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Urban Institute and Brookings Institution

Comments on “Federal Government Debt and Interest Rates”

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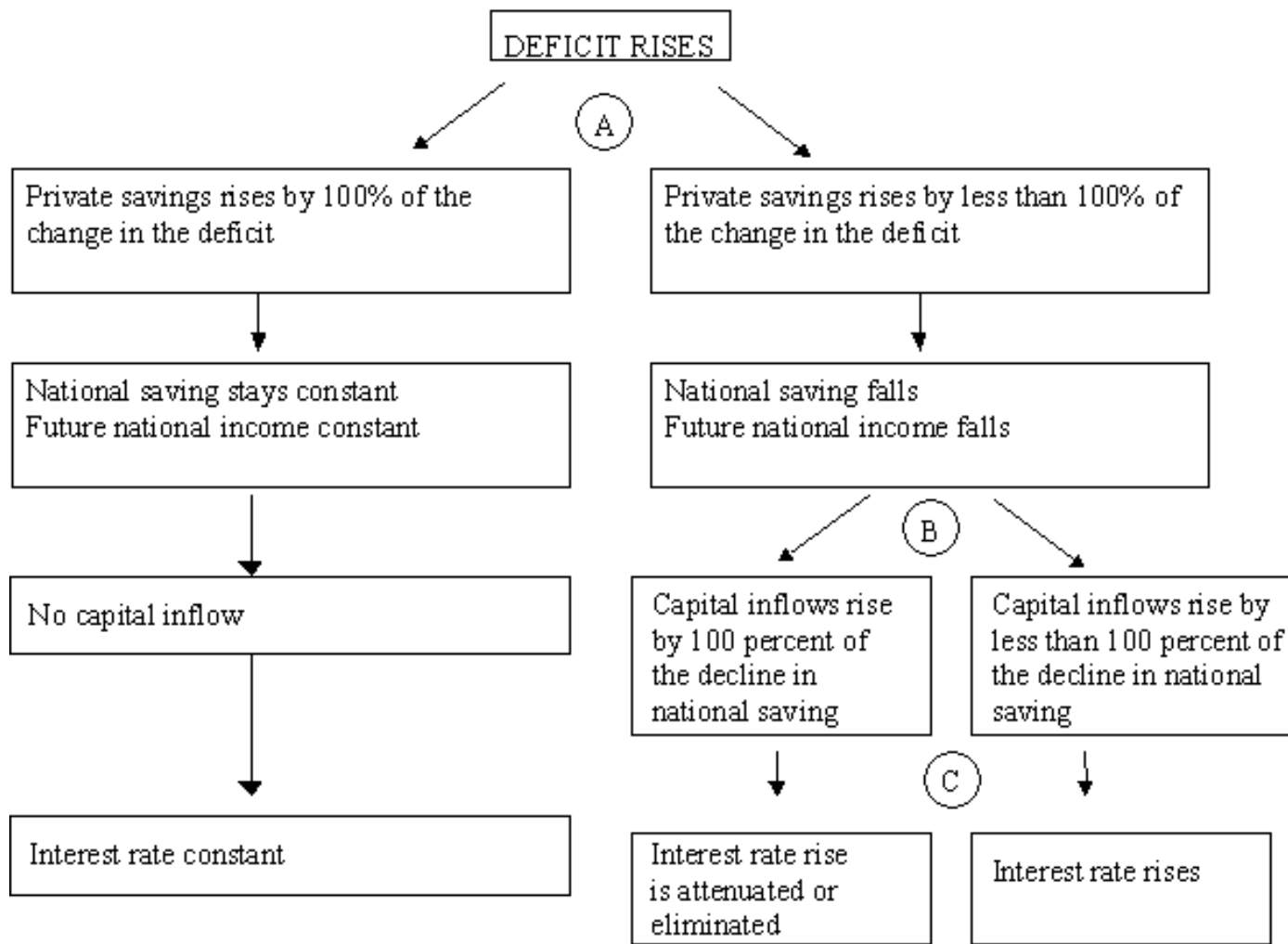
Summary

- Deficits and long-term economic performance:
Effect on interest rates is only one component of story
- Deficits and interest rates:
Surprising degree of convergence in estimates



Macro 101

- National saving = private saving + public saving
- National saving = $I + NFI$
- Increase in budget deficit reduces national saving unless fully offset by increase in private saving
- Reduced national saving:
 - Crowds out private investment
 - Increases borrowing from abroad/expands current account deficit





Keeping our eye on the ball...

- As long as national saving declines, future national income will decline
 - Domestic investment may decline and interest rates rise, and/or
 - Capital inflows from abroad may increase
- Either way, stock of capital owned by Americans in the future declines and future national income falls -- regardless of whether interest rates increase
- In other words, focus on point A, not point C in previous chart



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Deficits and interest rates



Debt vs. deficits

- Engen-Hubbard: “theory” says debt, not deficits, are linked to interest rate
 - Deficits then linked to *change* in r
- Even in neoclassical world, deficits can affect level of interest rate
 - Consider Solow model:
 - Saving rate determines *equilibrium* K and thus MPK
 - Deficit affects saving rate
 - Thus in equilibrium, *deficit* linked to r , not change in r



Debt vs. deficits, cont.

- Real world is not actually neoclassical
- Wide variety of market imperfections suggest that flows matter, not just stocks
 - Thus deficits can affect level of rates
- IS-LM also suggests this type of link
- Conclusion: Engen and Hubbard are too quick to dismiss any results relating deficits to *level* of interest rates as inconsistent with theory

- Reassuring that Engen and Hubbard's debt-based empirical results are broadly consistent with deficit-based results, as are Laubach's



Expectations

- If deficits affect interest rates, which deficits?
- Financial markets are forward-looking
- Should therefore expect relationship between current long-term rates and *expected* future deficits, not current deficit
- Feldstein (1986): "it is wrong to relate the rate of interest to the concurrent budget deficit without taking into account the anticipated future deficits."



Empirical studies

Measure of deficit	Positive	Mixed	Insignificant	<i>Total</i>
<i>Expected or unanticipated deficit</i>	<i>13</i>	<i>4</i>	<i>1</i>	<i>18</i>
VAR dynamics	2	2	6	<i>10</i>
Current deficit/debt	14	5	12	<i>31</i>
<i>Total</i>	<i>29</i>	<i>11</i>	<i>19</i>	<i>59</i>

Source: Gale and Orszag (2003)



Increase sustained *projected* deficits by 1 percent of GDP

- Elmendorf (1993): 43 basis points.
- Canzoneri, Cumby, and Diba (2002): 53 to 60 basis points
- Laubach (2003): 25 basis points

- Gale and Orszag (2003) survey, Rubin, Orszag, and Sinai (2004) paper: Reasonable range is 30-60 basis points



Measurement error

- Official or private forecasts are likely highly, but not perfectly, correlated with investor expectations
- Measurement error could therefore bias coefficient on projected deficit toward zero



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Two views?

- **Engen and Hubbard:**
Increase in *debt* equal to 1% of GDP raises 10-year real rate by 3 basis points
- **Gale and Orszag survey:**
Each 1% of GDP in sustained, projected deficits raises 10-year real rate by 30-60 basis points



Reconciliation

- Assume deficit of 1% of GDP each year over next 10 years
- Increase in debt: Roughly 10% of GDP at end of 10th year
- Engen-Hubbard: 30 basis points (= $3 * 1\%$ of GDP in debt * 10)
- Gale-Orszag range: 30-60 basis points

Hubbard and Rubin agree!



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2001/2003 tax cuts

- Assuming tax cuts are extended and not erased over time by AMT, effect on debt in 2014 > 20% of GDP
- Engen-Hubbard estimate of impact on interest rates: More than 60 basis points (20*3)
- Gale-Orszag range: Between about 60 and 120 basis points
- This factor alone tends to raise user cost of capital, yet calculations (based on tax effect alone) often do not include it



Conclusions

- Engen and Hubbard's results consistent with other recent papers – range of about 30-60 basis points for each 1% of GDP in sustained projected deficits
- Interest rate effect is only one mechanism through which deficits reduce future national income
 - Unless world is Ricardian, capital accumulation by Americans and therefore future national income declines -- regardless of effect on interest rates