



The Return of Inflation?

By Josh Rowe, PhD, CFA®

Josh Rowe is a portfolio manager at WMS Partners and a member of the Investment Committee. He has a doctorate in economic history from Princeton University.

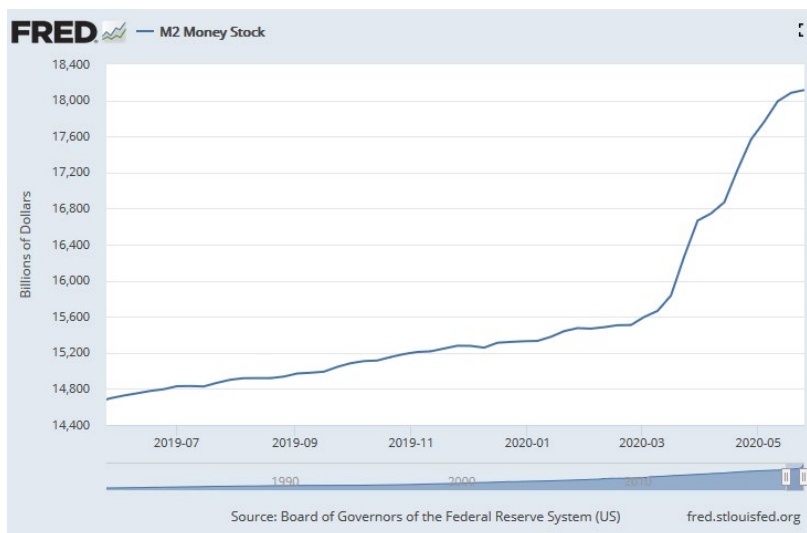


June 26, 2020

Last month, a stunning jobs report showed the U.S. economy added 2.5 million jobs versus a prior forecast of 7.5 million jobs *lost*. Notwithstanding technical quarrels over [misclassification](#), or renewed philosophical arguments about the utility or [futility of economic forecasts](#), it has become clear that the economy is stirring out of its pandemic-induced coma. The jobs numbers and a raft of [high-frequency statistics](#) are welcome signs that economic activity is set to rebound more elastically than feared as statewide lockdowns are eased. There is no dearth of factors to credit for the nascent recovery; the labor market was fairly healthy going into the crisis, consumer balance sheets were better poised to withstand a shock than in 2007, the Fed has stood ready and able to supply [unlimited liquidity to an expanding range](#) of money and credit markets, and, not least, fiscal relief has been unprecedented in speed, size, and scope. A swift response from Congress has plugged holes in state budgets, provided support to large and small businesses alike, and delivered such generous supplementary unemployment insurance to millions that nearly [70% of those who lost jobs are receiving more](#) in temporary benefits than they did in work.

As we begin to contemplate exiting the economic crisis, attention naturally turns to the pandemic's long-run effects. While travel, office work, and healthcare may never look quite the same post-COVID, the most important question for investors to consider may be the impact of all that government largesse. Necessary though immediate relief may have been, there are legitimate concerns that, once activity picks up, a budget deficit [approaching \\$4 trillion](#) and a record national debt of \$25 trillion may occasion the return of the 1970s bogeyman previously all but declared dead: out-of-control inflation.

Of course, a drop in economic activity that some have estimated will be [worse than 40% year-over-year in the 2nd quarter](#), is, *ceteris paribus*, deflationary. Asset values have plunged (though they have lately recovered), workers have been laid off, businesses have curtailed planned spending, the value of the dollar has skyrocketed, and futures for crude oil—probably the single largest commodity input into consumer prices—[turned negative](#) for the first time in April. This is not a backdrop in which one worries terribly about rising prices, and [policymakers have said as much](#).



Yet analysts with lenses focused on the middle distance see a conflict emerging between structural forces that have held inflation below the Fed's target for so many years and the steep increases in debt, deficits, and the money supply which have served as conventional harbingers of inflation.

The Market and Professional Forecasters Disagree

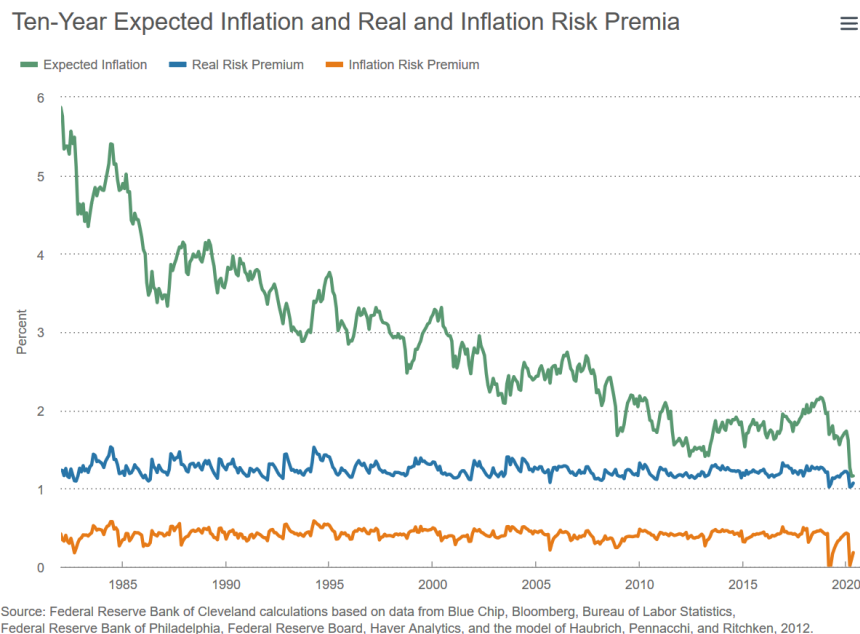
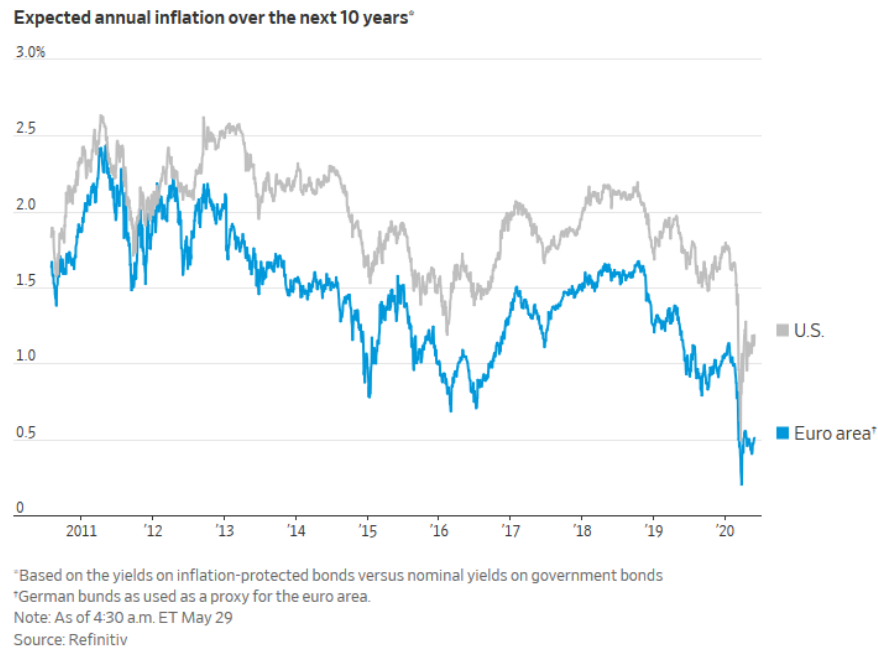
In fact, newspaper editorials, Wall Street strategists, and television talking heads have recently been so vocal about the return of inflation that it has begun to seem as inevitable as a Hollywood superhero movie sequel. Despite this chorus, the outlook for inflation is murky. There are secular influences that will continue to hold down inflation and interest rates: aging populations with a greater need to save, high levels of inequality that favor savers over spenders, a falling cost of capital goods enabled by digital technology, increased price competition in e-commerce, et cetera. There are factors which are likely to push up inflation: increases in government debt introduced to fight the pandemic and a central bank commitment to monetize these deficits via indefinite asset purchases. And then there are larger structural shifts that some forecasters have hypothesized but which may take years to play out: "deglobalization" seen in both the near-shoring of manufacturing supply chains and an end to global labor arbitrage alongside a reorientation of rich countries' fiscal policy toward Keynesian demand management, expanded social safety nets, or green infrastructure. No one knows the outcome of these latter predictions, or who will win the tug-of-war—those anchors which have weighed prices down for more than a decade, or a new policy regime in the pandemic's wake.

To better understand the path forward, we will review the long, tangled skein of proposed ingredients in the reflation story and compare them with similar forecasts (incorrect, as it turned out) made in the wake of the crisis of 2007 to 2009. We ask, "What is different this time?" and find that many of the structural forces that were missed or underestimated by the inflation hawks of a decade ago remain as strong as ever. There is no reason that growth in the money stock must *per se* cause inflation. Yet there are several important differences from the last recovery that qualify any prediction that the status quo will continue indefinitely.

It is our view that inflation is likely not a risk in the next year, and in fact yet greater federal stimulus (to prevent recessionary contraction in state and municipal budgets) is called for. Mounting debts and deficits [may be a drag on growth in the long run](#), but in the face of the worst global recession since 1929, there would likely be no growth at all in their absence. Nevertheless, the three-to-five-year horizon is much murkier. Though expansive fiscal policy is not by itself inflationary, if a government credibly promises to monetize all future deficits—that is, to permanently expand the debt without a commitment to back it with future taxes, there will be conditions suitable for the return of inflation.

At its core, inflation is a process; it is a dance between firms and households that is driven as much by the endogenous, self-reinforcing dynamics of expectations as by any external shock. Any forecast of a change in the inflation backdrop should thus begin by addressing expectations. Expectations are often observed indirectly: a 14% rise in the price of gold this year suggests unease with massive injections of central bank liquidity around the globe. More directly, the Philly Fed, which surveys professional forecasters, finds that, in contrast to so many hot takes on CNBC, economists are [revising downward](#) inflation risk at all horizons. Other, market-based indicators have also failed to register a substantial increase in implied inflation expectations. According to one gauge, the gap between yields on 10-year inflation-protected Treasury securities and standard 10-year Treasury notes, expectations are for a decade of [inflation just above 1%](#) in the United States. Swap markets, used by businesses to hedge future exposures, are showing levels closer

to 1.5%. Euro-area expectations are even lower. Other market measures such as [5-year breakevens](#) and [5-year, 5-year forward rates](#) are lately perking up, but remain toward the low end of recent ranges.



While these series can be volatile, they show that beliefs about inflation have been well anchored since at least 2012. In order for behavior to change—for consumers to shop differently, for jobseekers to bargain for wages differently, for firms to set prices differently—beliefs about the future of inflation must change.

The Role of the Fed in Setting Expectations

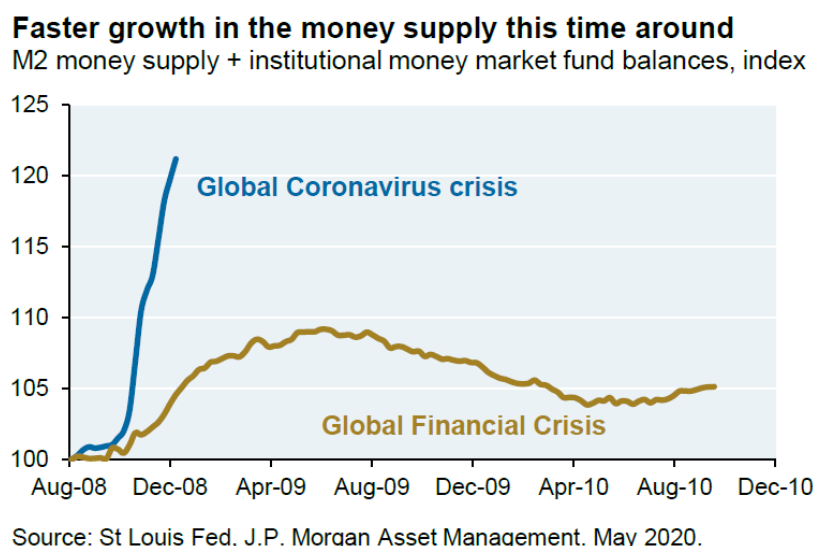
The Fed has a potentially large role in determining expectations, but, with respect to inflation, its “bazooka” has, so far this decade, fired only blanks. [In the words of the Nobel laureate economist Paul Krugman](#), if the Fed wants higher inflation, it must be able to make a “credible promise to be irresponsible”. The problem with this, as former Bank of England governor Mervyn King points out, is that the Fed cannot make that

promise—it is “time inconsistent”.¹ Whatever Jay Powell says, the market believes his institution will stick to its rate-hiking playbook when inflation finally arrives. This is why recent Fed speak about “allowing overshoots” or “letting the economy run hot” did nothing to change market expectations. Perhaps a new, higher inflation mandate would be enough to reset outlooks. Before the coronavirus crisis, [the Fed was expected to release a redesigned toolkit](#) which may have stipulated some form of tolerance of “catch-up” inflation, reemphasized “symmetric” targets, or even targeted price levels rather than rates (which implies looking at long-term build-ups rather than periodic spikes). Now the Fed has [committed to keep rates low for years](#). Will they keep their promise?

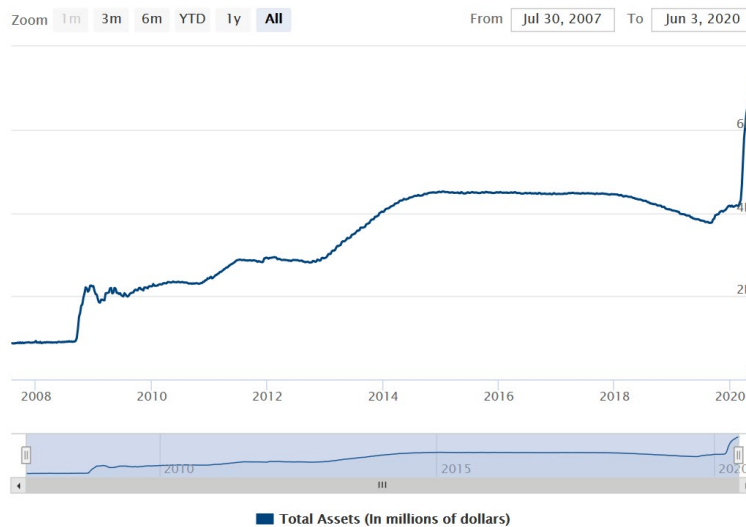
What may have changed in central banks’ dialogue with markets is a tacit recognition on both sides that the fiscal deficits required to triage the economy during the crisis and to nurse it back to full health afterwards, *will never be funded by tax increases*, but will instead result in higher structural deficits needing to be indefinitely monetized. In the short run, with a continuing output gap and huge unemployment rolls weakening wage pressures, it is difficult to imagine an inflationary spiral taking root. But, several years out, some see the hallmarks of a 1970s-style stagflation—a government balance-sheet recession, combined with higher trade tariffs and aggressive quantitative easing. Lord Robert Skidelsky, the eminent historian and Keynes biographer, [told Bloomberg](#) “there is going to be a depression and inflation at the same time.” Central banks can always engineer a given rate of inflation if they *really* want to; enough [helicopter drops](#) will eventually do the trick. This time, the thinking goes, they will be complicit in inflating away government liabilities because the economy will be too weak to grow its way out of debt. Printing money to fund liabilities amounts to a different form of public finance, blurring the lines between fiscal and monetary policy. “It’s a form of tax,” Skidelsky said. “Or you could actually tax openly just by increasing the rate of tax.”

The speed of the expansion of the money supply in the weeks following lockdown is certainly unparalleled and has animated much critical discussion. In a [Wall Street Journal op-ed titled “Get Ready for the Return of Inflation,”](#) economist Tim Congdon writes, “Excluding the years immediately after the Revolutionary War, the past few weeks have seen by far the highest rate of monetary expansion in U.S. history.”

In a note to clients, J.P. Morgan Asset Management’s chief investment strategist, Michael Cembalest, included the following chart, indexing the current growth in the money supply to the same time scale as the financial crisis of 2008:



This [hockey stick chart](#) showing the eightfold expansion in the Fed's balance sheet is equally hard to ignore:



Similar graphics have circulated that set the recent rally in stocks in comparison to growth in M2, purporting to show that the money that central banks have created has already spurred inflation of a kind: in asset prices, if not consumer prices. This is a familiar argument from the last crisis. We wonder, however, whether 2020's undoubtedly more pronounced spike in [narrow money](#) is also *qualitatively* different to the last round of central bank liquidity which failed to cause inflation to pick up.

What Wall Street Is Saying

In a note titled [“The Return of Inflation”](#), Morgan Stanley's chief strategist Chetan Ahya writes that, unlike the last go-round, today fiscal spending will expand, not contract, while central banks prime the pump: “For the first time in a decade, we are finally getting coordinated monetary and fiscal easing – a policy dynamic that we have viewed as essential to get out of the low-growth, low-inflation loop. The scale of easing is also unprecedented during peace time.” Further, policy is finally turning its attention to the structural macroeconomic pillars of the disinflationary regime: inequality, monopoly power, globalized supply chains, and low- or no-cost to the consumer technology services: “With the economic shock driving an even deeper wedge between low- and high-income workers, policy-makers are scrutinising what I have called trade, tech and titans more closely, given their role in driving the wage share of GDP lower and widening the income divide. Disturbing this trio will also mean disrupting the key structural disinflationary forces of the past 30 years.”

Jan Hatzius of Goldman Sachs is a bit [more sanguine](#): “In the current environment of exceptionally weak demand and economic activity,” he writes, “Running large government deficits won't be inflationary, and is not a reason to worry about a debt crisis, at least in countries like the US, UK, Japan.” In a year or two, even as the crisis recedes, [Hatzius believes](#) there will still be enough slack in the labor market to keep a lid on inflation despite aggressive policy support.

David Kelly, chief strategist of J.P. Morgan Asset Management [compares inflation risk to a live bomb that has not yet gone off](#). In the aftermath of the Great Financial Crisis, it was caution among lenders and regulatory forces that prevented huge increases of liquidity from slipping into the real economy and inflating prices, just as caution by fiscal authorities reigned in initial deficits after the worst of the crisis had passed. In contrast to the post-2008 period, he writes there are “no fiscal conservatives left” today to force

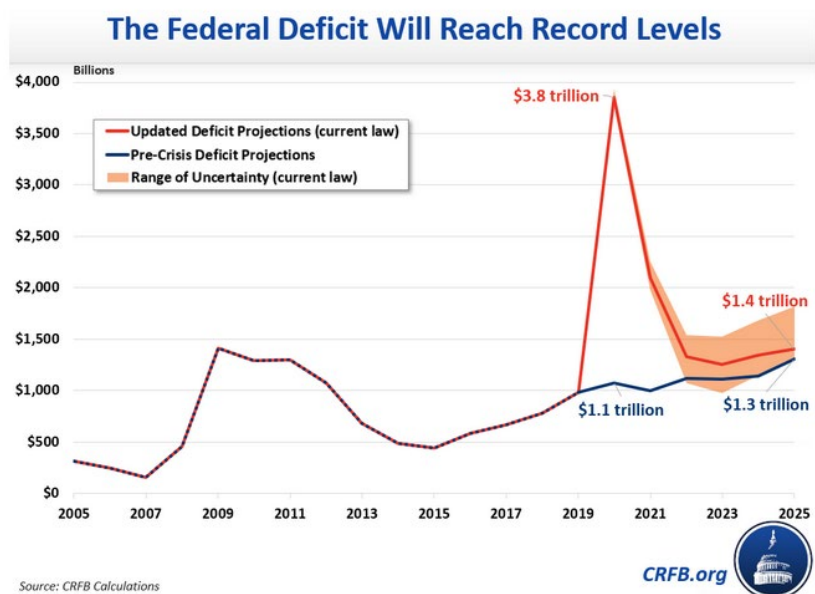
wanton governments onto a diet of austerity. Regulation of the financial system is laxer than it was a few years ago. Most importantly, perhaps, in Kelly's view, "The economy is likely set for a much more rapid rebound after the pandemic than was the case in the aftermath of the financial crisis. Put simply, once a vaccine is widely distributed, pent up demand among the American public for a very wide range of services and goods should be unleashed, and, while supply should be ramped up quickly also, the very pace of growth could prove inflationary."

Peter Perkins of the Macro Research Board writes that [the current episode is nothing like the 1970s](#). Then, food and energy supply shocks and the breakdown of the Bretton Woods global currency system caused a spike of imported inflation, while a more unionized workforce engaged in aggressive wage bargaining at home which led U.S. labor relations to derail, precipitating a wage-price spiral.² In contrast to 2008-2010, however, Perkins argues that in the current febrile political atmosphere, policymakers may find higher inflation to be the path of least resistance. "A key lesson of the 1970s," he writes, "is that once unleashed, inflation can build upon itself and compound underlying economic problems." This view, we find, amounts to a call for a generational political shift, which is, of course, one of the most challenging things to forecast.

Synthesizing these perspectives, we suggest that it is possible for a deep downdraft in economic activity to contain inflation for some time, while *simultaneously* making the economy [more vulnerable to a major supply disruption](#) that could radically change the inflation outlook. Economist Kenneth Rogoff [told Goldman Sachs](#) that high government debt does not imply imminent inflation as long as rates stay very low. If governments can service [long-term debts at sub-1% interest rates](#), it is not necessary for the central bank to permanently monetize the debt. But, Rogoff warns, "History tells us that shocks do happen. The issue today is that the market seems to think that any shock will only further drive down global real rates and that there is zero chance of ever having inflation again. I think that's wrong; some shocks could very well push real rates higher, which would create a lot of pressure."

The "Quantity Theory" Should Be a "Quality Theory": Type of Money Matters as Much as Supply

Rogoff's composite argument summarizes our thinking nicely. There is a strong bias to deflation over the next several years, but fiscal and monetary trends operate with a lag. The United States ran very aggressive fiscal deficits throughout the 1960s, but it was only in the 1970s, when buffeted by twin commodity and currency shocks, that the foundations crumbled. Deficits alone do not contribute to out-of-control inflation if they support growth in the productive capacity of an economy (as they almost necessarily do during a severe recession of private sector demand). It is when the governments spend frivolously, with little likelihood of boosting future tax receipts, that such economic fragilities become evident.³

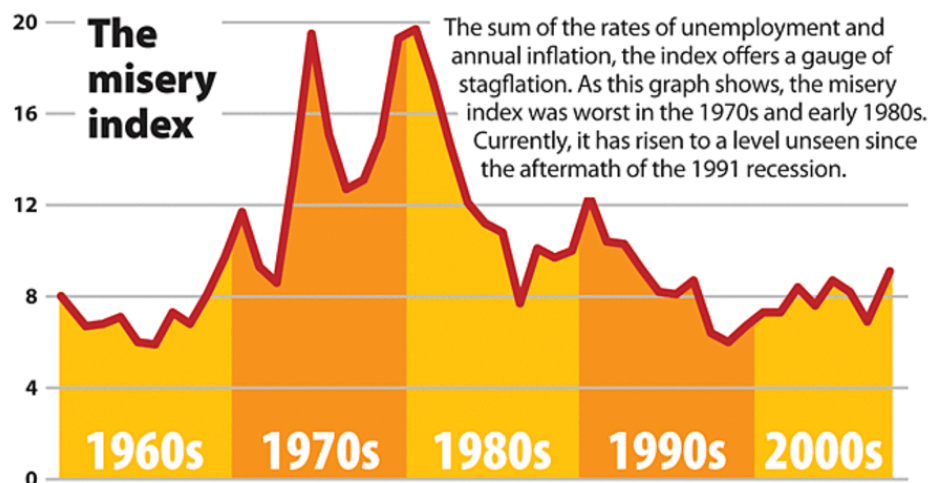


<https://www.crfb.org/blogs/budget-projections-debt-will-exceed-size-economy-year>

When the fiscal authority borrows and spends, it increases the deficit—a “flow” measure of debt. Yet this need not increase the long run “stock” of debt; spending that boosts private productivity can cause economic activity to pick up without accompanying increases in inflation. Real interest rates may rise gradually. Fiscal expenditure of this sort—roads, communications infrastructure, education, jobs training, better healthcare — “crowds in” the private sector, meaning it encourages firms to make concomitant investments that create good jobs. It has a [multiplier effect](#). In this instance, even when central banks increase the money supply, the supply of goods and services may be increasing just as quickly.

Where fiscal spending is wasteful, destructive, or lacks clear purpose, continued monetary accommodation leads to more money chasing fewer, less valuable productive outlets. Inflation is the result. Think of the supply of only one commodity—labor. If fiscal spending has a multiplier greater than one, every dollar spent creates more than a dollar’s worth of demand—more hours worked. Absent a change in relative bargaining power, new jobs are created as fast as new money is created, so wages creep up only slowly. At some point, though, this natural increase is exhausted. Unemployment is at its frictional lower bound and “shovel-ready” projects are tapped out. Returns on investment fall. This is [when inflation accelerates](#). Expectations become unanchored, and spirals result.

In the 1970s, a decade-long binge on government beneficence ran into decreasing returns. The Vietnam War and the expansion of entitlement programs did not have salutary productivity effects, and Fed chairman Arthur Burns’ refusal to “take away the punch bowl” (in the words of his predecessor, William McChesney Martin) set the stage for an economy that was highly susceptible to price shocks.



<https://www.csmonitor.com/Business/2008/0303/p01s01-usec.html>

Unfortunately, many economists and market participants learned the wrong lessons from the ‘70s which ill prepared them for the experience of the 2008 crisis. The stagflation of the Ford and Carter years was seen as vindication of the “quantity theory” of money, expressed in the simple equation $MV = PT$ (money supply times velocity equals the price level times the total number of transactions). The influential economist Milton Friedman held that the Great Depression had been caused by the Federal Reserve failing to arrest a precipitous drop in the money supply. Buttressed with meticulous historical documentation, Friedman eloquently articulated a theory of “monetarism” which held, against prevailing Keynesian orthodoxy, that if the money supply was expanded too fast—faster than the natural growth rate in the economy—inflation would ensue without corresponding increases in output. In other words, stagflation.

The economic woes of the '70s seemed to justify Friedman's position, and indeed much of his work on business cycles and money served as a valuable corrective to a naïve faith in fiscal demand management. On the other hand, many of his followers misread the history of financial crises and adopted an overly simplistic version of Friedman's theory, expressed in the patently incorrect catechism "inflation is always and everywhere a monetary phenomenon". They also applied the theory far too widely. This is why a number of libertarian-leaning economists and money managers were proven wrong when they penned an infamous open letter to then-Fed chair Ben Bernanke in 2010 warning that planned quantitative easing programs risked ["currency debasement and inflation"](#).⁴ The quantity theory's equation of exchange is older than Friedman—it was laid out separately, [in slightly different contexts](#), by the American economist Irving Fisher and the Swedish economist Knut Wicksell in the nineteen-teens. It is true enough to be an identity. But it is only part of the story.

In a metallic economy, the supply of money (coins) determines the price level. Simple as that. If an economy with a relatively fixed stock of goods encounters a sudden increase in the metallic base, money prices of goods must go up. This is what happened when discoveries of American [gold and silver flooded into Europe](#) in the 16th and 17th centuries. Prices in Spain [doubled from 1500 to 1650](#), a relatively large increase for the time. The quantity theory of money originated as early as 1568 in the writings of the French lawyer, Jean Bodin, who argued that [the influx of Peruvian silver was the chief culprit](#) of his era's inflation. Students of American history remember the populist presidential candidate William Jennings Bryan's "Cross of Gold" speech; he was demanding silver coinage to increase the metallic base and thus the price for agricultural commodities.



Images source: Wikipedia

But we do not live in a metallic economy. Nor would fixing the money supply to a gold standard or binding our monetary authority to a mechanical Taylor rule by itself foster price stability. This is both because technology constantly changes both the quantity and quality of goods in the market with unpredictable effects, and because banks and non-bank lenders generate *credit*. Most of the time, credit is synonymous with money. After all, you can buy a coffee with nothing but a credit card, and you can buy a house with very little money down.

In Friedman's view, the "V" and "T" on either side of the $MV = PT$ equation varied only slowly. Money velocity (the number of times a given unit of currency changes hands) and the index of total transactions do exhibit slow and steady growth over longer periods. In crises, however, they both have the habit of fluctuating a lot. Taking money out of banks and putting it under a mattress does a lot to slow the speed of circulation; similarly, 8% annualized drops in GDP [do happen](#) from time to time.

More significantly, central banks do not have a monopoly on what is used for money. M1, or the total of all physical currency and demandable bank deposits, is \$5 trillion in the United States. M3, which includes time deposits, savings bonds, institutional and retail money market funds, and short-term repurchase ("repo") agreements is closer to \$18 trillion. Thanks to the mechanism of fractional reserve lending, the private banking system actually *creates* money. By setting reserve rate requirements, the Fed can influence growth in the money supply, but it never has complete control. As an illustration, assume the Fed manufactures a \$100 deposit ("prints money") in Bank A's reserve account. Bank A is required to keep 10% in reserve and lends the remaining \$90 to an entrepreneur. The entrepreneur may spend this money immediately, or may save some for a later date, but, either way, someone receives \$90 which turns up in a deposit at Bank B. Bank B will also keep 10% in reserve, but is then free to lend \$81 dollars to another entrepreneur. And so on. Only $\$10 + \$9 = \$19$ are on reserve at banks, while two entrepreneurs have access to $\$90 + \$81 = \$171$ of borrowing in the economy. The limit of this process is $1 / R$, where R is the reserve ratio. \$100 of Fed deposits times $1 / 10\%$, produces \$1,000 of high-powered money.

The signatories to the "Open Letter to Ben Bernanke" missed two key factors. The first was that it was not just the depository banks that were creating money: money market funds, repo dealers, and other "shadow banks" such as collateralized debt obligations (CDO's) were also issuing money-like certificates of short-term credit at a faster clip than the traditional banking system. This phenomenon was relatively new, and it is perhaps understandable that so many commentators ignored it. The second factor should have been obvious. The money multiplier described in the paragraph above works just as quickly in reverse. When the chain of lending abruptly breaks, what used to be a money multiplier becomes a "money contractor". And when the unregulated financial sector is doing the banking, vast increases in liquid reserves at depository institutions will not automatically show up in the money supply. Indeed, at times during the last crisis, [broad money actually shrank](#). Understanding whether this will happen again in the wake of the coronavirus will require a brief survey of developments in the financial system—above all, the roots of demand for and supply of "safe assets".

The "Safe Assets" View of the World

Economic historian Gary Gorton [has written that](#) "all of human history can be written as the search for and the production of different forms of safe assets." What is a safe asset? Simply put, an asset is safe if it can be used at low cost as money—both as a store of value and as a medium of exchange. Characteristically, such a safe asset is "informationally insensitive" and has low or negative "beta". That is to say, changes in the market or in the economy have very little impact on the asset's value. One reason an asset might be deemed low beta is because it carries insurance—for example, a Treasury security is backed by the "full faith and credit" of the U.S. government, the world's largest collector of taxes. Another reason may be that it is difficult to understand. Hence, AAA tranches of securitized debt which are very complicated and hard to model will not vary much in value due to small shifts in credit markets. The [opacity of asset backed securities](#), in the safe assets view of the world, is a feature, not a bug. The important thing is that an asset can be exchanged at face value, no questions asked.

Throughout history the composition of safe assets in the world has changed. In medieval and early modern economies, nothing was safer than a coin—you could weigh it, assay it, or even melt it down, but most of the time, you need not bother. Unfortunately, coins are heavy and difficult to transport, and they lead to the [“big problem of small change”](#) where it actually costs a mint more to make small denominations useful for private commerce than the coins are worth. If money is about having no questions asked, the money supply will unravel once some people start asking questions. The entire edifice of the coinage is built on [common knowledge](#): everyone knows that everyone knows that a coin is worth what it says it’s worth. Unravelings of monetary systems are common throughout history when coins are clipped, sweated, or debased by the sovereign—financial panics and inflations occurred in 1278 and in 1619, leading to states stamping coins to officially certify them, or to milling them with serrated edges to make clipping apparent. The famous Weimar Republic, Zimbabwe, and Venezuela [hyperinflations](#) ended when a new currency was introduced.

It was a long time before states could go from printing coins to issuing debt—sovereigns initially had little credit as they had little taxing authority. Funds were raised only to fight wars and repayment was conditional on victory. It was Renaissance city-states that pioneered the issuance of a permanent debt backed by tolls, customs duties, and taxes on commodities.⁵ As nation states gained better revenue collection capacity, they issued such perpetual annuities as the [French rente of 1738](#), or [English consols](#) (for “consolidated stock”) of 1752. Paper money, or bank notes—literally “promissory notes” of the central bank—were invented in China but failed to catch on until the Bank of England began issuing them in the late 17th century. The distinction between government debt and paper money should not be drawn too finely; in essence, a hundred-dollar bill is nothing more than a perpetual, zero-coupon bond of the United States Treasury.⁶



A 19th century safe asset. Source: Wikipedia

By the 19th century, the private sector was getting into the act of manufacturing safe assets. During the “Free Banking” era in the United States (1837-1862), newly created banks, without a state charter, [issued their own banknotes](#) which were required to be backed, on demand, by specie. Despite this requirement, bank runs were common when rumors swirled of a paucity of physical collateral. Numerous banks failed. While they could only be redeemed by the bearer at the issuing bank, notes could be assigned (signed over) and thus served as money. The further from the source, the less well these notes functioned. With greater distance, [greater discounts were demanded](#) by local brokers—presumably both because of transaction costs

and the problem of remote supervision. The Free Banking Era ended with the Civil War and the rise of

a single bill—United States Notes, or “greenbacks”, which were not backed with gold or silver, but simply by the credit of the U.S. government.⁷

Here we see an example of one of the chief advantages of public money over private: private money is vulnerable to runs and flights-to-quality. Private sector money creators, like the packagers of AAA asset-

backed securities in the early 2000s, produce a wide array of heterogeneous products. There is a strategic complementarity of a single focal point—the one place everyone knows to shelter in a crisis. This is why [yields on U.S. government bonds fell](#), perversely, when the country’s credit rating was downgraded by S&P in 2011. There was no alternative to the world’s reserve currency, which [denominates over 80%](#) of global cross-border transactions. On the other hand, even a high level of collateralization, with gold, silver, mortgages, or other bonds, is an imperfect solution to the problem of runs: when questions begin to be asked about collateral—“how much?” or “how good?”—an asset ceases to function as money.

Over time, there has been a dramatic structural transformation of the market for private safe assets. Once, only physically backed notes had this attribute. By the middle of the 20th century, with the advent of deposit insurance, demand deposits at banks counted (think of personal checks). As economists Ricardo Caballero, Emmanuel Farhi, and Pierre-Olivier Gourinchas (CFG) highlight, in recent decades financial engineers have invented a panoply of new forms: “As the financial sector became more sophisticated, this category of ‘safe’ assets expanded to include money-like debt (for example, commercial paper, money market funds, repurchase agreements) and private label AAA asset-backed securities.”⁸

The supply of safe assets, whether sourced from government or private actors, is, of course, only half the story. Equally important is demand. In 2005, when Ben Bernanke was a member of the Federal Reserve Board of Governors, he gave a speech pointing to “a significant increase in the global supply of saving”, a stylized fact which became known as the “global savings glut”. As an explanation for why U.S. and other developed market interest rates remained so relatively low in the midst of so much borrowing and spending by American shoppers and homebuyers, a story about the oversupply of savings in (largely) East Asian economies fit nicely. China sold America lots of stuff; in return its firms and households, evincing a higher propensity for precautionary savings, bought Treasuries with the dollars they received.

CFG write, “For the last few decades, with minor cyclical interruptions, the supply of safe assets has not kept up with global demand. The reason is straightforward: the collective growth rate of the advanced economies that produce safe assets has been lower than the world’s growth rate, which has been driven disproportionately by the high growth rate of high-saving emerging economies such as China. If demand for safe assets is proportional to emerging economies’ share of global output, this shortage of safe assets is here to stay.”⁹

The natural result of such an imbalance is that the price of safe assets must go up and their yields steadily fall. This might account to the multidecade decline in nominal interest rates across the rich world. From this point of view, the U.S. specialized in selling the world a form of insurance – a dollar-backed guarantee that the world’s savings would not lose value. There is a kind of natural monopoly in providing a global reserve currency. Network effects and scale economies lead to a tendency toward a single unit of account. To see America’s export of liquidity in action, simply look at the growing balance of Eurodollars—deposit accounts held in dollars at banks outside the United States. This amount is estimated to have risen from \$1 billion in the 1950s to more than \$5 trillion by the mid-2000s.¹⁰

Safe assets—public debts—are, paradoxically, also public goods: the world needs such assets, but their providers fail to capture their full social value. Indeed, as the value of the dollar rose, U.S. goods exports became less competitive and the U.S. shed jobs overseas. Countries such as China were, in effect, free riding on the U.S. capital account. While China and its neighbors grew faster than the U.S., there was greater demand for U.S. government debt than the American economy would otherwise have supported. Into the breach, naturally, stepped Wall Street. Going into the crisis, the safe asset shortage led to an unprecedented increase in the creation of private monies which served as, effectively, surrogate Treasuries.

Securitization was Wall Street’s way of transmuting loans that were illiquid, information- and credit-sensitive, and long-dated into informationally insensitive, short-maturity, liquid bonds. Much of this was done by the “shadow banking” sector since [banks had lost their monopoly on credit creation](#) after Regulation Q capped the rates banks could offer on deposits. It took the form of short-term corporate debt (commercial paper), asset-backed debt (MBS, CDOs of MBS, and other “exotic” ABS), and wholesale collateralized funding (repo). Gorton writes, “Leading up to the recent crisis there was a shortage of government long-term safe debt, so agents were increasingly using privately-produced long-term debt, AAA/Aaa asset-backed and mortgage-backed securities (ABS/MBS). The outcome of this – short-term privately-produced debt backed by long-term privately-produced debt – was the financial crisis, a devastating event in terms of human costs.”¹¹

The reason this history is relevant to the discussion of inflation is that the post-crisis collapse in the supply of safe assets was a severe disinflationary shock. To the extent that safe assets were not merely stores of value but were also used to facilitate trading and commerce (that is, they had a convenience yield), the destruction of trillions of dollars of previously “safe” assets opened a gaping hole in the money supply. Ratings were slashed, issuers of quasi-government debt such as the GSEs were put into conservatorship, and entire countries such as Italy and Spain had their sovereign credit questioned by investors (see table below). It was this novel, pronounced shortage of money to which asset purchase programs and debt backstops by central banks were intended to address. The money supply that greases financial transactions what ultimately determines whether a home purchaser can get a mortgage, or a business can get a loan. This supply utterly imploded. Additionally, [legislation raised bank reserve requirements](#), and declining confidence in counterparties prompted banks to hoard liquidity. In total, much of the money supply that matters most disappeared overnight. With this insight, the fact that inflation did not ensue as central banks rode to the rescue is hardly surprising.

Table 1
A List of Safe Assets—Pre- and Post-Crisis

	<i>Billions of US\$</i>		<i>% of world GDP</i>	
	<i>2007</i>	<i>2011</i>	<i>2007</i>	<i>2011</i>
US Federal government debt held by the public	5,136	10,692	9.2	15.8
Held by the Federal Reserve	736	1,700	1.3	2.5
Held by private investors	4,401	8,992	7.9	13.3
GSE obligations	2,910	2,023	5.2	3.0
Agency and GSE-backed mortgage pools	4,464	6,283	8.0	9.3
Private-issue ABS	3,901	1,277	7.0	1.9
German and French government debt	2,492	3,270	4.5	4.8
Italian and Spanish government data	2,380	3,143	4.3	4.7
Safe assets	20,548	12,262	36.9	18.1

Source: Barclays Capital (2012). Data came from Federal Reserve Flow of Funds, Haver Analytics, and Barclays Capital.

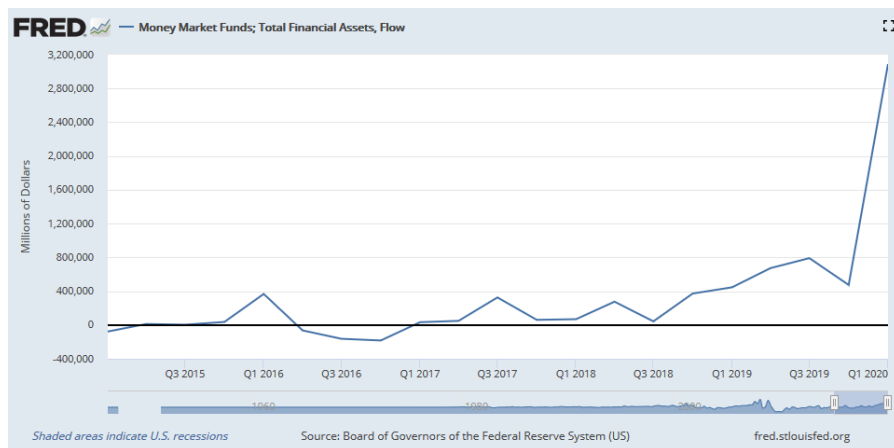
Note: Numbers are struck through if they are believed to have lost their “safe haven” status after 2007. GSE means “government-sponsored enterprise.” ABS means “asset-backed security.”

Table from Caballero, Farhi and Gourinchas, “The Safe Asset Shortage Conundrum,” p. 32.

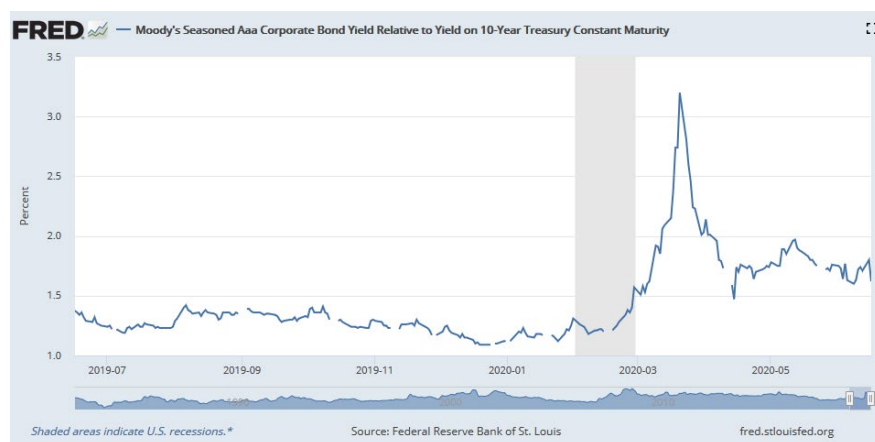
Going into the crisis, safe assets were already undersupplied, as testified by falling interest rates across the rich world. The meltdown itself exacerbated this condition at exactly the moment when households, banks, and businesses were craving safety the most. It is apparent that excess safe asset demand has disinflationary consequences. In a 2014 article titled [“Why Is Euro Inflation So Low”](#), economist Jean-Pierre

Landau wrote, “Essentially, economic agents develop a strong inclination for holding money and government bonds, in preference to any other financial or real assets; and, in so doing, *are induced to cut down on their expenditures*. This is both a sign and a consequence of extreme risk aversion. As a result, Europe may be caught into a ‘safety trap’ from which there is no escape other than a temporary transfer of risk from private to public balance sheets.” [Emphasis mine]

Therefore, the crucial consideration of the moment is whether this crisis is like the last one with respect to the total money supply. Is the market unable to provide the safety that savers seek in developed and emerging economies alike? In a safety trap, it is not lack of demand that causes disinflation. Rather both deflation and demand shortages are common outgrowths of underlying financial market disfunction. While it is hard to know exactly how the shadow banking sector is faring in real time, we find that the collapse in safe asset supply seen in 2008 has not been repeated in 2020. The best evidence for this comes from the Federal Reserve’s quarterly [Flow of Funds](#) report. For just one example, net flows into money market funds hit a record \$3 trillion in the first quarter.



The Federal Reserve’s rescue programs have been larger, broader, and more rapid in 2020 than in 2008-2009, with credit spreads widening sharply at first then coming back in.



More to the point, the U.S. Treasury may do as much in 2020 to alleviate the safe asset supply shortage as the entire private sector did in the decade up to the financial crisis, issuing nearly \$4 trillion in new Treasury securities. Other governments are also selling safe bonds in the hundreds of billions of dollars. There is no doubt that the pace of money supply growth across both the real economy and the global financial system is unprecedented. Arguably, unconventional monetary policies such as QE that gobble up all the safe assets

are not actually productive in a safety trap scenario—they simply substitute one safe asset (cash) for another (Treasuries). CFG write, “if a shortage of safe assets is the main reason behind the economic downturn, and the constraints on those that demand these assets to shift their portfolios into riskier assets are severe, reducing the available supply of safe assets via central bank purchases may aggravate the problem.”¹² Central banks have learned their lessons here. They are now engaged in a quasi-fiscal risk transformation: [buying corporate bonds directly](#). These actions, and others targeted at specific bottlenecks in financial systems, will avert the severe shortage of money-like debt witnessed in the aftermath of the financial crisis.

The revival asset purchase programs and the resilience of much of the money market does not mean inflation is guaranteed. We must also consider the structural forces that underpin safe asset demand. After the crisis is over, demand in the real economy will return. If it is swamped by the savings desire of billions of emerging market households and a rapidly aging rich world population needing to rebuild scarred balance sheets, it will be hard to shake deflationary expectations. A ten-year German bund with a 0% coupon looks like a good investment if one is facing a decade of falling prices. To weigh the balance of factors, we should look beyond than COVID economy to the world of 2025 or 2030.

The Great Rebalancing

As Clive Crook argues in a [Bloomberg column](#), it is possible to envision a new equilibrium, a few years hence, in which there is a lot more public spending, borrowing, and money-printing in the system than there is demand to soak it all up. Opposition to austerity is spreading and central bank independence is eroding. As in the past, an upward dollar adjustment would allow the U.S. to run structurally higher deficits for years, but this would hurt American competitiveness and further pressure on U.S. manufactures is no longer as politically feasible. The United States’ fiscal capacity is limited by expectations that future tax rises would impair growth, or that more borrowing may crowd out private sector activity. Central banks may be increasingly returning to their original role – lenders to the government.

Trade wars, deglobalization, and safe asset shortages are all symptoms of a deeper imbalance. The U.S. currently finds itself in an international situation analogous to the Bretton Woods-era [Triffin dilemma](#). In 1960, economist Robert Triffin pointed out that the U.S. could not simultaneously satisfy the world’s demand for a reserve currency and continue to back its currency with gold. Triffin was proved correct when Nixon suspended convertibility in 1971. Today, the U.S. cannot both sate the world’s thirst for safe assets and steer a sustainable debt dynamic. Of course, no one knows where a threshold of “sustainability” is. Japan currently runs a public debt-to-GDP ratio [in excess of 200%](#) while the yen remains a “safe haven” currency; the U.S. is [likely to cross 100% this year](#). But for a release of the downward pressure on yields and lift-off of inflation, something in the international financial system must give.

One day, perhaps soon, [as Stephen Roach of Yale and formerly of Morgan Stanley writes](#), the EU, China, and other emerging nations will begin to produce more safe assets to satiate their internal demand. This would be accompanied by a fall in the dollar, which would certainly raise the specter of imported inflation, as in the 1970s. Yet such a scenario would require China to make significant progress in liberalizing its capital account, further develop its financial markets (which are [still rife with fraud, distrust, and bubbles](#)) and produce more investible outlets for domestic savers. The RMB may gain share in global transactions at the expense of the dollar as China [moves more aggressively into digital payments](#). More likely, as China transitions its economic model, it will simply [reduce its savings rate](#). China’s [own demographic challenges](#), however, make such an evolution challenging. Ultimately, both the safe asset supply and demand curves must shift for inflationary expectations to begin to take root. In our judgment, inflation is likely to remain

quiescent in the United States until there is clear progress on reversing global imbalances; COVID-19 is accelerating these trends, but they remain a multiyear process.

For investors, getting the timing right will be difficult. So much of the outlook for inflation depends on judging the direction and magnitude of policy. Not just policy today—it is fairly clear that if Congress returns to its deficit hawk script, relief measures announced thus far will do little more than staunch current bleeding in personal and firm finances. State and local governments, to take just one example, [face \\$500 billion in budget cuts over the next two years](#), according to Moody's Analytics. The economic effects of such a contraction will be felt far more widely.

Judging shifts in the political winds, as many Wall Street strategists are now attempting, is often a fool's errand. We can hardly predict the outcome of the November presidential election, much less the battle over Congressional appropriations in 2025. But there do seem to exist trends toward increased tolerance of debts, deficits, and inflation that could find their way into expectations over the next few years. Government spending may thread the needle of providing vital infrastructure and increasing the quantity and quality of jobs.¹³ But, for the United States at least, our bet would not be on such a sea change. Inflation is a more likely result than a step-change in economic productivity. Finally, our reading of the money supply argument implies that total excess liquidity is indeed increasing, albeit at a rate slower than the headline figures claim. One party's debt is another party's asset. If those debts are not rolled over, safe asset seekers will find alternatives, and greater economic dysfunction is likely to arise.

In recent years, the return of inflation has been prophesied as often as central banks have made major policy announcements. In 2018, for example, when interest rates were on the rise and [CPI was running close to 3%](#), it was commonplace to declare the death of the great bond bull market. Such forecasts were wrong, as it turned out. But no bull market can live forever. Eventually yields must hit a nadir. Inflation inspires such fear among investors because when you buy a 30-year Treasury bond yielding 1%, any sustained pickup in inflation above expectations will make for a very unpleasant experience. The risks for bondholders are heavily asymmetric.

The last 30 years of financial history in the United States has been written by the baby boom generation. Bond yields have plunged, home prices have soared, inflation has been conquered by the Fed, and major fiscal investments in infrastructure, healthcare, and social security have been put off for a later date. An era of aggressive borrowing and tax cutting in the United States has been enabled by the rise of a generation of savers in East Asia. This trend too will come to an end. Younger voters with no memory of the 1970s are likely to resuscitate fiscal policy, not least around the issue of climate change. Investments may be made to redress inequality. The non-dollar financial system will [inexorably rise](#) as alternatives emerge. Bonds will look like questionable investments, while "high quality" staples and consumer technology stocks will be less attractive. Inflation hedges like real estate will gain popularity, while cyclicals such as banks, industrials, and infrastructure may assume market leadership. But this, like all generational transitions, will take time. When the veteran China watcher and economist Michael Pettis wrote a book in 2013 titled [The Great Rebalancing](#), he envisioned a process of decoupling that would last a decade. China and America would end their codependency as China navigates the middle-income trap, becoming a more consumption-driven economy. We are nearly eight years into that decade while the process Pettis anticipated is still in its infancy.

Investors interested in how to position around this scenario should see our companion piece, "Inflation: Will the Dog Bark This Time?" The executive summary is to avoid long duration assets, revisit cyclical industries, and prioritize companies with pricing power. But the most important investment virtue is

patience. Secular changes, as their name suggests, can take an age.¹⁴ The “reflation trade” has come and gone many times in the last decade but positioning a portfolio to last is a holistic process. When the shock comes, it will be a surprise—whether war, or climate, or trade, or something else—and its timing will be difficult to foresee. With one eye on the many financial and economic factors that conspire to hold back inflation, and another on those rising forces that augur its resurgence, the best we can do is to be prepared.

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¹ King, Mervyn. (2016). *The End of Alchemy*. New York: W.W. Norton, 185.

² For an overview of the factors that caused the great inflation of the 1970s see former Federal Reserve vice chair Alan Blinder’s excellent summary: <https://www.nber.org/chapters/c11462.pdf>.

³ “Receipts” are not the same as “rates”. Improving growth will raise fiscal revenues even if tax rates are not hiked. Debts and deficits are measured as a share of the overall economy, and thus government debt-to-GDP is the most frequently quoted metric. If deficit spending *increases* the long-run trend rate of growth—for example if it is spent on critical transportation infrastructure [such as the Eisenhower Interstate Highway System](#), initial deficit spending can actually make the steady-state debt-to-GDP ratio go *down*—by increasing the denominator faster than the increase in the numerator.

⁴ The effectiveness of quantitative easing has been much debated. Even [Bernanke admitted](#), QE “works in practice but not in theory.” Arguments against QE, besides claims that it distorts financial markets, ultimately take the form of appeals to the neutrality of money—money can change nominal economic variables, such as prices, wages, exchange rates, or GDP, but not real ones. An even stronger form claims that the Fed cannot even engineer inflation if markets believe QE programs will be withdrawn eventually. While these concerns have some validity, a consensus has emerged that QE was effective at lowering rates and credit spreads through two channels: a “signaling” channel by which the Fed communicates its commitment to support markets, and a credit channel, in which it buys unconventional assets like mortgage-backed securities, providing liquidity to a distressed market. See this paper by Krishnamurthy and Vissing-Jorgensen: <https://www.nber.org/papers/w17555>. Some central banks aim to exploit the signaling channel by means of “[yield curve control](#)”, a strategy by which they target prices rather than quantities, setting caps on yields and hoping, if they are believed by the market, to loose less firepower.

⁵ For a review of the history of sovereign credit, see Stasavage, David. (2011). *States of Credit: Size, Power, and the Development of European Polities*. Princeton University Press.

⁶ Thus, when as part of a Quantitative Easing (QE) program, the Fed commits to buying one form of government liability (Treasury bonds) with another (freshly created cash), it is doing nothing more than a maturity swap. It is not increasing the amount of debt, but merely shifting its maturity from, say, 10 years, to forever. This not truly different than ordinary Open Market Operations. When the Fed buys credit assets, like mortgage backed securities or [corporate bonds](#), it is replacing private sector obligations with government ones, and is engaging in something more akin to fiscal policy.

⁷ This contrasts with the [Confederate States dollar](#), or “greyback” which was backed by the promise to pay the bearer only after Southern victory and independence. When Union forces blockaded Southern ports, stopping the export of cotton, the Confederacy, with limited tax collection machinery, simply printed more notes, depreciating the greyback and triggering inflation. News of the defeat at Gettysburg caused the value of the currency to fall by 20% in terms of goods.

⁸ Caballero, Ricardo, Emmanuel Farhi, and Pierre-Olivier Gourinchas. (2017). [“The Safe Asset Shortage Conundrum,”](#) *Journal of Economic Perspectives* 31, no. 3., 40.

⁹ Ibid, 30.

¹⁰ Carbaugh, Robert J. (2009). *International Economics*, 12th edition. Cengage Learning, 530.

¹¹ Gorton, Gary. (2016). [“The History and Economics of Safe Assets,”](#) NBER Working Paper, 1.

¹² Caballero, Farhi, and Gourinchas, 42.

¹³ Larry Summers [recently claimed](#) that “The deepest truth about debt is that you can’t evaluate borrowing without knowing what it’s going to be used for. Borrowing to invest in ways that earn a higher return than the cost of borrowing, and provide the wherewithal for debt service with an excess leftover, is generally a good and sustainable thing. Borrowing to finance consumption, leaving no return to cover debt service, is generally an unsustainable and problematic thing.” The unknown is whether investors trust the U.S. government to make those types of investments.

¹⁴ Secular (adj.) “occurring once in an age or a century”, from the Latin *saecularis* “of an age, occurring once in an age”. <https://www.etymonline.com/word/secular>.