Perceptions & Misperceptions of Fiscal Inflation

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Overview

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  - small short-run fiscal stress
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  - large long-run fiscal stress
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- Describe inherent symmetry: Regimes M & F
- How long-run fiscal stress can undermine monetary control of inflation
  - introduce idea of a “fiscal limit”—point at which taxes & spending no longer adjust to stabilize debt
  - can arise for economic or political reasons
Era of Fiscal Stress

- Short-run imbalances
Short-Run Fiscal Stress

Figure 1.12. General Government Fiscal Balances and Public Debt (Percent of GDP unless noted otherwise)

Emerging and developing economies
Advanced economies
World

Sources: IMF, Fiscal Monitor; and IMF staff calculations.


Left scale for Japan.

Cyclically adjusted primary balance adjustment needed to bring the debt ratio to 60 percent by 2030. For Japan, the scenario assumes a reduction in net debt to 80 percent of GDP; this corresponds to a gross debt target of about 200 percent of GDP.

Based on the IMF staff’s Consultative Group on Exchange Rate Issues (CGER).

Economies include Argentina, Australia, Brazil, Canada, Chile, China, Colombia, Czech Republic, euro area, Hungary, India, Indonesia, Israel, Japan, Korea, Malaysia, Mexico, Pakistan, Poland, Russia, South Africa, Sweden, Switzerland, Thailand, Turkey, United Kingdom, and United States. For a detailed discussion of the methodology for the calculation of exchange rates’ over- or undervaluation, see Lee and others (2008).

These economies account for 18.5 percent of global GDP.

These economies account for 27.4 percent of global GDP.

These economies account for 39.2 percent of global GDP.

Fiscal deficits and public debt are very high in many advanced economies. Although policy became much less stimulatory in 2010, real GDP growth picked up, suggesting a handoff from public to private demand. For 2011, fiscal consolidation is expected to be modest in advanced economies. As a result, the adjustment required to achieve prudent debt levels by 2030 remains very large. Fiscal adjustment will be larger in economies with high external surpluses than in economies with high deficits, which is consistent with widening global imbalances.

Shares of GDP. Source: IMF, WEO
Era of Fiscal Stress

- Short-run imbalances
- Long-run imbalances
Long-Run Fiscal Stress: Aging Populations

Dependency Ratio: Population 65 and above relative to ages 15-64

Blue: 1960
Red: 2005
Green: 2050
U.S. “Unfunded Liabilities”

Source: CBO Long-Term Budget Outlook
U.S. “Unfunded Liabilities”

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- Other Federal Non-interest Spending
- Medicare and Medicaid
- Social Security
Spending Commitments to the Aged

<table>
<thead>
<tr>
<th>Country</th>
<th>Aging-Related Spending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>482</td>
</tr>
<tr>
<td>Canada</td>
<td>726</td>
</tr>
<tr>
<td>France</td>
<td>276</td>
</tr>
<tr>
<td>Germany</td>
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<td>495</td>
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<tr>
<td>Advanced G-20 Countries</td>
<td>409</td>
</tr>
</tbody>
</table>

Worldwide “Unfunded Liabilities.” Net present value of impact on fiscal deficit of aging-related spending, in percent of GDP. Source: IMF
Long-Run Fiscal Stress

Debt-GDP. Source: BIS
Long-Run Fiscal Stress

Debt-GDP. Source: BIS
Message in Long-Run Projections

- These projections cannot happen
- Some assumptions underlying projections
  1. economies will grow out of projected deficits
  2. governments will default outright on debt
  3. fiscal policies will adjust surpluses to stabilize debt
  4. paths of inflation will turn out different from assumed
  5. some combination of the four
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- Most central bankers hope for 3
  - what are the prospects for significant entitlements reform?
Prospects for Entitlements Reform

The level of public fiscal discourse in Greece
Prospects for Entitlements Reform

The level of public fiscal discourse in U.S.
Message in Long-Run Projections

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- Europe makes clear how onerous is 2
- Most central bankers hope for 3
- We focus on ways that 4 might arise
Unresolved Fiscal Stress

- Spending promises without financing plans create unresolved fiscal stress
- Raises possibility economy will hit its fiscal limit—point at which, for economic or political reasons, surpluses can no longer adjust to stabilize debt
- Many questions to address
Unresolved Fiscal Stress

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- Here focus narrowly on:

1. How might unresolved fiscal stress affect inflation/aggregate demand?
Unresolved Fiscal Stress

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- Raises possibility economy will hit its fiscal limit—point at which, for economic or political reasons, surpluses can no longer adjust to stabilize debt.

- Many questions to address.

- Here focus narrowly on:

1. How might unresolved fiscal stress affect inflation/aggregate demand?

2. Can central banks retain control of inflation/aggregate demand?
Asymmetric Perceptions of Macro Policies

- Policy boxing: place monetary & fiscal policy in separate boxes
  - create firewalls between them
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- Policy boxing: place monetary & fiscal policy in separate boxes
  - create firewalls between them
- Treat monetary & fiscal policy asymmetrically
  - Monetary policy:
    - independent central bank with clear mandate
    - staffed by professional economists
    - integrate academic research with practical policy
Asymmetric Perceptions of Macro Policies

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- Treat monetary & fiscal policy asymmetrically
  - Monetary policy:
    - independent central bank with clear mandate
    - staffed by professional economists
    - integrate academic research with practical policy
  - Fiscal policy:
    - utterly political without clear economic objectives
    - little input from economists
    - essentially no connection between research and policy
Policy Boxes: Historical Rationales

1. High and hyper-inflations have had fiscal roots
   - central bank pressured to print money to finance government spending and keep government solvent
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2. Inflation bias
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2. Inflation bias
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   **Solution:**
   - create an independent central bank
   - give central bank clear objectives
   - permit central bank to “move first”—before fiscal policy
   - force fiscal authority to adopt policies that ensure solvency
Institutions treat monetary & fiscal policy asymmetrically.

This denies intrinsic *economic symmetry* between the policies.
Monetary & fiscal policy have two tasks: (1) control inflation; (2) stabilize debt

Two different policy mixes that can accomplish these tasks
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Two different policy mixes that can accomplish these tasks:

Regime M: conventional assignment—MP targets inflation; FP targets real debt (called active MP/passive FP)

Regime F: can arise in an era of fiscal stress
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MP behavior completely familiar: target inflation by aggressively adjusting nominal interest rates

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Monetary-Fiscal Interactions: Regime M

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- FP adjusts future surpluses to cover interest plus principal on debt
- What is FP doing?
  - any shock that changes debt must create the expectation that future surpluses will adjust to stabilize debt’s value
  - people must believe adjustments will occur eventually
  - eliminates wealth effects from government debt
Monetary-Fiscal Interactions: Regime M

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  - any shock that changes debt must create the *expectation* that future surpluses will adjust to stabilize debt’s value
  - people must believe adjustments will occur eventually
  - eliminates wealth effects from government debt
  - for MP to target inflation, fiscal expectations must be anchored on FP adjusting to maintain value of debt
- Any reason to believe expectations are now so anchored?
An Equilibrium Condition

\[
\frac{M_{t-1} + Q_t B_{t-1}}{P_t} = \sum_{j=0}^{\infty} \beta^j E_t \left[ \tau_{t+j} - z_{t+j} + \frac{M_{t+j} - M_{t+j-1}}{P_{t+j}} \right]
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Market value government liabilities =
Expected present value primary surpluses + seigniorage

- In Regime M . . .
  - MP delivers equilibrium inflation process
  - taking inflation as given, FP must choose compatible surplus policy
  - “compatible” means: stabilizes debt
  - imposes restrictions on \( E_t PV \)
Primer on Monetary-Fiscal Interactions

- Monetary & fiscal policy have two tasks: (1) control inflation; (2) stabilize debt
- Beautiful symmetry: two different policy mixes that can accomplish these tasks

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- **Regime F:** can arise in an era of fiscal stress
- **Regime F arises in two ways**
  1. Sargent & Wallace’s unpleasant monetarist arithmetic
Conventional Perception of Fiscal Inflation

- Arises from unpleasant arithmetic mechanism
  - hit fiscal limit; surpluses unresponsive to debt
  - seigniorage adjusts to stabilize debt
  - produces high & volatile inflation

— Mervyn King (1995)
I agree
Conventional Perception of Fiscal Inflation

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- A central banker’s take on this:
  “...the proposition is of little current relevance to the major industrial countries. This is for two reasons. First, seigniorage—financing the deficit by issuing currency rather than bonds—is very small relative to other sources of revenues. Second, over the past decade or so, governments have become increasingly committed to price stability.... This sea change in the conventional wisdom about price stability leaves no room for inflation to bail out fiscal policy.”

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Policy Boxes Again

- A deeply ingrained misperception: CB independence & inflation targeting insulate inflation from FP
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Stems from beliefs that

- Regime M is best way to achieve two tasks
- Regime F necessarily brings high inflation

Beliefs underlie monetary reforms without corresponding fiscal reforms

- assumes MP reform can force FP reform
- Europe shows us how well that works
Policy Boxes Again

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- There is another channel through which fiscal policy can affect inflation and aggregate demand
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  2. fiscal theory of the price level
Monetary-Fiscal Interactions: Regime F

- Governments issue mostly nominal (non-indexed, local currency) bonds
  - 90% U.S. debt; 80% U.K. debt; 95% Euro-area debt; most of Australian, Japanese, Korean, New Zealand, & Swedish debt
  - increasing important in Latin America: Chile (92%), Brazil (89%), Colombia (77%), Mexico (75%)
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In Regime F:
- FP sets primary surpluses independently of debt
- MP prevents interest payments on debt from destabilizing debt
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- Nominal debt is revalued to align its value with expected surpluses

- Lower current or expected surpluses reduce value of outstanding debt: raises aggregate demand
Fiscal Transmission in Regime F

\[ \frac{M_{t-1} + Q_t B_{t-1}}{P_t} = \sum_{j=0}^{\infty} \beta^j E_t \left[ \tau_{t+j} - z_{t+j} + \frac{M_{t+j} - M_{t+j-1}}{P_{t+j}} \right] \]

- Increase in current or expected transfers
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- Higher current & future inflation and economic activity
- Long bonds shift inflation into future
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- Demand for debt $\Leftrightarrow$ aggregate demand
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Debt Maturity & Regime F

- One- and two-period nominal debt: $B_t(t + 1), B_t(t + 2)$
- Equilibrium condition

$$\frac{B_{t-1}(t)}{P_t} + \beta B_{t-1}(t+1) E_t \frac{1}{P_{t+1}} = E_t PV (\text{surpluses, seigniorage})$$
One- and two-period nominal debt: \( B_t(t + 1), B_t(t + 2) \)

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\]

MP determines the timing of inflation

- stabilize expected inflation: forces adjustment in \( P_t \)
- lean against current inflation: forces adjustment in \( E_t(1/P_{t+1}) \)
- tradeoff depends on maturity structure, \( B_{t-1}(t + 1)/B_{t-1}(t) \)
- richer maturity structure ⇒ any pattern of inflation

Message: MP not impotent, but it cannot control both actual & expected inflation
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Undermining Monetary Control of Inflation

- Policy starts in Regime M: active MP/passive FP
- Agents begin to doubt necessary fiscal adjustments will be forthcoming
  - consolidation progresses in fits & starts
  - domestic politics grow more polarized
- Simplest case: people believe at future date $T$ economy hits the fiscal limit and Regime F adopted
- From $T$ on, inflation determined by fiscal expectations
  - value of debt & price level at date $T - 1$ pinned down
- Forward-looking agents bring those effects into period before the fiscal limit
Undermining Monetary Control of Inflation

At a known date $T$ economy reaches fiscal limit
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<table>
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Undermining Monetary Control of Inflation

What happens before the fiscal limit?

- Regime M policies do not determine inflation
- Ricardian equivalence breaks down
- Lower expected surpluses reduce debt-output
- Regime M MP destabilizes expected inflation
  - leaning against inflation raises interest on debt, wealth, future inflation
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Messages:
1. Price level determined by beliefs about policy in the long run
2. Inappropriate or uncertain FP makes MP unable to anchor inflation expectations

All this generalizes to more plausible scenarios
Government Debt Before the Fiscal Limit

Debt–GDP Target

Fluctuating Transfers: Always Regime F

Fiscal Limit is Regime F
Passive Monetary/
Active Fiscal

Fiscal Limit
T = 50

Debt in Fixed Regime F
Passive Monetary/
Active Fiscal
Inflation Before the Fiscal Limit

Fluctuating Transfers: Always Regime F

Fiscal Limit is Regime F
Passive Monetary/Active Fiscal

Inflation in Fixed Regime F
Passive Monetary/Active Fiscal

Fiscal Limit T = 50
Inflation Before the Fiscal Limit

Fiscal Limit is Regime F
Passive Monetary/Active Fiscal

Inflation in Fixed Regime F
Passive Monetary/Active Fiscal

Fiscal Limit T = 50

Inflation When Fiscal Limit at T = 50

Inflation Target

Fluctuating Transfers: Regime M Before Fiscal Limit
Inflation Before the Fiscal Limit

Expected Inflation When Fiscal Limit at $T = 50$

Inflation When Fiscal Limit at $T = 50$

Inflation in Fixed Regime F
Passive Monetary/Active Fiscal

Fiscal Limit is Regime F
Passive Monetary/Active Fiscal

Fiscal Limit $T = 50$

Fluctuating Transfers: Regime M Before Fiscal Limit
Eventually, we hope, the economy will recover and inflation will rise.

Suppose that to combat inflation, the Fed raises rates to, say, 6% (as in 2006/07 or 2000/01).

This will have a big impact on the fiscal deficit.
Putting a Sharp Point on the Message

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- Suppose that to combat inflation, the Fed raises rates to, say, 6% (as in 2006/07 or 2000/01).
- This will have a big impact on the fiscal deficit.
  - 6% of $15 trillion in debt is $1 trillion in interest expenses.
  - About doubles current deficit.
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Without this fiscal backing, higher interest rates create higher inflation.
Take Aways

1. Conventional perceptions of inflation miss a channel for fiscal inflation
   ▶ channel may be important in times of fiscal stress
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   - channel may be important in times of fiscal stress
2. Perception that MP can always stop an inflation that breaks out assumes the necessary fiscal backing will always be forthcoming
   - when fiscal limit possible, the assumption breaks down
3. If inflation has fiscal roots, aggressive MP can exacerbate aggregate demand fluctuations
4. Existing monetary-fiscal frameworks largely silent on how policy tensions get resolved
   - needs resolution before the big fiscal stress hits
5. Should be thinking about enforceable rules for fiscal behavior or different mandate for the Fed
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