 4, 2021
[11] IBID
[12] Cyclical causes such as Monetary Policy and Government Spending and Borrowing can morph into structural catalysts of inflation if they extend for a long period of time and/or the higher costs get built into the economic structure of the U.S. economy.
[13] Milton Friedman, "Inflation: Causes and Consequences", p. 24, New York: Asia Publishing House.
[14] As defined by the Federal Reserve Bank of St. Louis, "M2 is a measure of the U.S. money stock that includes M1 (currency and coins held by the non-bank public, checkable deposits, and travelers' checks) plus savings deposits (including money market deposit accounts), small time deposits under $100,000, and shares in retail money market mutual funds."



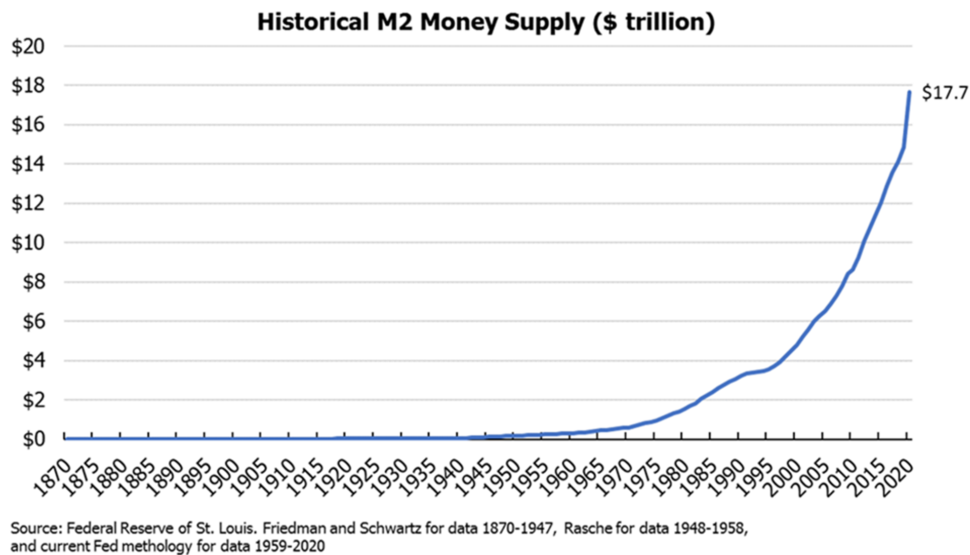
The second chart exhibits how unprecedented the current money supply annual increase is for a peace time economy. The previous substantial increase was during World War II.



The magnitude of the size of the actual money supply is clearly unprecedented. The following charts detail it on a monthly and annual basis, respectively.

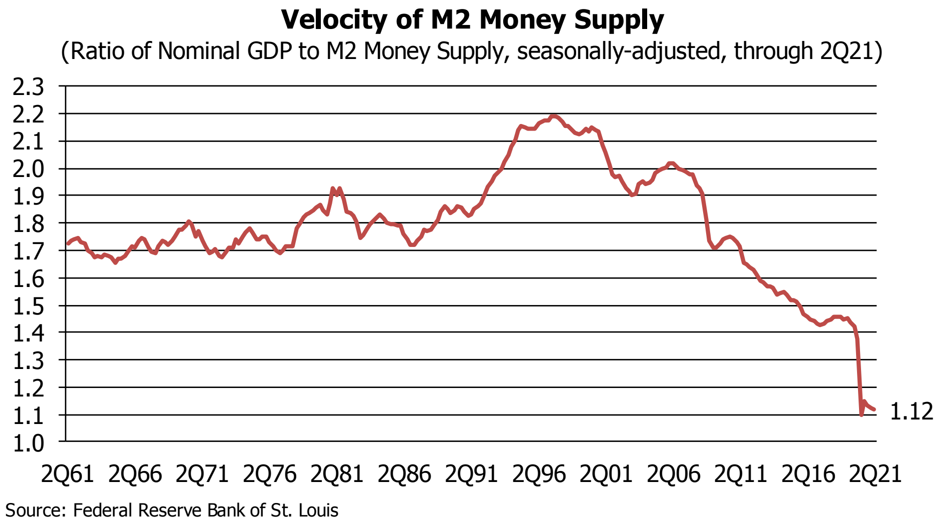


The following chart is annual (so most recent number is different) and details M2 Money Supply over a longer time period.



At the same time as this unprecedented level of expansion in money supply, the velocity of money plummeted to record lows. The velocity of money is the frequency at which one dollar is used to purchase domestically produced goods and services each quarter. If the velocity of money is decreasing, then fewer transactions are occurring between individuals and businesses in an economy.[15] This would imply that the money supply is growing faster than GDP or increased productivity and may be inflationary.

[15] https://fred.stlouisfed.org/series/M2V

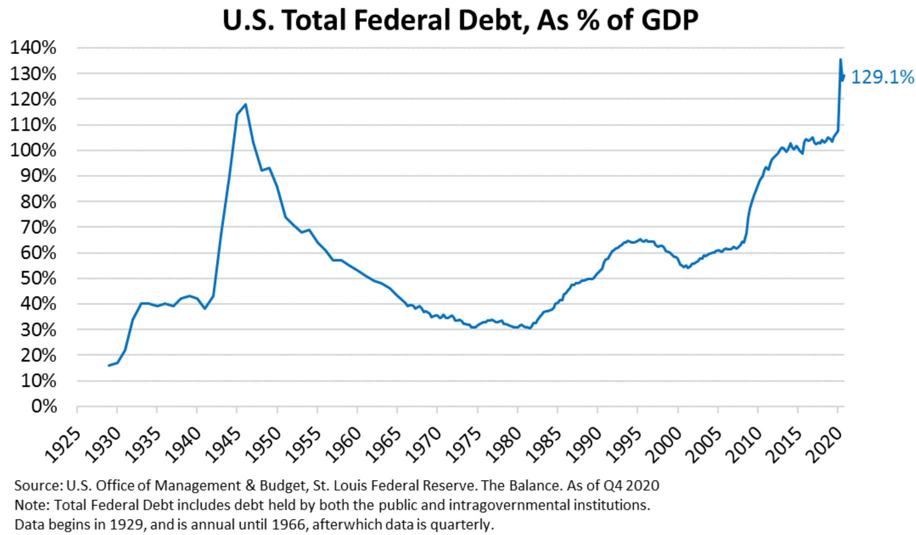


Federal Reserve Chair Jerome Powell does not seem concerned with the increase in the money supply. In his February 23, 2021 testimony to Congress, he said that the growth in the money supply, specifically M2, "doesn't really have important implications." The above notwithstanding, a sustained increase in the money supply not accompanied by enough GDP growth certainly has the potential to result in higher sustained levels of inflation.

Government Spending and Borrowing

In March 2021, President Biden signed a $1.9 trillion COVID-19 relief bill that extended federal unemployment support and provided $1,400 stimulus checks to many Americans. It also provided $350 billion in aid to state and local governments and schools. On August 10, 2021, the Senate passed a bipartisan infrastructure package. A roughly $1 trillion agreement cleared in a 69-30 vote. President Biden called the deal "the most significant long-term investment in our infrastructure and competitiveness in nearly a century." Indeed, the infrastructure spending includes money for roads, bridges, clean drinking water, public transit, freight rail systems, ports, airports, and broadband access, among other measures that can lead to greater productivity. However, the package still faces obstacles to becoming law as Democrats are pushing for an additional $3.5 trillion healthcare, childcare, and antipoverty plan (that is less likely to attract bipartisan support) and are tying the infrastructure effort to it. Passage of this additional spending plan will no doubt contribute to higher debt levels.

The total federal debt as a share of GDP is at an all-time high. The previous high was during WWII.



Past and potential future government spending in the wake of the pandemic has been extraordinary. Although, spending of this magnitude can be inflationary, it is important to note that infrastructure spending can certainly lead to more productivity and may ultimately prove to be disinflationary. Massive spending that includes permanent changes to healthcare, childcare, and the social safety net, may result in structural changes to the U.S. economy, budget, borrowing, tax policy, and deficit that may morph into structural catalysts of inflation.

"Return to Normal" Inflation (Base Effect)

There are causes of inflation that are likely temporary including the "return to normal" inflation (also characterized as "base effect" inflation). This considers that consumption and price growth were very depressed during the pandemic and therefore a rebound from such as low level would, by necessity, be dramatic. The most restrictive time of the pandemic was characterized as a period when people did not go to restaurants, felt less of a need to buy new clothing, and generally did not travel. Accordingly, a stark rebound in travel, restaurants, and apparel was expected and has manifested in July 2021, with year over year increases of Public Transportation (including airfare) of 14.0%, Lodging away from home: 21.5%, Apparel: 4.2%, Food away from home: 4.6%, and Energy: 23.8%. On a longer-term basis – inflation in these categories would be expected to dissipate once the base effect has worn off.

CPI by Component	% m/m, seasonally adjusted					% yr/yr, not seasonally adjusted				
	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021	Mar 2021	Apr 2021	May 2021	Jun 2021	Jul 2021
CPI, All items	0.6	0.8	0.6	0.9	0.5	2.6	4.2	5.0	5.4	5.4
Core	0.3	0.9	0.7	0.9	0.3	1.6	3.0	3.8	4.5	4.3
Food	0.1	0.4	0.4	0.8	0.7	3.5	2.4	2.2	2.4	3.4
Food at home	0.1	0.4	0.4	0.8	0.7	3.3	1.2	0.7	0.9	2.6
Food away from home	0.1	0.3	0.6	0.7	0.8	3.7	3.8	4.0	4.2	4.6
Energy	5.0	-0.1	0.0	1.5	1.6	13.2	25.1	28.5	24.5	23.8
Housing	0.3	0.4	0.3	0.5	0.4	2.1	2.6	2.2	2.6	2.8
Owners' eq. rent	0.2	0.2	0.3	0.3	0.3	2.0	2.0	2.1	2.3	2.4
Lodging away from home	3.8	7.6	0.4	7.0	6.0	-6.4	7.4	9.0	15.1	21.5
Rent	0.2	0.2	0.2	0.2	0.2	1.8	1.8	1.8	1.9	1.9
Apparel	-0.3	0.3	1.2	0.7	0.0	-2.5	1.9	5.6	4.9	4.2
New vehicles	0.0	0.5	1.6	2.0	1.7	1.5	2.0	3.3	5.3	6.4
Used vehicles	0.5	10.0	7.3	10.5	0.2	9.4	21.0	29.7	45.2	41.7
Public transportation	0.7	5.8	4.0	2.4	0.4	-8.2	7.0	15.9	17.3	14.0
Medical care	0.1	0.0	-0.1	0.0	0.3	1.8	1.5	1.5	1.0	0.8
Education	-0.2	0.2	0.4	0.2	0.2	0.8	0.8	1.0	1.2	1.2
Communication	0.0	0.4	0.2	0.0	0.2	2.1	2.4	2.6	2.8	1.1
Core commodities	0.1	2.0	1.8	2.2	0.5	1.7	4.4	6.5	8.7	8.5
Core services	0.4	0.5	0.4	0.4	0.3	1.6	2.5	2.9	3.1	2.9

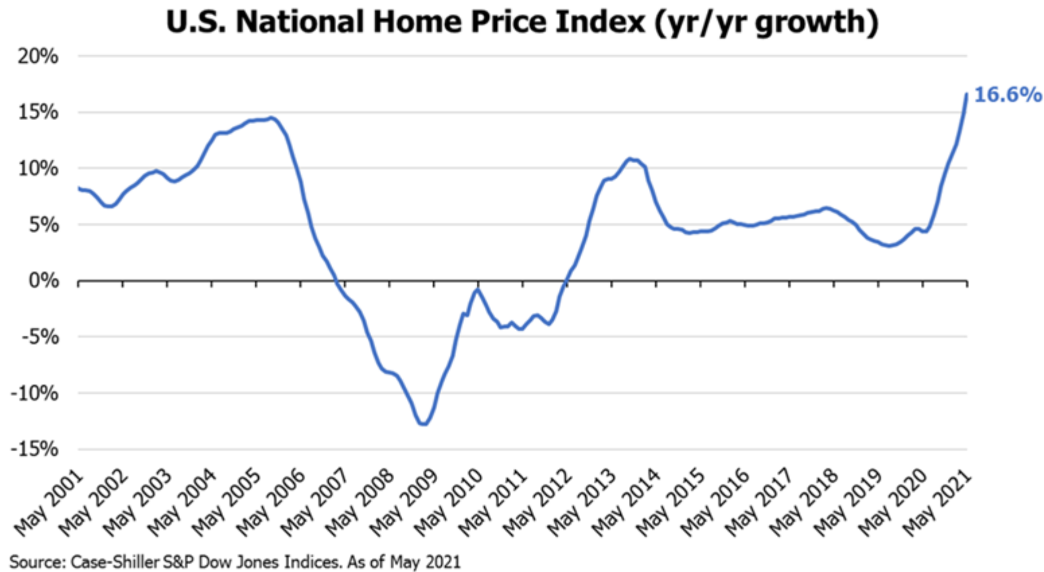
Source: U.S. Bureau of Labor Statistics

An interesting way to remove the base effect and understand how inflation has changed is to compare prepandemic February 2020 levels with July 2021 and annualize the numbers. The chart below details how inflation would appear without the base effect. Headline CPI would be 3.7% on an annualized basis, relative to 5.4% year over year in July 2021. Core CPI (without the volatile food and energy components) would be 3.2%, as opposed to the official year over year number of 4.3%. Therefore, it is clear elevated levels of inflation exist, even when stripping out the base effect.

CPI by Component		
Component	% Change Feb 2020 - July 2021	Annualized Growth Rate
CPI, All items	5.19%	3.67%
Core	4.56%	3.22%
Food	6.00%	4.23%
Food at home	6.07%	4.28%
Food away from home	6.30%	4.44%
Energy	10.67%	7.53%
Housing	3.96%	2.79%
Owners' eq. rent	3.43%	2.42%
Lodging away from home	8.20%	5.79%
Rent	2.96%	2.09%
Apparel	-1.63%	-1.15%
New vehicles	7.12%	5.02%
Used vehicles	43.66%	30.82%
Public transportation	-4.58%	-3.23%
Medical care	3.28%	2.32%
Education	2.04%	1.44%
Core commodities	8.12%	5.73%
Core services	3.35%	2.36%

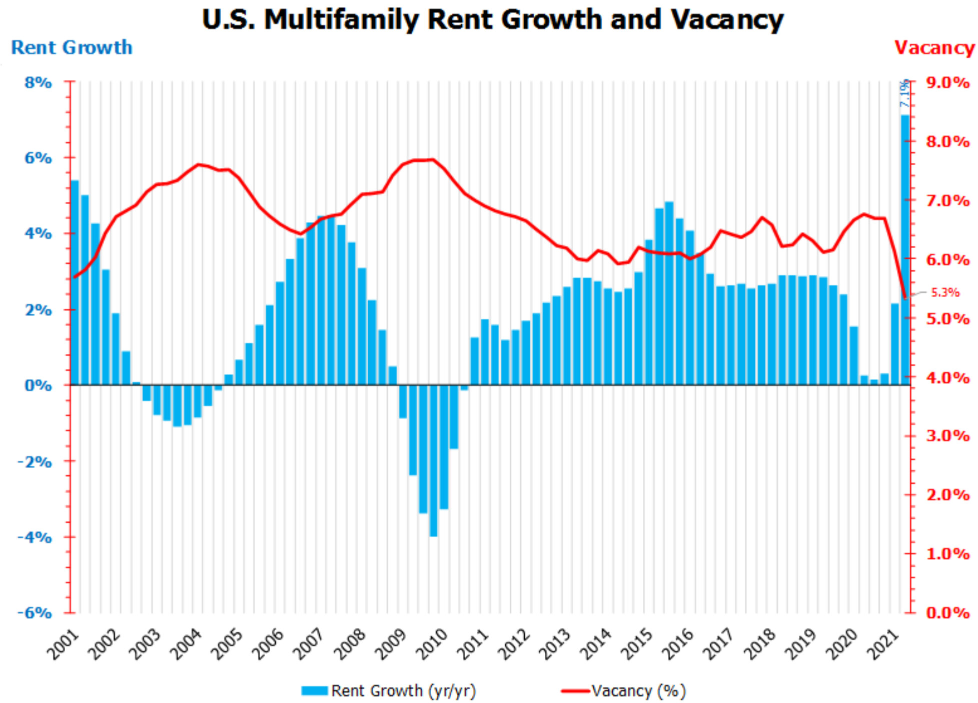
Source: U.S. Bureau of Labor Statistics

This relatively elevated level of inflation may be understated. When analyzing inflation from a housing perspective, we note that there are two major components: owners' equivalent rent (OER) which constitutes 23.6% of the CPI and rent of primary residence, which accounts for 7.7%.[16] OER is up 2.4% year over year and also up 2.4% annualized from prepandemic levels, while rent of primary residence is up 2.8% year over year and 2.1% annualized from prepandemic levels. However, the impact the OER measure has on the actual cost that individuals experience is challenged by the fact that single-family home values are up 16.6%[17] year over year and the government rent estimate is challenged by other data including CoStar's estimate that multifamily asking rent is up 7.1% year over year. Therefore, it is possible that inflation pain is being experienced at a higher level than is indicated by the official data.



[16] The release of CPI weightings lags the main CPI data release by one month. These weightings are as of June 2021, the most recent available data from the Bureau of Labor Statistics. Owners' equivalent rent of primary residence (OER) is based on the following question that the Consumer Expenditure Survey asks of consumers who own their primary residence: "If someone were to rent your home today, how much do you think it would rent for monthly, unfurnished and without utilities?" Rent of primary residence is based on the following question that the Consumer Expenditure Survey asks of consumers who rent their primary residence: "What is the rental charge to your household for this unit including any extra charges for garage and parking facilities? Do not include direct payments by local, state or federal agencies."

[17] S&P CoreLogic Case-Shiller National Home Price Index. Data presented is year over year growth in May 2021.

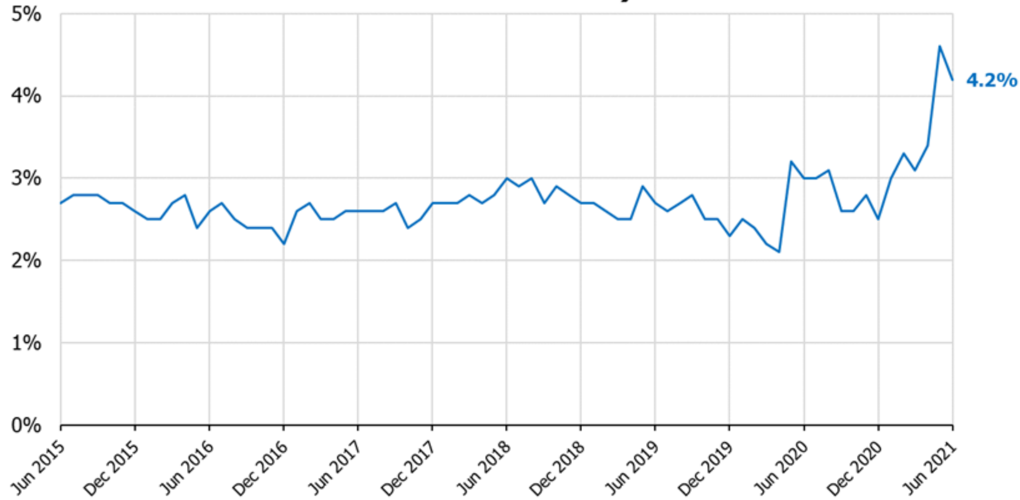


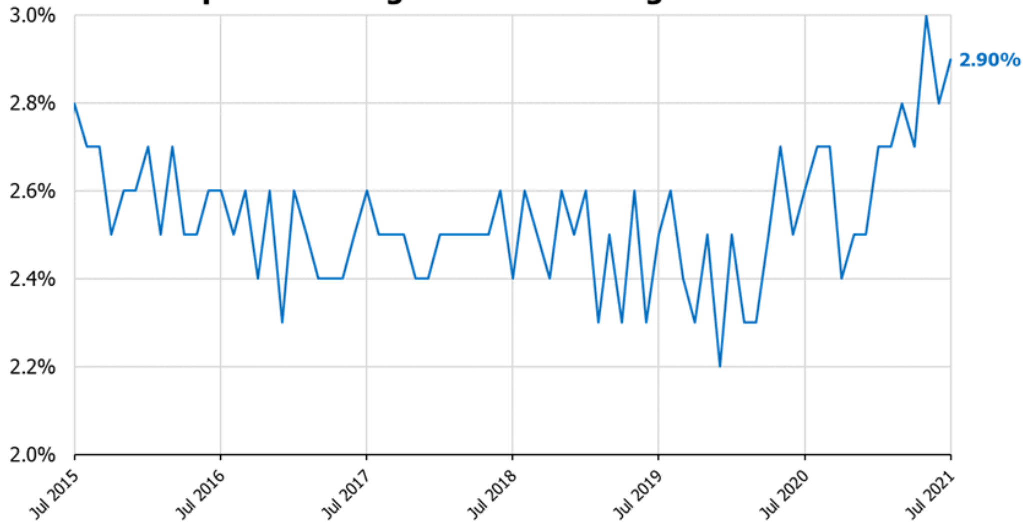
<u>Consumer expectations</u>

Consumer expectations are based on fact, impression, illusion, and psychology. Therefore, they can be volatile and not necessarily reflect reality. Nevertheless, they can take on a life of their own and result in real inflation. It is these expectations that may contribute to a wage price cycle. The wage price cycle involves consumers noticing higher prices and demanding wage increases which in turn results in higher prices.

The median consumer now expects 4.8% inflation over the next year, a new series high, and 3.6% inflation over the next three years, slightly below August 2013's peak of 3.8%.[18] Another measure of consumer expectation is the University of Michigan's consumer sentiment index which revealed that one- and five-year inflation expectations were 4.2% and 2.9%, respectively.

[18] "Inflation Expectations at Twelve-Month Horizon Rise Again", Federal Reserve Bank of New York, July 12, 2021





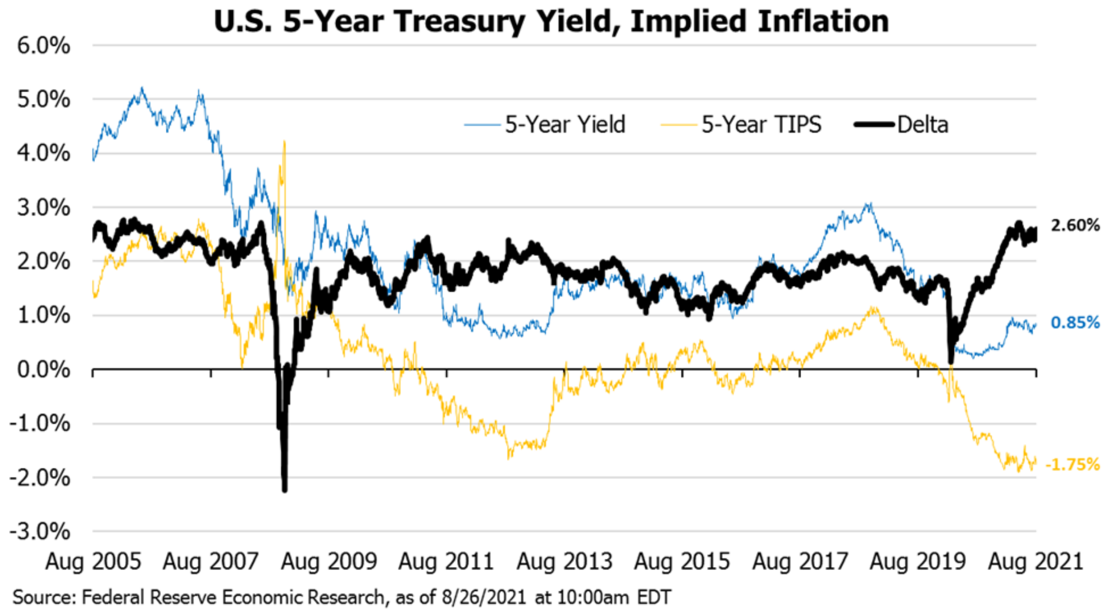
Consumer perception of inflation is heavily influenced by items that one encounters every week (i.e. food, gas) and every month (i.e. rent). These factors can have a disproportionate impact on consumer inflation expectations. For example, energy cost has increased 23.8% year over year.

Food away from home (4.6%) is certainly up. As an example, Chipotle Mexican Grill raised its menu prices by around 4% earlier this year, on top of increases the chain made on the price of delivered food last year. On July 20, 2021, the company stated it "hasn't seen pushback from customers, and it believes it is proving

its pricing power with diners."[19] The housing component[20] of the consumer price index displayed an increase of 3.4% year over year in July, above the 1.8% exhibited in February 2021.

The impact and direction of consumer expectations will influence inflation on a more cyclical basis and is subject to change based on shifting perceptions.

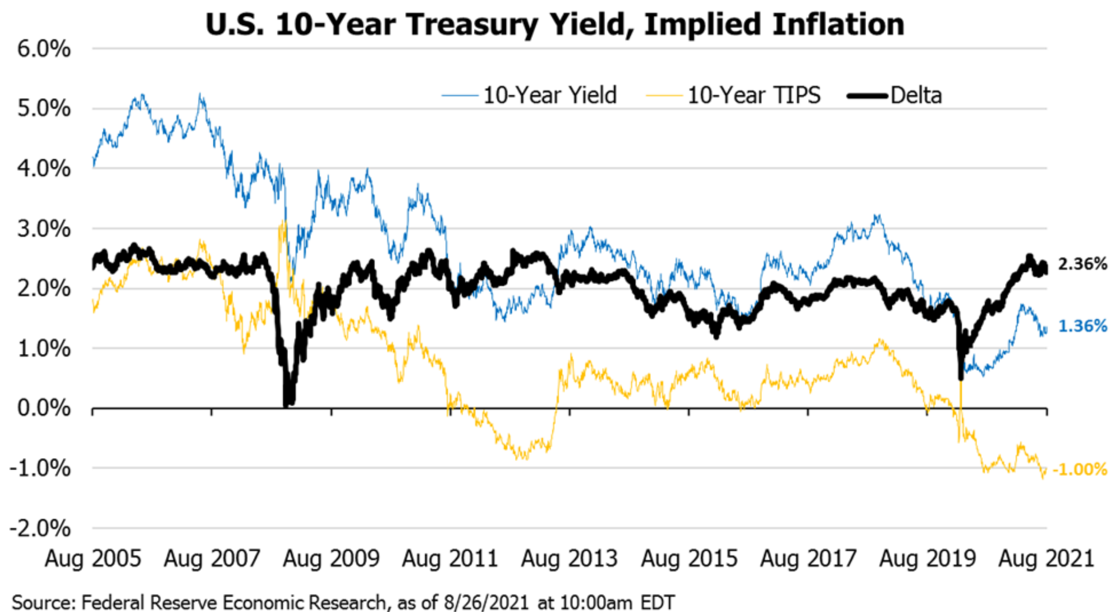
Investor inflation expectations are lower, as evidenced by the Treasury Inflation Protected Securities (TIPS) premium[21] of 2.60% implied 5-Year inflation expectancy and 2.36% implied 10-Year expectancy.



[19] Theo Francis, Thomas Gryta, Gwynn Guilford "How Much More Will Your Oreo's Cost? Companies Test Price Increases, Wall Street Journal, July 22, 2021

[20] Housing is a special aggregate index produced by the Bureau of Labor Statistics, which includes owner's equivalent rent, rent of primary residence, and lodging away from home

[21] TIPS are inflation protected bonds. The lesser return TIP investors are willing to accept in order to be protected from inflation is an indicator or investor expectations.



Supply Shortages

Used car prices increased 41.7% year over year ending July 2021. This is principally the result of an international shortage of semiconductors[22] which are used throughout modern automobiles. Other aftereffects of the pandemic include dwindling cargo space on box ships coming from Asia. Those who want immediate shipments often must pay about three times the going freight cost, according to brokers and cargo owners.[23]

The average price to ship a container from China to California is now at $6,043, up 43% since the start of this year and 344% since the start of 2020, according to the Freightos Baltic Index.[24] Some small business owners have stated that shipping costs now account for 30% to 35% of the company's revenue, from 15% to 20% before the pandemic[25]. Delays are also caused by gridlock at certain U.S. ports. As of July 30, 2021, approximately 80 container ships are now at anchor awaiting berths at US ports.[26] According to data from Alphaliner, "Carriers need much more tonnage as ships get stuck in congested ports in both the U.S. and Asia. Some carriers reported that they needed at least 20-25% more fleet capacity [in the trans-Pacific] to continue carrying the same amount of cargo."[27]

According to the McKinsey Global Institute (McKinsey), the COVID-19 pandemic interrupted a long-term trend of the share of services in household consumption rising and led to an unexpected spike in demand for products[28].

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[22] Intel Chief Executive Pat Gelsinger sees the global semiconductor shortage potentially stretching into 2023. See Asa Fitch "Intel CEO Says Chip Shortage Could Stretch Into 2023", Wall Street Journal, July 22, 2021

[23] Costas Paris, "Small importers bear the brunt of snarled supply chains; '$17,000 and it won't move until September'" Wall Street Journal, July 11, 2021

[24] IBID

[25] IBID

[26] https://www.freightwaves.com/news/us-ports-face-peak-season-gridlock-plus-as-anchorages-fill

[27] IBID

[28] https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/the-consumer-demand-recovery-and-lasting-effects-of-covid-19#

The trend for the past six decades has been for U.S. households to spend a declining share on goods and an growing share on services such as restaurants, bars, travel, and hotels.[29] That became inverted with the COVID-19 pandemic as durable goods[30] spending rose nearly 32%[31] and spending on nondurable goods[32] increased just 8%[33] in the time period between 1Q 2020 and 1Q 2021. During the same period, consumer spending on services declined 3%.[34] The increase in goods acquisitions was met with supply chain disruptions, as many did not expect the surge. The ensuing bottlenecks slowed production and delivery of durable and non-durable goods.

According to McKinsey, "Shortages may not end soon as certain pandemic trends and behaviors may extend. They include; greater acceptance of work from home which leads to more purchases online and more spending on the home. The spread of the delta variant may result in more curtailment of spending on services and more goods expenditures – an extension of COVID era habits. (Restrictions on international travel are good example). There is much catch up that need to take place to reach pre-COVID inventory levels."[35] McKinsey estimates that U.S. retailers needs to replenish their warehouses by $55 billion to reach pre-COVID levels.

According to a global pricing index by London-based Drewry Shipping Consultants Ltd., the average price world-wide to ship a 40-foot container has more than quadrupled from a year ago, to $8,399 as of July 1.[36] The measure has surged 53.5% since the first week of May.[37] Denmark-based shipping research group Sea-Intelligence ApS stated that a staggering 695 ships were more than a week late in arrivals at U.S. West Coast ports in the first five months of 2021. That compares with 1,535 such late arrivals during the entire period from 2012 to 2020, the group said.[38] It remains to be seen if these inflationary shortages and price increases are a long-term phenomenon.

What is most concerning about this type of inflation is that it is not caused by overheated demand – but rather because of constricted supply. Although a concern, overheated demand reflects a strong economy and can be remedied by increasing interest rates. Constricted supply-generated inflation restrains productivity, can drive up prices, erode incomes, and lead to a softer economy. Supply shortages are generally temporary and tend to work themselves out eventually, however, the length of time the imbalance will last and how badly it will influence prices remains unknown.

<u>Labor Cost Increases</u>

There are many factors that impact wage growth including supply of labor, skill set, number of employers, foreign competition and government and corporate minimum wage policies. Wage increases can be inflationary since labor costs are typically the highest cost component in the production of most goods and services. Accordingly, emphasis must be placed on understanding the direction of labor compensation.

Payrolls are 5.7 million below the pre-pandemic peak. Paradoxically, there were 10.1 million job openings as of June 2021. It is very possible that the elevated federal unemployment payments ($300 per week) are one explanation for the dichotomy. As of July 31, 2021, approximately half of U.S. states had ended the

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[29] https://www.bea.gov/data/consumer-spending/main
[30] Expected lifetime of more than three years
[31] https://fred.stlouisfed.org/series/PCDG
[32] Expected lifetime of less than three years
[33] https://fred.stlouisfed.org/series/PCEND
[34] https://fred.stlouisfed.org/series/DSERRO1Q156NBEA
[35] Jaana Remes and Sajal Kohli in "Shortages of Everyday Products have become the new normal. Why they won't end soon", Barrons, August 4, 2021
[36] Paul Page, "Container Shipping Prices Skyrocket as Rush to Move Goods Picks Up", Wall Street Journal, July 5, 2021
[37] IBID
[38] IBID

elevated unemployment payments, while the payments for the other half will end after Labor Day (September 6, 2021). Other causes of continued elevated unemployment levels may include continuing fears of contracting COVID-19 and absence of childcare. Also, more than one year of remote learning has pushed two million parents out of the workforce. Even for parents of young children who want to return to work, the child-care options may not be there. Low pay has resulted in staffing shortages at many day-care centers and caused others to close. Ultimately, more spaces could open as wages increase, however, the added cost to parents, may render continued employment at certain jobs not economically feasible.

There is also evidence that many Americans are striking out on their own as the number of new businesses started during the pandemic reached a new high. New business growth is currently about 1.7 times above historic trends[39].

Wages are rising across the income spectrum[40] and many workers are quitting in growing numbers[41], which is generally believed to reflect confidence in the availability of other jobs and the pricing power of in-demand labor.

Source: Current Population Survey, Bureau of Labor Statistics, and Federal Reserve Bank of Atlanta Calculations. As of June 2021.

According to the New York Federal Reserve, median one-year ahead expected earnings growth increased by 0.3 percentage points to 2.9% in July, its fourth consecutive increase and its highest reading on record[42]. The median expected year-ahead household income growth decreased slightly to 2.9% in July from 3.0% but remains elevated at pre-pandemic levels seen during late 2018 and early 2019.[43]

Wage increases are being pushed by corporate and state minimum wage increases. In addition, the elevated levels of federal unemployment insurance may have kept many people from returning to work, resulting in competition for workers and increased wages. Furthermore, many workers are seeking better wages and working conditions after having time to reflect on their alternatives.

[39] https://www.census.gov/econ/bfs/index.html
[40] https://www.atlantafed.org/chcs/wage-growth-tracker
[41] https://fred.stlouisfed.org/series/JTSQUR
[42] https://www.newyorkfed.org/newsevents/news/research/2021/20210809
[43] IBID

Within the past 18 months, many large corporations increased their minimum wages including Target ($15 per hour), Hobby Lobby ($17), Amazon ($15), Wayfair ($15), Under Armour ($15), and Costco ($16).[44] Bank of America is increasing its hourly wage, targeting a minimum wage of $25 by 2025.

Although Walmart's minimum wage remains at $11 per hour, the company raised pay earlier this year for more than 425,000 workers to between $13 and $19 per hour, bringing the wage of half of the company's hourly employees up to $15. Starbucks gave raises of at least 10% to all employees, and added a 5% bump to starting wages.[45] Chipotle is increasing the starting wage to a range of $11 to $18 per hour, which the company says will result in an average of $15 for new hourly workers. McDonalds announced pay increases at corporate-owned locations[46] this month, which will bring entry level pay for crew employees to at least $11 to $17 per hour, while shift managers will receive at least $15 to $20 per hour, based on restaurant location.[47]

The cumulative impact of all these wage increases, especially at Amazon and Walmart which are present in many communities, has put pressure on smaller companies that need to compete and raise wages.

Many companies have near monopsonist labor pricing power. They are one of the few employers in a specific area and can dictate the cost of labor. The Biden administration has proposed to overhaul U.S. antitrust policy to crack down much more aggressively on monopolistic behavior by large corporations which may result in more companies competing for labor. In addition, with the more widespread acceptance of remote work, many local companies are competing for workers nationally. Both these factors may result in higher wages and may be inflationary.

Certain states are also increasing their minimum wages. For example, California's rate is scheduled to grow to $15 per hour by 2023. In New York, it has been increased to $15/hour for New York City, $14 for Long Island and Westchester, and $12.50 per hour in the rest of the state.

The private sector and state mandated increases are good news for the worker; however, it can also be inflationary.[48] To what extent these trends are transitory is unknown. However, the corporate and state minimum wage increases are likely permanent.

There are other wage pressure indications as well. The most recent New York Federal Reserve Survey revealed that the mean annual reservation wage was $71,403 – a very high amount needed to lure someone to a new job. This reflects a 15.7% increase from a year earlier.[49] For individuals without a college degree, it was 26.1% compared to 6.0% for those with one; and 16.4% for those earning $60,000 or less, compared to 2.9% for those making more. This may indicate the post-COVID realization that workers have higher earning power as reflected in the increased minimum wages and that their services are in greater demand.

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[44] Over half of the Costco's employees earn $25 or more

[45] Dominick Reuter and Ben Winck, "Under Armour is the latest company to raise wages during the pandemic. Here are the major firms that hiked pay over the past year", Business Insider, May 19, 2021

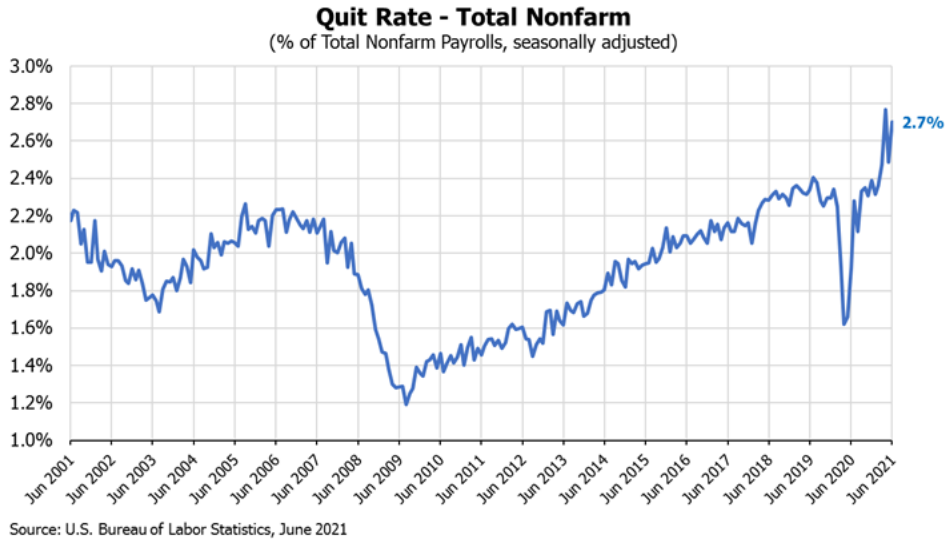
[46] Corporate-owned locations constitute only 5% of total US restaurants or about 650 locations.

[47] Dominick Reuter and Ben Winck, "Under Armour is the latest company to raise wages during the pandemic. Here are the major firms that hiked pay over the past year.", Business Insider, May 19, 2021

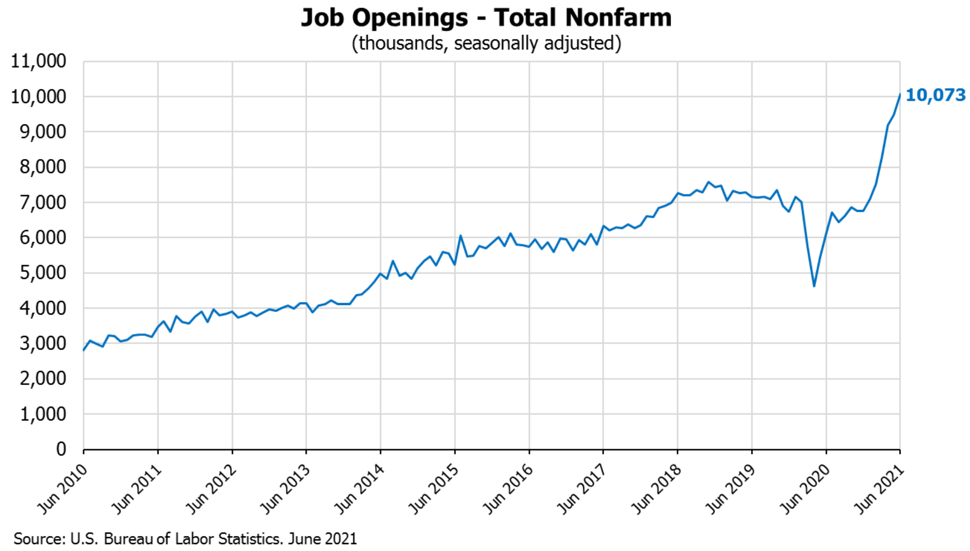
[48] Ironically, it is the very inflationary nature of increases not matched by productivity increases that may erode workers' real gains.

[49] The percentage increase was greater among workers under 45, at 17.30% compared to 14.15% for those over 45.

Below are most recent charts for the Quits Rate[50] and jobs openings, which are additional indications of the tight labor market. With the exception of April 2021, June 2021 saw the highest Quits Rate on record, while the 10 million open positions are also the highest recorded. The very high quits and the record number of open positions may be reflective both of higher unemployment payments as well as higher expectations.

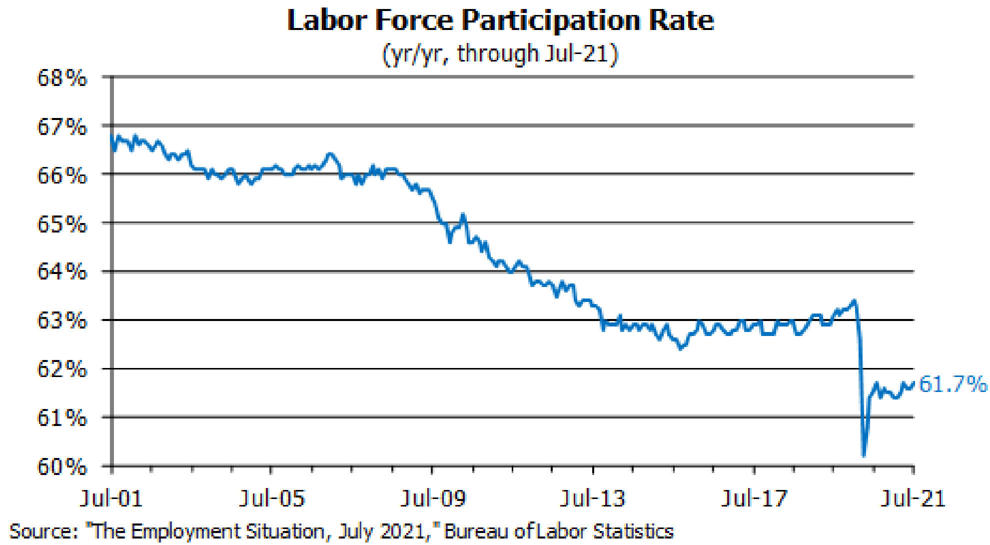


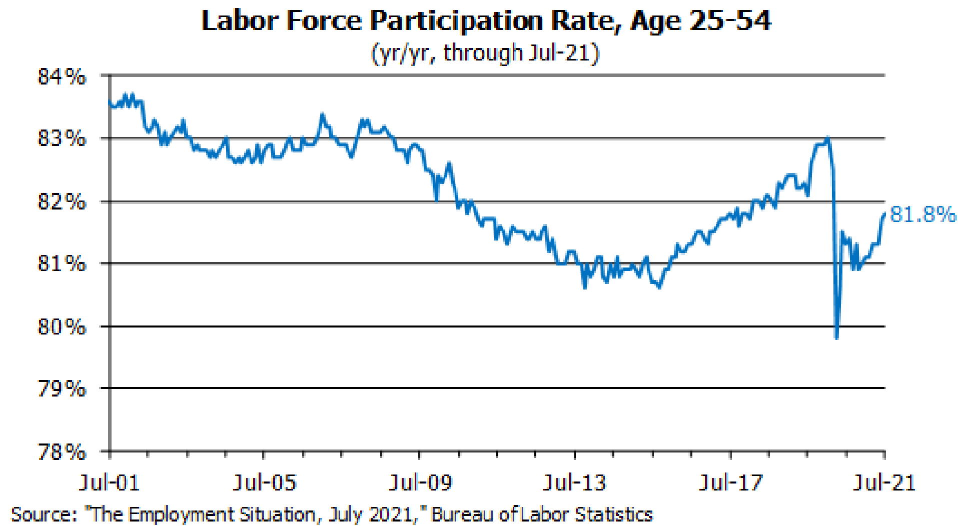
[50] The Quits Rate is the number of quits during the entire month as a percent of total employment.



Labor Force Participation Rate

The Labor Force Participation Rate has not returned to its prepandemic level. This may indicate that there is slack in the labor force and wages will not necessarily rise substantially until the participation rate increases.





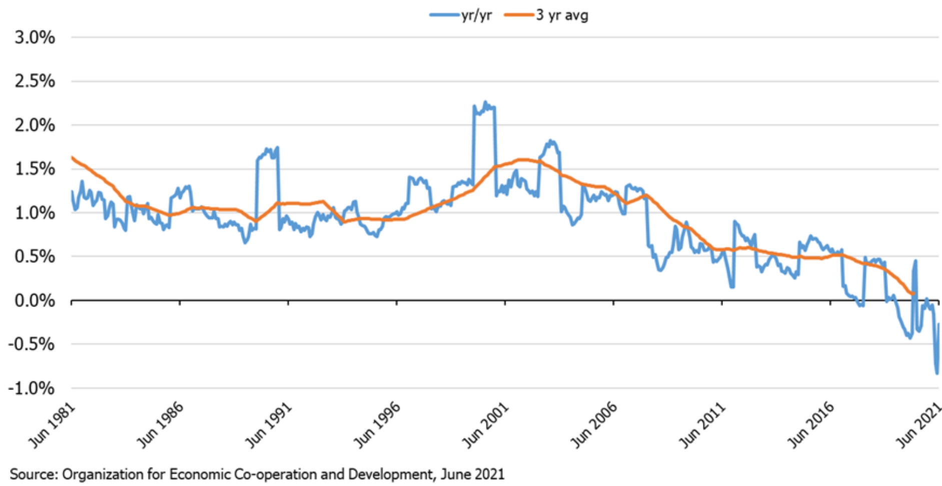
In conclusion, most labor force trends suggest scarcity and as a corollary, higher wages. This may result in inflationary pressure.

Demographic Trends

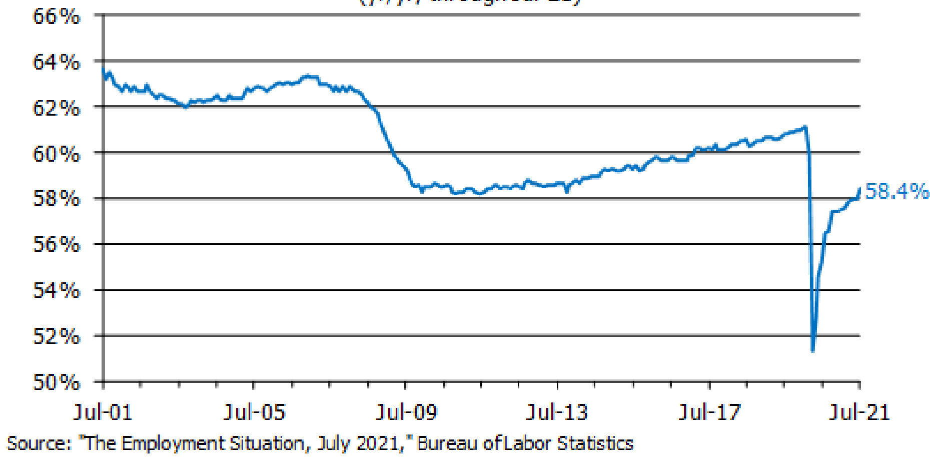
In addition to the cyclical factors discussed above, structural factors including broader demographic trends have the potential to lead to higher labor costs, and as a consequence, higher inflation. On the eve of the pandemic, the unemployment rate was 3.5% and arguably, a labor shortage was looming. Indeed, the working-age population stopped growing several years ago[51] and appears to be declining for the first time in U.S. history. Over the next decade, real potential GDP is projected to grow more slowly than it did before 2008, primarily because the labor force is expected to grow more slowly than it has in the past.[52] According to the Congressional Budget Office's (CBO) report titled " The Budget and Economic Outlook: 2020 to 2030", the potential labor-force growth rate will be just above zero through 2030 (0.5% between 2020-2024 and 0.3% between 2025-2030), down from a range of 2.5% starting in the mid-1970s to 0.5% from 2008 through 2019. This CBO report was published in January 2020, before the COVID-19 pandemic. An updated forecast may include even lower growth, no growth, or even a slight decline.

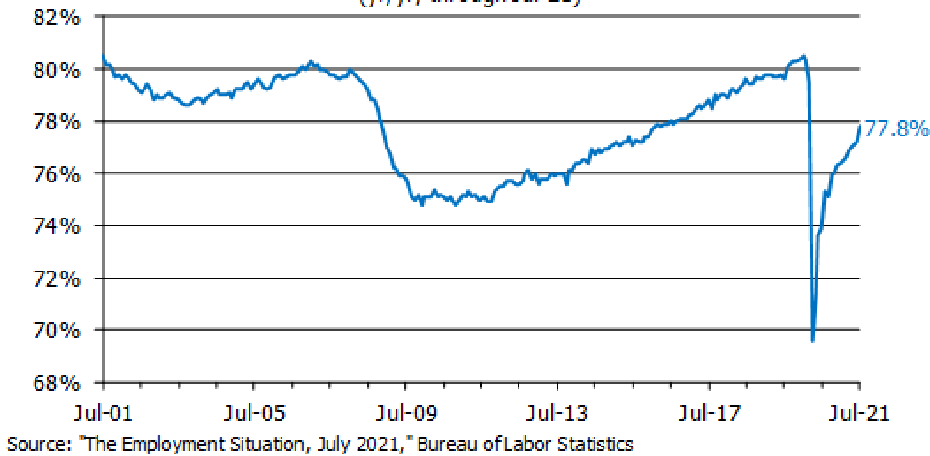
The large "Baby Boom" generation cohort is currently 57 to 75 years of age. So, more than half are older than 65 and each year more enter that age category. The slowdown in legal immigration during the Trump administration and the virtual halt during the pandemic has also negatively impacted the growth in working age population.

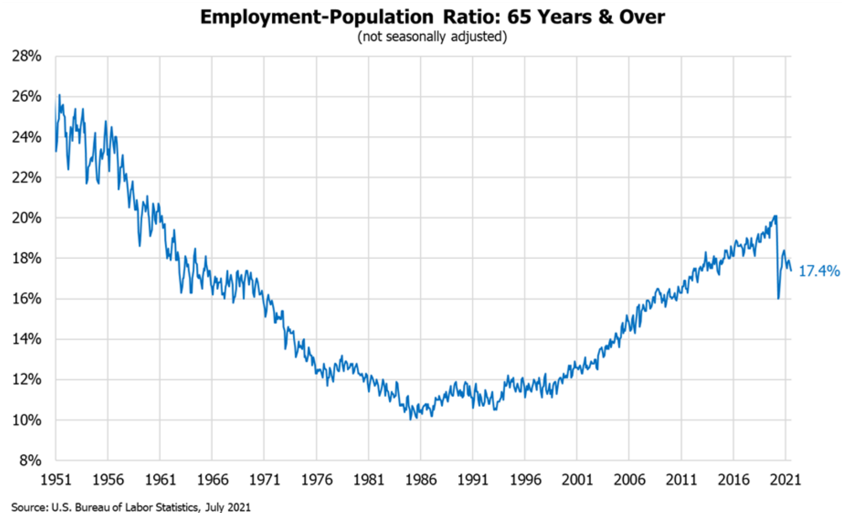
[51] Justin Fox, "Millennials Getting Raises Have Retiring Boomers to Thank With room to grow in the labor market, fewer Americans in the 20-64 age group could help boost pay on the lower end of the scale.", Bloomberg, July 23, 2021
[52] https://www.cbo.gov/publication/56073



The employment to population ratio has not returned to its prepandemic level.







Pre-COVID, the Employment to Population Ratio (EPR) had risen to 61%, and for those over age 65, it had increased to 20.1%, a 62-year high. In the wake of the pandemic, both metrics have declined. The overall EPR now stands at 57.8%, while the EPR for those over age 65 is 17.4%. The pandemic also impacted those just below the age of 65. According to Geoffrey Sanzenbacher, an economics professor at Boston College, "15% of those over age 62 were retired a year after the coronavirus took hold in the U.S., up from 10% a year after the 2007-09 recession started and 13% right before the pandemic."[53] As more companies pivot back to the office, he believes that it is possible that more older workers may choose to retire if they can no longer work remotely[54].

Prior to the pandemic the employment to population ratio for those over age 65 was at its highest level since 1960. However, the pandemic has led many older workers to retire ahead of schedule. Should the overall EPR and/or the EPR for those 65 or older resume its upward trajectory in the post-COVID world, it could alleviate some of the negative effects of a lower birth rate (BR).

A more substantial economic recovery could result in a higher BR. A higher BR, combined with increased international immigration and higher employment participation, could result in more robust future growth.

U.S. Birth Rate

The future working age population is impacted by the birth rate. According to a report from the U.S. Centers for Disease Control and Prevention, in 2020, the BR in the U.S decreased for the sixth year in a row. This decline extends a 60-year trend during which the BR has declined precipitously from 3.65 births per woman (BPW) in 1960. In the years that followed, the BR dropped to 1.74 BPW in 1976, before beginning to increase and peaking in 1990 at 2.08 BPW. The average remained above 2.00 BPW through 2007. However, in the wake of the Global Financial Crisis, the BR started declining again, despite the fact that historically the BR has typically increased during economic recoveries. Then, in the wake of the COVID-19 pandemic, the BR fell to 1.64 in 2020, the lowest amount since data has been recorded (1800). It is this recent decline that will begin to impact the work force in the next two decades. In the absence of net positive immigration, a rate of 2.1 BPW is required to sustain current population. Apart from South Dakota, no state has a fertility rate at or above the replacement rate of 2.1.

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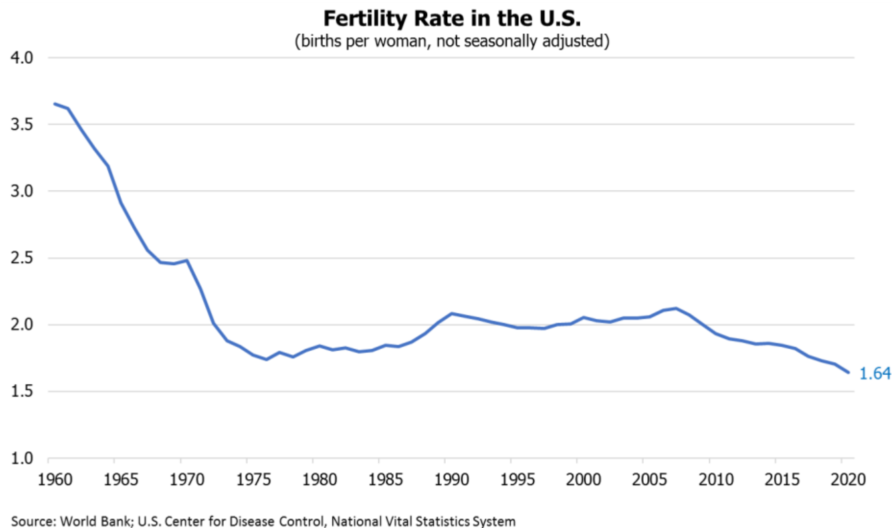
[53] Lisa Beilfuss "The Labor Shortage Is Worse Than It Looks, and Help Isn't on the Way" Barron's, August 2, 2021
[54] IBID



A declining birthrate deprives the economy of consumers, workers, and innovators who create demand, foster economic activity, and grow GDP. It also reduces the number of potential workers and could be inflationary for labor costs long-term.

An aging population impacts the economy. It may result in lower interest rates since older people tend to retain higher savings which would increase bank holdings and potentially lead to lower interest rates.[55]

As the working age population is static or declining, wages should increase. Conversely, there is substantive research suggesting that higher retirement rates can also be disinflationary since retirees tend to spend less on most things (a notable exception is healthcare).[56] The net effect of these two opposing forces will ultimately impact U.S. inflation in an as yet undetermined way.

International Immigration

International immigration has been a source of population growth for many American metropolitan areas. Large metro areas such as New York, Chicago, Detroit, Miami, Philadelphia, Milwaukee, St. Louis, Honolulu, and Providence would have *lost* population over the past decade had it not been for international immigration. International immigration has declined 57% between 2016 and 2020, representing a 35-year low.[57] However, President Biden appears to have a more positive view of higher levels of immigration than the previous administration.

International immigration and greater labor force participation can help militate against the economic challenges of low fertility. The multi-decade trend of retirement-age workers remaining in the workforce longer is encouraging, but as noted above, that may have reversed in the wake of the pandemic.

[55] Sungki Hong and Hannah G. Shell, "Factors Behind the Decline in the U.S. Natural Rate of Interest," *Economic Synopses*, No. 11, 2019. https://doi.org/10.20955/es.2019.11
[56] IBID
[57] https://www.cato.org/blog/no-year-has-seen-legal-immigration-cut-2nd-half-fy-2020

Contact with the Criminal Justice System

Another factor lowering the potential job population is contact with the criminal justice system. According to the "Sentencing Project" and based on data from the US Bureau of Justice statistics, the number of Americans under the control of the U.S. corrections system is greater today than decades ago. As of 2019, there were over 6.3 million Americans or 2.5% of the adult population in prison, jail, on parole, or probation.[58] This compares to 1.2% of the total population in 1980. Individuals in the corrections system includes 2.1 million that are currently incarcerated, 3.5 million on probation, and 0.9 million on parole.[59] Once these individuals leave the corrections system (after parole and probation are completed), they still have a criminal record. Although official statistics do not exist, it is estimated about 8.6% of the US adult population has a felony conviction.[60] The vast majority of people that spent time under the corrections system would likely be precluded from many good paying jobs. Nearly half of formerly incarcerated people are unemployed one year after leaving prison.[61]

According to the FBI, a criminal record exists for individuals who have been convicted of or arrested for a felony. Misdemeanor arrests and convictions are recorded depending on individual state policies. One need not be convicted of a crime in order to have their employment prospects impacted by the criminal justice system. An arrest, even if it results in no conviction or charges being filed, can negatively impact employment chances. In 2015, one in three American adults — more than 70 million people — had some type of criminal record[62], As of mid-2017, that number has climbed to 73.5 million, about the same percentage that had a college degree.[63] Criminal records range from no charges being filed to a full felony conviction. As reported in the Wall Street Journal, "Even if charges were dropped, a lingering arrest record can ruin employment chances."[64] According to a 2018 analysis by the Prison Policy Initiative, 27% of formerly incarcerated individuals are unemployed.[65] Additionally, a New York Times/CBS News/Kaiser Family Foundation poll found men with criminal records account for about 34% of all nonworking men ages 25 to 54.[66] This has resulted in a large class of unemployable or difficult to employ people. Indeed, the labor force participation rate for men ages 25-54 was 97.9% in 1954 and has headed lower since, at 88.3% in July 2021. Unless there are changes, the outsized share of US adults with an arrest record will continue to represent a large class of people that would likely be precluded from many types of employment.

Several different types of "Clean Slate" legislation are making their way through governmental bodies on the federal[67] and state levels. These potential laws would clear or seal eligible criminal records. These reforms would automate the existing process of sealing or clearing certain eligible records after a certain time period. Pennsylvania, Utah, Michigan, New Jersey, Virginia, Connecticut and Delaware[68] have already enacted clean slate legislation. With demographic trends pointing toward a smaller working age

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[58] The United States has less than 5 percent of the world's population yet has almost 25 percent of the world's total prison population. The US incarceration rate is by far the highest in the Organization for Economic Cooperation and Development (OECD) and is over six times higher than the average OECD nation.

[59] The sum of these three categories equal 6.5 million, greater than the total 6.3 million cited earlier due to individuals classified in more than one category.

[60] Michael Suede, "What Percentage of The US Adult Population Has a Felony Conviction? ", Libertarian News, June 2014

[61] Jamie Dimon, "If You Paid Your Debt to Society, You Should Be Allowed to Work ", NY Times, August 4, 2021

[62] Matthew Friedman, "As Many Americans Have Criminal Records As College Diplomas", Brennan Center for Justice at New York University Law School, November 17, 2015.

[63] https://www.politifact.com/factchecks/2017/aug/18/andrew-cuomo/yes-one-three-us-adults-have-criminal-record/

[64] Gary Fields and John Emshwiller, "As Arrest Records Rise, Americans Find Consequences Can Last a Lifetime - Even if Charges Were Dropped, a Lingering Arrest Record Can Ruin Chances of a Job", The Wall Street Journal, August 18, 2014.

[65] https://www.prisonpolicy.org/reports/outofwork.html

[66] See also Nicholas Eberstadt "Men Without Work: Americas invisible Crisis", Templeton Press, September, 2016

[67] https://www.ernst.senate.gov/public/index.cfm/2021/4/ernst-casey-push-to-give-americans-a-clean-slate-seal-records-for-past-low-level-nonviolent-offenses

[68] https://www.americanprogress.org/press/statement/2021/06/30/501202/statement-cap-applauds-delaware-becoming-6th-state-pass-clean-slate-legislation/

population in the future, these efforts may lead to increased labor force participation and an increased employment to population ratio, at a time when it is sorely needed. Increasing the labor supply in this way could partially offset some of the inflationary pressure created by a shrinking labor supply.

These various demographic factors influence the supply the labor over the long term. The basic law of economics – supply and demand – dictates that if the supply of something declines and demand remains static or increases – the cost will increase. Accordingly, if labor becomes more scarce, higher prices for that resource could result.

Monopolistic Pricing Power

Despite the Sherman Antitrust Act of 1890[69], many companies have near monopolistic or duopolistic pricing power. The Biden administration has proposed to overhaul US antitrust policy to crack down much more aggressively on monopolistic behavior by large corporations. This can result in lower prices and greater choice for consumers and therefore be deflationary over the long term.

Technology – E-Commerce

E-Commerce has also had a deflationary influence as it fosters competition, price transparency, and competition across regions. Taylor Schreiner, director at Adobe Digital Insights, said that his firm's data-tracking project has found a long-established trend of falling prices for goods bought online, such that online prices fell an average of 4% a year from 2015 through 2019, according to the company's Digital Economy Index, which tracks online prices since 2014 across 18 categories. The pandemic halted this dynamic. Online prices have risen 2% since March 2020, according to Adobe data.[70] Uber and Lyft fares are increasing rates in the wake of the pandemic.[71]

Automation[72] and greater technology in the workplace may reduce the demand for certain jobs, which could moderate against labor cost inflation in the face of the broader demographic trends of a potentially shrinking workforce. However, unless automation replaces an equal number of workers (thus creating mechanical workers) or productivity increases (existing human workers become more productive), wages would theoretically increase. According to Lydia Boussour, economist at Oxford Economics "Capital spending on information-processing equipment rose 5.7% in 2020, almost double its average after the financial crisis, as companies deferred traditional investments in other equipment and structures, which fell roughly 12% last year".[73]

Additionally, automation and/or productivity gains can mitigate against inflation. Automation clearly eliminates jobs, but it also has the potential to create new jobs. Greater automation or productivity should

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[69] According to the Federal Trade Commission, "Congress passed the first antitrust law, the Sherman Act, in 1890 as a "comprehensive charter of economic liberty aimed at preserving free and unfettered competition as the rule of trade." In 1914, Congress passed two additional antitrust laws: the Federal Trade Commission Act, which created the FTC, and the Clayton Act. With some revisions, these are the three core federal antitrust laws still in effect today. The antitrust laws proscribe unlawful mergers and business practices in general terms, leaving courts to decide which ones are illegal based on the facts of each case. Courts have applied the antitrust laws to changing markets, from a time of horse and buggies to the present digital age. Yet for over 100 years, the antitrust laws have had the same basic objective: to protect the process of competition for the benefit of consumers, making sure there are strong incentives for businesses to operate efficiently, keep prices down, and keep quality up."

[70] Preetika Rana "Uber, Lyft Sweeten Job Perks Amid Driver Shortage, Lofty Fares", Wall Street Journal, July 2, 2021
[71] IBID
[72] See Christopher Mims, "Amid the Labor Shortage, Robots Step in to Make the French Fries", Wall Street Journal, August 7, 2021
[73] Lisa Beilfuss "The Labor Shortage Is Worse Than It Looks, and Help Isn't on the Way" Barron's, August 2, 2021

have a moderating impact on inflation. It is possible that the pandemic has changed the labor market in some irreversible, ways which may lead to a more inflationary environment.

Deglobalization

Deglobalization could be inflationary if it results in less low-cost goods entering the United States. U.S. global trade has soared from 11% of GDP in 1970 to 31% in 2011. Elaborate international supply chains were built to source materials and products in the cheapest possible place. Low cost labor was accessed in China, other parts of southeast Asia, and eastern Europe. The shift to a market economy in the aforementioned locations resulted in a more than doubling of the workforce integrated into the global economy[74]. This impacted prices as U.S. "core" goods prices, which strip out volatile energy and food prices, rose just 18% between 1990 and 2019, while prices for core services, most of which are rendered domestically, surged 147%[75]. The Trump administration's pivot to an anti-globalization and protectionist posture towards China has been continued, in practice if not in rhetoric, by the Biden Administration.

The COVID-19 pandemic exposed vulnerabilities of multifaceted, distant supply chains for vital goods such as medical supplies and semiconductors. This may result in more onshoring that may lead to increased costs for certain goods on a more permanent basis.

Inflation Temporary or Not?

The very expansive monetary policy that resulted in a record level of money coursing through the veins of the U.S. economy would appear to be inflationary, perhaps with long term implications. Should the Fed make a policy mistake such as waiting too long to increase interest rates to rein in inflation, this may result in more tightening than would otherwise be necessary, which would have an adverse impact on the U.S. economy. Other risks include inflationary pressures choking off growth.

Labor costs have increased and demographic, government, corporate and social trends appear to point to a more long-term elevated wage level.

Consumer expectations seem focused on a higher level of inflation, but that could be caused by increases in products in which people interface with on a weekly and monthly basis such as food, gas, and rent. This differs from investor expectations as manifested in the TIPS implied inflation rate.

When "return to normal" inflation (base effect inflation) is stripped out of the current headline inflation rate it is still above 3.5%. Inflation associated with supply shortages may also prove to be ephemeral. When normalizing, the most egregious manifestation of supply shortages (i.e., the semiconductor shortage that has spawned the jump in used car sale prices) results in only a modest decline in both CPI and core CPI.[76] The BLS now publishes a special aggregate index that excludes food and energy, as well as housing and used cars and trucks. This "core core" CPI growth showed a 3.2% year over year rise in July.

Should supply constraints remain for a prolonged period, it could stymie growth and can result in stagflation, similar to the situation engendered by the oil supply constraints of the 1970s. Raising interest

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[74] Gwynn Guilford, Inflation Threat May Be Boosted by Changes in Globalization, Demographics and E-Commerce, Wall Street Journal, July 12, 2021

[75] IBID

[76] Used vehicles make up 3.5% of total CPI as of June 2021, a relatively small share. However, this figure grew by 41.7% in July. If used vehicle CPI instead grew by 2.0% on an annualized basis, headline CPI would be 4.5% and core CPI 3.0%. This analysis is based on relative weighting of CPI components for the previous month of June, the most recent available data. Therefore, analyzing the weightings necessary to reproduce the headline numbers is not exact.

rates in that situation would be very painful and would further hurt the economy and may not tame inflation, as it would likely do if inflation was caused by an overheated economy. Inflation may depress corporate profitability.

The reversal of the low-price model initially used by Uber, Lyft, and Amazon has resulted in higher prices. However, E-Commerce overall has been deflationary as it encourages more market competition and price transparency. A trend towards deglobalization will likely result in higher prices as the volume of low-cost imports is curtailed somewhat.

The many factors discussed earlier can have an impact on future inflation. It is unclear how the temporary and more long-term inflationary and deflationary factors discussed above will ultimately net out. Current projections point to elevated inflation levels through the end of the year. Investor sentiment points to an average of 2.5% to 3.0% over the next five years. It is our opinion that inflation at those levels or even somewhat higher are likely. As of now, inflation reminiscent of the elevated levels of the 1970s appear as improbable to return as are the prospect of bellbottom pants becoming fashionable again.

Inflation's Impact on CRE and the Efficacy of CRE as a Hedge against Inflation

Many consider commercial real estate (CRE) to be a hedge against inflation. However, consideration must be given to several multidimensional factors that impact the intersection of inflation and CRE.

The combined impact of the economic recovery from the COVID-19 pandemic, unprecedented government spending, and pent up consumer demand is that interest rates should rise. Current high valuations are, to a certain extent, dependent on low rates, so if inflation remains steady or picks up and caprates increase, valuations are at risk. The Federal Reserve's ability to be accommodative may be limited if inflation remains steady or rises further. An increase in interest rates would make it more difficult to refinance loans as debt service coverage ratios and loan to value ratios may not pencil out. It may also cause cap rates to increase – thus lowering values. At the same time, rent growth in office and retail may be stymied by the recalibration of those sectors triggered by increased participation in remote work and e-commerce. Lower-wage businesses such as hotels, retail stores, and restaurants are particularly exposed to rising wages which can negatively impact their net operating income. The expected lower demand for office and retail space, and consequently, lower net operating income, may mean that values are challenged over the next 12 to 24 months. Industrial and multifamily yields may fall as a result of powerful investor demand. With many investors shunning the retail and office sectors – a substantial amount of capital is chasing industrial and multifamily properties, resulting in lower cap rates and higher values. If inflation continues to increase, there is a chance that even industrial and multifamily performance can be negatively impacted. Property sectors with the ability to grow rents may prove to be more resilient.

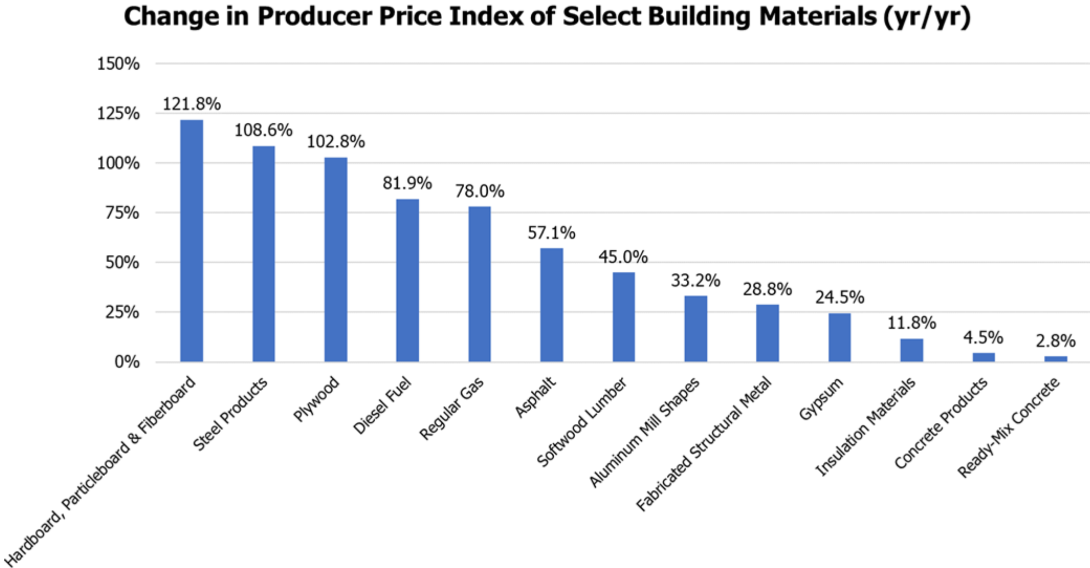
According to Green Street; "during the high-inflation decade that ended in 1982, single family homes held their value on a real basis and equity REITs delivered respectable real returns." Though data is less comprehensive, commercial property also appears to have been a good hedge over that span. These results are remarkable seeing that equities and bonds did not keep stride with inflation. According to Green Street "Over the entirety of that ten-year span, REITs delivered a 13.1% annualized total return, which translated into a 5.0% real return (vs. core CPI). This performance was exceptional, as the S&P 500 (nominal return = 6.7%), long-term Treasuries (5.8%), and corporate bonds (5.7%) all generated negative real returns. It is also instructive to look at how equity REITs have performed during times when inflation has risen substantially."[77] However, this data is 40 to 50 years old and may not be reflective of the CRE world of 2021. The retail industry is being recalibrated with a shift away from malls to e-commerce. It is not known what future demand in the office sector will be.

[77] Heard on the Beach, "An Inflation Refuge", Green Street, June 24, 2021

If treasury yields remain low in the face of inflation, investors are likely to turn more to commercial real estate investments. CRE as a hedge in the current economic environment will likely be differentiated by property type with sectors such as logistics, multifamily, and self-storage favored.

The impact of inflated building materials on real estate value

Increased building materials costs may result in less construction and as a corollary higher value for existing structures. The trailing 12-month buildings material increases are very substantial.



Building materials are used in different proportions in multifamily, office, industrial, and retail. For example, more softwood lumber is used in constructing multifamily properties while more concrete products are incorporated in industrial facilities. Although there are too many variables to be able to produce a table that is precise because local conditions and the economy drive the distribution of costs, the following chart details an attempt at estimating the general allocation share of various building materials by proper type.

Construction Cost Property Type Weightings				
Material	**Multifamily**	**Office**	**Industrial**	**Retail**
Asphalt	10.0%	7.5%	10.0%	10.0%
Softwood Lumber	20.0%	10.0%	5.0%	5.0%
Plywood	7.5%	5.0%	2.5%	2.5%
Particleboard & Fiberboard	2.5%	5.0%	2.5%	7.5%
Gypsum	5.0%	5.0%	5.0%	5.0%
Insulation Materials	7.5%	7.5%	10.0%	7.5%
Concrete Products	10.0%	10.0%	15.0%	12.5%
Ready-Mix Concrete	5.0%	5.0%	5.0%	5.0%
Fabricated Structural Metal	2.5%	7.5%	5.0%	5.0%
Steel Plates, Bars, & Structural Shapes	10.0%	15.0%	15.0%	15.0%
Aluminum Mill Shapes	10.0%	12.5%	15.0%	12.5%
Copper Wire & Cable	5.0%	5.0%	5.0%	7.5%
Regular Gas	2.5%	2.5%	2.5%	2.5%
Diesel Fuel	2.5%	2.5%	2.5%	2.5%
Total Weight	100.0%	100.0%	100.0%	100.0%

Source: Based on CoStar Advisory Services and New York Life Real Estate Investors estimates. As of July 2021.

When the construction weightings are applied to the above noted construction cost increases the following increases by property type become apparent. Multifamily construction costs increased 41.5% year over year in July for construction inputs excluding labor, based on the weightings above. On average over the past three months, multifamily construction costs are 51.9% above last year. The decrease in July relative to May and June is primarily due to the recent decline in the cost of lumber. The industrial property type saw the lowest increase of 35.0% in July, and 36.1% on average over the last three months, mainly due to less lumber and more concrete needed for construction.

Yr/Yr Increase in Construction Costs by Property Type				
Property Type	**May 2021**	**Jun 2021**	**Jul 2021**	**3-Month Avg.**
Multifamily	57.5%	56.6%	41.5%	51.9%
Office	45.5%	47.4%	41.0%	44.6%
Industrial	35.5%	37.8%	35.0%	36.1%
Retail	41.0%	43.7%	41.0%	41.9%

Source: U.S. Bureau of Labor Statistics. Weightings based on CoStar Advisory Services and New York Life Real Estate Investors estimates. As of July 2021.

The labor cost share varies according to the type of construction and specific task performed. Higher labor costs are in place for trade intensive multi-family projects in contrast to warehouse distribution facilities. The share of construction cost associated with labor is typically between 40% and 60%. Wage costs for construction workers increased 3.6% percent since Q4 2019 or increased 3.2% percent between 2Q 2021 and 2Q 2020). Government regulation costs may increase. Regulations at the local, state and federal levels of government may account for as much as 30% of the cost of multifamily development.[78]

Should these elevated building material prices remain in place (or increase) over a significant period, it may have the effect of limiting new construction. Some apartment construction has slowed this year, despite

[78] https://www.nahbclassic.org/generic.aspx?genericContentID=262391

fierce demand.[79] If leasing demand remains high in the face of limited new supply, it may also result in higher values for commercial real estate, especially apartment and logistics properties. Naturally, this is not the only variable that influences values, and other factors may have more impact. The recalibration of office usage because of remote work and the rise of e-commerce may depress demand in the office and retail sectors, respectively. In contrast, e-commerce is having a substantial positive effect on the warehouse distribution property type. It is still too early to tell if these elevated material prices are sustainable over the medium or even the short term. The recent decline in the price of lumber indicates that the elevated levels may not be sustainable for some construction components. In a capitalist trading system, supply constraints tend to work themselves out over time.

Conclusion

The impact inflation has on construction costs may prove to be a benefit to existing commercial real estate – especially multifamily and logistics properties – as the economic feasibility of new construction is challenged. Inflated building material costs may curtail construction and result in increased value for existing inventory of certain asset classes including multifamily and warehouse distribution facilities. The magnitude of such a temporary or possibly longer-term advantage would be influenced by the duration of heightened levels of building materials inflation.

The shorter-term leases prevalent in certain property types such as multifamily and logistics may act as a hedge against inflation. In theory, lodging would also be a hedge, as its room rates get repriced daily. However, it is exposed to wage pressure and challenges finding workers[80] that may impact its ability to grow net cash flows. Self-storage facilities benefit from short term leases as well as low labor costs.

Interest rate rises could result in cap rate increases that negatively impact CRE values. Should interest rates rise without compensatory NOI increases, it may make loans more difficult to refinance as debt service coverage ratios decline. Likewise, lower values could result in increased Loan to Value ratios that render loans more problematic to fund. If treasury yields remain low in the face of inflation, investors are likely to turn more to commercial real estate investments.

Overall, historical performance during previous periods of inflation point to CRE acting as a hedge. However, the CRE market 40 to 50 years in the past (when inflation was most pronounced) is very different than it is in 2021. In conclusion, CRE investors need to be cognizant of the threat of inflation as well as the risk of interest rate and cap rate increases. Certainly not all CRE will act as a hedge against inflation. In particular, owners of certain property types such as office and retail may face challenges increasing net operating income – even in an inflationary environment.

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[79] Ryan Dezember, "Lumber Prices Break New Records, Adding Heat to Home Prices," The Wall Street Journal, May 3, 2021. https://www.wsj.com/articles/record-lumber-prices-lift-sawmills-while-homeowners-do-it-yourselfers-pay-up-11620034201?mod=article_inline

[80] https://www.ahla.com/press-release/reports-nearly-500000-hotel-jobs-wont-return-years-end-room-revenue-will-be-down-44

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