

The Continuing Case for Nominal GDP Level Targeting

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Prologue

This story has four parts. Part one returns to the Federal Reserve’s 2019 strategic review, observing with hindsight that setting an explicit target path for the price level would have provided a better solution than flexible average inflation targeting to the policy problems associated with the zero lower interest rate bound. Part two argues, similarly, that a nominal GDP level targeting strategy would have guided a more successful policy response to disruptions in economic activity beginning in March 2020.

Part three continues the case for nominal GDP level targeting, now that inflation has risen significantly and persistently above the Fed’s two percent target. Part four steps back to conclude: setting a multi-year target path for the aggregate price level or, preferably, the level of nominal GDP would help the Federal Open Market Committee break the re-emergent pattern of 1970s-style “stop-go” monetary instability.

Part One: The Strategic Review

Looking back, the main question confronting the Federal Reserve during its 2019 strategic review seems clear: it concerns the zero lower interest rate bound. Specifically, if as seems likely, the zero lower bound has become a recurrent constraint that prevents the FOMC from

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delivering sufficient monetary accommodation during recessions, then how can the Fed prevent inflation from falling below two percent, on average, over the entire business cycle?

Contemporary macroeconomic theory already answers this question. In an environment where both inflation and the long-run natural rate of interest are low, the long-run neutral setting for the nominal policy rate will also be low, leaving less room for easing through interest rate cuts during a cyclical downturn. Under such circumstances, the central bank should follow a policy rule that targets the level, instead of the growth rate, of some nominal variable. Focusing on the choice between inflation and price-level targeting, Svensson (2001) and Eggertsson and Woodford (2003) provide early statements of this result; Mertens and Williams (2019) reconfirm it more recently.

Compared to inflation targeting, price level targeting offers two advantages. First, in a purely mechanical way, adjusting monetary policy with reference to a multi-year price level path prevents a series of modest, but single-sided, deviations of inflation from target from cumulating into much larger gaps between the actual price level and the level that consumers and businesses expected when entering into implicit or explicit long-term nominal contracts. In fact, recent appeals for level targets and related “make-up” strategies echo arguments made by Broaddus and Goodfriend (1984), Hetzel (1989), Bordo, Choudhri, and Schwartz (1990), and Ireland (1993) against “base drift” in the money growth targets set by central banks during the 1970s and 1980s. By setting a multi-year target path for levels instead of annual targets for growth rates, the central bank signals that “bygones will not be bygones.” This strategy works to reduce long-run monetary uncertainty when applied to any nominal variable.

With its emphasis on the role of expectations, however, contemporary macroeconomic theory identifies a second advantage of policy strategies cast in terms of levels. Following a

period of low inflation, policy rates must remain “lower for longer” to bring the price level back up to a multi-year target path. Even – or especially – when policy rates are constrained by the zero lower bound, the resulting increase in expected future inflation works to reduce the real interest rates that matter in shaping consumer and business spending plans. Through this expectational channel, additional monetary stimulus gets applied exactly when it is needed most. In dynamic, stochastic, general equilibrium, the price level returns to its target path more quickly.

By promising to compensate for past misses of inflation below target, the flexible average inflation targeting scheme that emerged from the Fed’s 2019 review attempts to secure some of the benefits of a more explicit, level targeting strategy. Unfortunately, as noted by Levy and Plosser (2020), Ireland and Levy (2021), Ireland (2021), and Plosser (2021), average inflation targeting as described and implemented by the FOMC suffers greatly from its ambiguities. Committee members never made clear to the public and maybe even to themselves how much extra inflation they would allow for, to compensate for past undershoots. Nor did Committee members indicate whether average inflation targeting might also require inflation to run below target for a time to make up overshoots of the kind we’re seeing today. Then they got caught by surprise by the sharp acceleration in inflation that actually did occur in 2021.

Obviously, the precise policy prescriptions of a price-level targeting strategy will depend on the details, especially on the base year chosen to fix the target path. To give the FOMC the biggest benefit of the doubt, figure 1 sets the base in January 2012, when the Committee first announced its formal, two percent long-run inflation target. Even so, the figure clearly shows the PCE price index moving back towards its level target path with alarming speed in 2021. In fact,

the PCE price index now lies just one percentage point below the target path, making an overshoot inevitable by this year's end.

Recall that, under a level-targeting strategy, the central bank's policy rate should be at its long-run neutral level as soon as the price level meets its target path. Having just moved its federal funds rate target one small step above zero, the FOMC still has a long way to go. More consistent reference to a graph like that shown in figure 1 would have provided earlier warning that policy normalization should have started sooner.

But hindsight, as they say, is 20-20. What more general lesson should be learned? The FOMC has always resisted calls to announce and follow an explicit monetary policy rule. Committee members argue that real-world complexities render any simple rule inadequate and incomplete; their discretionary actions will always be needed to cope with unforeseen contingencies. That sounds right!

Long ago, however, Friedman (1953) pointed out that this argument rests on the assumption that the Committee's discretionary actions can be sufficiently well-calibrated and well-timed to reduce volatility in the Fed's goal variables. And then, more often than not, Friedman and Schwartz (1963) observed the opposite: discretionary actions working in practice to amplify fluctuations in employment and inflation. Now we've seen this again!

Following its 2019 strategic review, the FOMC should have had more confidence in contemporary macroeconomic theory. It should have amended its long-run policy strategy by announcing and making consistent reference to a multi-year price-level target path or, perhaps, a multi-year target path for the level of nominal GDP instead.

Part Two: The Events of 2020

Hendrickson (2012), Beckworth (2019), and Binder (2020) make the case for nominal GDP targeting, as a preferred alternative to inflation or price-level targeting. Hendrickson (2012), in particular, shows how the Fed's monetary policy decisions under Chairs Volcker and Greenspan, by stabilizing nominal GDP, contributed to the Great Moderation of the 1980s and 1990s. Beckworth (2019) outlines in great detail the many theoretical and practical advantages of targeting nominal GDP in levels instead of growth rates, and Binder (2020) describes how monetary policy decisions based on nominal GDP targeting are easier to communicate to the public.

Shortly after the US economy shut down in March 2020, Ireland (2020) extended and applied those same arguments to show how the Fed could set and use multi-year target path for the level of nominal GDP to guide its most effective monetary policy response. Figure 2 illustrates, now with the benefit of hindsight.

By setting a target path for 4 percent nominal GDP growth starting from a base set in the fourth quarter of 2019, the FOMC could have articulated in the clearest possible way its determination to use monetary policy to prevent what should have been only temporary disruptions in economic activity from translating into permanent losses in nominal income and spending. At the same time – just as clearly and easily – the FOMC could have reminded both the public and itself that, once a vigorous recovery was well underway, monetary policy would have to return to normal as well.

Once more, the figure shows how consistent reference to a multi-year nominal target path could have allowed the Fed to guard against sustained inflation *and* deflation. The graphs confirm that it was right for the FOMC to hold rates at zero and continue its large-scale asset

purchase programs throughout 2020 and into 2021 – just look at the large gaps between nominal GDP and target! But the graphs also show that these gaps are all but closed by the third quarter of 2021; by last year’s end, in fact, nominal GDP had moved above target.

Recall, again, that a level targeting strategy requires that policy strike a neutral stance once the gap between actual and target paths get closed. These observations, which could have been made in real time, confirm that the process of policy normalization should have started sooner.

Part Three: Today’s Inflation

And now, the challenge has reversed itself: instead of bringing inflation back up, the FOMC needs to push inflation back down to its two percent long-run target. And yet, the solution remains the same. For several reasons, continued reference to the multi-year nominal GDP level target path shown in figure 2 will provide the most useful policy guidance.

First, although the “transitory vs. persistent” debate discussed by Greenwood and Hanke (2021) and Ireland and Levy (2021) now appears to have resolved itself, with the FOMC’s (2022) own projections for PCE price inflation running well above two percent through at least 2024, it is still the case that supply-side disturbances can be blamed for some of the increase in measured price inflation. To the extent that they are pushing inflation higher, however, these same unfavorable supply shocks are also working to slow the rate of real GDP growth, neutralizing their effects on nominal GDP. Thus, as Beckworth (2019) and Michel (2022) emphasize, reference to nominal GDP rather than prices will help the FOMC “look past” temporary movements in inflation driven by disruptions to supply chains and natural resource supplies and stay focused on intermediate-term trends driven by monetary policy alone.

Second, the M2 money stock has grown by almost 40 percent since the end of 2019. As shown in figure 3 and discussed in detail by Ireland (2022), nothing like this has been seen before, even during the high-inflation years of the 1970s.

A sharp fall in M2 velocity – also shown in figure 3 – has tempered the effects of this money growth on nominal spending and inflation. Looking forward, however, this decline in velocity could easily reverse itself, as households and businesses continue working down their accumulated stocks of liquid assets. And even if velocity remains stable instead of continuing on its downward trend, the now positive gap between the level of nominal GDP and the target path in figure 2 will expand further if M2 continues to grow at rates that, even now, remain well above 10 percent per year.

With these concerns in mind, it is helpful to recall how Tobin (1983) and McCallum (1985) used the equation of exchange $MV = PY$ to reinterpret targeting nominal income PY as targeting the money supply M after adjusting for shifts in velocity V . Their logic shows how nominal GDP targeting can serve, today, as a quantity-theoretic cross check against the FOMC’s meeting-by-meeting decisions, to help ensure that policy tightening proceeds neither too quickly nor too slowly, bring inflation gradually back to target. And this cross check may be particularly useful, now, in aggregating the effects of increases in federal funds rate and the additional “quantitative tightening” applied as the Fed reduces the size of its balance sheet by allowing assets purchased since March 2020 to mature without reinvestment.

Part Four: Short Circuiting Stop-Go

Third, finally, and most important of all: as the product of the aggregate nominal price level and real GDP, a strategy directed at stabilizing nominal GDP works to satisfy both sides of the Fed’s

dual mandate. Nominal GDP is, nevertheless, a nominal variable, denominated in units of dollars. Announcing and making consistent reference to a multi-year target path for the level of nominal GDP would therefore help correct a more fundamental change in mindset that appears to underlie the FOMC's amended long-run strategy.

Hetzel (2008, 2021) and Hess (2021) identify stochastically shifting lexicographic preferences for maximum employment versus price stability as a driving force behind the “stop-go” policies that generated macroeconomic instability and rising inflation throughout the 1970s. During its “go” phases, the FOMC delayed interest rate increases in an effort to reduce unemployment, even after economic expansions were well underway. Then, during the “stop” phases, the FOMC belatedly and therefore too aggressively tightened monetary policy out of concern for the rising inflation that had already appeared.

It is disturbing to see some basic elements of stop-go resurfacing behind the Fed's recent policy actions. And engineering the “soft landing” that brings inflation back down without sending the economy back into recession will be tricky business no matter what. Continuous focus on the intermediate-term trends reflected in a multi-year target path for the level of nominal GDP will impose discipline and consistency on the FOMC's meeting-by-meeting decisions and keep expectations anchored, reducing the pressure and the chances of error. Nominal GDP targeting will restore balance and symmetry to the FOMC's strategic framework. Focusing on a nominal GDP target will help FOMC members remind the public – and themselves – that monetary policy creates the most favorable environment for economic growth and stability when it aims to stabilize a nominal variable *first*.

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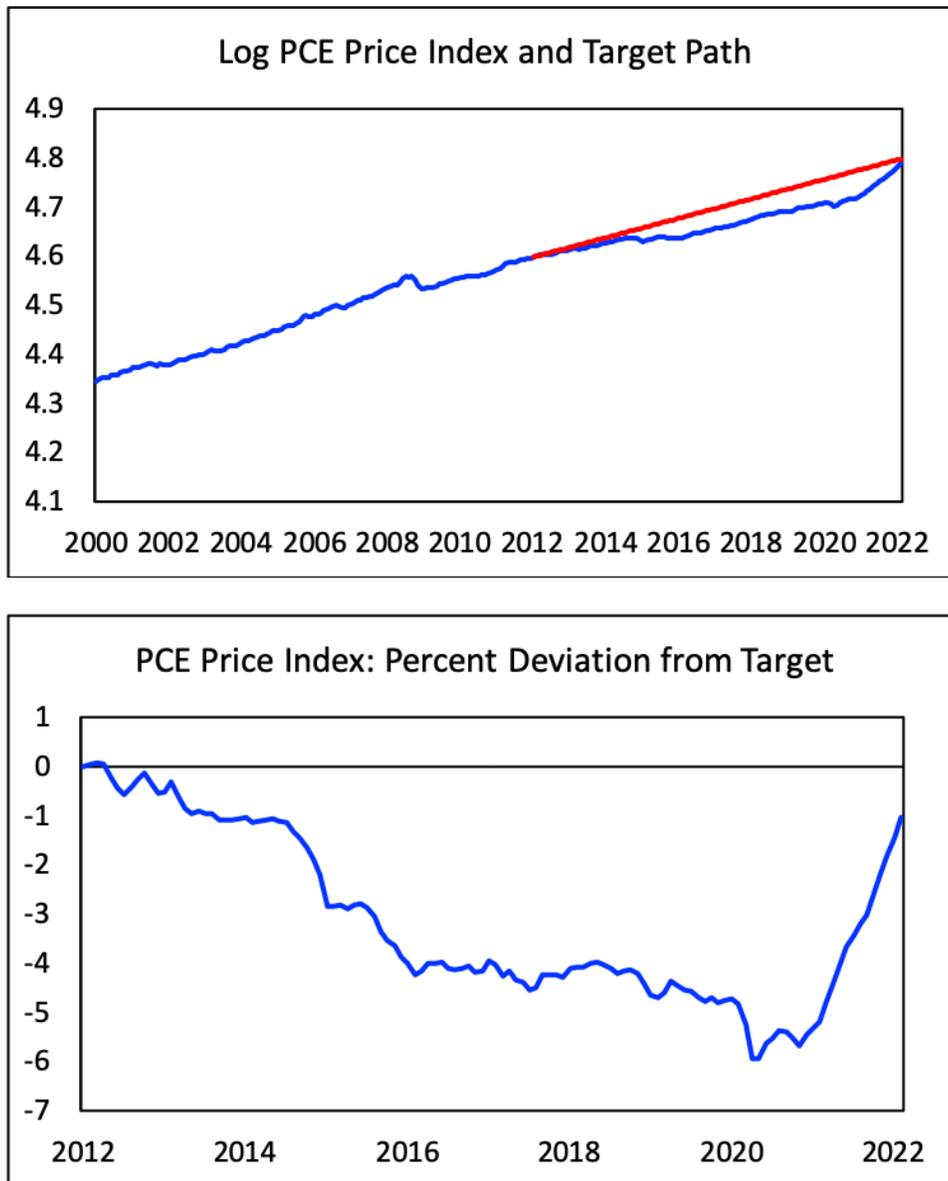


Figure 1. PCE Price Index and Target Path. The top panel shows the natural logarithm of the PCE price index (blue line) together with multi-year level target path (red line) that calls for 2 percent annual inflation starting from a base set in January 2012. The bottom panel shows the percentage-point deviation between the actual price level and the target path. Data Source: Federal Reserve Bank of St. Louis, Federal Reserve Economic Database (FRED).

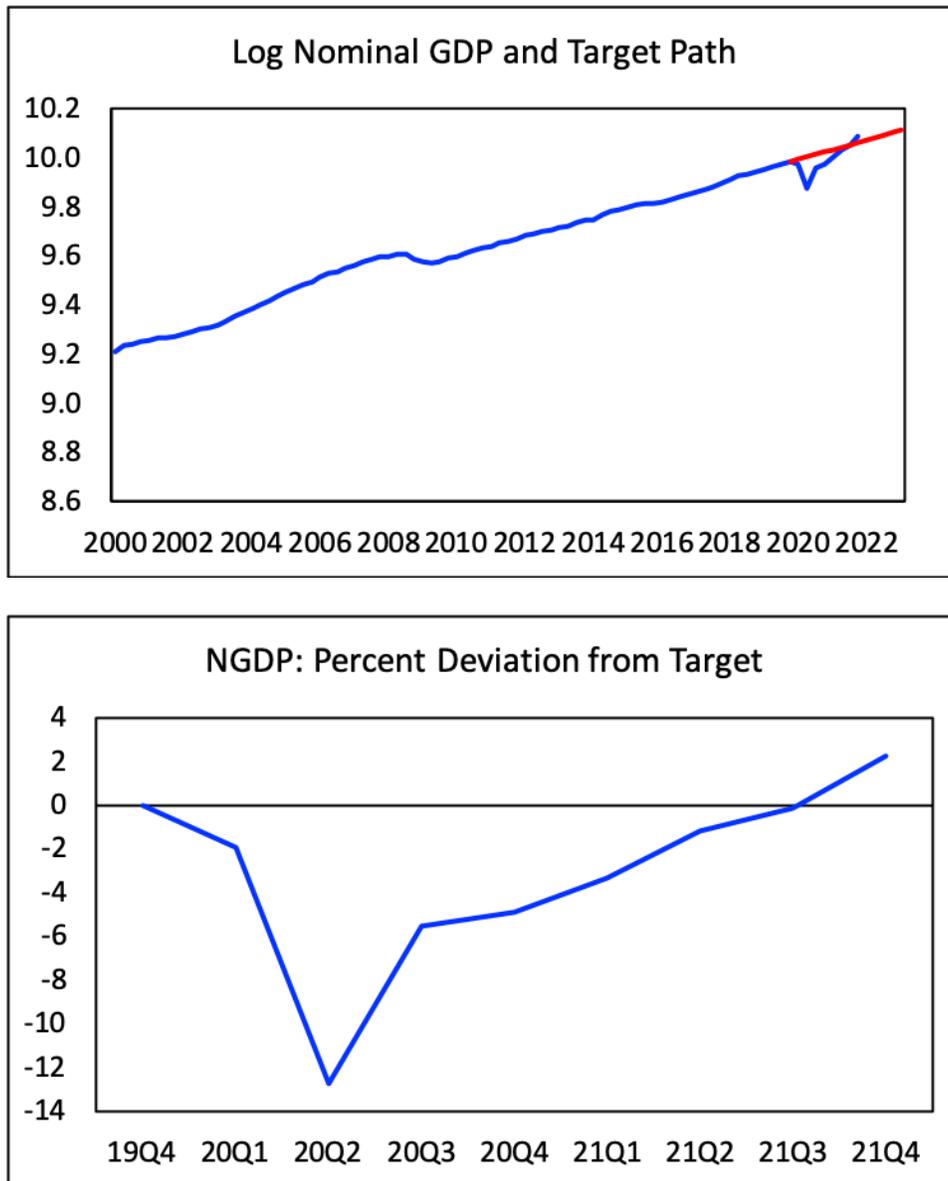


Figure 2. Nominal GDP and Target Path. The top panel shows the natural logarithm of nominal GDP (blue line) together with multi-year level target path (red line) that calls for 4 percent annual growth starting from a base set in the fourth quarter of 2019. The bottom panel shows the percentage-point deviation between the actual level of nominal GDP and the target path. Data Source: FRED.

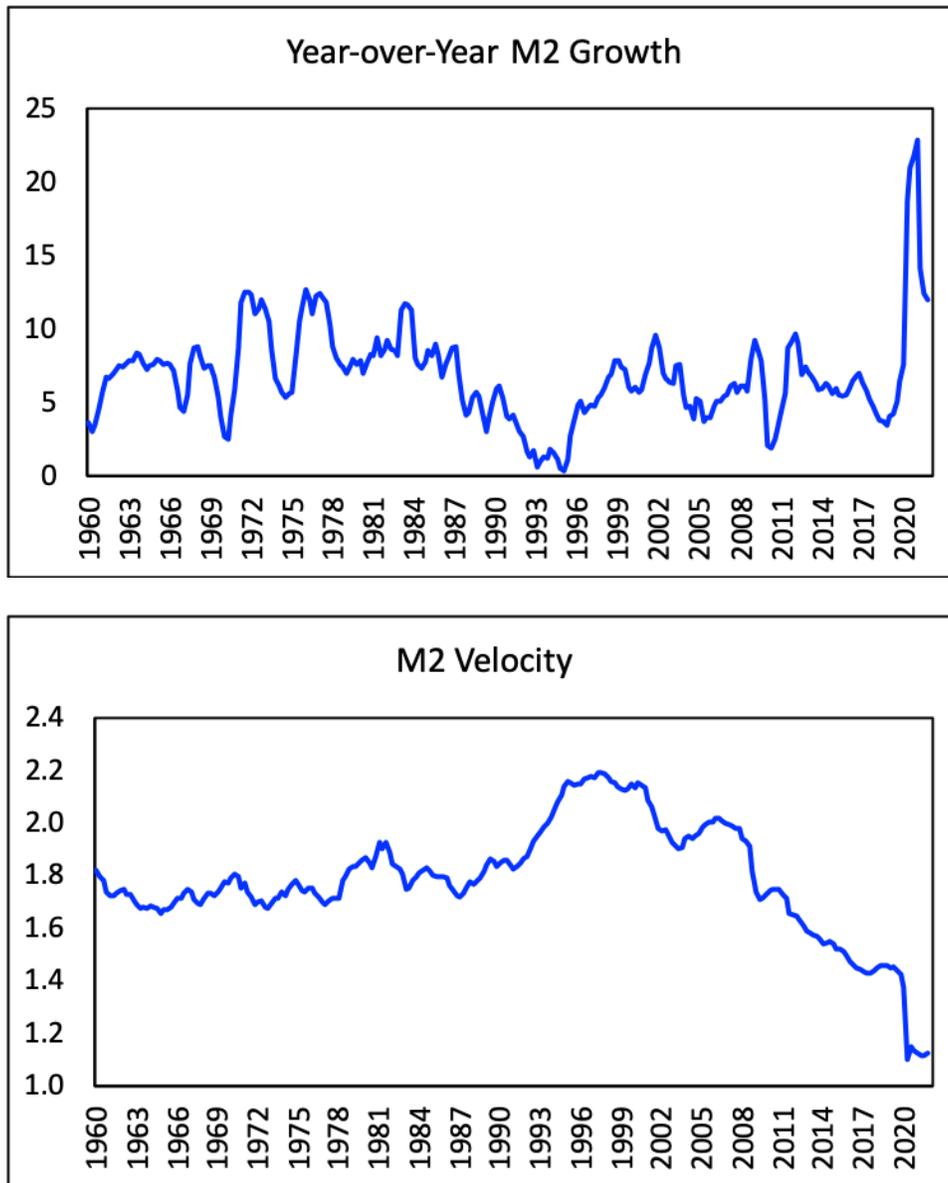


Figure 3. M2 Growth and Velocity. The top panel shows year-over-year percentage-point growth in the M2 money stock. The bottom panel shows M2 velocity, computed by dividing nominal GDP by M2. Data source: FRED.