

HFG Trust White Paper Series

■ Where's the Inflation?



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Last month, we discussed the possibility that [deflation](#) could infect the American economy. In it, we highlighted that, in spite of all the monetary and fiscal stimulus measures taken to offset the severe negative consequences from stay-at-home orders, investment markets were still indicating that the expected annual inflation rate would be below 1% for the next five years. Since then, inflation expectations have drifted marginally higher, but still remain well below the Federal Reserve's 2% target. Recent conversations with clients and prospects have made us aware that a deeper dive on the topic of inflation is warranted. In this article, we'll explore inflation, future expectations, and how to protect your investment portfolio.

Inflation can be broadly defined as the increase in the prices of goods and services over time. However, I like to think of it a little differently. I view inflation as the erosion of the purchasing power of a hard-earned dollar. Putting it that way typically prompts a more visceral reaction: "Who or what is taking away my purchasing power!?"

Consumer Price Index

We'll do our best to shed light on that question, but first, let's discuss how inflation is measured

and tracked. A widely used inflation gauge is the Consumer Price Index, or CPI, which measures the weighted average monthly change in prices of a basket of goods and services. The basket is updated periodically to reflect changing consumer habits in order to remain a relevant indicator of the overall prices of goods and services that Americans actually purchase.

The latest CPI reading, taken in May, showed that on average, prices increased a mere 0.1% from the prior year. It has always been a bit of a headscratcher to me how remarkably low and stable the aggregate CPI figure is each month. Fortunately for those among us who like to dig deeper, the monthly CPI release is far from a black box calculation. The categories, price changes, and weightings are all there to see. In May, price changes ranged from a 27% increase for *uncooked beef roasts* to a 38% decrease for *fuel oil*, with every other category's price change falling somewhere in between. Luckily, the price of *instant coffee* declined 1.6%. I'll take all the wins I can get.

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Stable prices are important to a smoothly functioning economy.

In our article on deflation, we pointed out that if consumers expect the purchasing power of their dollars to increase with the passage of time, they'll delay consumption, which in turn squeezes company sales and profits. Lower profits lead to reduced investment and hiring, with stalled wages to follow. Eventually, this

feedback loop results in a deflationary recession.

Alternatively, if prices are rising quickly, consumers and investors will make every effort to part with their depreciating currency as soon as possible. This pulls future consumption and investment into the current period, resulting in an increase in the quantity demanded which, all else equal, brings about still higher prices and hoarding activity. This vicious cycle can be devastating to economies.

Correction: Stable prices are very important to a smoothly functioning economy!

I came of age in the 1990s. I'm 40 years old and have only known stable prices. The last time annual CPI inflation ticked above 5% was in 1990. I have no interesting personal accounts of inflation to relate to others at the proverbial cocktail party, but I listen—and I absorb the history, the pain, and the lessons.

In the 20 years from 1970 to 1989, CPI inflation averaged 6.3% annually. A dollar lost 70% of its purchasing power in those two decades. In contrast, the 20 years from 2000 to 2019 saw inflation average just 2.2% per year. A dollar lost only 35% of its purchasing power in this most recent two-decade period. As investors approach retirement and increase exposure to

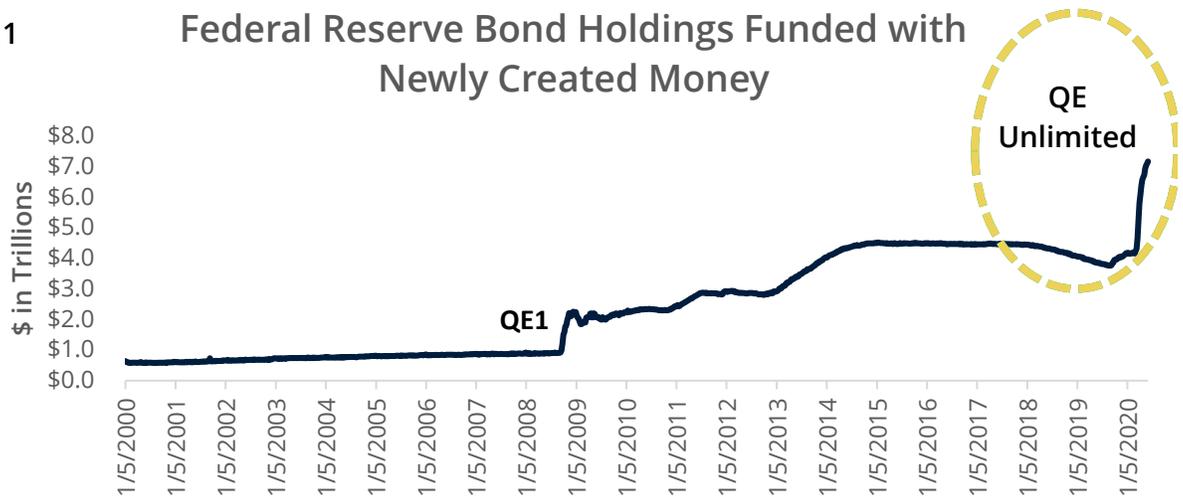
fixed income securities, it's natural to pay closer attention to inflation expectations and plan accordingly.

Lucky for us, there are some highly educated folks who not only pay very close attention to inflation expectations, but they also have the tools at their disposal to influence it as well! They are our central bankers. Our central bank, the Federal Reserve, has two incredibly important mandates: 1) achieve maximum employment and 2) ensure price stability. In order to meet its objectives, the Fed regulates overnight interest rates and the money supply. Through some combination of luck and skill, the Fed's aggressive monetary policy actions (read: money printing) in response to the 2008 financial crisis did not result in runaway price inflation of **goods and services**. (The reason for the bolding will become evident later.)

"The haste and magnitude of the recent monetary reaction far surpasses the Fed's initial round of quantitative easing in 2008."

CHART 1

Federal Reserve Bond Holdings Funded with Newly Created Money



The current crisis has triggered a similar but larger monetary response. The Fed wasted no time in lowering its target overnight interest rate to near zero and embarking on what is known as unlimited quantitative easing. "Providing much-needed liquidity to financial markets" is how central bankers characterize their actions. I call it "money printing." There's no better way to illustrate this liquidity injection other than with a chart (see Chart 1). The haste and magnitude of the recent monetary reaction far surpasses the Fed's initial round of quantitative easing in 2008.

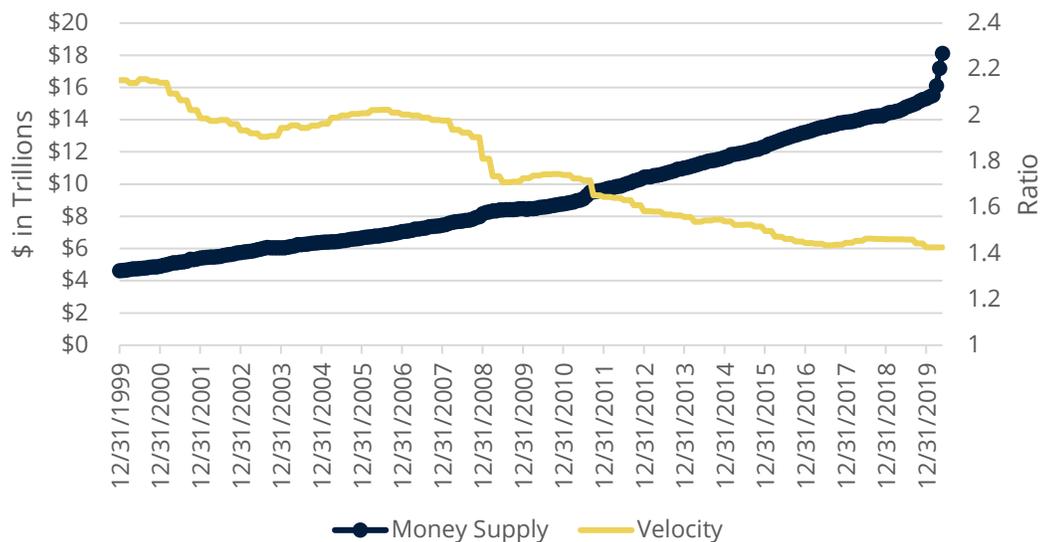
Quantity Theory of Money

The Fed's actions fall squarely under the heading of "inflationary measures." There has been a sudden, large increase in the money supply. More money in circulation should result in higher prices. This is what common sense tells us. There is also a well-known economic theory known as the *quantity theory of money* that supports exactly this conclusion. According to the theory, if the amount of money in an economy doubles, price levels will also double. Over the past few decades, the quantity of money in our economy has grown much, much

faster than prices have. What gives? The theory is based on the assumption that the velocity of money is *constant*, irrespective of changes in the quantity of money. That's where it breaks down—the velocity of money is *not* constant.

The velocity of money is a measurement of the rate at which money changes hands in a given period. If you're like me, you'd welcome an example here. A commonly used illustration involves an economy made up of just two people who transact the same \$100 with each other multiple times. Jane buys \$100 of beef from John. John turns around and buys \$100 of fruits and vegetables from Jane. If these transactions are repeated another nine times during the year, then the economy's size, or gross domestic product, would be \$2,000. It conceivably follows that the higher the velocity of money, the more vibrant the economy. Returning to the quantity theory of money, clearly the velocity of money has declined over the past couple decades (see Chart 2). Explanations include banks sitting on excess reserves and consumers paying down debt in lieu of spending. But the story doesn't end

CHART 2 Money Supply vs Velocity of Money



there. It's more complicated, and a deeper understanding lies ahead.

If after reading this far, you're starting to get an uneasy feeling that CPI is like a coil spring getting compressed, I would say you were blessed with good common sense.

One of the fascinating things about inflation is that expectations matter. Expectations influence our buying habits, which in turn impact inflation. It's a classic self-fulfilling prophecy. A simple example is if we expect higher future inflation, we'll ask for wage increases which will force our employers to raise their prices, and so on and so on. Recall however that I have known only stable prices during my entire life as a consumer. Neither I nor anyone in the big spending 20- to 50-year-old age bracket wakes up each morning expecting prices to be higher. And for that reason, the Fed has the luxury of trying to maintain price stability in an economy with sticky prices.

5-Year Breakeven Inflation Rate

A qualitative assessment of inflation expectations is only so helpful. Let's get back to real, quantifiable data. The most widely used market-based metric of future inflation expectations is something called the *5-year breakeven inflation rate*, and its calculation is simple. It is the difference between the yields on two separate 5-year U.S. government debt obligations: the conventional Treasury and the inflation-linked Treasury. The inflation-linked notes are called Treasury Inflation Protected Securities (TIPS). What makes TIPS unique is that the principal is adjusted semiannually based upon changes in CPI. TIPS protect investors against unexpected hikes in inflation.

If the yield on the 5-year Treasury is 3% and the yield on 5-year TIPS is 1%, the difference of 2% represents the average expected inflation rate

over the next five years. That's the rote learning part. To truly understand it, let's bring it to life. As an investor, if you were presented with a choice between the two government bonds listed above, and you believed that inflation would surely average more than 2% annually over the next five years, you would buy TIPS. Assume others felt that way and together, you all started bidding up the price of 5-year TIPS. As the bond price increased, the yield would fall. If the yield falls to 0.50%, for example, the difference between the two government bond yields would expand to 2.5%, reflecting investors' expectations for a higher inflation rate. If it settles there, that's where investors are indifferent between holding Treasuries and inflation-linked notes, the breakeven inflation rate.

So how well does the breakeven inflation rate predict actual future inflation? See Chart 3 below for a comparison between year-end breakeven inflation rates and the actual realized inflation over the ensuing five years. I'd characterize its predictive reliability as low, but it nonetheless provides a basis for investment decisions as well as a context for evaluating central bank actions. The key takeaway is that the current 5-year breakeven rate is a measly 1.0%! The Fed has been running the wheels off its virtual printing press, and a 1% future expected inflation rate is all it has to show for it.

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CHART 3

Date	5-Year Treasury Yield	-	5-Year TIPS Yield	=	5-Yr Breakeven Inflation Rate	Avg Inflation - Next 5 Years	Under- or Overestimate
12/31/2002	2.7%		1.3%		1.5%	3.0%	-1.6%
12/31/2003	3.2%		0.9%		2.3%	2.7%	-0.4%
12/31/2004	3.6%		1.1%		2.5%	2.6%	0.0%
12/31/2005	4.4%		2.1%		2.3%	2.2%	0.1%
12/31/2006	4.7%		2.5%		2.2%	2.3%	0.0%
12/31/2007	3.4%		1.1%		2.3%	1.8%	0.5%
12/31/2008	1.6%		1.7%		-0.1%	2.1%	-2.2%
12/31/2009	2.7%		0.4%		2.3%	1.7%	0.6%
12/31/2010	2.0%		-0.1%		2.1%	1.5%	0.5%
12/31/2011	0.8%		-0.9%		1.7%	1.4%	0.3%
12/31/2012	0.7%		-1.5%		2.2%	1.4%	0.8%
12/31/2013	1.7%		-0.4%		2.1%	1.5%	0.6%
12/31/2014	1.7%		0.3%		1.3%	1.8%	-0.5%
12/31/2015	1.8%		0.4%		1.4%		
12/31/2016	1.9%		0.0%		2.0%		
12/31/2017	2.2%		0.3%		1.9%		
12/31/2018	2.5%		1.0%		1.5%		
12/31/2019	1.7%		0.0%		1.7%		
6/10/2020	0.4%		-0.6%		1.0%		

As we've discussed so far, inflation has been noticeably absent in recent memory, especially since the financial crisis of 2008. It has failed to even meet the Fed's inflation target of 2%. Where is all the newly created money going? It doesn't appear to be finding its way into what we would call the real economy where **goods and services** are purchased. If that were the case, certainly we'd see higher CPI readings. We believe it's showing up in asset prices, including stocks and real estate.

Admittedly, it's tough to trace the direct link between money printing and fully valued asset prices, so we have to rely on intuition a little bit here. In addition to injecting trillions of new dollars into our economy, the Fed has employed a wide variety of tactics to support prices in debt markets, including its stated

willingness to buy corporate bonds recently downgraded to junk. Risk appetites are soaring because there is a perception among investors that the Fed stands ready to support various risky securities, effectively removing downside risk. Excessive speculation is not far behind, and voila, we find ourselves in a world with elevated stock and real estate valuations in the face of a severe economic pullback, the duration and depths of which we don't yet know. Lesson: Don't fight the Fed!

"Where is all the newly created money going?"

Final Thoughts

Coming back to inflation as measured by CPI, those who, in the recent past, have warned of rapidly rising prices resulting from supercharged money printing have been wrong. There's no two ways about it. I should know—I was among the ranks of Chicken Littles sounding inflation alarms in 2009. This time around, it's easy to be dismissive of the so-called inflationistas.

“There are some very powerful people doing whatever they can to ensure prices rise, rather than fall.”

Why could it be different this time? What are some factors that could ignite inflation? First of all, some Fed officials have already indicated a willingness to let inflation run hotter than its 2% target. Therefore, don't expect policy tightening at the first signs of 2% or higher inflation. Second, there's a chance that this recession could be followed by a rapid recovery, not like the long drawn out affair that followed the housing crash. If a vaccine were to become widely available by the end of the year, a quick turnaround could swiftly absorb any deflationary slack in the economy and lead to higher prices. Third, it's possible that the benefits of globally sourced cheap labor are phasing out. Offshoring production to Asia has kept a lid on goods prices for decades now. Coronavirus-related disruptions to supply chains have led many industry executives to

reconsider logistics strategies. Bringing some functions back home would pressure cost structures. Fourth, government spending programs designed to revive the economy have been staggering in scale and scope. We've primarily focused on monetary policy in this article, but the fiscal policy response should not be overlooked as an inflationary force as well.

There are steps investors can take to defend against inflation. After all, what we're after here is ensuring that you are earning what's known as a real return. The real rate of return is what you earn after adjusting for the impact of inflation. If an investment returns 5% in a year and inflation is 2%, the real rate of return on your investment is 3%. Real estate, gold, TIPS, short-term bonds, and companies with strong pricing power are examples of investment options that would serve to limit the harmful impacts of inflation on your portfolio over time.

Please contact us if you have questions or would like to discuss how your portfolio is positioned to defend against upticks in inflation. It does feel like the economy is at a crossroads right now, striking a precarious balance between deflationary and inflationary pressures. It's difficult to envision deflation winning out over any significant period of time. There are some very powerful people doing whatever they can to ensure prices rise, rather than fall. Hopefully they're just not too successful.