HARWOOD
Economic Review

AMERICAN INSTITUTE FOR ECONOMIC RESEARCH

FALL 2022 Volume 6, Issue 3

SURGING PRICES, RISING UNCERTAINTY

ON THE CUSP

Harwood Economic Review

AMERICAN INSTITUTE FOR ECONOMIC RESEARCH

A Letter from the Managing Editor

Peter C. Earle

Signs of autumn are appearing everywhere here in the Berkshires. Tourists have departed, mornings are getting cooler, and the famed New England foliage is poised to enter its harlequin phase.

The inflationary updraft which a year ago was dismissed as *transitory* has proven to be anything but. The August 2022 headline CPI number came in at 8.3 percent. That is an easing from July's 9.1 percent headline CPI, owing to falling energy prices, but food prices continue to rise. The core (excluding food and energy) CPI for August 2022 came in at 6.3 percent. It now exhibits two of inflation's most troubling characteristics: unpredictability and stubbornness. The Federal Reserve has raised rates five times this year. Lag effects apply, of course, but presently, the rise in the general price level continues unabated.

As inflation rises, the range of future outcomes broadens. Perhaps one year from now headline CPI will be down to 3 percent year-over-year. That would be better than it is currently, but individuals and firms that altered their current plans expecting the same or higher inflation will have wasted money and time. Similarly, if inflation is higher at this time next year–say, 12 percent–producers and consumers that reorganized in anticipation of lower inflation will have misspent funds, inefficiently allocated resources, and likely foregone certain opportunities. Consumers rebalance budgets as price changes occur. Producers, in addition to the considerable task of anticipating customer tastes, must now estimate not only the price their goods and services will fetch in future markets, but what price changes in factor inputs, wages, transportation, marketing, and retailing may bring. And those shifts in price need to be re-evaluated by businessmen and entrepreneurs on an ongoing basis.

Producers and consumers also need to be concerned about what policy makers do to address rising or persistently high prices. For eight months now, amid the highest inflation in forty years, we have seen four political responses. First came the conflation of relative price changes with inflation, by blaming the war in Ukraine for the increase in the general price level. Then, blaming the general rise in prices on private industry ranging from gas station owners to billionaires. The next tactic was to selectively pick economic numbers and misrepresent their significance, such as the *0.0* percent change in headline CPI from July to August 2022. And most recently, on *60 Minutes*, Americans witnessed the President essentially denying the existence of inflation altogether. History strongly suggests that if inflation worsens, price controls will be implemented to some extent or another.

Money is the *high ground*. Control over the rate at which the money supply grows or shrinks, where and how it enters the global economy, and which individuals or entities receive it first substantially influences the fate of billions of people the world over. Unsound money heightens uncertainty. We know that we are at the cusp of significant economic change. But change to, or toward, what?

This is the same battle that AIER's founder, E.C. Harwood, engaged in for over half a century. It is the battle that AIER continues fighting in his stead. Your support makes our fight possible. Thank you!

Peter C. Earle
Managing Editor, *Harwood Economic Review*

FOMC Projects Even Higher Inflation

William J. Luther and Morgan Timmann

Fed officials raised their projections for inflation this week. The median Federal Open Market Committee (FOMC) member now projects inflation will be 5.2 percent in 2022, up from 4.3 percent projected back in March. The most recent revision follows a string of misses at the Fed, which consistently underestimated the extent to which prices would grow over the latest year and a half. The median FOMC members' projection of inflation has increased every quarter since June 2020.

The Personal Consumption Expenditures Price Index (PCEPI), which is the Fed's preferred measure for inflation, grew at a continuously compounding annual rate of 6.1 percent from April 2021 to April 2022. Core PCEPI, which excludes volatile food and energy prices, grew 4.8 percent. The Consumer Price Index, released last Friday, grew extraordinarily, portending an uptick in PCEPI inflation for May.

FOMC Projections

It is difficult to predict how the FOMC will conduct monetary policy over the next few years. It raised its federal funds rate target by 75 basis points on June 15, even though Chair Powell seemed to have ruled out increases of greater than 50 basis points after the previous meeting.

The FOMC says it will continue hiking rates and reducing its balance sheet to bring inflation back down to 2 percent. But inflation looks likely to remain above the Fed's target for some time. Immediately following this week's FOMC meeting, bond markets were pricing in around 2.80 percent inflation on average over the next five years, down from 2.86 percent the week prior.

FOMC member projections provide some indication of how quickly the Fed intends to bring down inflation. Members are asked to project inflation under the assumption that the Fed conducts monetary policy appropriately. Hence, the projections indicate how inflation will evolve if FOMC members do what they say they should do.

The median, central tendency, and range of FOMC member projections are presented in The Summary of Economic Projections and reproduced in the tables to the right. The central tendency of PCEPI projections is constructed by removing the three lowest and highest projections submitted for each period.

Median FOMC member projections of inflation

Projection Date	2021	2022	2023	2024	Longer run
June 2020	1.6	1.7			2.0
September 2020	1.7	1.8	2.0		2.0
December 2020	1.8	1.9	2.0		2.0
March 2021	2.4	2.0	2.1		2.0
June 2021	3.4	2.1	2.2		2.0
September 2021	4.2	2.2	2.2	2.1	2.0
December 2021	5.3	2.6	2.3	2.1	2.0
March 2022		4.3	2.7	2.3	2.0
June 2022		5.2	2.6	2.2	2.0

Central tendency of FOMC member projections of inflation

Projection Date	2021	2022	2023	2024	Longer run
June 2020	1.4–1.7	1.6–1.8			2.0
Sept. 2020	1.6–1.9	1.7–1.9	1.9–2.0		2.0
Dec. 2020	1.9–1.9	1.8–2.0	1.9–2.1		2.0
March 2021	2.2–2.4	1.8–2.1	2.0–2.2		2.0
June 2021	3.1–3.5	1.9–2.3	2.0–2.2		2.0
Sept. 2021	4.0–4.3	2.0–2.5	2.0–2.3	2.0–2.2	2.0
Dec. 2021	5.3–5.4	2.2–3.0	2.1–2.5	2.0–2.2	2.0
March 2022		4.1–4.7	2.3–3.0	2.1–2.4	2.0
June 2022		5.0–5.3	2.4–3.0	2.0–2.5	2.0

Range of FOMC member projections of inflation

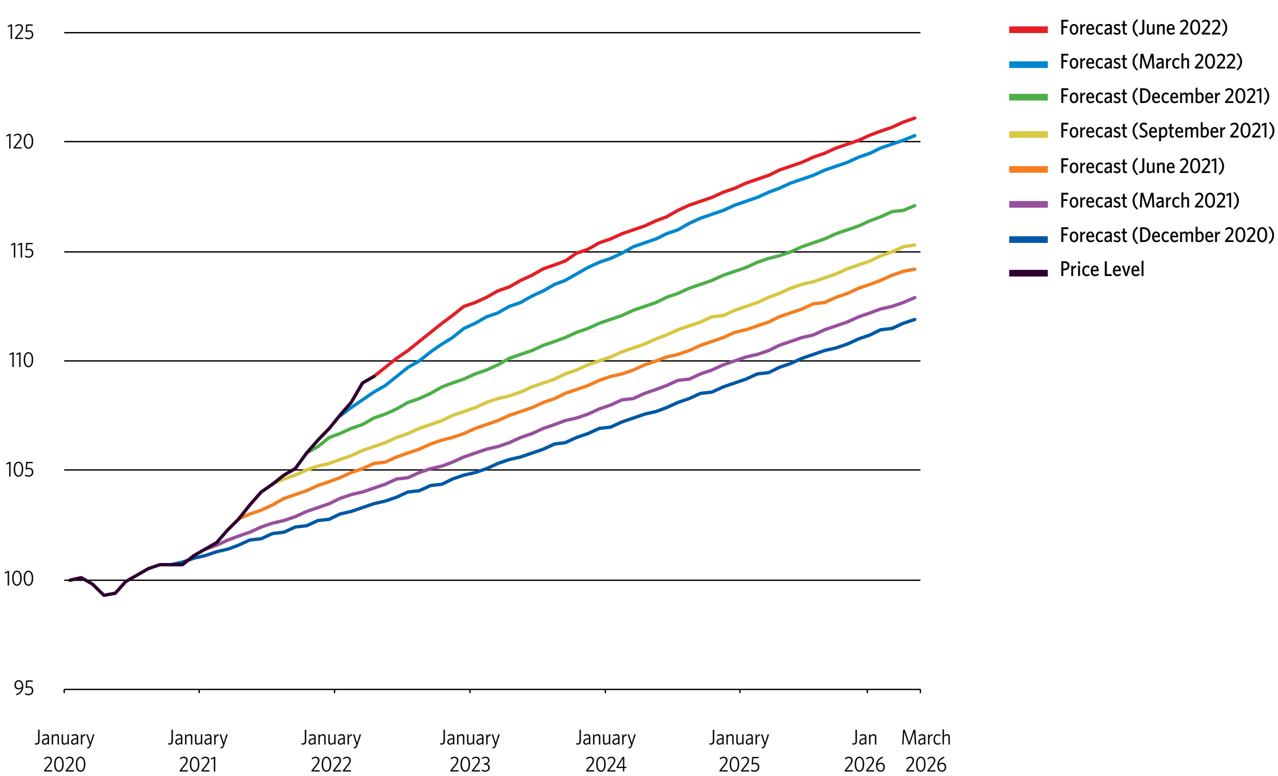
Projection Date	2021	2022	2023	2024	Longer run
June 2020	1.1–2.0	1.4–2.2			2.0
Sept. 2020	1.3–2.4	1.5–2.2	1.7–2.1		2.0
Dec. 2020	1.5–2.3	1.6–2.2	1.7–2.2		2.0
March 2021	2.1–2.6	1.8–2.3	1.9–2.3		2.0
June 2021	3.0–3.9	1.6–2.5	1.9–2.3		2.0
Sept. 2021	3.4–4.4	1.7–3.0	1.9–2.4	2.0–2.3	2.0
Dec. 2021	5.3–5.5	2.0–3.2	2.0–2.5	2.0–2.2	2.0
March 2022		3.7–5..5	2.0–2.5	2.0–2.2	2.0
June 2022		4.8–6.2	2.3–4.0	2.0–3.0	2.0

The median FOMC members' inflation projection for 2022 increased by 0.9 percentage points between March and June. Projections now range from 4.8 to 6.2 percent, with a central tendency of 5.0 to 5.3 percent. Back in March, projections ranged from 3.7 to 5.5 percent, with a central tendency of 4.1 to 4.7 percent.

Forecasting Prices

Higher projected inflation rates over the next three years suggest prices will be much higher than previously implied by Fed officials. We forecast prices from FOMC member projections under the assumptions that (1) FOMC members set monetary policy consistent with their projections, (2) inflation is constant from month to month across each year, and (3) there are no unforeseen shocks to the economy over the forecast period. Forecasts from projections made since December 2020 are presented alongside the actual time series from January 2020 to April 2022 in Figure 1 below.

Figure 1 Forecast of Price Level from FOMC Member Projections



Our forecast of the price level based on median FOMC member projections indicates that prices will be roughly 12.7 percent higher in January 2023 than they were in January 2020, just prior to the pandemic. That amounts to a continuously compounding annual rate of inflation of 4.0 percent since January 2020. In March, the median FOMC member projected prices would be just 11.7 percent higher in January 2023—a continuously compounding annual rate of 3.7 percent since January 2020.

The median FOMC member now projects the price level will be 15.6 percent higher in January 2024 than it had been in January 2020—up from 14.7 percent projected in March. By January 2025, prices are projected to be 18.1 percent higher. Based on current projections, one can expect inflation to average 3.3 percent from January 2020 to January 2025—10 basis points higher than the median FOMC member projected in March and 130 basis points above the Fed's average inflation target.

It seems clear that the Fed has abandoned the plain meaning of its average inflation target. Inflation has been above target for more than a year. The Fed does not intend to offset this period of above-target inflation with a period of below-target inflation to ensure that inflation is on target on average. It is not even committed to bringing inflation back down to 2 percent very quickly. The median FOMC member currently projects inflation will remain above target through 2024.

We had better get used to high inflation. We will likely be dealing with it for years.

Bad Explanations for Inflation

Alexander William Salter

While decomposing inflation into its constituent parts is empirically tricky, its essence is simple. Inflation results from too much money chasing too few goods. Milton Friedman popularized this rule of thumb. Its combination of intelligibility and descriptive power explains why it's still widely used.

But not everyone got the memo. Politicians, bureaucrats, journalists, and Very Online™ academics are looking hard for other causes. Let's consider some bad explanations for inflation.

Greedy corporations!

The favorite of progressives in Congress, especially Senator Elizabeth Warren, this explanation is the worst of the lot. Corporations are always greedy. They want profits to be as large as possible. Yet inflation is rarely as high as it is now. The last time we saw the dollar depreciate this quickly was 40 years ago. Variable effects cannot be explained by a constant cause. Gravity does not cause one to trip and fall. Greed does not cause inflation.

Market power

In economics, *market power* means the ability of firms to charge prices in excess of marginal costs. Proponents of market-power explanations for inflation point to increased concentration in several industries over the last two years.

Assume for the sake of argument that industry concentration has increased. It still doesn't explain inflation.

First, the link between concentration and market power is weak. Sometimes concentration is driven by structural economic factors—an efficient response to changing economic circumstances. When that happens, there's no corresponding market power increase.

Second, the market power argument confuses the level of prices for the *growth rate* of prices. Inflation refers to the latter. Even if market power allowed firms to raise prices, it would be a one-time event. Inflation would temporarily spike, then return to trend. Instead, we've had a long period of above-trend inflation. It just doesn't add up.

Wage-price spiral!

Some bad explanations never die. The wage-spiral view was a mainstay of Keynesian (pseudo-)theories of inflation from the mid- to late-20th century. It was bad then and it's bad now.

Supposedly, rising prices cause workers to demand higher wages, which results in firms charging still higher prices to break even. It's a positive feedback loop. But it has two grave defects. One is conceptual. The other is factual.

Conceptually, it doesn't make sense for wages to outrun worker productivity. Firms can't afford to pay workers more than the value those workers add to the firm's bottom line. If you own a sandwich shop, and you think hiring a prospective worker would add $15 per hour in revenue, what's the most you'd be willing to pay him to work? You will lose money if you pay him more than $15 per hour. The dollar figure of the worker's output, what economists call the *marginal revenue product of labor*, is the upper bound on wages.

Factually, inflation has outpaced wage growth for months. The CPI increased 8.6 percent year-over-year, while nominal (dollar-valued) wages are only up 5 percent. That means workers have effectively taken a pay cut (i.e., after adjusting their wages for inflation). What wage-price spiral? If anything, firms are getting a deal!

Cost-push!

I'll take question-begging for $400, Alex! This theory of inflation says businesses pass on ("push") higher costs to consumers in the form of higher prices. But this isn't an explanation. It's just repeating the thing to be explained. Why are costs going up? You're right back where you started.

Improving public discourse

Hopefully, these lousy explanations will soon fade out of the public's consciousness. We need to focus on what matters: a comparative abundance of money over goods. To be clear, this doesn't mean inflation is 100 percent money-supply-driven. Lingering supply-chain issues from the pandemic and the ongoing war in Ukraine are part of the problem. Furthermore, we should be careful in weighing monetary and non-monetary factors.

Our Sound Money Project colleagues have done good work demonstrating money matters a lot right now. It's not the whole explanation, but it's the largest part. Armed with this knowledge, and inoculated against some of the silly explanations prevalent today, we can work towards policy solutions to regain control over the dollar's value.

Inflation and Time

Joshua R. Hendrickson

With higher rates of inflation in the news, I have been thinking a lot about how we measure inflation and how the general public talks about inflation.

Price theory is all about *relative prices*. Sometimes the *all else equal* assumption in economics masks this idea. When we think about the relationship between the price of lumber and the quantity demanded of lumber, we are holding everything else constant. Thus, what we are really thinking about is what happens to the quantity demanded of lumber when the *relative* price of lumber changes. A change in the money price of lumber (without the corresponding *all else equal* assumption) doesn't necessarily tell us much at all.

For example, suppose the government re-denominated the currency by adding a *0* onto the end of every denomination. In this scenario, everything denominated in dollars (including your income) would increase by a factor of ten. If this is all that changed, your demand for every good or service would be identical. Why? Because all prices and your income increased by a factor of 10, but the real value of your income didn't change and relative prices didn't change.

We can use this example to think about how we measure inflation. We define inflation as a sustained increase in money prices, on average, over time. That definition is straightforward enough, but it doesn't tell us much about how to construct a measurement of inflation. Nonetheless, we might be able to draw some insights from this simple example.

By adding a *0* onto the end of every denomination of currency, the money supply is increasing by a factor of 10. Money prices also increase by a factor of 10. Money prices, on average, increase by the same magnitude as the quantity of money. We have the most straightforward example of the Quantity Theory of Money that one can think of. But notice another important implication here. The change in the quantity of money and the change in prices had no effect on the well-being of the people in the model (no effect on their *utility*, to use economics jargon).

This point is important because in the real world, it is difficult to figure out why prices are changing. An increase in the money supply (all else equal) will lead to higher money prices. However, in the real world all else isn't equal. Sometimes the demand for money changes at the same time that the supply of money changes. Also, over any given period of time, the supply and demand for various goods and services change for reasons that have nothing to do with changes in the money supply. The changes in the money supply will tend to change the general level of money prices, whereas changes in supply and demand will cause changes in *relative* prices. When looking at any particular good, it is extremely difficult to disentangle these effects and relative price effects are certainly not what we are trying to measure when we measure inflation.

To measure inflation, we need to track how money prices change, on average, over time. One way to think about doing this is just measuring expenditures over time. For example, suppose that the only shopping that you do is once a week at the grocery store, and that you think your shopping is pretty representative of the average consumer. You could track the dollar value of what you spend each week to see if the monetary cost of your weekly trip is rising. Expenditures, however, measure the product of price and quantity. We are only interested in prices when we are trying to measure inflation. A rise in expenditures could be explained by prices, quantities, or a combination of the two.

Alternatively, you might conduct an experiment. Since all of your spending takes place once a week at the grocery store, you could simply commit to buying the exact same basket of goods every week. In theory, this seems great. The quantities are all fixed. Only prices change. Thus, any change in this measure of total expenditure must be due to prices, correct?

Well, it is actually not that simple. First, this is effectively a weighted average, but the weights are determined by the quantities in the basket. Are these quantities representative? Of whom? Second, since supply and demand for each individual good fluctuate, relative prices will change. These relative price changes will necessarily change the quantities consumed of each of these goods, but the quantities in the measure I have described wouldn't change. Third, if we are tracking these prices over a long enough period of time, there might be changes in the *quality* of the goods.

Going back to the re-denomination example reveals a key point about what we are trying to measure when we measure inflation. Supply and demand are all about relative prices. Inflation is all about money prices. In this crude example, if we measure inflation correctly, then changes in inflation should not produce any sort of changes in supply and demand for any particular good. In other words, we shouldn't predict different allocations for consumers if we measure income and prices in money terms than we do when we measure income and prices in real terms (adjusting for changes in the price level).

Of course, in reality, a lot of things change over time, and we have to do our measurement in the real world. Thus, what we want to measure when we measure the price level is the change in the cost of a constant-utility basket of goods. In the redenomination example, this is easy. In the real world, it is more difficult.

I won't bore you with the details, but economic theory tells us how to do this. But again, it is easier said than done. The typical way that we construct a price index in reality tends to locally approximate what economic theory tells us how to measure. But, when there are large relative price changes, this introduces considerable bias in measurement relative to the theoretical alternative.

An additional issue is that relative prices can change with a given period of time, but also across periods of time. Changes in relative prices across time are measured by interest rates. Thus, as Alchian and Klein taught us, a theoretically correct price index would also include asset prices.

By this point, you should draw one general lesson: this all seems pretty complicated. It therefore isn't all that surprising that the general public might complain about how inflation is measured given that it is clearly measured imperfectly relative to what economic theory suggests.

Nonetheless, these aren't the typical issues and complaints that one hears from the general public. The bias introduced by local approximations tends to suggest that measured inflation is *too high* in comparison with actual inflation. However, people who complain about inflation measures often argue that the inflation measure is *too low*.

Most economists are dismissive of this argument. Complaints about how to measure inflation are dismissed as conspiracy theories or lack of understanding. There is certainly some skepticism of official government statistics, and the prevalence of this opinion among the general public has made me think about what these critics are really trying to articulate when they complain about measures of inflation.

I think what this boils down to is that people often think about inflation as measuring something like *the cost of living* and they think that these price indices don't accurately measure the cost of living. Let's think about this idea a bit more.

In macroeconomics, there has long been this idea known as the classical dichotomy. The idea is that real variables affect real variables, and nominal variables affect nominal variables. In other words, the allocation of goods and services is determined by relative prices, but the trajectory for money prices is determined by the supply and demand for money. You'll notice some similarities between how I have discussed the ideal construction of a price index and the classical dichotomy. Although they are not the same concept, they elucidate some of the same points.

Of course, the real world is more complicated. We are not able to construct the theoretically ideal price index, and the classical dichotomy doesn't hold, at least in the short-run, because monetary policy has real effects. Nonetheless, both of these ideas can help us to think about the cost of living.

Suppose for a moment that the classical dichotomy is always true. Would the price level be an accurate measure of the cost of living? I don't see how it would. If the classical dichotomy holds, then the allocation of goods and services necessary to live a particular lifestyle would be independent of the level of money prices. In this case, changes in the price level are superfluous.

By the same measure, suppose we constructed an ideal price index. Would this price index be a good measure of the cost of living? In some ways, yes. This index would track the monetary cost of a constant-utility basket. Thus, we would have a measure of the monetary cost of a particular standard of living. Nonetheless, it is important to note that this price index keeps track of the monetary cost of a particular level of utility, but it doesn't measure the *affordability* of that level of utility. If one's money income is increasing just as quickly as the price level, it wouldn't be any more difficult to afford the same constant-utility basket of goods after the increase than it was before.

Herein lies the crux of the matter. People think of price level as measuring the cost of living because it is often used to perform what are sometimes called *cost-of-living adjustments* to money wages or money income. However, this adjustment is what is necessary to prevent a change in affordability. Since one price (money wages) must change in response to another price (the price level) for such a cost-of-living adjustment to occur, the cost of living isn't really about money prices at all. It is about relative prices.

I would submit that the best way to measure the cost of living is in terms of time. We can measure the cost of goods in terms of time by dividing the price of a particular good by the average nominal wage. This measures cost in terms of the number of hours that one would have to work in order to purchase the good.

This has the benefit of allowing us to better compare money prices of the same good across time. For example, suppose that you are perusing a 1971 Sears catalog (as one does) and you see this beautiful refrigerator.

They're asking $399.95 for this refrigerator (a little more if you get the avocado color). My lazy Google search tells me that you can get a 18-cubic-foot top-freezer refrigerator from Sears for $663.99 today. You clearly have to give up more money today to get the refrigerator, but does the refrigerator really cost more?

According to the Federal Reserve Economic Data (FRED), the average hourly wage for nonsupervisory workers was $3.73 per hour in 1971. That means that it would have taken approximately 107 hours of work to afford this refrigerator in 1971. Today, FRED tells us that the average hourly wage is $27.33. That means that it costs the average worker about 24 hours of labor to buy the $663.99 refrigerator today. In terms of time, the refrigerator has become substantially cheaper.

This comparison is largely a story of productivity and economic growth and occurred despite the fact that the money prices have risen substantially over this period. Comparing the prices of things like housing, bread, eggs, milk, and gasoline over shorter horizons, however, such as the period since early 2021, reveals that not only have money prices risen, but also the cost of goods in hours worked has risen substantially.

Of course, if you zoom out, one thing that you see is that for many of these goods (although not housing), the story is much like it would be for the refrigerator. The time cost of goods is falling. Nonetheless, periods of inflation tend to be associated with *higher time costs*. For example, from the moment Richard Nixon announced the closing of the gold window until 1980, the cost of the basket of goods measured by the Consumer Price Index increased 8 percent in terms of *time*. This is despite the fact that money wages (according to the same measure I used above) had increased by 76 percent over the same period!

So perhaps the reason that people see inflation as being measured too low is that during periods of high inflation, money wages are not keeping up with money prices, such that prices seem to be rising faster than reported because the cost of the goods is not only rising in terms of money, but also rising in terms of time. Working the same number of hours doesn't get you the same amount of stuff.

This brings me to my final point. The monetary regime that we have had since Richard Nixon closed the gold window is one of persistent price inflation. A comparison of money prices today and money prices in 1971 is essentially meaningless. There is virtually no informational content there, even adjusting for measured inflation. But this is a characteristic of an inflationary regime. By contrast, money price comparisons over long periods of time under previous regimes (such as the gold standard) were often useful.

This has potential implications for macroeconomic policy. For example, George Selgin has made the case for a price level that declines with the rate of productivity. In this sort of a world, the change in the time cost of the refrigerator from the example above would be reflected in *money prices*. In fact, in such a world, not only would relative prices convey important information, but changes in the price *level* would convey important information about productivity growth. Until then, we are stuck arguing about the correct measure of inflation.

This article was originally published in the Economic Forces newsletter.

Monetarism Remains a Useful Guide on Inflation

Peter N. Ireland

Monetarism posits that monetary policy works through the effects that Federal Reserve actions have on the money supply. In both words and deeds, Federal Reserve officials reject this tenet. And a long tradition in macroeconomics—exemplified most recently in a position paper by Florian Kern, Philippa Sigl-Glöckner, and Max Krahé—offers more detailed criticism. This short essay responds by placing the debate between monetarists and their critics in historical perspective, citing evidence to support key monetarist propositions, and explaining how monetarist principles can be put to good use improving monetary policy strategy.

This much is clear: Federal Reserve officials conduct monetary policy by managing interest rates. During normal times, they adjust their target for the federal funds rate, the interest rate on very short-term loans between banks, to achieve their stabilization goals for inflation and unemployment. During severe recessions, after bringing the funds rate down to zero, they switch tactics, offering forward guidance that promises to hold the funds rate lower for longer even after the economy begins to recover and conducting large-scale purchases of Treasury bonds and mortgage-backed securities, all to reduce longer-term interest rates and thereby provide additional policy stimulus.

Measures of the money supply such as M2 play absolutely no role in this strategic framework. Federal Reserve Chair Jerome Powell has acknowledged this. In responding to a question from Louisiana Senator John Kennedy in February 2021, he explained:

> *Well, when you and I studied economics a million years ago, M2 and monetary aggregates generally seemed to have a relationship to economic growth. Right now, I would say the growth of M2, which is quite substantial, does not really have important implications for the economic outlook. M2 was removed some years ago from the standard list of leading indicators, and just that classic relationship between monetary aggregates and the size of the economy, it just no longer holds.*

In fact, the *classic relationship* that Chair Powell's statement refers to lies at the heart of what Karl Brunner, writing in 1968, first called *monetarism*.

Brunner lists three basic principles of monetarism:

> *First, monetary impulses are a major factor accounting for variations in output, employment and prices. Second, movements in the money stock are the most reliable measure of the thrust of monetary impulses. Third, the behavior of the monetary authorities dominates movements in the money stock over business cycles.*

Brunner also summarizes a number of classic articles that object to these monetarist positions:

> *These articles comprise a countercritique which argues that monetary impulses are neither properly measured nor actually transmitted by the money stock. The authors reject the Monetarist thesis that monetary impulses are a chief factor determining variations in economic activity, and they contend that cyclical fluctuations of monetary growth cannot be attributed to the behavior of the Federal Reserve authorities. These fluctuations are claimed to result primarily from the behavior of commercial banks and the public.*

The new position paper by Kern *et al.* and another recent article by Peter Stella skillfully update the countercritique in Brunner's survey. On the other hand, recent papers by Kenneth Stewart and by John Greenwood and Steve H. Hanke argue for the continued empirical relevance of Brunner's monetarist propositions. Thus, debates between monetarists and their critics continue, more than half a century after the publication of Brunner's summary—not quite a *million years* as Chair Power claims in jest, but a very long time nonetheless!

For monetarists, Milton Friedman and Anna Jacobson Schwartz's *Monetary History of the United States* remains the most important source of evidence supporting their views. That book reshaped economists' understanding of the Great Depression by highlighting the key role played by relentlessly contractionary monetary policy in deepening and prolonging the economic contraction. It emphasized, moreover, that the contractionary thrust of monetary policy was reflected not in interest rates, which declined sharply in 1929 and remained low throughout the decade that followed, but rather in the money stock, which from August 1929 through March 1933 *fell by over a third. . . more than triple the largest preceding declines recorded in our series.*

Further support for monetarist propositions comes from studies of hyperinflation. Philip Cagan first demonstrated how explosive growth in prices, at rates exceeding 50 percent *per month*, could be explained by equally explosive growth in the money supply, at rates far exceeding growth in money demand. Meanwhile, as Kate Phylaktis and David Blake have shown, interest rates rise proportionally in economies experiencing exceptionally high inflation. Again, in these experiences, the stance of monetary policy is reflected more accurately through readings on money growth than interest rates.

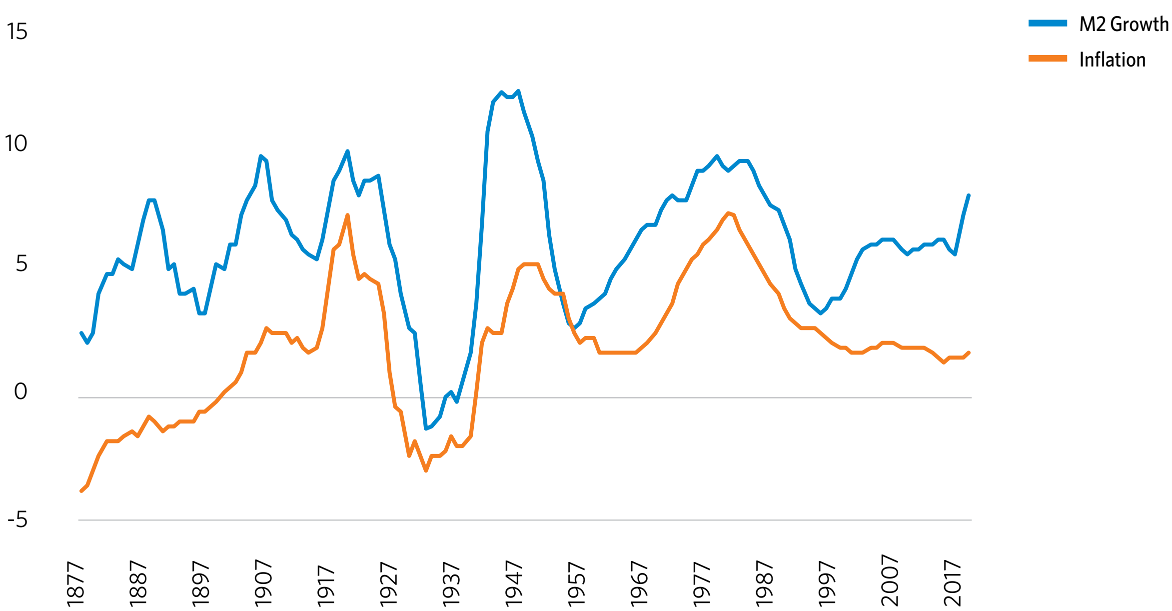
The Great Depression and episodes of hyperinflation provide the most convincing evidence of monetarist propositions, precisely because they are so extreme. Movements in the money stock become so large that they swamp all other factors that might also affect economic growth and inflation, creating natural experiments that reveal the effects of money growth in isolation. In my own recent research, however, I've shown that the same statistical connections between money growth, real GDP growth, and inflation that were the focus of Friedman and Schwartz's *Monetary History* still appear in the US data. As a simple illustration, the graph below compares ten-year averages of M2 growth and inflation over an extended period running from 1877 through 2021. Inflation is measured by changes in the GDP deflator, using annual data from the MeasuringWorth website. The long annual series for M2 is derived by splicing post-1959 data from the Federal Reserve Bank of St. Louis' FRED database to pre-1959 data from Table 4.8 in Milton Friedman and Anna J. Schwartz's *Monetary Trends in the United States and the United Kingdom*.

It is easy to see the deflation caused by monetary contraction during the Great Depression. And it's just as easy to see the inflation caused by excessive money growth during both World Wars, and especially throughout the 1970s.

Also clear is the surge in M2 growth that began in 2020. Looking back in light of the inflation that has emerged since then, it was a mistake for Federal Reserve officials to ignore the signal sent by money growth in 2021. Looking ahead, however, monetarist principles can still be put to good use. Historical evidence strongly suggests that if excessive M2 growth is allowed to persist, high inflation will persist as well. On the other hand, if the Federal Reserve raises interest rates too quickly, sharply declining M2 growth will signal the risk of recession. Monitoring M2 growth can help in making sure the Fed tightens monetary policy at the appropriate pace, not too fast and not too slow.

Fed officials may not want to abandon the strategy of interest rate management altogether, forgoing their short-run stabilization goals by adopting the constant money growth rule advocated most famously by Milton Friedman. But they should certainly pay renewed attention to the *classic relationship* between money and the economy that monetarists uncovered long ago.

M2 Growth and Inflation Ten-Year Averages



Why Will Inflation Remain So High For So Long?

William J. Luther

With inflation marking a 40 year high in June, everyone seems to have one question on their mind: When will inflation return to normal? July's Consumer Price Index (CPI) print offers a glimmer of hope. Core CPI, which excludes volatile food and energy prices, grew just 0.3 percent in the month of July, down from 0.6 and 0.7 percent in the prior two months. Declining energy prices left headline CPI unchanged over the month.

Alas, the Federal Open Market Committee's (FOMC) latest Summary of Economic Projections suggests inflation will remain high for some time. The median FOMC member is currently projecting 5.2 percent inflation in the personal consumption expenditures price index (PCEPI) for 2022; 2.6 percent inflation for 2023; 2.2 percent inflation for 2024; and 2.0 percent thereafter.

The Federal Reserve is ostensibly committed to a 2 percent average inflation target, which permits a temporarily high rate of inflation. But just because the Fed *can* let inflation run higher than 2 percent for a period of time doesn't mean it *should*. FOMC members are asked to submit their projections under the assumption that the Fed conducts monetary policy appropriately, as they see it. Hence, their projections for inflation tell us how FOMC members think the price level *should* evolve.

When should inflation be higher than the Fed's 2-percent average inflation target? In general, prices should rise above the level consistent with the Fed's average inflation target when real output falls below its long run growth path. When supply constraints reduce our ability to produce, higher prices provide a useful signal that goods and services are relatively scarce and an incentive to scale back purchases until production recovers.

We must be careful not to confuse above-average prices with above-average inflation, however. When the economy is recovering from an adverse supply shock, for example, prices return to trend. In the process of returning to trend, prices are (1) above trend and (2) growing at a rate below the average inflation target. Hence, justifications for higher prices do not necessarily justify higher inflation. We must think carefully about where the economy is and where it is going.

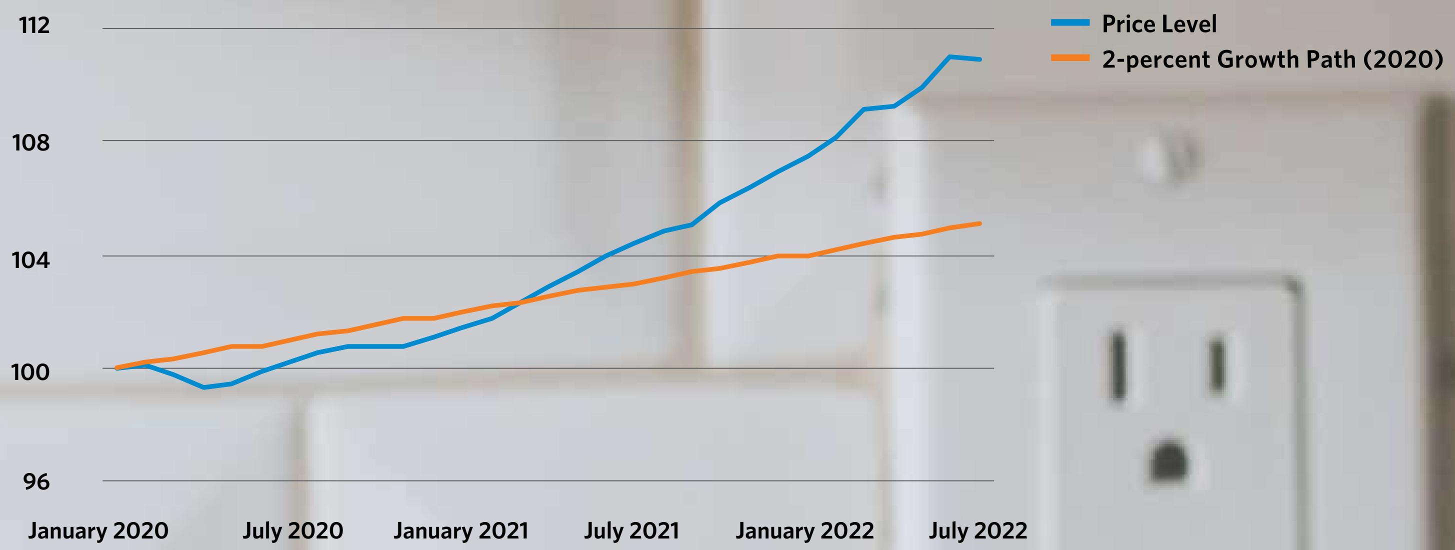
Consider how prices have evolved over the last 18 months. In April 2021, prices started to rise above trend. Then, in October 2021, they began to rise more rapidly. The continuously-compounding annual inflation rate since January 2020, which had stood at 3.0 percent in August and September 2021, climbed to 3.2, 3.4, 3.5, 3.6, and 3.7 percent in the months that followed. In March 2022, it climbed to 4.0 percent, where it remained until June 2022 when it hit 4.3 percent. Hence, the question today is whether inflation should be above 2 percent *given that prices are already well-above the level consistent with the Fed's average inflation target*.

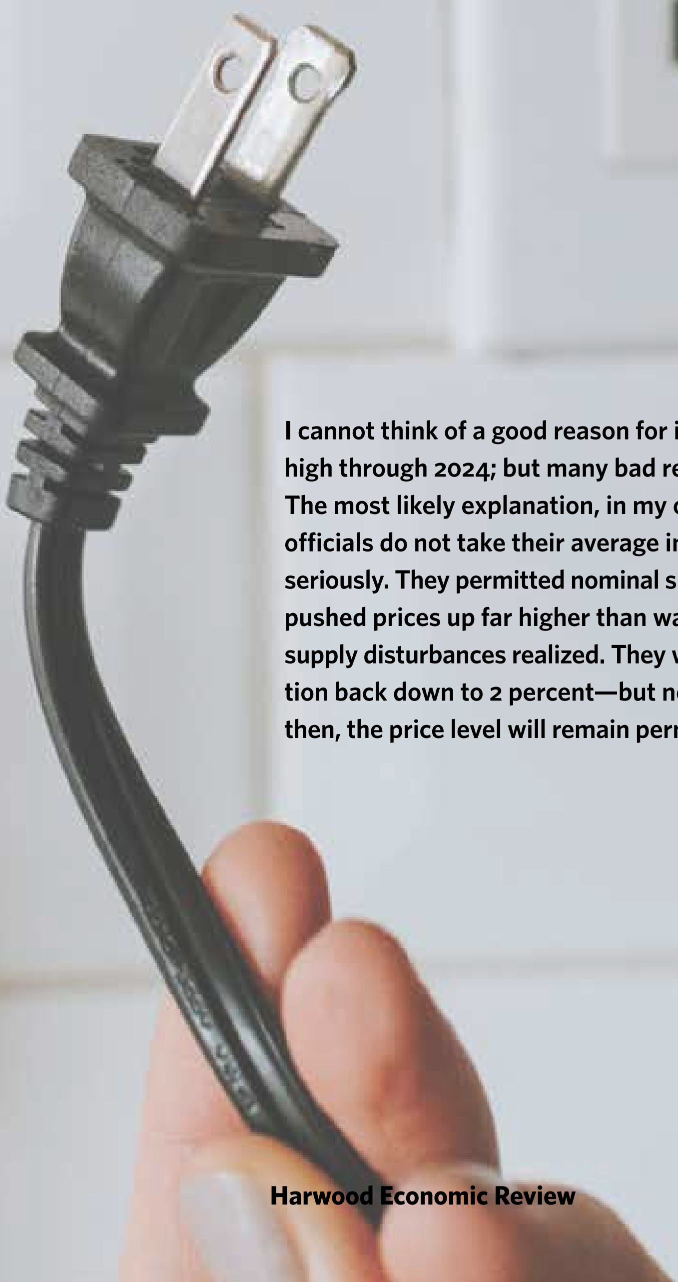
What justification might Fed officials have for wanting inflation to remain above 2 percent through 2024? Perhaps they would point to lingering supply disturbances associated with the pandemic or, more recently, Russia's invasion of Ukraine. Alas, that would not quite cut it. To the extent that these disturbances persist, they justify above-trend prices. They do not necessarily justify above-average inflation. Above-average inflation would require a general *worsening* of supply conditions. And, despite the modest decline in real output observed in the first two quarters of 2022, potential output has likely continued to recover. Since prices are above trend, the process of returning to trend as real output recovers would require *less than* 2 percent inflation—not more than 2 percent inflation, as Fed officials project.

Perhaps Fed officials think that, although the economy will largely recover from these temporary supply disturbances, these disturbances will also bring about a longer-lasting reduction in total factor productivity growth. Below-average total factor productivity growth would result in below -average real output growth and, as such, could serve as a justification for above-average inflation.

The below-average total factor productivity growth story is sensible, but strikes me as unlikely. We do not typically assume a temporary reduction in our ability to produce has a long-lasting effect on total factor productivity growth. What is different in this situation? And why would it warrant inflation to be 20 to 60 basis points above the average inflation target, given that prices are already elevated well above the level consistent with the average inflation target?

Personal Consumption Expenditures Price Index





I cannot think of a good reason for inflation to remain high through 2024; but many bad reasons come to mind. The most likely explanation, in my opinion, is that Fed officials do not take their average inflation target very seriously. They permitted nominal spending to surge, which pushed prices up far higher than was required given the supply disturbances realized. They will eventually get inflation back down to 2 percent—but not any time soon. Even then, the price level will remain permanently elevated.

Why You Should Include Charity In Your Will

Andrew Palmer

There is a common misconception that only the rich need to make a will. That is not true. A will eases the pain of your passing on those you leave behind, and without a will, regardless of your personal wishes, state laws will determine the transfer of your estate.

There is an even bigger misconception that only the super-rich leave money to charity when they die. That's also not true. The fact is that most gifts by will (bequests) are made by everyday people who want to have a lasting, positive impact on their community.

Without this type of generosity, many charitable institutions couldn't continue their missions into the future. Non-profits need our support to do their good work.

Here are four reasons why you should include a charity in your will:

A Gift By Will Is Easy To Make
A bequest is one of the easiest charitable gifts to make. It is simple to implement, and easy to change should you ever need to. You can give specific property, or designate a dollar amount, or a percentage of your estate. You can also designate a non-profit as a beneficiary of your retirement plan or life insurance policy.

A Gift By Will Does Not Alter Your Current Lifestyle
Making a bequest is a way of demonstrating your commitment to the future of the institution you love that doesn't affect your current asset balance or cash flow. There are no substantial costs, and the gift can easily be modified to address your changing needs.

A Gift By Will Can Change Lives
Non-profits improve our lives every day through their dedicated work, community, and stability. A bequest can help your best-loved charity further its mission and values. It can continue making a difference for generations to come.

A Gift By Will Creates A Lasting Legacy
Including a non-profit in your will is a great way to bring dignity, meaning, and purpose to a life well-lived. You can demonstrate your commitment to the future of the institution you love, and better yet, a bequest can allow you to give to an institution that you may have always wanted to support, but were unable to during your lifetime. Creating a legacy with your gift ensures that you, and your values, will live on.

You don't have to be wealthy to make a difference. Whoever you are, whatever your situation, you can help make a better world by including a charity in your will.

SEE PAGE 19 TO GIVE TO AIER

AIER events

Movie Screening: *Just the Truth* with an introduction by Gen LaGreca

October 25
Carmel, IN

Join AIER's Bastiat Society program in Indianapolis for a private movie screening of a new liberty-themed movie, *Just the Truth*, which portrays the threats to a free press in an era of growing government. Writer and producer Gen LaGreca will introduce the film.

***The Fall of the Evil Empire and the Rise of Socialism in America* with Yuri Maltsev**

November 2
Chicago, IL

AIER's Bastiat Society program in Chicago will host an event with Yuri Maltsev. Socialism is no longer entertained by academics but is considered a real political alternative taken seriously by our ruling elites. Many Americans don't recognize how much of what they enjoy in life is a result of free enterprise and would disappear if socialism were to be implemented. The reality of socialism is political tyranny based on coercion and mass murder. We'll discuss different forms of socialism, including communism and fascism.

***Central Bank Digital Currencies: A Potential Threat to Freedom* with Norbert Michel**

November 11
Washington, DC

AIER's Bastiat Society program in Washington DC will host a luncheon with Norbert Michel, Vice President and Director of the Cato Institute's Center for Monetary and Financial Alternatives in Washington, DC. The IMF and governments around the world are advocating the transformation of their national currencies into central bank digital currencies or *CBDCs*. Governments favor CBDCs, because it enhances their power over economic policy and their control over people's money. Michel will discuss why CBDCs are incompatible with personal liberty.

***Navigating the Educational Challenges of COVID-19* with Mandy Rhodes**

November 17
Tucson, AZ

Please join the Bastiat Society of Tucson for an event with Mandy Rhodes, Principal of Pusch Ridge Christian Academy Grammar School. Drawn from real-life experiences on the front lines of leading a school through the COVID-19 era, Mandy will articulate what they wrestled with, what they tried, what worked for them, what risks they took and didn't take, and the reasons behind those choices.

Planned Giving

Each one of us already has a default estate plan—one dictated to us by the government. The government doesn't know who we are; it cares nothing for our achievements, our principles and beliefs, our ethics, or our commitment to our families. In this plan, hard-earned assets can be unnecessarily taxed and heirs can be left with little or nothing.

The only way to make sure that your estate plan reflects your wishes is to design it yourself with competent counsel. Will your legacy be subsumed by faceless bureaucrats as a windfall profit for government programs that you may believe are antithetical to prosperity and justice? Or will it be a responsible transfer of values held dear by the one who earned the money? Make sure that you are the author of your own personal estate plan.

By making a planned gift to AIER—whether it be through your will, charitable trust, or another giving vehicle—you are making an incredible commitment to true freedom, sound money, and private governance. You not only secure your legacy as a champion of free markets, but you ensure that AIER will continue to fight for the principles you hold dear for generations to come.

We are forever grateful for AIER's planned giving supporters who help to ensure that people around the world will always have access to sound economic research, robust education in free market concepts, and practical training from AIER.

Here are some ideas on how to include AIER in your estate plans:

Your Will

If you already have a will, you can generally amend it to create a bequest for AIER and other charities. If you have elected a living trust rather than a will, you can also include AIER and other charities as trust beneficiaries, similar to creating bequests under a will.

Your Retirement Accounts

Retirement accounts—such as an IRA, 401(k), and others—that are left to heirs are double-taxed because (often but not always) they are subject to the estate tax and heirs are also subject to ordinary income tax on what's left. Retirement accounts left to a non-profit like AIER are not taxed at all.

Your Life Insurance

One of the easiest ways to leave AIER in your estate plans is to simply name AIER as a beneficiary of a life insurance plan. Life insurance proceeds, other than when given to a spouse or to a tax-exempt entity like AIER, are generally subject to the estate tax. Therefore, life insurance policies that are no longer needed for financial security are a good choice for enhancing your philanthropic legacy.

Other Giving Vehicles

Several less-common giving vehicles are typically used in complex estates, but might be worthy of consideration. We recommend you speak with your attorney or financial advisor regarding: Charitable Gift Annuities, Charitable Remainder Trusts, and Charitable Lead Trusts.

To get started

please contact us at 888-528-1216

SUPPORT AIER

Researching, articulating, and advancing the importance of markets

I followed Colonel Harwood for many years and one thing that came through in all of his writing was that he was a great patriot and a strong believer in an honest currency. Having been in the investment business for 48 years, I think Colonel Harwood's teaching is needed even more now than it has ever been. He had a great impact on my thinking.

—**Arnold Van Den Berg**, Longtime AIER Donor

AIER donors understand the importance of AIER's mission and want others to understand too.

For nearly a century, the American Institute for Economic Research has educated Americans on the value of personal freedom, free enterprise, property rights, and sound money. Eschewing dogmatic assertions and party politics alike, AIER seeks to scientifically understand and demonstrate the importance of these principles to advance peace, prosperity, and human progress. We support the research of numerous leading economists and share their findings with policymakers, professionals, educators, and the general public through publications, in-person programs, and online outreach that are each tailored to the needs of these audiences. By strategically articulating and promoting the principles of pure freedom, AIER helps to build the intellectual basis for, and popular consensus around, the expansion of individual rights and market freedom and against the increasing demands for government intervention, central planning, and collectivist policies.

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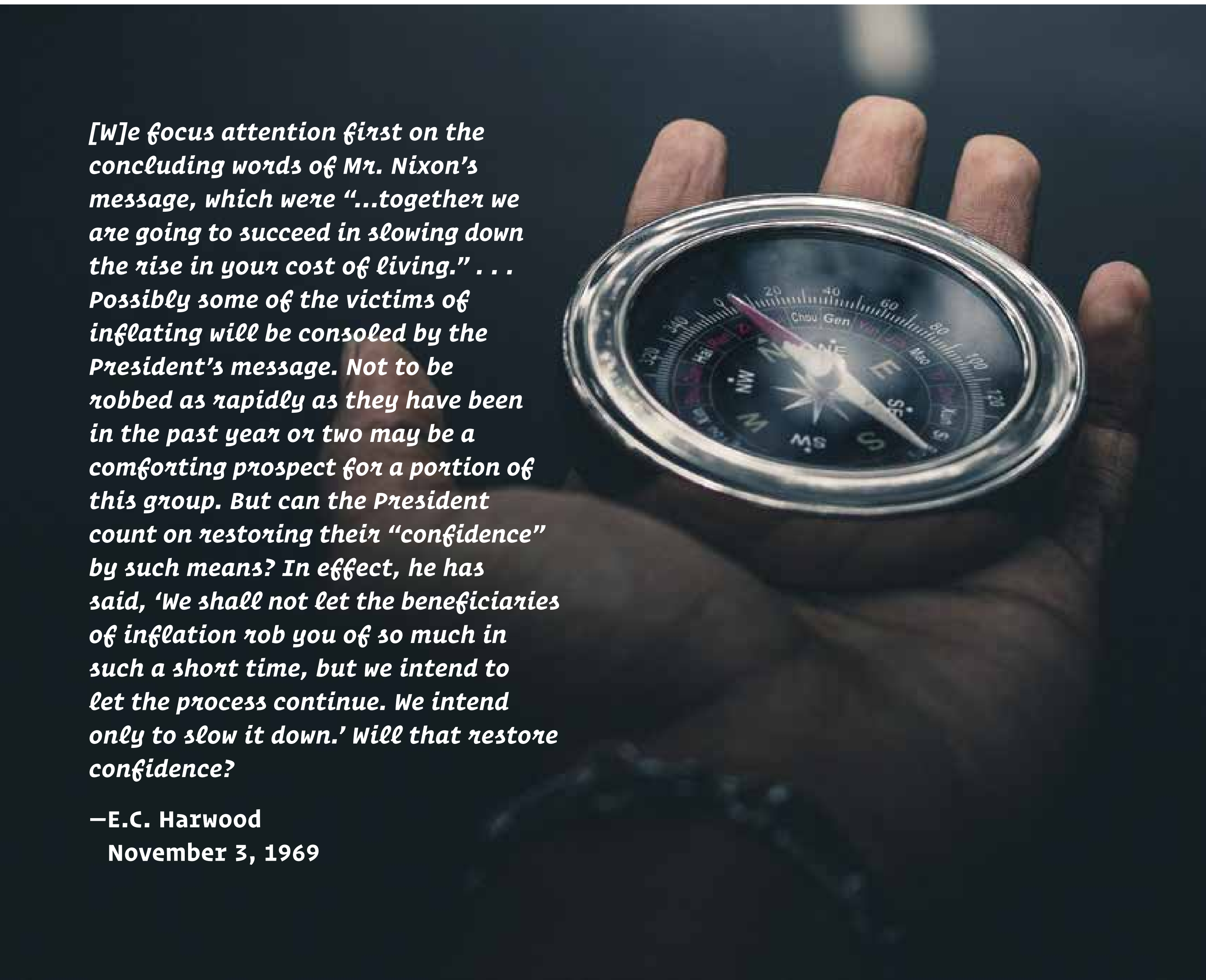

[W]e focus attention first on the concluding words of Mr. Nixon's message, which were "...together we are going to succeed in slowing down the rise in your cost of living." . . . Possibly some of the victims of inflating will be consoled by the President's message. Not to be robbed as rapidly as they have been in the past year or two may be a comforting prospect for a portion of this group. But can the President count on restoring their "confidence" by such means? In effect, he has said, 'We shall not let the beneficiaries of inflation rob you of so much in such a short time, but we intend to let the process continue. We intend only to slow it down.' Will that restore confidence?

—E.C. Harwood
November 3, 1969