J.P.Morgan
Private Bank

INVESTMENT INSIGHTS

Worried about inflation? We're not.

By Joe Seydl, Tom Kennedy and Pieter Clerger

IN BRIEF

- Despite unprecedented fiscal and monetary support launched in response to the COVID-19 pandemic, we believe U.S. consumer inflation will struggle to rise materially above 2% in the coming years, making aggressive monetary tightening unlikely.
- The two most important drivers of consumer inflation are the labor market and housing demand. Neither will overheat anytime soon.
- The global backdrop does not present an inflationary threat, which it did in the 1970s. We do not believe the money supply, the U.S. dollar or commodity prices will spark an inflationary outbreak.
- Our analysis supports our positive view on cyclical areas of the market. We prefer cyclical assets relative to inflation products such as TIPs or inflation swaps.
- Asset price inflation could be a concern. Valuations are elevated, and corporate tax hikes could impact equity markets.

When the coronavirus pandemic jolted the global economy last year, policymakers responded with unprecedented fiscal and monetary support. Some observers now worry that these historic actions will lead to an inflation impulse causing aggressive monetary tightening, potentially derailing the recovery. Should you share this fear? Our short answer—no. We think inflation will struggle to rise materially higher than 2%. Indeed, we don't see U.S. inflation rising above 2% on a sustained basis before the second half of 2023.

To be clear, we're talking about consumer inflation (the price of consumer goods and services), not asset price inflation (the price of equities, corporate bonds and other financial securities).

The global backdrop seems benign, with inflation well below 2% in many developed economies. Nor do we spot any inflationary threat from the U.S. money supply, the U.S. dollar or commodity prices. But we do believe the Federal Reserve's (Fed's) easy monetary policy has translated into asset price inflation. Already, valuations are extended in many financial markets. Overall, our outlook for modest consumer inflation supports our positive view of cyclical sectors such as financials, industrials and housing.

Inflation concerns are nothing new, of course (we heard them often in 2017 and 2018). And it's worth noting that investor fears have flipped from deflation to inflation in less than a year—despite the fact that the deflationary crisis of the Great Depression and the inflationary crisis of the 1970s were 40 years apart.

A narrative that shifts this quickly should be viewed with a healthy degree of skepticism. Still, we take inflation concerns seriously. In the following pages, we present our responses to some of the top questions we are asked about inflation.

HOW CAN YOU SAY INFLATION IS TAME? LOOK AT THE STOCK MARKET!

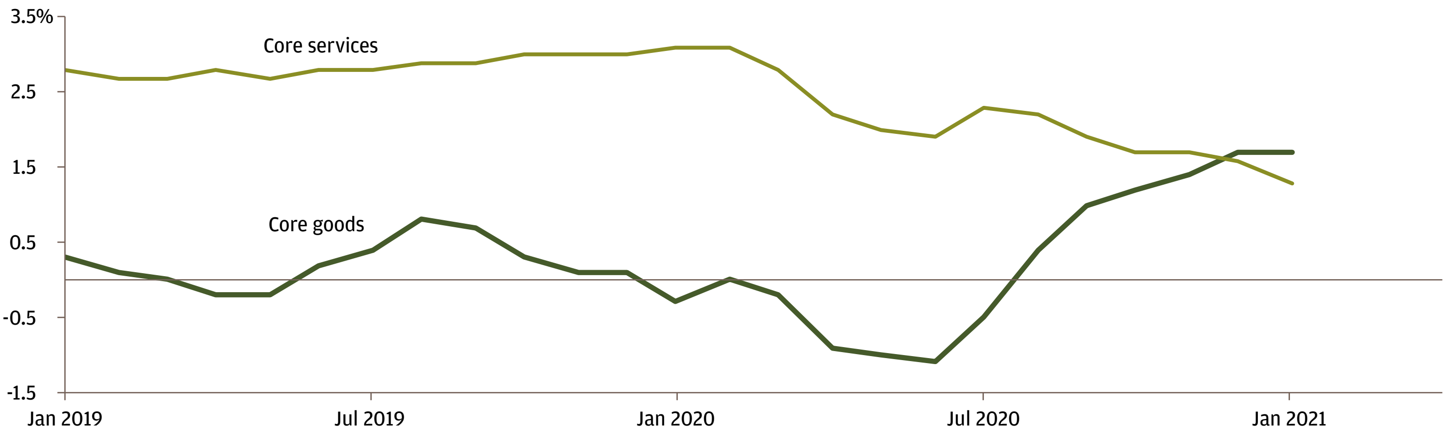
When we say we are not worried about inflation, we mean we are not worried about consumer price inflation. As we've noted, there is a crucial distinction between asset inflation and consumer inflation. Consumer inflation doesn't move quickly. And, more importantly, we understand what makes it rise and fall, as we will explain.

WHAT IS THE NEAR-TERM OUTLOOK FOR CONSUMER INFLATION?

In 2020, services inflation collapsed (think of the cost of an airline ticket or a haircut) while the cost of goods spiked. (Remember shortages for items such as toilet paper and cleaning supplies?) As the pandemic subsides, we expect the gap between services and goods inflation will normalize. Goods inflation should cool as global manufacturing production ramps up, given low inventories in the sector. Services inflation should firm as the resumption of services activity allows companies to regain pricing power.

GOODS AND SERVICES ARE INFLATION LIKELY TO NORMALIZE

YOY inflation

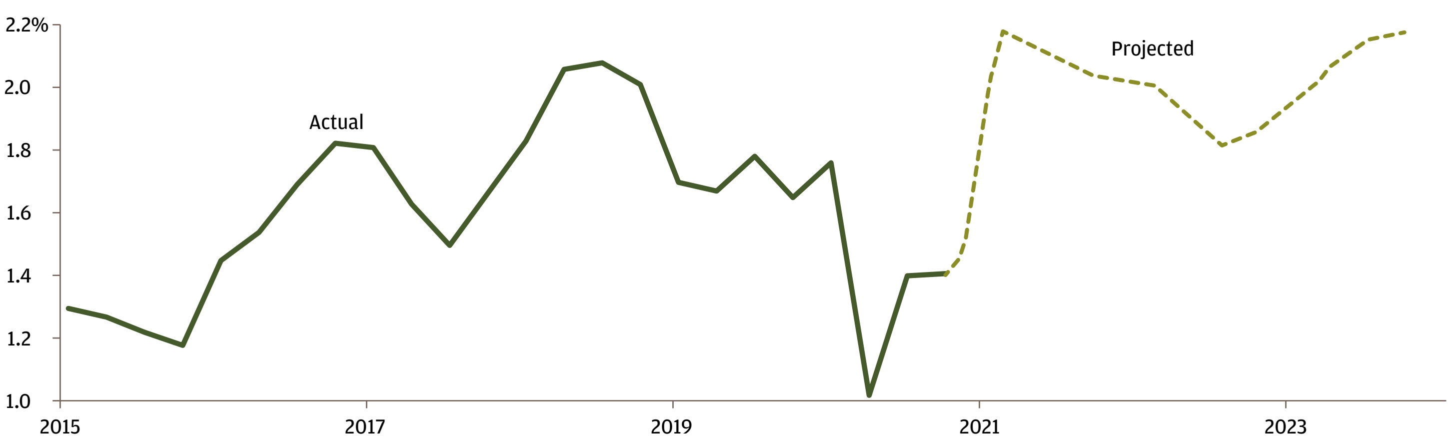


"Core goods" defined as goods ex food & energy commodities. "Core services" is defined as services ex energy services.
Source: Bureau of Labor Statistics, as of January 31, 2021.

The improvement in services inflation will likely cause a temporary overshoot of the Fed's 2% inflation objective for two reasons: transient supply shortages (e.g., everyone rushing to get back on airplanes, but the airlines aren't running enough flights); and "base effects" from 2020 (i.e., the fact that overall inflation plummeted in March, April and May of last year). That said, we expect supply to eventually catch up to demand beginning in the second half of 2021 and into 2022. From that point on, inflation rates will likely be determined more by fundamental drivers than by supply considerations.[1]

BEWARE OF INFLATION COMPS

Core PCE inflation YOY



Source: Department of Commerce, as of February 14, 2021.

[1] We don't mean to be dismissive of supply shortages—there's no law that says they always have to be temporary—but it's nearly impossible at the moment to disentangle what is a true supply shortage that can last from one that is COVID-19 related. If we are still seeing widespread supply shortages long after the pandemic is over, then it would inform our outlook on consumer price inflation. But for now, it's too early to make a strong statement on their multi-year effect.

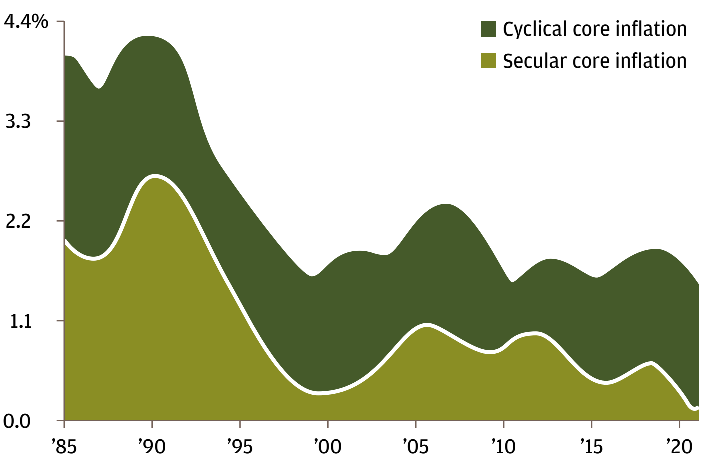
WHY AREN'T YOU WORRIED ABOUT CONSUMER INFLATION OVER THE LONGER TERM?

In assessing the long-term outlook for inflation, it helps to break inflation down into two broad categories, cyclical and secular.

Cyclical inflation moves with the business cycle (think of the cost of an airline ticket or a trip to Disney Word). Secular inflation generally does not (think of the price of a big-screen TV, for example). Secular inflation has been on a downward trend for decades, largely due to technology and globalization,[2, 3] and we doubt this backdrop changes anytime soon. COVID-19 accelerated technological adoption, which increases price transparency in the economy, and it should continue to power ahead. Further, concerns about "de-globalization" are often exaggerated (as we wrote about here).

SECULAR INFLATION HAS BEEN DECLINING FOR DECADES

% contribution to YOY change in core PCE inflation



Both series are Hodrick-Prescott filtered.
Source: Bloomberg Financial L.P./Bureau of Economic Analysis, as of November 30, 2020.

In our view, any problem with consumer inflation is more likely to come from cyclical factors that are more closely tied to the business cycle as opposed to secular factors.

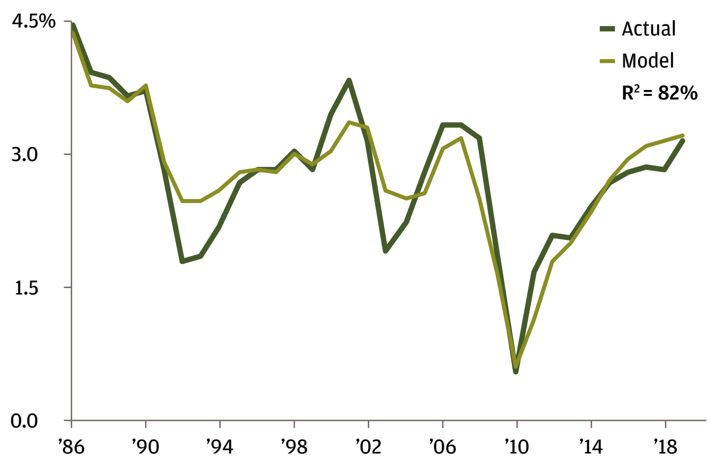
DON'T WE EXPECT A RAPID ECONOMIC RECOVERY FROM COVID-19? WON'T CYCLICAL CONSUMER INFLATION OVERSHOOT?

What are the prospects for higher cyclical inflation? Our proprietary economic model aims to answer that question. It has two main variables: labor market slack and a measure of housing demand.[4]

The model explains 82% of the variation in core cyclical consumer price inflation since 1985 (and the variables are highly statistically significant). Simply put, in a discussion of inflation, labor market slack and the housing sector deserve most of our attention—and we don't expect much upward pressure on inflation from either source in the coming years. We emphasize that inflation generated from the labor market and housing comes from the *level* of activity in these sectors, not from the rate of growth.[5]

OUR MODEL EXPLAINS 82% OF CYCLICAL INFLATION

YOY core cyclical inflation



Model equation is 0.9 + 0.13a + .47b +.17c; a = labor market slack which is defined as the difference between headline unemployment and the CBO's estimate of the natural rate of unemployment; b = multifamily construction (relative to population); c = inflation persistence variable. Annual data used. Model Durbin Watson statistic is 1.72.
Source: Bureau of Labor Statistics/J.P. Morgan Private Bank, as of December 2019.

[2] We consider PCE inflation in this secular/cyclical breakdown as opposed to CPI since PCE is the Fed's preferred measure of inflation. This is not an important distinction for our purposes—the same analysis for CPI yields nearly identical results.

[3] Cyclical core PCE inflation contributes approximately 80% to core PCE inflation, whereas secular contributes approximately 20%.

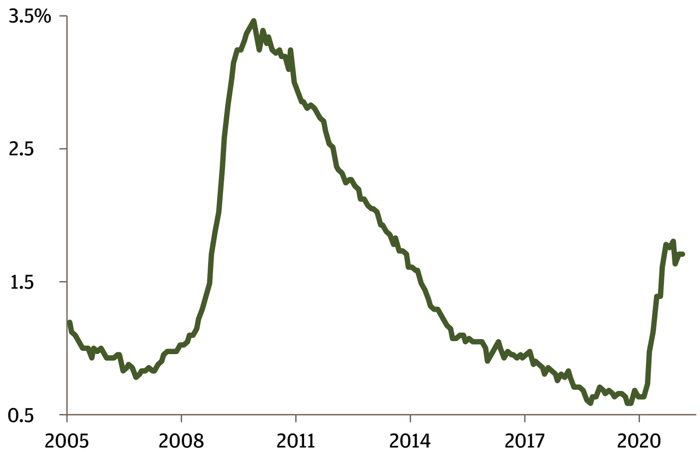
[4] We also include in the model a one-period lag of the inflation rate (since inflation has "persistence," meaning yesterday's inflation rate has an impact on today's) as well as a constant, which effectively captures anchored inflation expectations.

[5] J.P. Morgan Investment Bank has published a piece on how the growth rate can have effects on inflation, but that the effects are modest (see "U.S.: Inflationary speed limit effects are back, sort of" here). In our inflation model, we find no growth rate effects on core cyclical consumer price inflation; this is probably because we are using annual data, whereas our Investment Bank is using quarterly data.

Turning to the labor market, we expect the unemployment rate to continue its rapid descent, falling below 5% by the end of this year, given recent upward revisions to fiscal stimulus expectations. But we don't see a return to the pre-pandemic 3.5% unemployment rate before 2023 at the earliest—and that is assuming we don't encounter another unexpected negative shock along the way. The spike in the number of permanent job losers is about half of what we saw after the 2008 global financial crisis (GFC). Yet it is a meaningful increase, and it suggests we won't jump immediately back to the pre-COVID-19 labor market by the end of this year.[6]

RISE IN PERMANENT UNEMPLOYMENT ABOUT HALF OF WHAT OCCURRED DURING GFC

Permanently unemployed as % of working age population



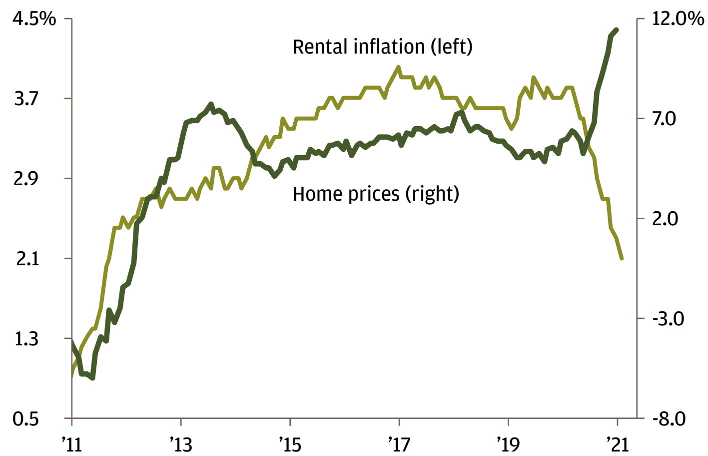
Permanently unemployed rate defined as those who have permanently lost their jobs (as opposed to temporary layoffs) as a % of the working age population.
Source: Bureau of Labor Statistics, as of January 31, 2021.

On the housing front, inflation seems similarly tame. Yes, home prices are on a tear in many locations, amid low mortgage rates and accelerated migration trends from COVID-19. (See our housing article here.) We think the home purchase market will stay strong, especially in the South, where there is considerable new construction, and in the suburbs across the United States.

But consumer inflation comes from housing rental rates, not from home prices, since paying a rent is a consumption item that recurs, whereas buying a home is treated as a one-time investment. Typically, home prices and rental rates rise and fall in tandem, but COVID-19 sent the two markets in opposite directions (chart below). The rental inflation rate is currently still *falling*, and this is acting as a headwind to overall consumer inflation, despite the pickup in home prices. Rental inflation, which carries an 18.5% weight in the core PCE inflation basket (and nearly a 40% weight in core CPI) will recover, but likely at a slow pace. This reflects the fact that the multifamily market is somewhat oversupplied on a fundamental basis (even absent the pandemic), particularly in densely populated metro areas.

HOME PRICES AND RENTS DECOUPLED DURING COVID-19

YOY change



Source: Federal Housing Finance Industry/Bureau of Labor Statistics, as of December 31, 2020.

[6] Trends in labor force participation are saying something similar. The headline rate, which is currently at 6.3%, would be nearly 10% if adjusted for the decline in labor force participation induced by the COVID-19 shock.

DO YOU SEE ANY PARALLELS TO THE 1970S?

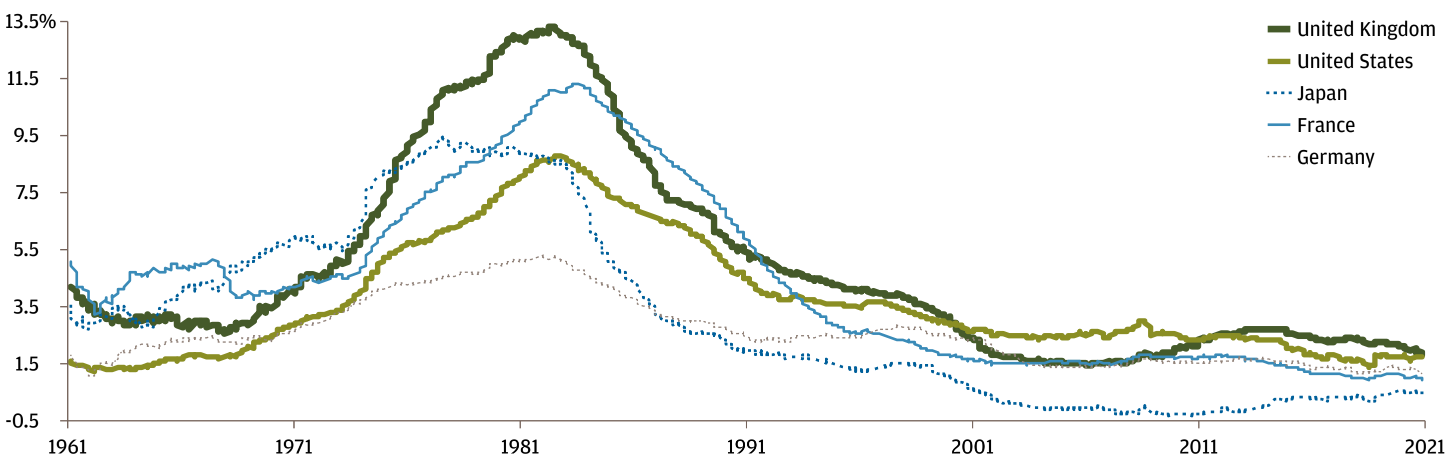
Investors often look to the 1970s as a period when inflation had devastating consequences for portfolios, but the analogy doesn't apply: The 1970s' inflation problem was global in nature, whereas today the sole focus is on the United States.

Given the depth and breadth of today's globalization versus the 1970s, we find it hard to believe the United States could have its own inflation problem while Europe and Japan are grappling with inflation well below 2%, with interest rates stuck at or below 0%. In addition, the inflation rate in China continues to fall.

If there were an inflation problem in the United States alone, businesses would find arbitrage opportunities to source lower-cost resources from outside the United States (unless the dollar were depreciating on a sustained basis, a subject we address below).

INFLATION HAS FALLEN ACROSS THE DEVELOPED WORLD

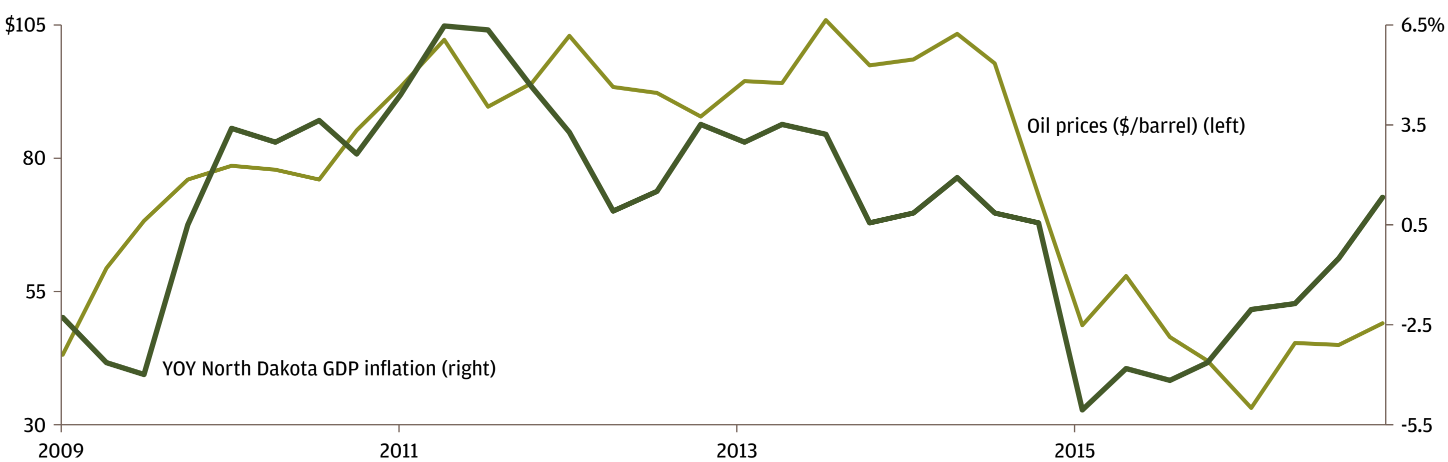
CPI inflation, 10-year rolling average



Source: Bank of International Settlements, as of December 31, 2020.

The 2010-14 North Dakota shale fracking boom is an instructive example of sourcing lower-cost resources. North Dakota faced inflation pressures early on, but eventually it drew in resources from the rest of the country. This shift subsequently cooled the inflation rate, long before global oil prices collapsed (chart below). Increased globalization suggests that national economies are increasingly linked, much as state economies are connected within the United States.

INFLATION IN NORTH DAKOTA COOLED BEFORE OIL PRICES COLLAPSED



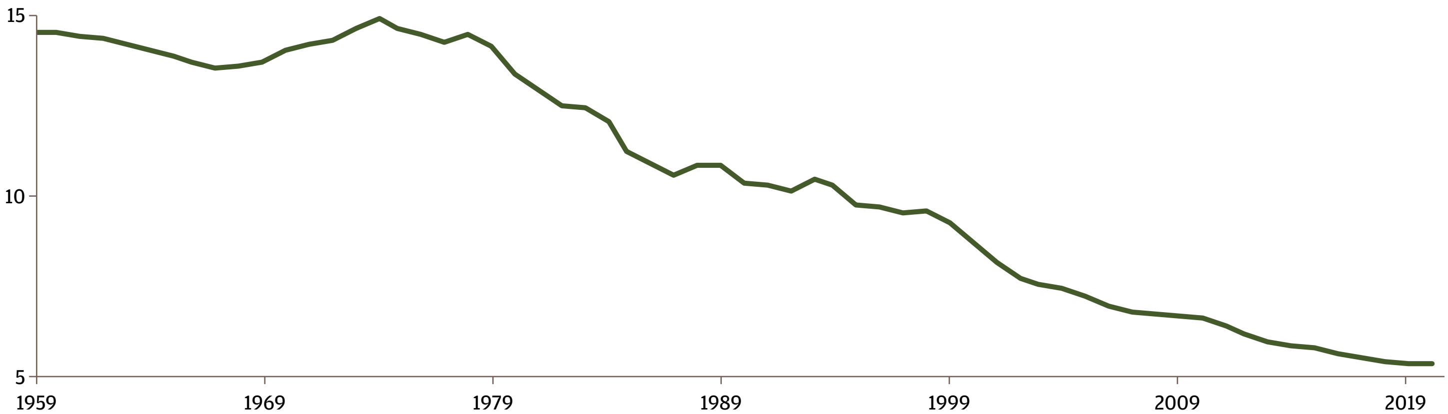
Source: Bureau of Economic Analysis/Energy Information Administration, as of December 31, 2020.

One final point on the 1970s. During this period, inflation was primarily driven by policymakers attempting to exploit the tradeoff between inflation and unemployment (i.e., to push unemployment low at the expense of higher inflation). This was well before central banks established political independence and formalized the concept of an inflation target to anchor expectations. In addition, the inflation outcome of the 1970s was exacerbated by two large energy supply shocks.

Today, the backdrop is very different. Yes, the Fed is making a bold commitment to average 2% inflation through the cycle, but it has by no means abandoned its inflation target, and market inflation expectations are thus still firmly anchored. In addition, the energy intensity of the economy has fallen structurally and will likely continue to decline as new, cheap sources of clean energy emerge.

ENERGY INTENSITY OF THE ECONOMY HAS DECLINED

Thousands of BTUs/real dollar of GDP (2019 $s)



Figures show three-year moving average.
Source: Energy Information Administration, as of December 31, 2020.

WHAT ABOUT FISCAL STIMULUS—WHY WON'T IT SPARK INFLATION?

President Joe Biden recently signed into law a USD1.9 trillion stimulus package. That is substantially more than the prior stimulus package of USD900 billion signed into law in December. By definition, then, fiscal stimulus poses a new level of risk. But will it be inflationary?

Most of the elements in the fiscal package will have a very low, if not zero, economic multiplier—that is, the elements will have modest ripple effects in the broader economy.

For example, as jobs come roaring back, less unemployment insurance support will be required. As state and local tax revenues rebound, less federal support will be used. The significance of these diminishing multipliers is often overlooked by market participants who somewhat simplistically compare the size of the latest fiscal package (USD1.9 trillion) to the size of the output gap (~USD650 billion, according to the Congressional Budget Office).[7]

However, if stimulus checks, which have a more static economic multiplier, become a permanent feature of fiscal policy, then the risks of an inflation problem would rise considerably, in our view. Yet we expect stimulus payments (set at one-time checks of USD1,400 to households up to certain income limits) will be discontinued once the pandemic has been brought to heel, limiting their inflationary potential.

One further point. It is misleading to look at the aggregate savings of U.S. households over the past year (which is around USD1.5 trillion) and conclude that another round of stimulus checks (totaling roughly USD450 billion) is like adding fuel to an already lit fire. The increase in savings since the outbreak of COVID-19 has been highly concentrated among wealthier individuals, who have lower propensities to consume. Less wealthy individuals (the targeted recipients of the fiscal checks) have accumulated much less of a cash buffer.[8]

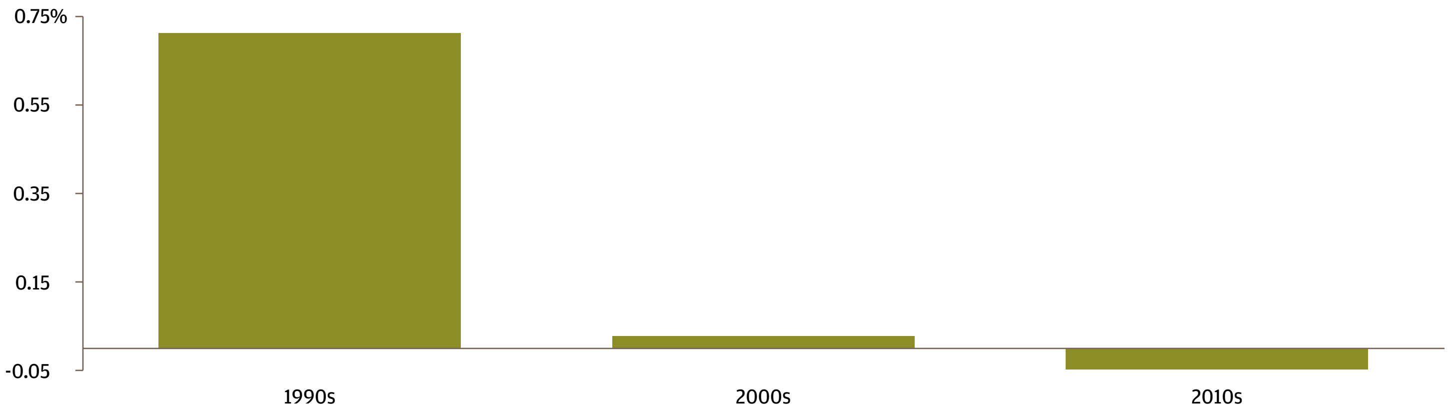
[7] In addition, we certainly would not treat the CBO's estimate of the output gap as definitive. According to the CBO's estimate, the economy was overheating in 2018/2019, but where was the inflation? Alternative estimates suggest potentially a much larger output gap than the CBO's estimate. (See: "There is more slack than they think," Hatzius and Struyven, Goldman Sachs, February 16, 2021.)
[8] See "Americans Are Sitting on Lots of Spare Cash. It May Not Boost Growth Much" here.

BUT WON'T FISCAL STIMULUS DESTABILIZE THE DOLLAR?

If the U.S. dollar were depreciating on a sustained basis as a result of excessively large fiscal deficits, then spiraling import inflation could possibly lead to a consumer inflation problem. However, there hasn't been a meaningful relationship between the U.S. budget deficit and the dollar since the 1990s (see chart below). Case in point: During the Trump Administration, the dollar rose during a period of expanding budget deficits.

USD/BUDGET DEFICIT CORRELATION FELL AS DOLLAR GLOBAL RESERVE STATUS SOLIDIFIED

Correlation between the dollar and the budget deficit



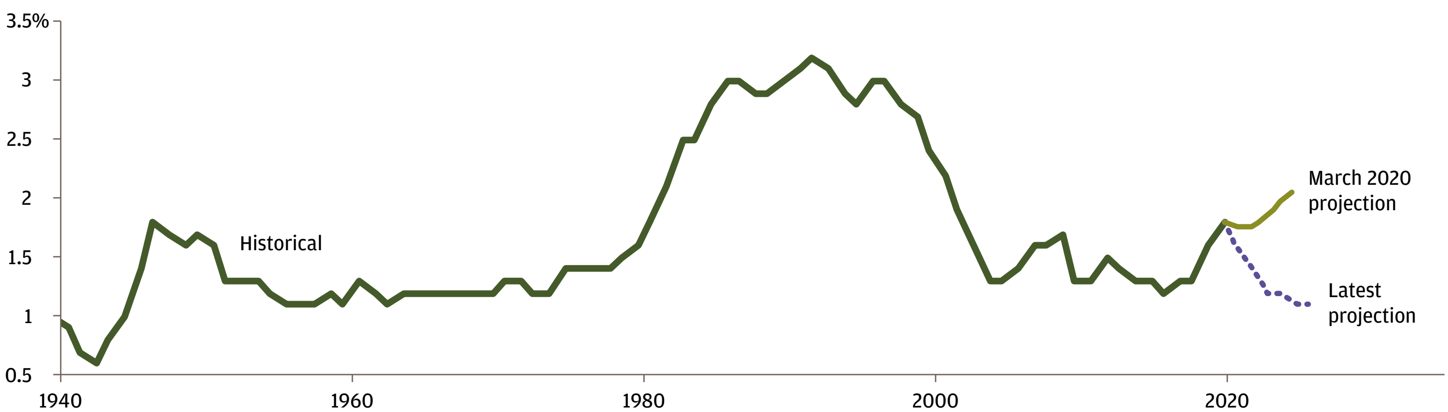
Calculated using three-year changes in broad trade-weighted U.S. dollar versus three-year changes in U.S. structural budget deficit as a % of GDP.
Source: Bloomberg Finance L.P./J.P. Morgan Private Bank, as of February 2021.

The relationship between the dollar and the deficit broke down, we think, because the dollar's status as a global reserve currency has grown since the 1990s. This has allowed the United States to take on more government debt, while its debt service cost has actually fallen.

On this important metric, the U.S. fiscal position is much improved compared with the 1990s, when the interest coverage ratio was about 3x higher.[9] In our view, today's fiscal limits are more connected to the domestic economy (i.e., labor and housing) than to the dollar (we don't expect the dollar to lose its reserve status anytime soon[10]).

DEBT SERVICE BURDEN PROJECTED TO FALL

Interest expense, % of GDP



Source: J.P. Morgan Private Bank, CBO, Committee for a Responsible Budget, as of December 31, 2020.

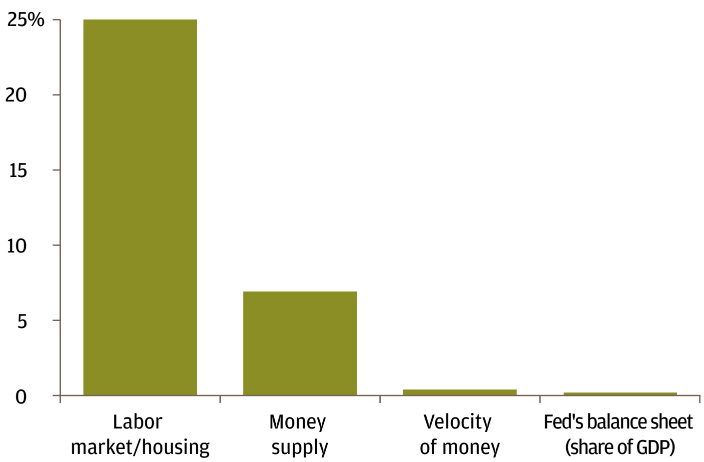
[9] Last year, the Fed refunded $88 billion, roughly 0.4% of GDP, to the Treasury. This was based on interest that it had collected on the bonds it held. In effect, this means that the Treasury paid an amount of interest equal to 0.4 percentage points of GDP to the Fed, which then handed the money right back to the Treasury. That leaves the actual interest burden around 1.0% of GDP, or about one-third of where it was in the 1990s.

[10] And certainly not to Bitcoin. See "Bitcoin and Baseball Cards" here.

BUT WHAT ABOUT QUANTITATIVE EASING AND FED MONEY PRINTING?

Exceptionally simulative monetary policy won't spur consumer inflation either, in our view. Indeed, monetary variables haven't been useful in explaining consumer inflation for decades. We illustrate this point in the chart below. It shows how the fit in our cyclical inflation model changes when we substitute in money variables for labor market slack/housing demand.

MONETARY VARIABLES DON'T EXPLAIN INFLATION WELL
% contribution to our inflation model's fit



Model considers YOY change in variables, and what's shown above is the change in R^2 from each variable to the inflation model. "Money supply" is defined as M2. "Velocity of money" is defined as GDP/M2.
Source: J.P. Morgan Private Bank/Federal Reserve Board/Bureau of Labor Statistics, as of February 2021.

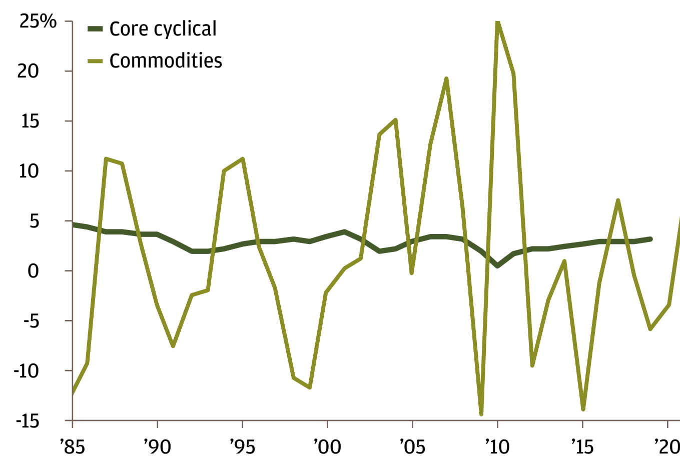
Why don't these money variables drive inflation? It's an ongoing subject of academic research, but we suspect the answer connects to several factors. First, bank regulations have stifled the transmission of monetary easing into bank lending. In the wake of the GFC, new regulations resulted in banks nearly doubling their capital, which equates to less money to lend.[11] Furthermore, regulations restricted the ability of banks to lend to riskier borrowers. As a result, 70% of all U.S. mortgages are now underwritten to borrowers with a FICO score above 760, up from 25% pre-GFC.[12]

Second, the introduction of interest on excess reserves (IOER) is a key distinction between the 1960s and 1970s and today.[13] Since the GFC, the Fed has paid interest to banks that hold liquidity at the Fed. In doing so, the Fed reduces the incentive for a bank to make risky loans, as IOER is often set at a level above risk-free rates available in the market. In short, the Fed effectively slows down the flow of money and credit through the economy.

COMMODITY PRICES ARE BOOMING—ARE YOU WORRIED THEY SIGNAL INFLATION?

Look at the chart below, which overlays the variation of commodity prices on core cyclical consumer prices. It plainly shows that commodity prices provide little-to-no predictive power on consumer prices.

COMMODITIES DON'T EXPLAIN INFLATION WELL
YOY inflation



CRB Spot Index used to proxy commodities.
Source: Bureau of Labor Statistics/Bloomberg Finance L.P./J.P. Morgan Private Bank, as of December 31, 2019.

One possible exception is the mid-2000s commodities super-cycle, which eventually filtered into core PCE inflation rising modestly above 2% (core PCE inflation peaked at 2.4% in 2006). However, that cycle was driven by China's insatiable demand for industrial commodities, which lasted about a decade. It's not clear how much of the past year's upward pressure on commodities reflects COVID-19-related supply restrictions, which will wane, as opposed to lasting demand that will continue to drive commodity prices exponentially higher over a multi-year window. But even if we are in the early stages of another commodities super-cycle (which we very much doubt), the mid-2000s experience suggests a modest pass-through of commodity prices to consumer prices even during a multi-year boom.

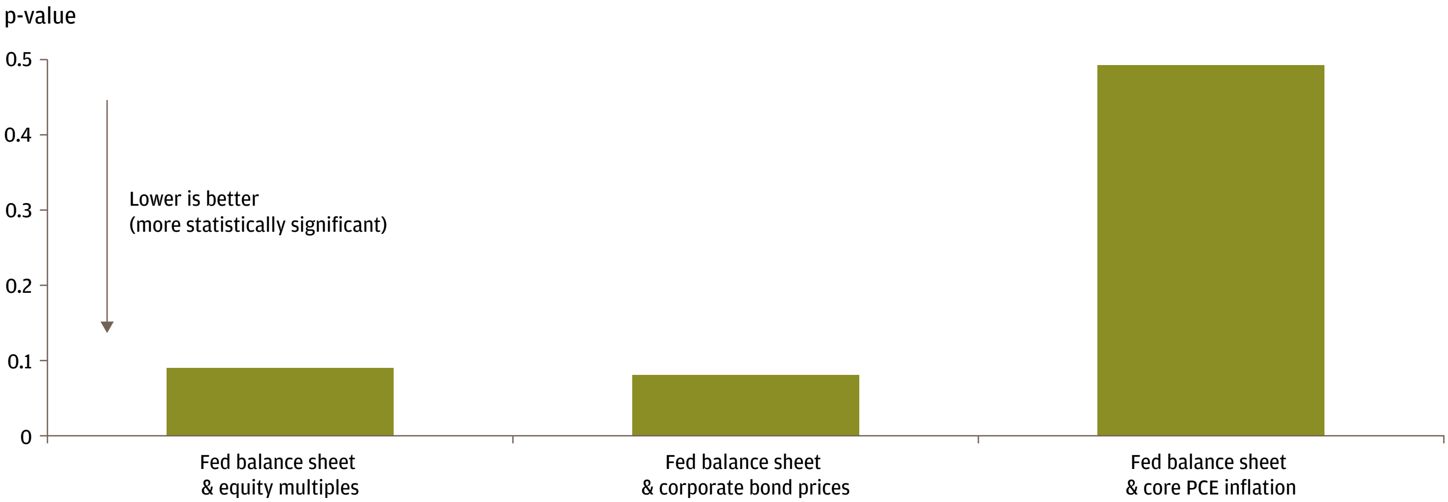
[11] Sourced from the New York Federal Reserve. As of Q3 2020, Tier 1 capital ratios at the largest bank holding companies in the United States were 12.7%, up from 6.5% in Q3 2007.
[12] Sourced from the Federal Reserve Economic Snapshot Q3 2020.
[13] See "Debt Monetization: Then and Now" here.

OK, YOU'RE NOT WORRIED ABOUT CONSUMER INFLATION. BUT WHAT ABOUT ASSET PRICE INFLATION?

Although we are skeptical of using money or liquidity variables to explain consumer price inflation, these variables do have an impact on asset price inflation.

To illustrate the link between monetary expansions and asset prices, we ran a statistical test that attempts to determine whether one variable "causes" another by examining how lagged changes in the two variables interact.[14] We found that there is a causal relationship between changes in the Fed's balance sheet and changes in both equity multiples and corporate bond prices. That causal relationship does not exist when it comes to the impact of the Fed's balance sheet on consumer prices.[15] The chart below shows the results of the test.

FED BALANCE SHEET CAUSAL FOR EQUITY MULTIPLES AND CORPORATE BOND PRICES, BUT NOT FOR CONSUMER INFLATION



Model utilizes two lags of each variable. We confirmed that the relationship in reverse was not significant. Equity variable is the change in Shiller CAPE ratio. The Dow Jones Corporate Bond index is used to calculate changes in corporate bond prices. Fed balance included as a % of potential GDP. Quarterly data from Q1 2000 to Q4 2020 used.
Source: J.P. Morgan Private Bank/Haver Analytics/Federal Reserve Board, as of February 2021.

IS THERE A PROBLEM WITH THE CONSTRUCT WHERE MONETARY INJECTIONS ARE MORE STIMULATIVE TO ASSET PRICES THAN CONSUMER PRICES?

We see two potential problems. First, the construct could result in an asset bubble that threatens economic and financial stability. For now, while we see some frothy pockets in the market (e.g., in SPACs, crypto assets or in highly valued low free cash flow companies), we think aggregate comparisons to the late 1990s dot.com stocks or the mid-2000s housing market are overblown. For home prices in particular, while the migration-driven re-rating has been abrupt, buying has occurred against the backdrop of very tight supply in the single-family market. Unlike in the 2000s, leverage isn't a concern, as buying has been concentrated among either high-quality borrowers or people making all-cash offers.

Another potential problem with asset price inflation is that it widens wealth gaps in society. Financial assets are highly unequally distributed, which means that when their valuations improve, inequality worsens.[16] Large wealth gaps are a potential issue for investors, as they may induce redistributive policies that attempt to narrow the gaps, especially in the form of higher taxes. From a markets perspective, we are most concerned with a potential broadening of the corporate tax base.

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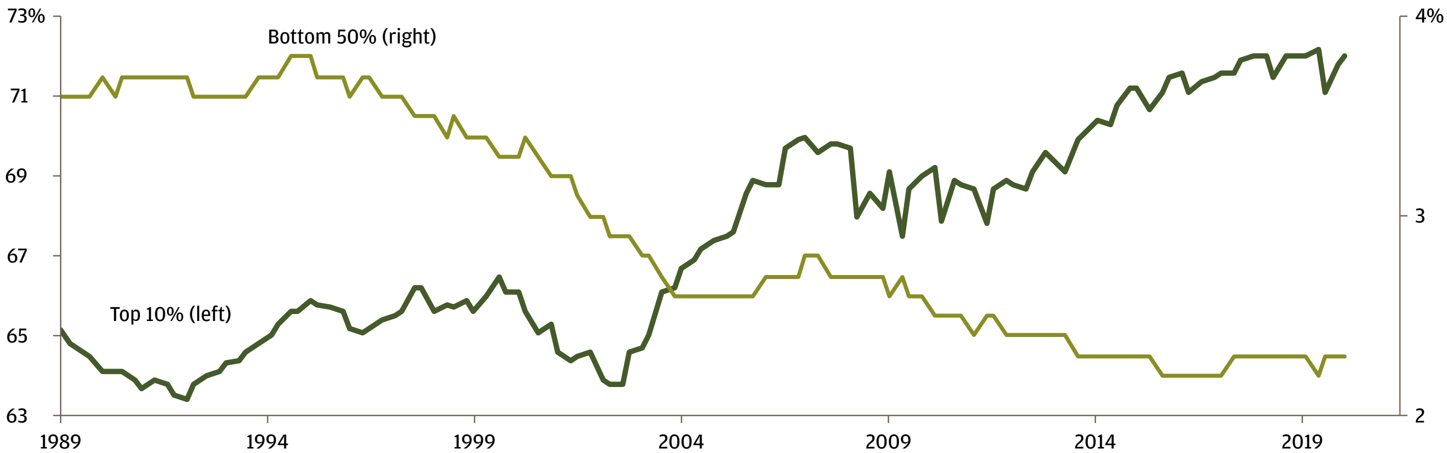
[14] The formal name for this test is a Granger Causality Test.
[15] To be more precise (for the wonks out there), we haven't "proved" causality, but rather we can reject the hypothesis that there is not a causal relationship between the Fed's balance sheet and the equity and bond markets.
[16] We wouldn't be a harsh critic of the Fed here: Its tool kit is blunt, limited, and operates via financial assets (increasing their valuation is the point of quantitative easing). Additionally, wealth inequality was a growing issue before the era of QE, so it tells you more is at work than just the Fed.

While we doubt that tax policy changes will prove to be the cause of the next recession, they may well have significant impacts on specific companies or market sub-sectors in the years ahead.

WEALTH INEQUALITY HAS INTENSIFIED

% of total financial assets held by household income bracket



Source: Federal Reserve Board, as of Q3 2020.

WHAT ARE THE INVESTMENT IMPLICATIONS OF YOUR INFLATION OUTLOOK?

How do our views on inflation inform our overall investment outlook? We do not expect that rising consumer prices will cause the Fed to move aggressively to raise rates and thus potentially derail the recovery. That supports our bullish stance on cyclical areas of the market that should benefit from a healing global economy. Among them: financials, industrials and construction-related sectors (particularly infrastructure and single-family housing). Because core bonds currently offer negative after-inflation yields, we think investors can find attractive risk-adjusted returns in high yield municipals, bank-preferred stocks and core real estate/infrastructure exposures. Finally, we are hard-pressed to find value in traditional inflation hedges such as TIPs or inflation swaps, whose value is directly tied to consumer price moves.[17]

[17] For TIPs and inflation swaps, timing is everything. Last summer, we did see value in these products. (See: "Why you shouldn't fear inflation or government debt" here.)

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