"Rules Versus Discretion Over the Last 50 Years"

Prepared for the Conference:
A 50-Year Retrospective on the Shadow Open Market Committee and Its Role in Monetary Policy

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# Table 1. Monetary Policy Rules as Reported in the Federal Reserve Report

A. Monetary policy rules

Taylor (1993) rule	$R_t^{T93} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t)$
Balanced-approach rule	$R_t^{BA} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2(u_t^{LR} - u_t)$
Balanced-approach (shortfalls) rule	$R_t^{BAS} = r_t^{LR} + \pi_t + 0.5(\pi_t - \pi^{LR}) + 2min\{(u_t^{LR} - u_t), 0\}$
Adjusted Taylor (1993) rule	$R_t^{T93adj} = max\{R_t^{T93} - Z_t, ELB\}$
First-difference rule	$R_t^{FD} = R_{t-1} + 0.5(\pi_t - \pi^{LR}) + (u_t^{LR} - u_t) - (u_{t-4}^{LR} - u_{t-4})$

NoTE: R_t^{T93}, R_t^{BA}, R_t^{BAS}, R_t^{T93adj}, and R_t^{FD} represent the values of the nominal federal funds rate prescribed by the Taylor (1993), balanced-approach, balanced-approach (shortfalls), adjusted Taylor (1993), and first-difference rules, respectively.

R_{t-1} denotes the midpoint of the target range for the federal funds rate for quarter $t-1$, u_t is the unemployment rate in quarter t, and r_t^{LR} is the level of the neutral real federal funds rate in the longer run that is expected to be consistent with sustaining maximum employment and inflation at the FOMC's 2 percent longer-run objective, represented by π^{LR}. π_t denotes the realized four-quarter price inflation for quarter t. In addition, u_t^{LR} is the rate of unemployment expected in the longer run. Z_t is the cumulative sum of past deviations of the federal funds rate from the prescriptions of the Taylor (1993) rule when that rule prescribes setting the federal funds rate below an effective lower bound of 12.5 basis points.

The Taylor (1993) rule and other policy rules generally respond to the deviation of real output from its full capacity level. In these equations, the output gap has been replaced with the gap between the rate of unemployment in the longer run and its actual level (using a relationship known as Okun's law) to represent the rules in terms of the unemployment rate. The rules are implemented as responding to core PCE inflation rather than to headline PCE inflation because current and near-term core inflation rates tend to outperform headline inflation rates as predictors of the medium-term behavior of headline inflation.
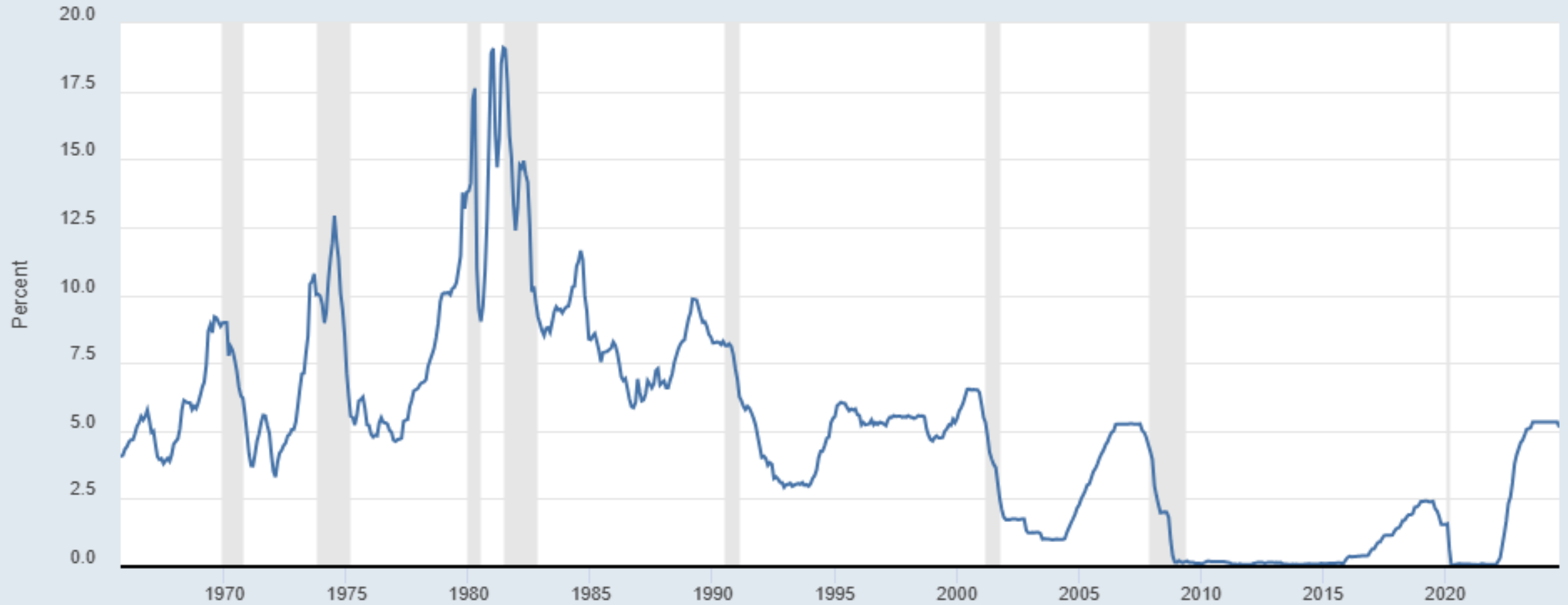
Figure 1. The Effective Federal Fund Rate

$$r = p + .5y + .5(p-2) + 2$$

$$r = 1.5p + .5y + 1$$

where

r is the federal funds rate

p is the inflation rate

y is real GDP gap

Figure 2. A simple version of the Taylor rule: If inflation is 2 (p =2), and the GDP gap is 0 (y=0), then the interest rate r (r=4).

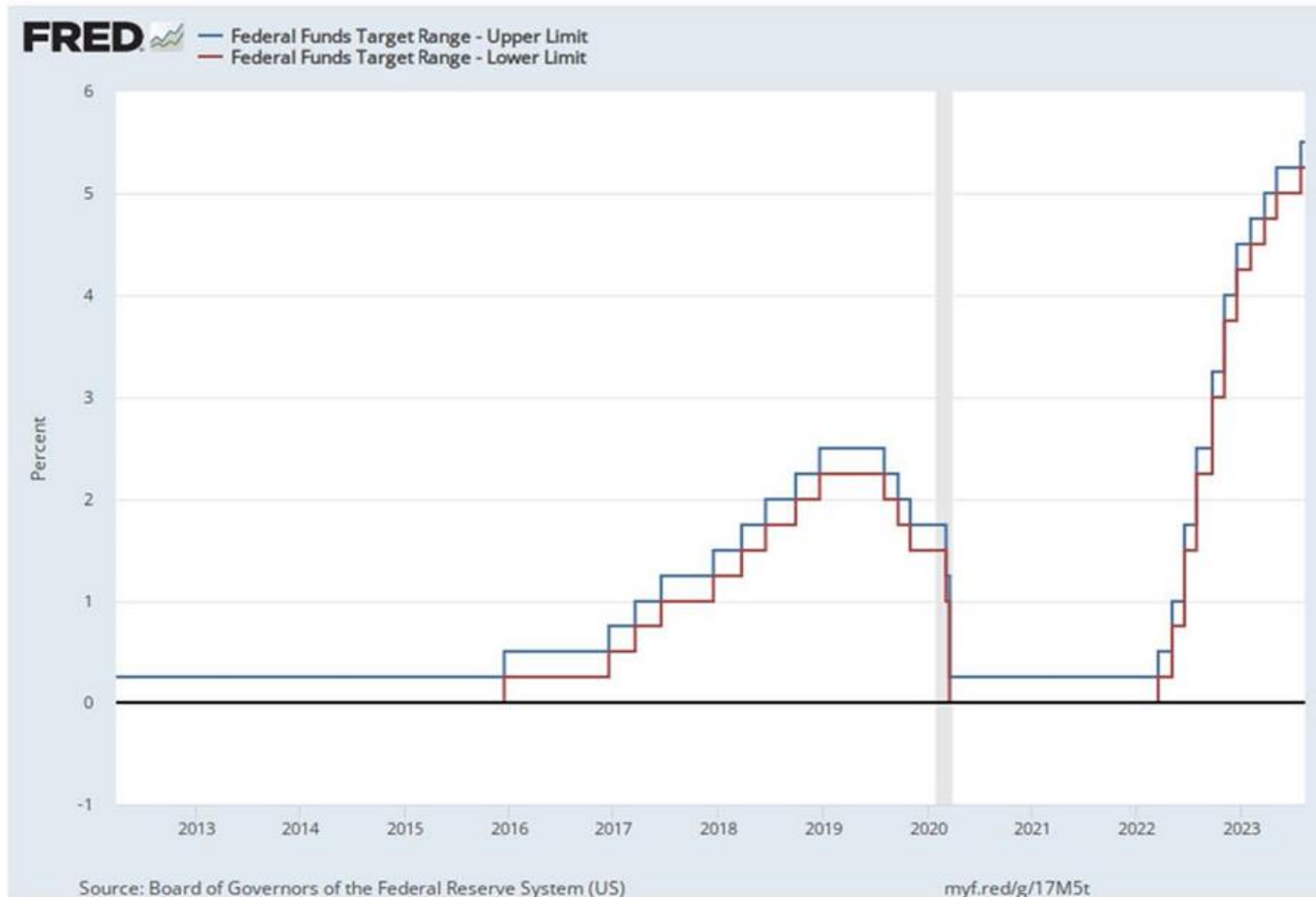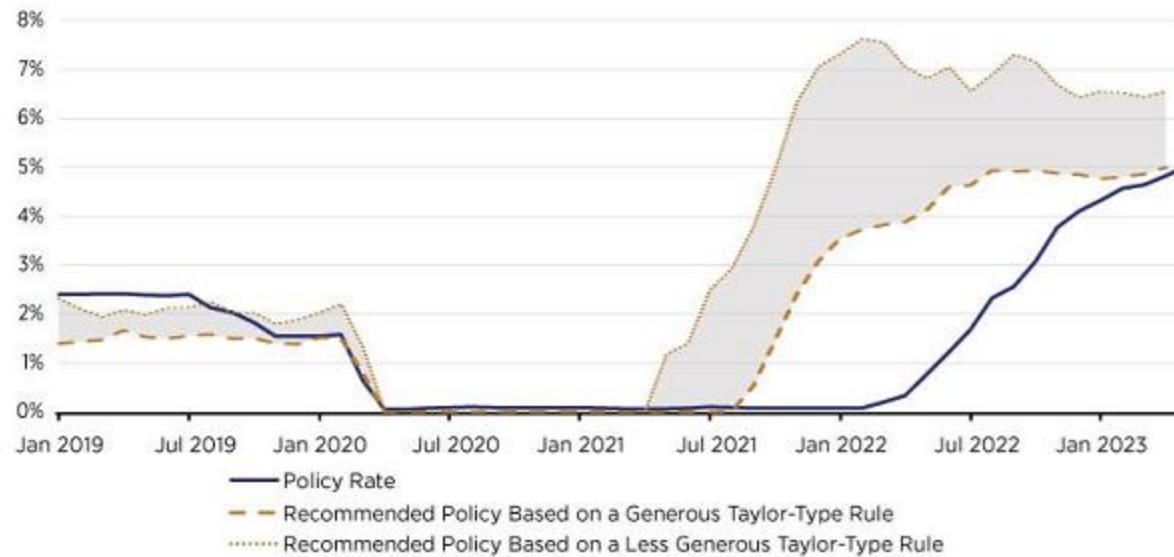Figure 3. The Fed held the interest rate lower than the Taylor rule and inflation rose sharply as the Fed then tightened policy.

Figure 4. This chart shows that policy was too low, and this was the reason that inflation rose.
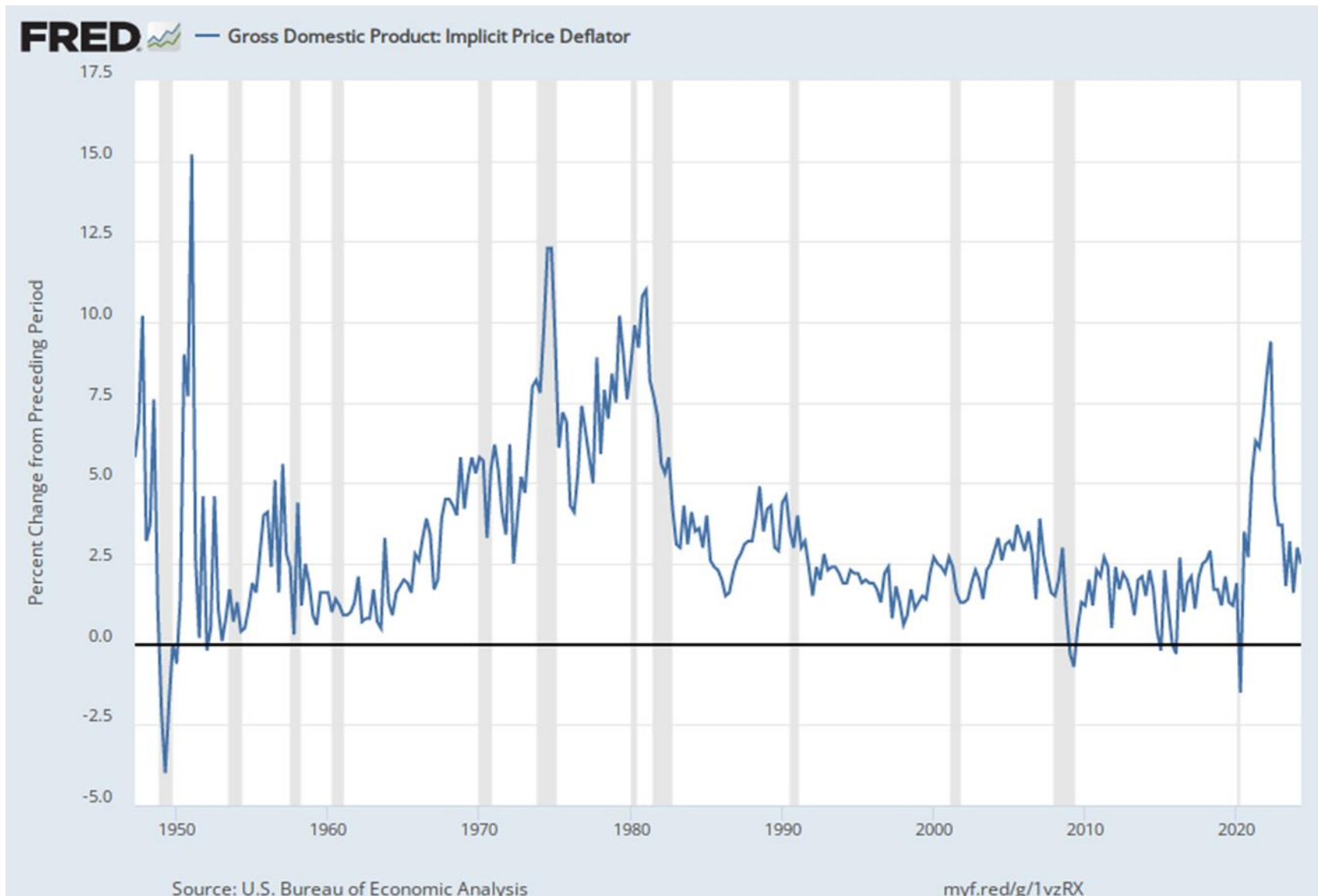
Figure 5. The inflation rate rose well above the Fed's target of 4 percent.
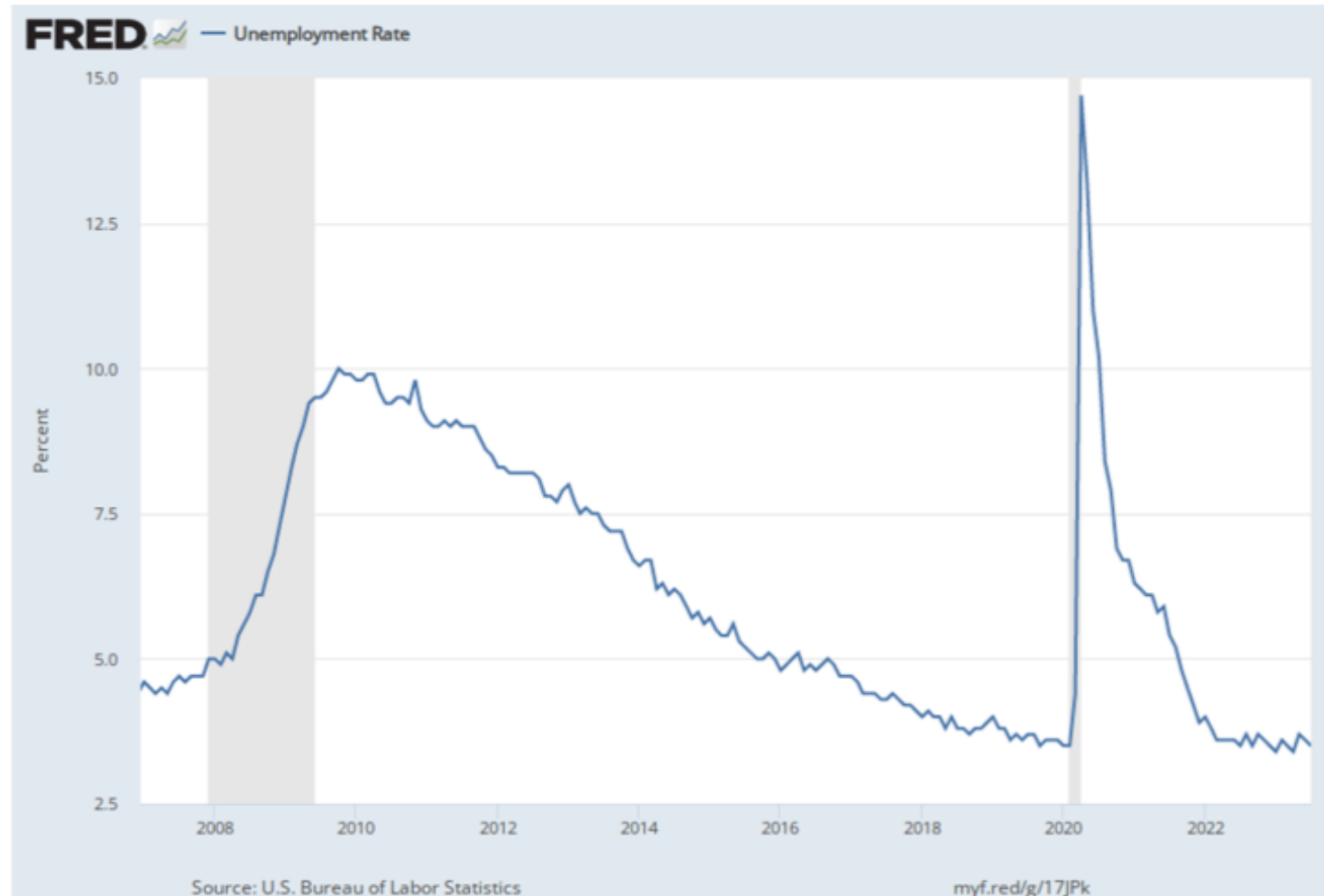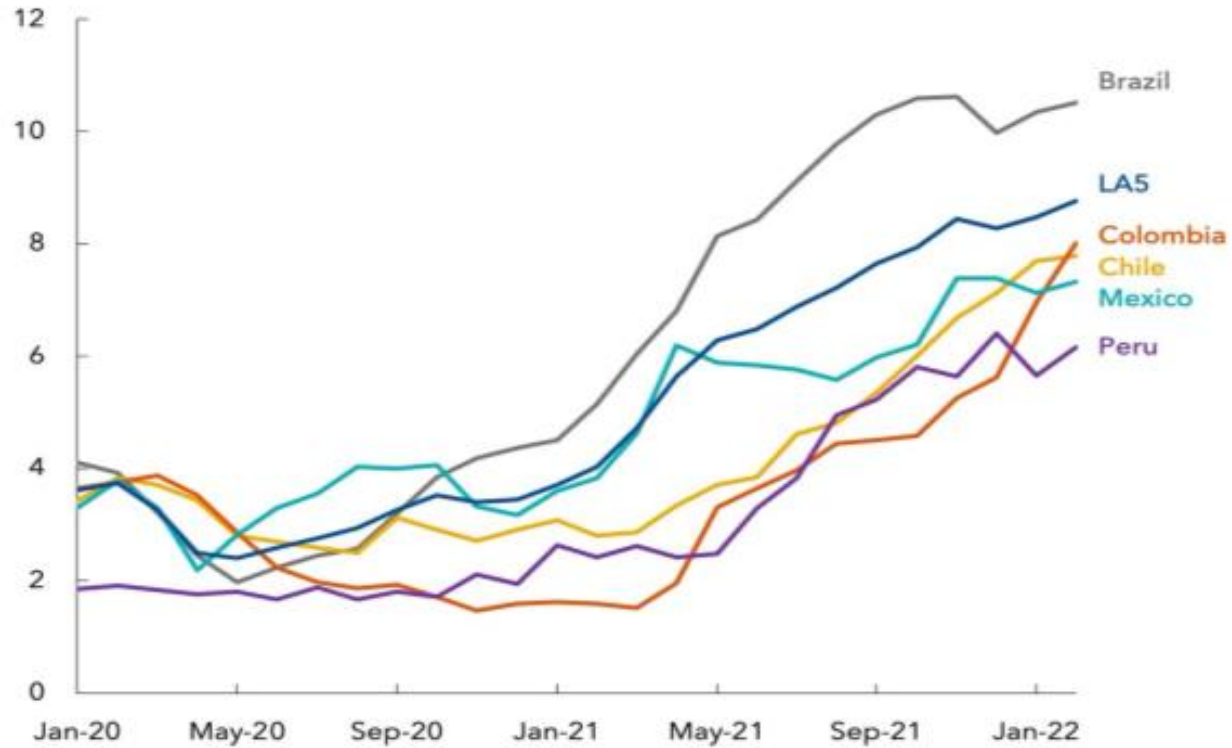
Figure 6. The unemployment rate rose well above the target range.

Broader based

Inflation in Latin America has become broader based since the second half of 2021.

(year-over-year percent change)

Sources: Haver Analytics; national authorities; and IMF staff calculations.
Note: Peru refers to Lima.

IMF

Figure 7. Inflation in Latin America from January 2020 to January 2022