

Understanding Fiscal Inflation

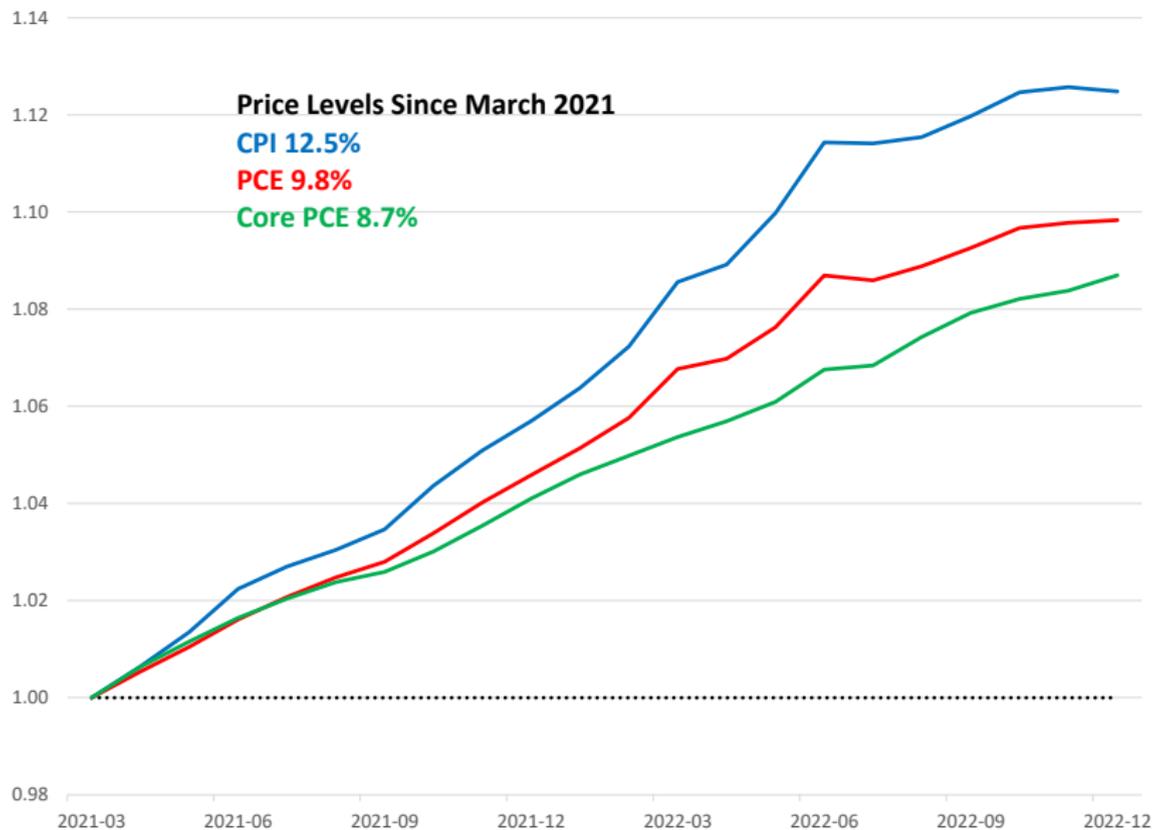
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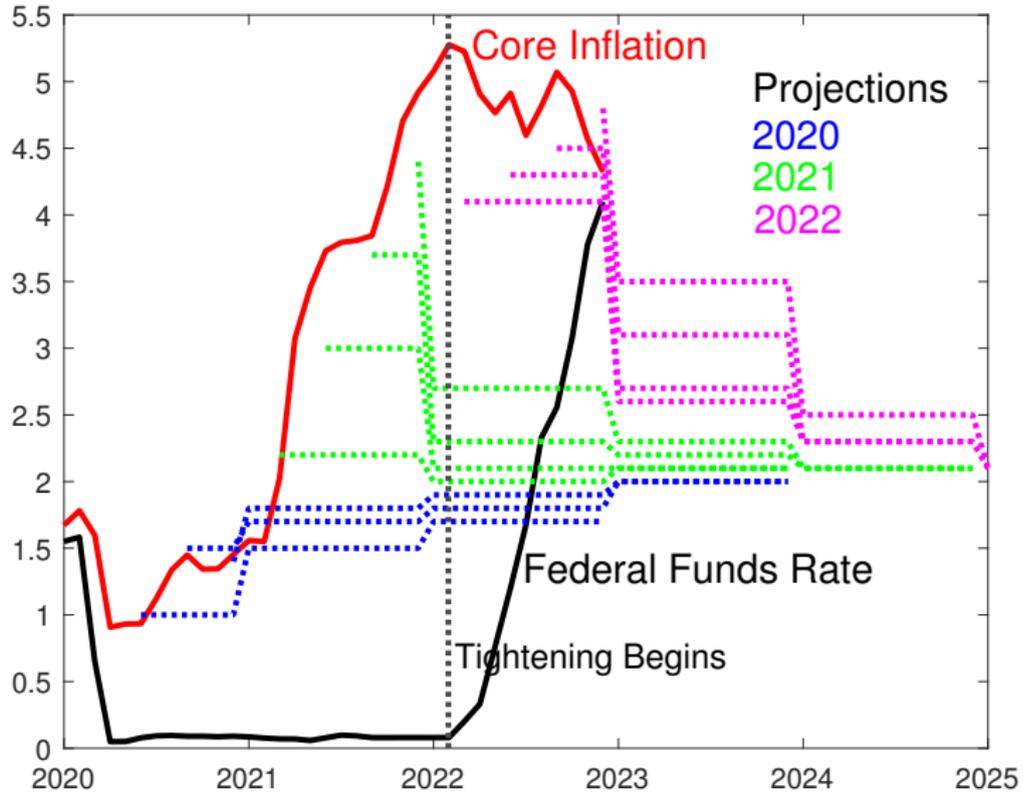
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American Inflation Today



Inflation & the Fed's Response



Fed believes inflation will be (relatively) transitory

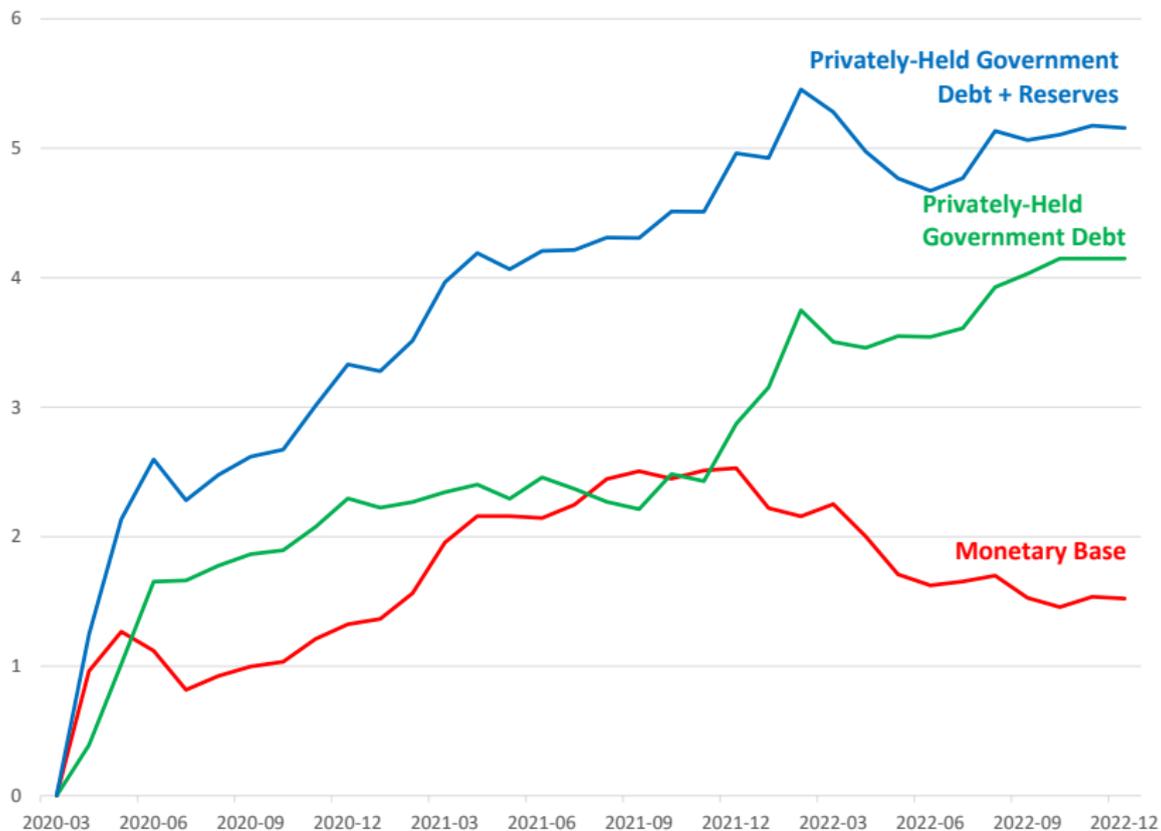
The Fed's Views of Inflation (?)

- ▶ From combined strong demand & constrained supply
- ▶ Chairman Powell:
 - ▶ “Early in the pandemic, goods prices began rising rapidly, as abnormally strong demand was met by pandemic-hampered supply.” 11/22
 - ▶ “. . . spending on durable goods has boomed since the start of the recovery and is now running about 20 percent above the pre-pandemic level. With demand outstripping pandemic-afflicted supply, rising durables prices are a principal factor lifting inflation well above our 2 percent objective.” 8/21
- ▶ “Transitory” as supply-chains heal & demand for goods/services realigns
- ▶ Others attribute initial inflation to fiscal expansion, but argue that has waned

Might the Fed Be Wrong?

- ▶ Perhaps, due to its narrow view of fiscal inflation
- ▶ View leads to a belief that...
 1. MP *can always offset fiscal inflation*
 2. Even if Phillips curve is flat, nailing down $E\pi$ nails down π
 3. Back to a commitment to hit π^*
- ▶ When is this true, according to theory?
- ▶ Does expansion in government liabilities play a role?

Nominal Government Liabilities



\$5 trillion increase in interest-bearing liabilities in two years (par value)

Fiscal Expansion

- ▶ Always two effects
 1. Higher *real* demand: “Keynesian hydraulics”
 2. Higher *nominal* wealth: bond financing
- ▶ Hydraulics: simple IS-LM, monetarism, new Keynesian
- ▶ Debt-financed increase in purchases, G_t
 - ▶ higher real AD raises employment, production, real income, private expenditures
 - ▶ inflation arises from positive output gaps
- ▶ All initial action in Euler equation (IS)
 - ▶ MP tightening raises real interest, offsets fiscal demand, hits π^*
- ▶ “Fed has the tools” to control inflation stems from the hydraulics view (Yellen, Waller)

Waning Demand Stimulus

- ▶ Keynesian hydraulics about real spending/income flows
- ▶ Once accumulated government spending has transformed into consumption expenditures, fiscal stimulus ends
- ▶ Once the spigot turned off, hydraulic flows end
 - ▶ by mid 2021 people had largely spent their Covid-relief transfers
- ▶ When inflation really got going in last half of 2021, observers attributed it to non-fiscal factors

What About Wealth Effects?

- ▶ New government debt finances fiscal expansion
 - ▶ increases nominal wealth
 - ▶ agents must be induced to hold it
- ▶ Value of bonds depends on discounted cash flows
 - ▶ “cash flows” are primary budget surpluses
 - ▶ higher surpluses raise real backing, increasing bond demand
- ▶ If surpluses not expected to rise sufficiently
 - ▶ real value of bonds exceeds backing (at initial prices)
 - ▶ value of bonds falls—lower Q_t , higher P_t —until agents absorb new bonds

$$\frac{Q_t B_t}{P_t} = \sum_{j=1}^{\infty} E_t m_{t,t+j} S_{t,t+j}$$

- ▶ the missing bond-market clearing condition: $B_t^d = B_t^s$

Illustration

- ▶ Distinguish “ordinary” from “emergency” purchases
- ▶ Ordinary $G^o (= T^o)$ financed with lump-sum taxes
- ▶ Emergency G^e financed with one-period debt: no tax adjustments
- ▶ Flexible prices, fixed capital, consumption/leisure choice, linearize, *i.i.d.* shocks to (G_t^o, G_t^e, T_t^e)

$$\text{Euler equation: } i_t = E_t \pi_{t+1} + r_t^n$$

$$\text{Natural interest rate: } r_t^n = \frac{1}{\sigma + \omega^{-1}} (G_t^o + G_t^e)$$

$$\text{Monetary policy: } i_t = \phi \pi_t, \quad 0 \leq \phi < 1$$

$$\text{Budget: } b_{t-1} = \beta(T_t^e - G_t^e) + \delta(1 - \beta\phi)\pi_t + \beta b_t$$

$$b_t = B_t/P_t, \quad \delta = b/y$$

Equilibrium

► Inflation

$$\pi_t = \underbrace{\frac{\beta}{\sigma + \omega^{-1}}(G_t^o + G_t^e)}_{\text{Keynesian hydraulics}} + \underbrace{\frac{\beta}{\delta}(G_t^e - T_t^e)}_{\text{wealth effects}} + \frac{1}{\delta}b_{t-1}$$

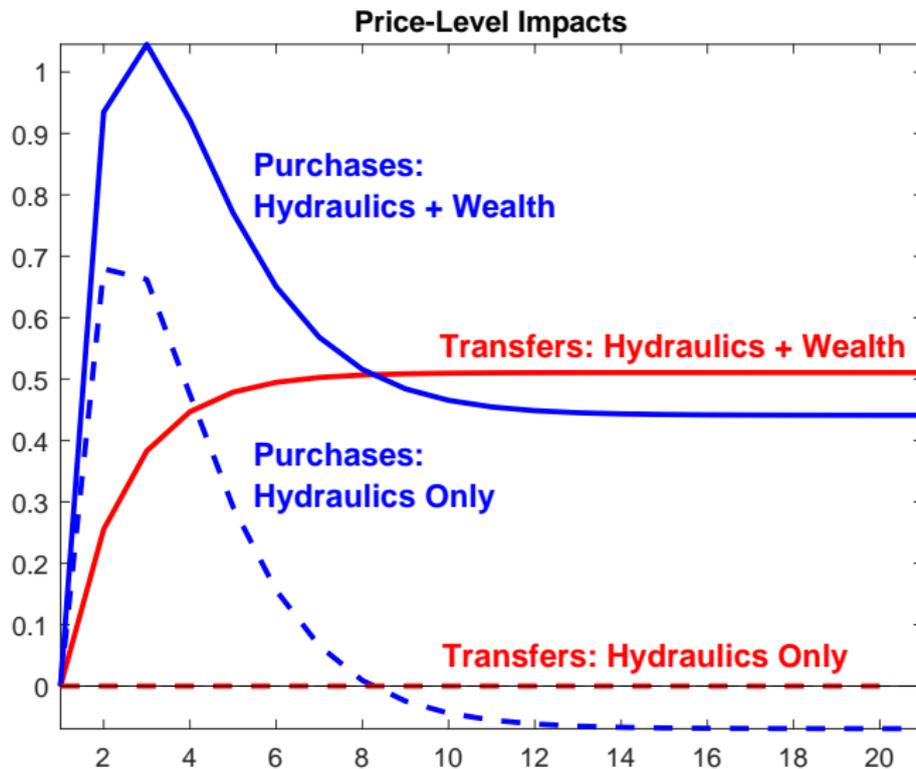
$$\Rightarrow E_t \pi_{t+1} = \frac{1}{\delta}b_t \quad \delta : \text{debt-GDP}$$

► Debt dynamics

$$b_t = \underbrace{-\frac{\delta(1 - \beta\phi)}{\sigma + \omega^{-1}}(G_t^o + G_t^e)}_{\text{Keynesian hydraulics}} + \underbrace{\beta\phi(G_t^e - T_t^e)}_{\text{wealth effects}} + \phi b_{t-1}$$

$$\Rightarrow E_t b_{t+1} = \phi b_t \quad \phi : \text{MP inflation response}$$

Hydraulics & Wealth Effects



Debt duration 6 years, $\phi = .5$, debt-output 100%, serially correlated shocks

Debt Backing During Covid

- ▶ “Backed” means: did people expect that future taxes would rise sufficiently to pay interest & principal on the liabilities?
- ▶ U.S. has no legislated fiscal rules that require taxes to rise to payoff government borrowing
- ▶ We do have “The Hamilton Norm”
 - ▶ *deficits beget surpluses*
 - ▶ create securely-backed public debt
 - ▶ safe government debt underpins financial markets
- ▶ U.S. has largely upheld this norm
 - ▶ U.S. treasury's the world's go-to safe asset

Maintaining the Norm Then

“... today I’m pledging to cut the deficit we inherited in half by the end of my first term in office.”

President Obama, 23 February 2009 at Fiscal Responsibility Summit, six days after \$831 billion for American Recovery and Reinvestment Act signed into law

- ▶ The norm: “ordinary” deficits, backed by future taxes
- ▶ Periodic fiscal consolidations retire debt

Break the Norm Now

“It’s important to note that we believe this should be provided on an emergency basis, not something where it would require offsets.”

Jen Psaki, White House Press Secretary, 15 March 2022, referring to \$22.5 billion request for Covid funding after \$4.6 trillion allocated in earlier relief

- ▶ Departure from the norm: “emergency” deficits, unbacked by future taxes
- ▶ Characterizes message from elected leaders throughout pandemic

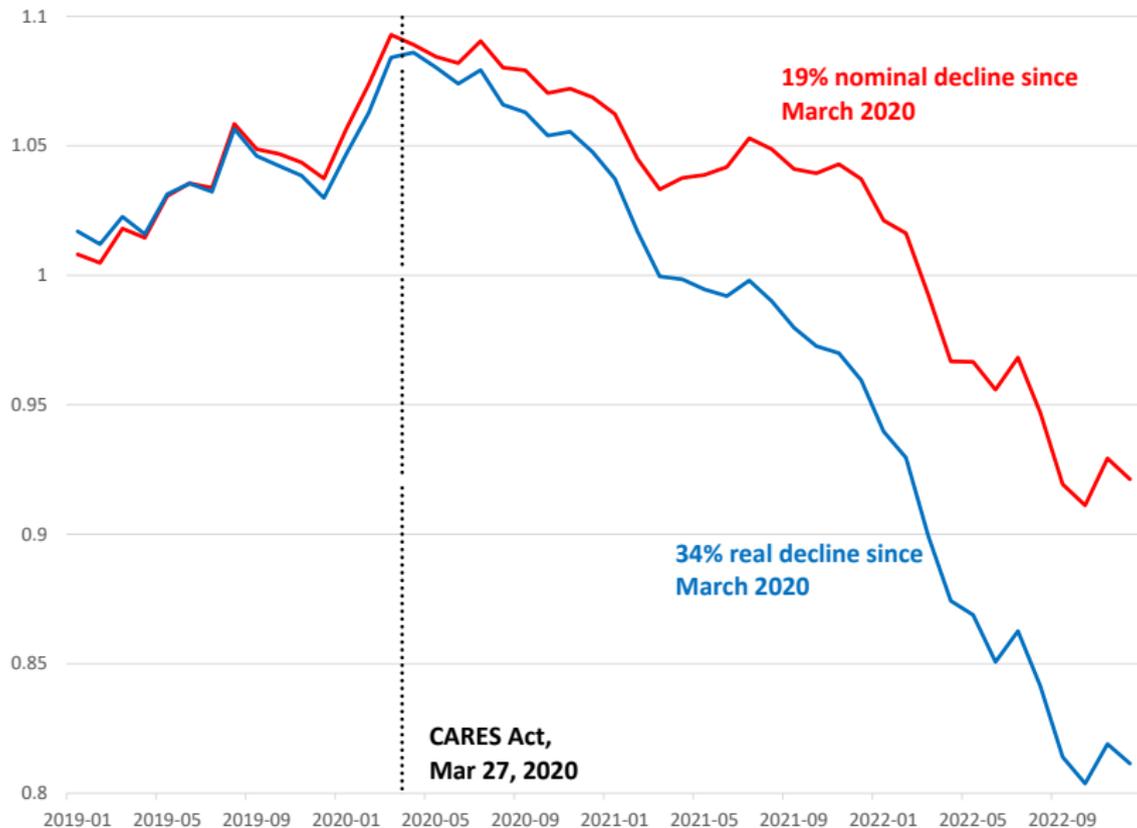
Unbacked Debt

- ▶ Covid borrowing may have been perceived as unbacked
 - ▶ Transfers morphed from “loans” to “gifts”
 - ▶ Gifts raise permanent income
 - ▶ Government debt becomes nominal private wealth
1. What happens in the bond market?
 2. How does monetary policy fit in?
 3. Will surpluses adjust?

The Bond Market

- ▶ Since March 2020, nominal government liabilities have risen 30%
- ▶ With no change in $EPV(\mathcal{S})$, equilibrium in bond market requires ultimate increase in P of 30%
- ▶ By this reasoning, P has much further to rise than the Fed believes
- ▶ Assuming $\Delta EPV(\mathcal{S}) = 0$ is strong
- ▶ The Fed's actions matter

Market/Par Value Marketable Treasuries



Since March 2020, par value rose \$6.5 trillion, market value rose \$2.8 trillion

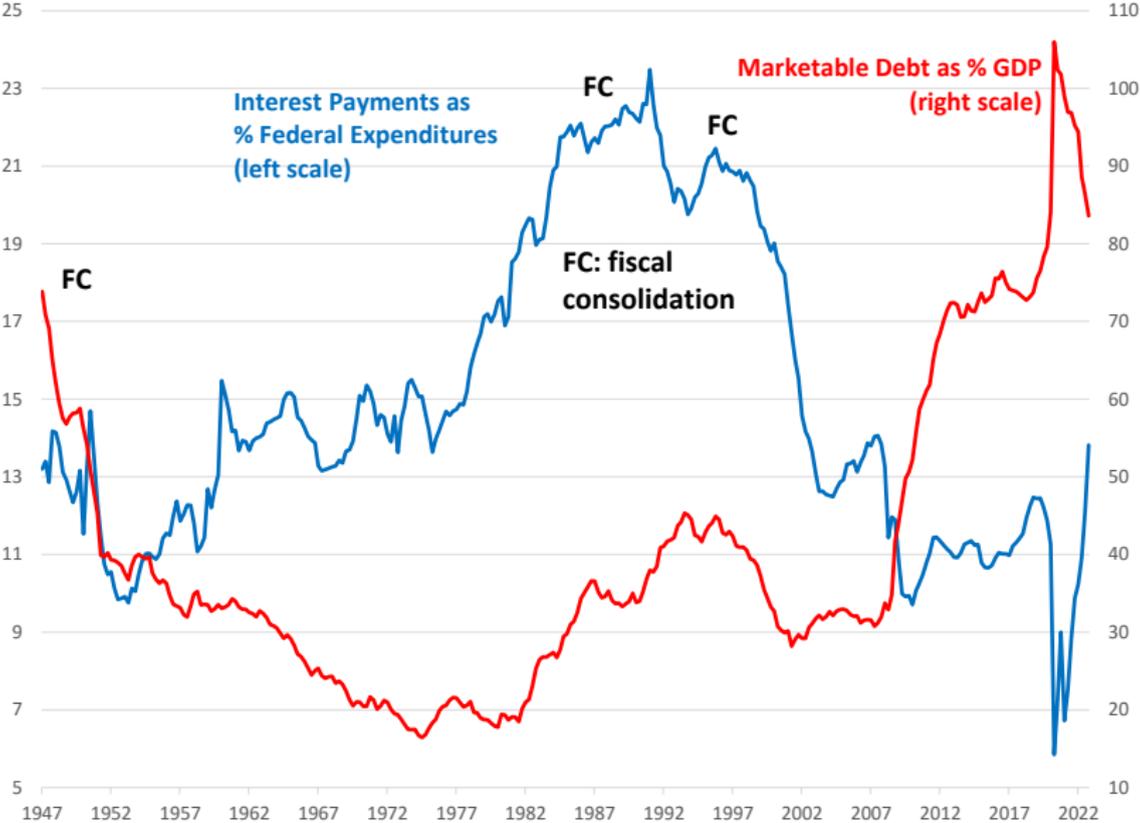
Fed Actions

- ▶ Higher funds rate raises *real* discount rates
 - ▶ Higher real discount rates *reduce* $PV(S)$
 - ▶ Calls for a larger increase in P
- ▶ If higher real rates slow economic growth, they reduce tax receipts
 - ▶ Lower receipts reduce expected surpluses
 - ▶ Calls for a larger increase in P
- ▶ But there is an out:
 - ▶ Congress & the president could maintain the Hamilton norm

Will Surpluses Adjust?

- ▶ Debt-GDP poor predictor of “fiscal consolidation” to increase primary surpluses
- ▶ Elected officials—and voters—don’t care about debt per se
- ▶ They care about whether the government provides goods & services
- ▶ Historically, surpluses adjust when interest payments on the debt get high enough
 - ▶ high debt service crowds out other politically beneficial spending

Fiscal Consolidations



“Revenue enhancements” throughout 1980s

Will Surpluses Adjust?

- ▶ Debt service now 14% of spending & rising quickly
- ▶ Will U.S. political squabbles—like the debt ceiling debacle—will prevent consolidation?
- ▶ If they do not, the Fed's actions & fiscal consolidation will bring inflation down
- ▶ If they do, the Fed might raise rates still more
 - ▶ higher resulting interest payments will be financed with more debt sales
 - ▶ price level will need to rise more to equate real debt to surpluses
 - ▶ if real rates get higher, recession becomes more likely
- ▶ Worst case: stagflation

Wrap Up

- ▶ Hard to understand current inflation without bringing unusually large expansion of government liabilities into the picture
- ▶ Once you do that, the Fed plays second fiddle
- ▶ Congress & president in first chair
- ▶ When inflation due to debt-financed fiscal expansion, solution lies in *joint* response of monetary & fiscal policies
- ▶ Monetary policy cannot fix all fiscal problems