The Relation Between Budget Deficits and Growth: Complicated but Clear

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The (Un)sustainability of Govt Deficits & Debt

- (Orthodox) Simplified sustainability conclusion: $g>r$
  - Note: not necessary to prevent Deficits, stop Debt from growing, or to repay debt
- But:
  - Loanable funds: deficits compete for scarce saving, slows growth and drives up interest rate
  - Ricardian Equivalents: consumers save to pay down debt, slows growth
  - ISLM: transaction crowding out drives up interest rate
  - Bond vigilantes boycott!
  - Takeaway: Rising deficit and debt ratios should be associated with higher interest rates and slower growth
- However, Keynesian view: deficit boosts demand
  - Countercyclical stabilizer: rising deficit ratio could be associated with recovery growth
  - Discretionary fiscal policy to boost growth
  - But: inflation danger!
- USA Reality Check: Debt ratio has been growing since founding

US Govt Debt? Get Over It!

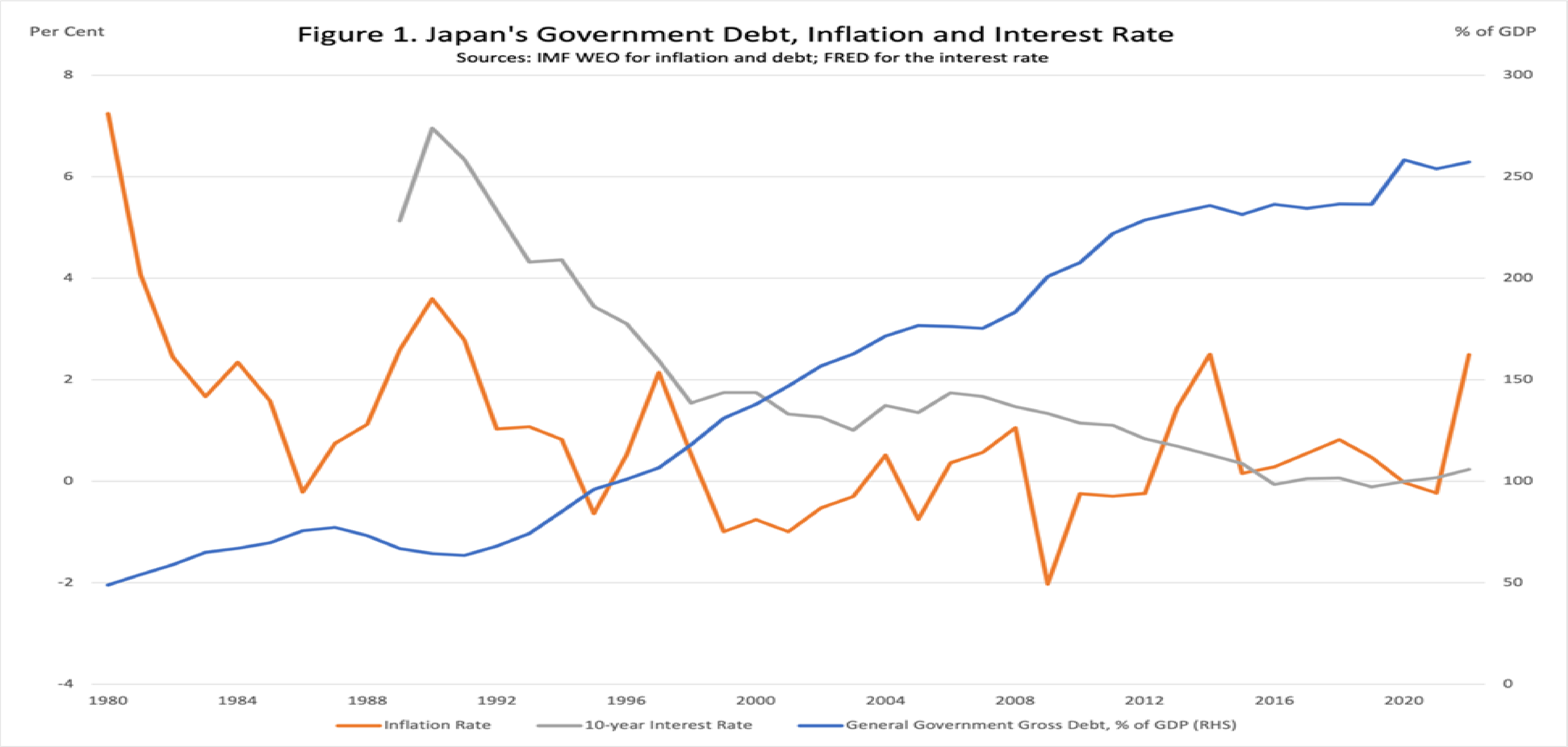
	Change is		Average Size of Change in Gross Public Debt
Time Period	Positive	Negative	(% of GDP)
1791 to 1930	66	74	0.31
1931 to 2018	83	5	4.22
1791 to 2018	149	79	1.82

FIGURE 1 Change to Gross Public Debt relative to GDP: 1791–2018.

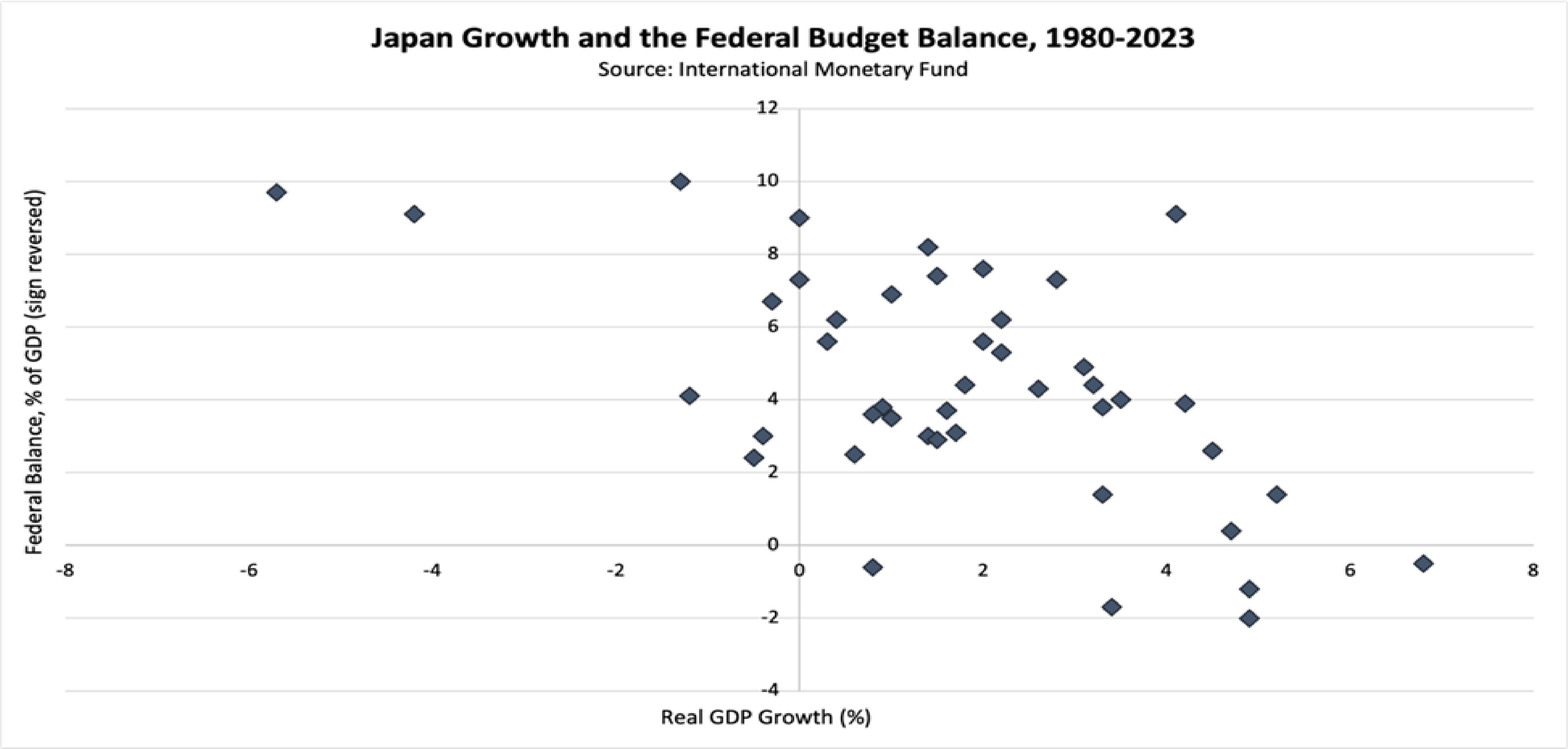
Modern Money Theory

- Sovereign currency: affordability not in question: no risk of involuntary default—even if r>g
- Functional finance: budget should serve functional purpose—to balance the private sector
- Sectoral balance: budget outcome largely not discretionary
- Endogenous money: Central bank sets the overnight interest rate
  - Both loanable funds and ISLM rejected
  - CB can set any rate it wants, but generally targets short term rates; others more complexly determined
  - But: Treasury can issue at short maturity
- No bond vigilantes; “bond sales are a reserve drain”
- Evidence that high deficits and debt raise interest rates and inflation???

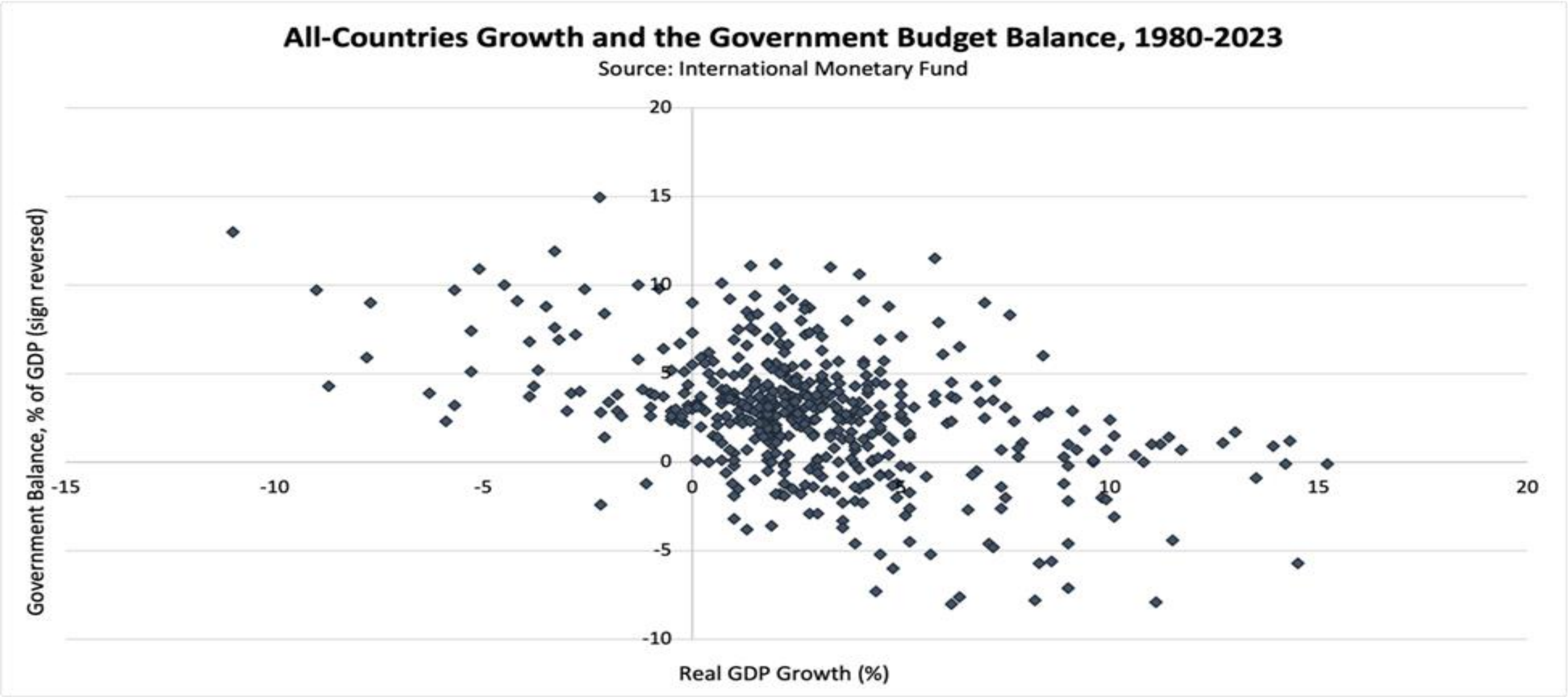
Japan: High Debt causes High Inflation and Interest rates?



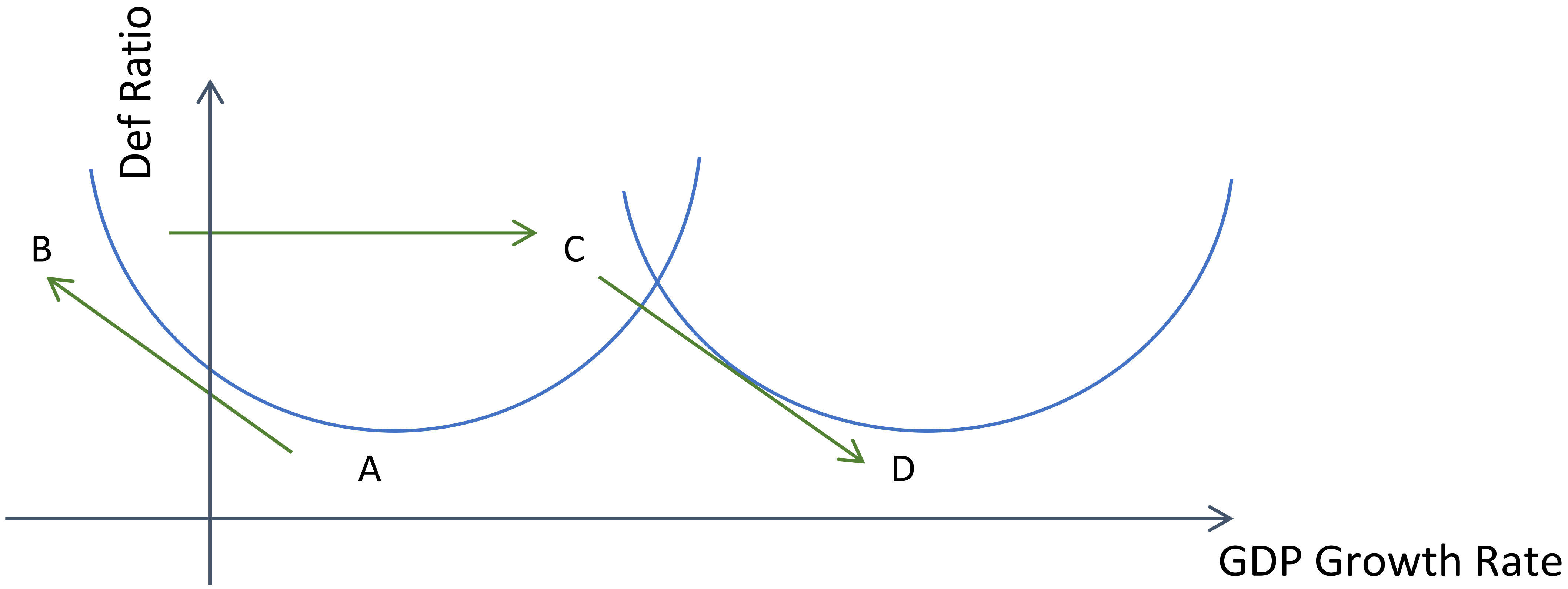
Japan: High Deficits Cause Low Growth?

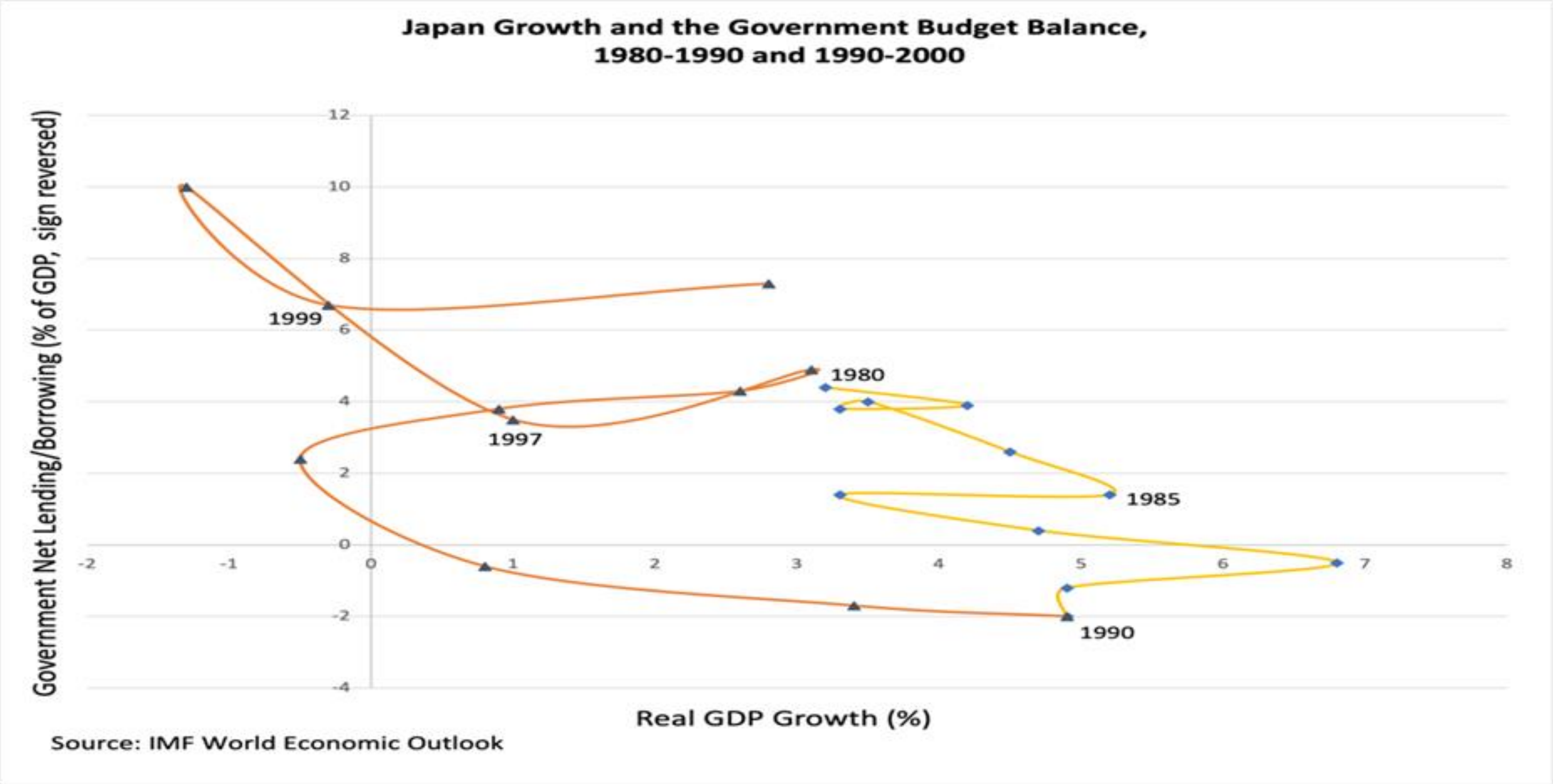


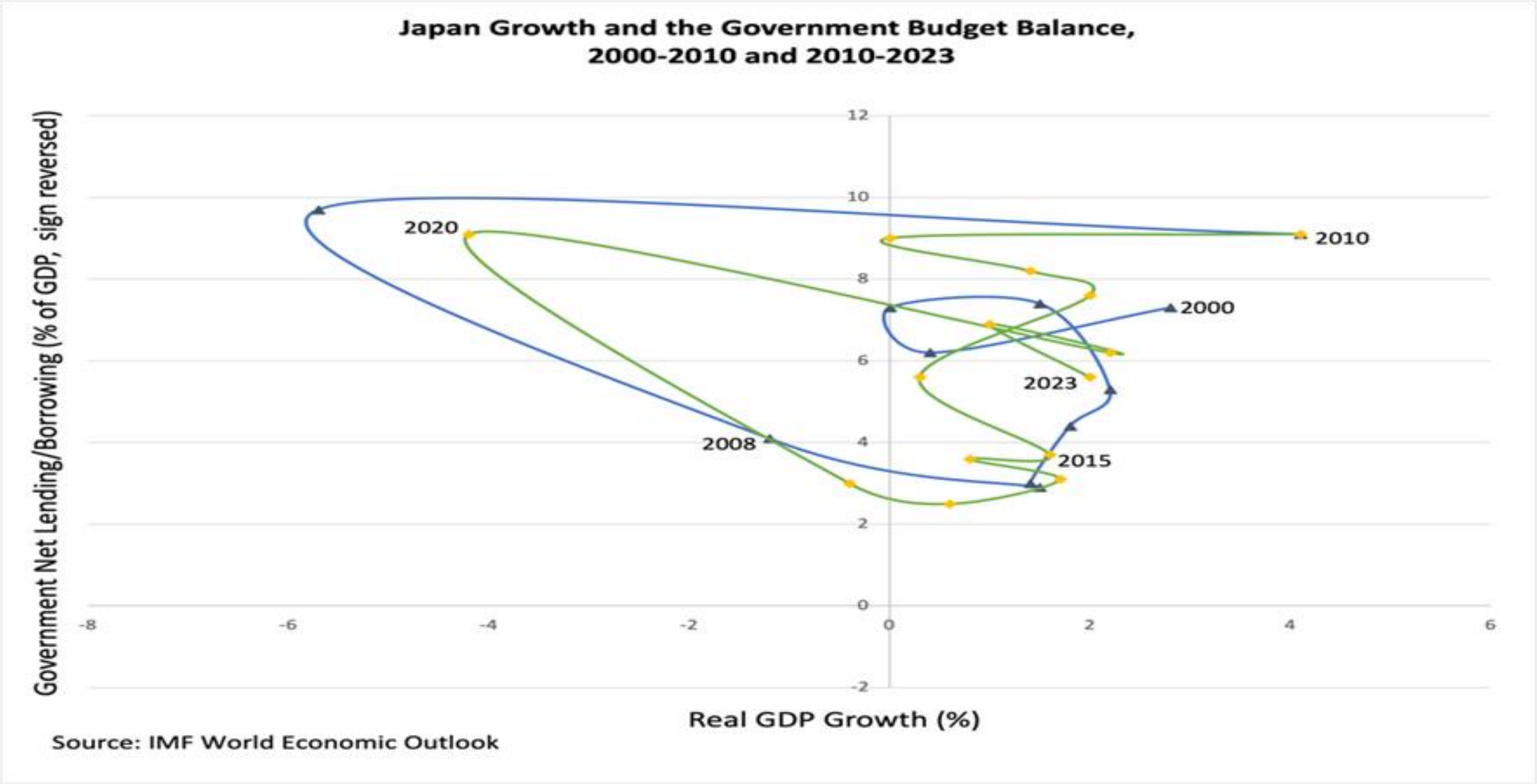
All Countries: Japan, USA, UK, Canada, Brazil, Mexico, Singapore, Russia, China, Germany, France, Netherlands



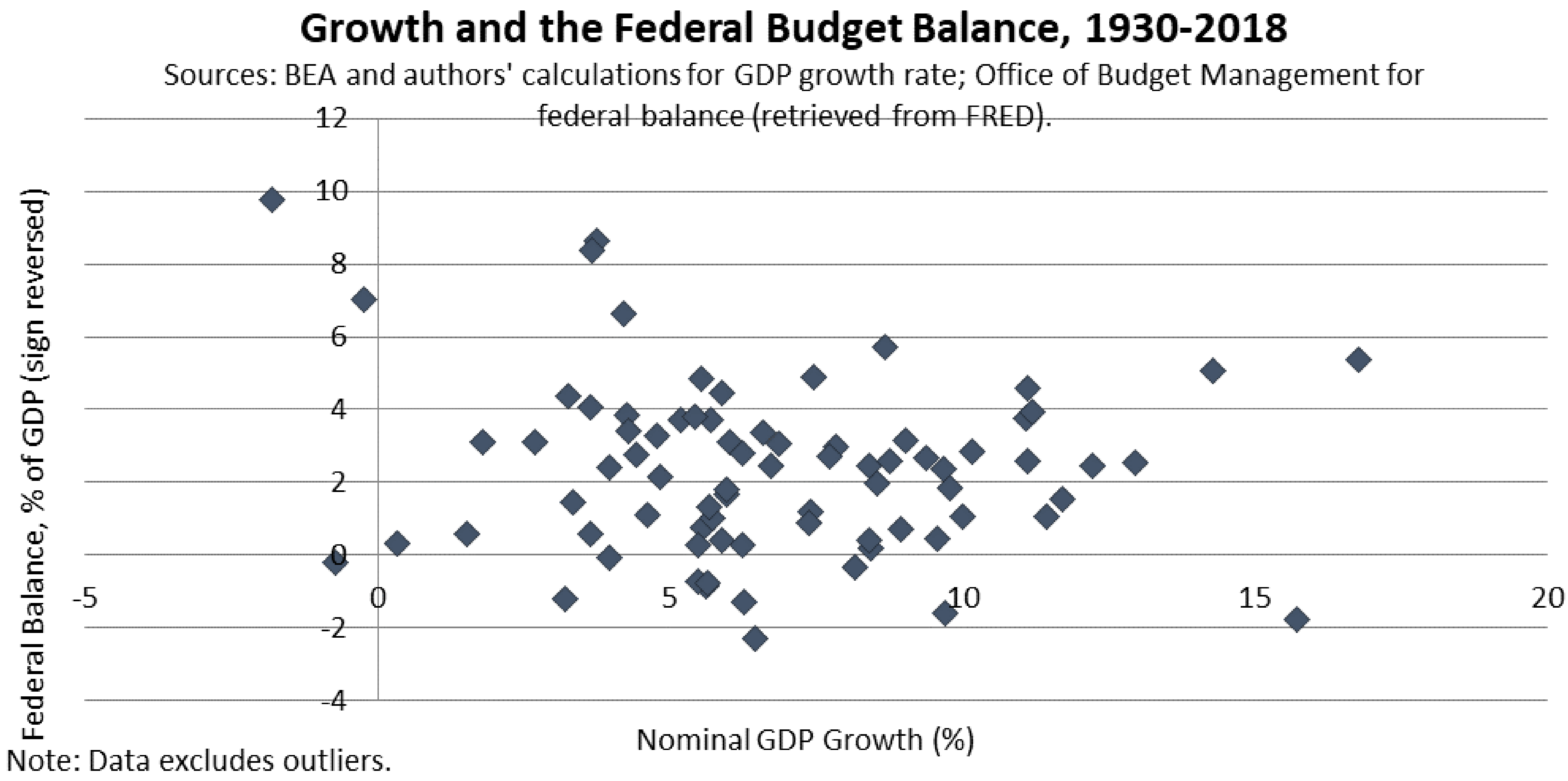
The Wray Curve: Good and Ugly Deficits

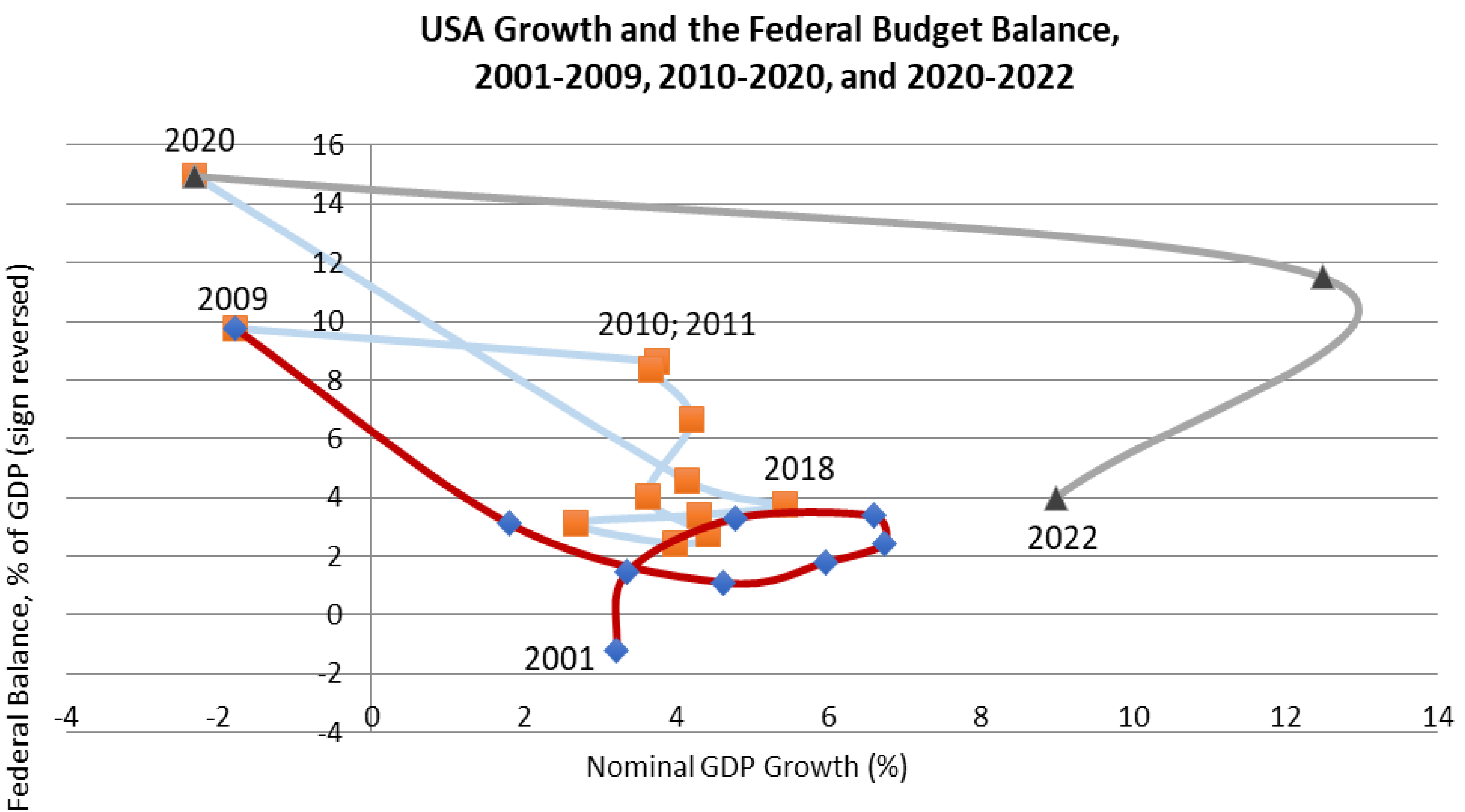



Japan Growth and the Government Budget Balance,
1980-1990 and 1990-2000
Government Net Lending/Borrowing (% of GDP, sign reversed)
12
10
8
6
4
2
0
-2
-4
-2
-1
0
1
2
3
4
5
6
7
8
1999
1980
1997
1985
1990
Real GDP Growth (%)
Source: IMF World Economic Outlook

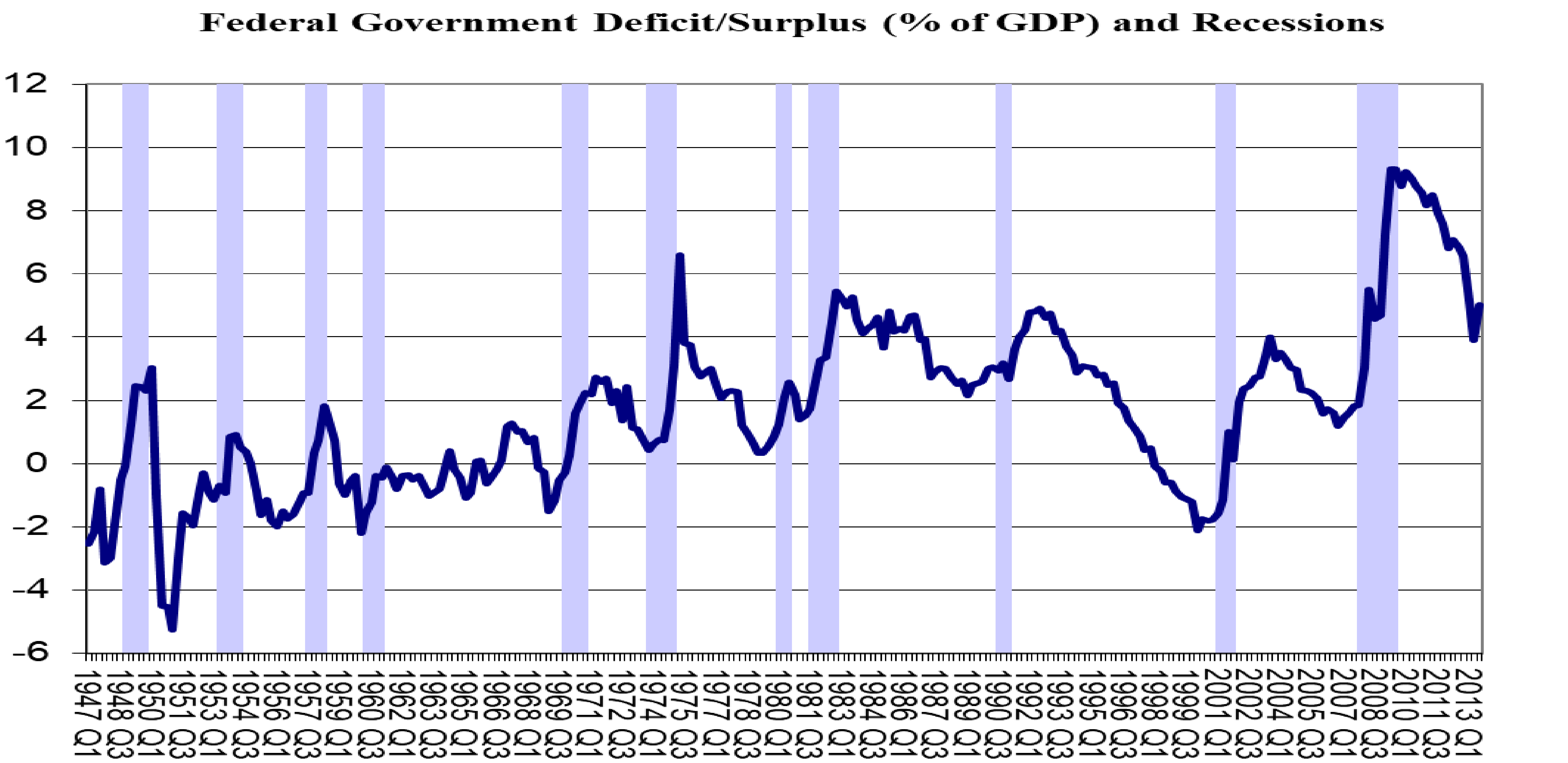


Japan Growth and the Government Budget Balance,
2000-2010 and 2010-2023
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2000
2008
2010
2015
2020
2023
12
10
8
6
4
2
0
-2
-8
-6
-4
-2
0
2
4
6
Source: IMF World Economic Outlook

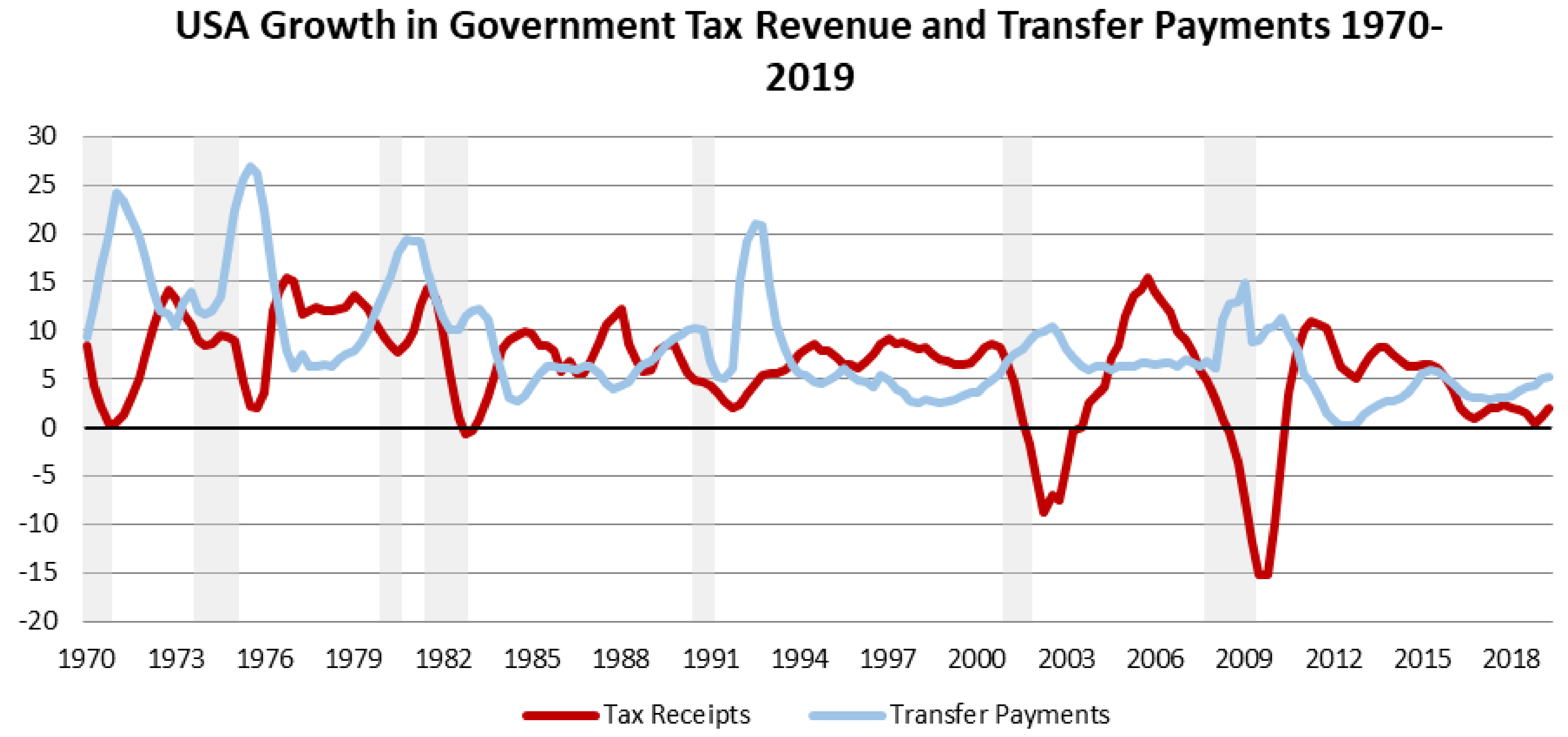

Growth and the Federal Budget Balance, 1930-2018
Sources: BEA and authors' calculations for GDP growth rate; Office of Budget Management for federal balance (retrieved from FRED).
12
10
8
6
4
2
0
-2
-4
-5
0
5
10
15
20
Federal Balance, % of GDP (sign reversed)
Nominal GDP Growth (%)
Note: Data excludes outliers.



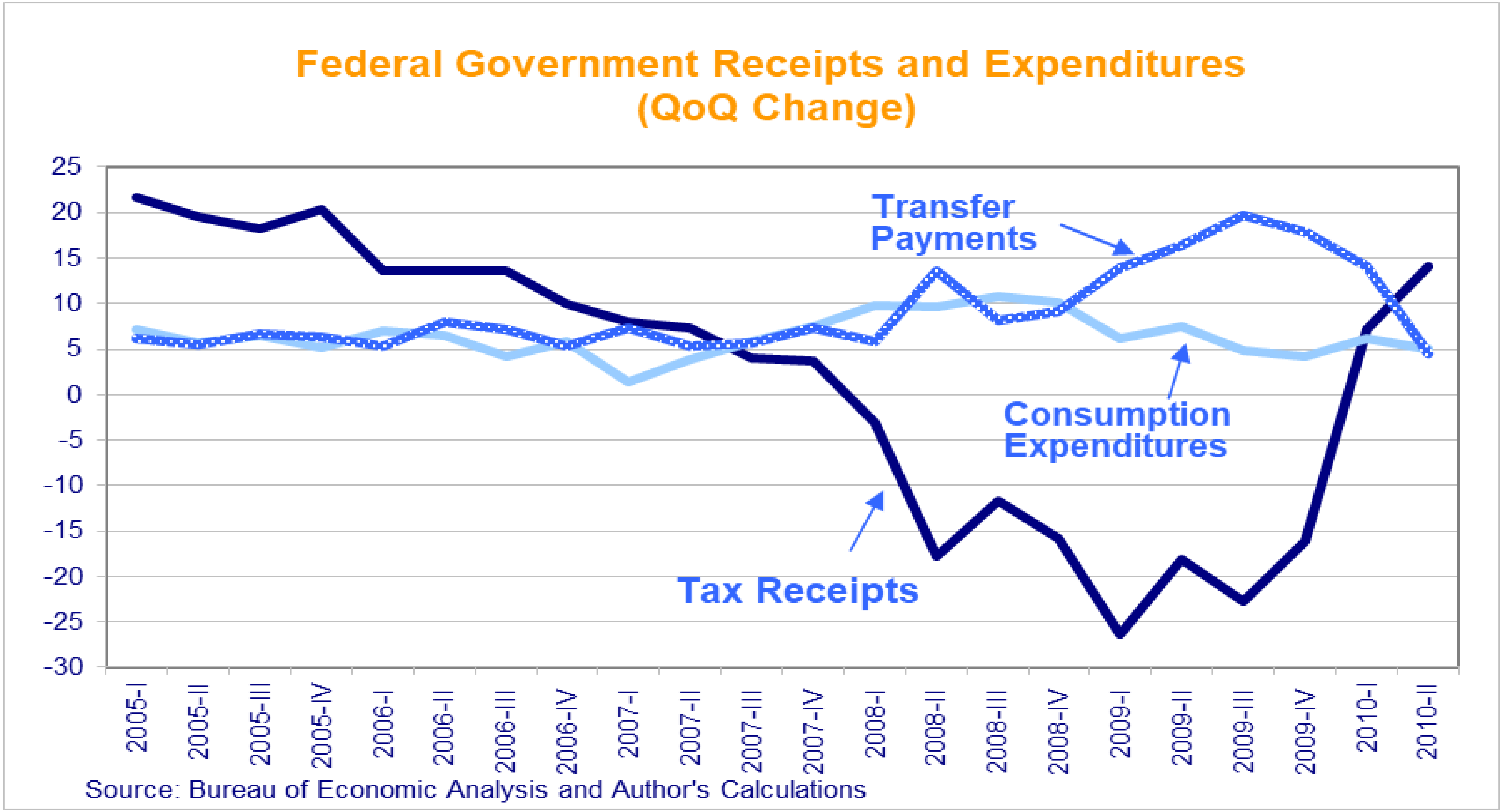
Sources: BEA and authors' calculations for GDP growth rate; Office of Budget Management for the federal balance



Source: Bureau of Economic Analysis & National Bureau of Economic Research and

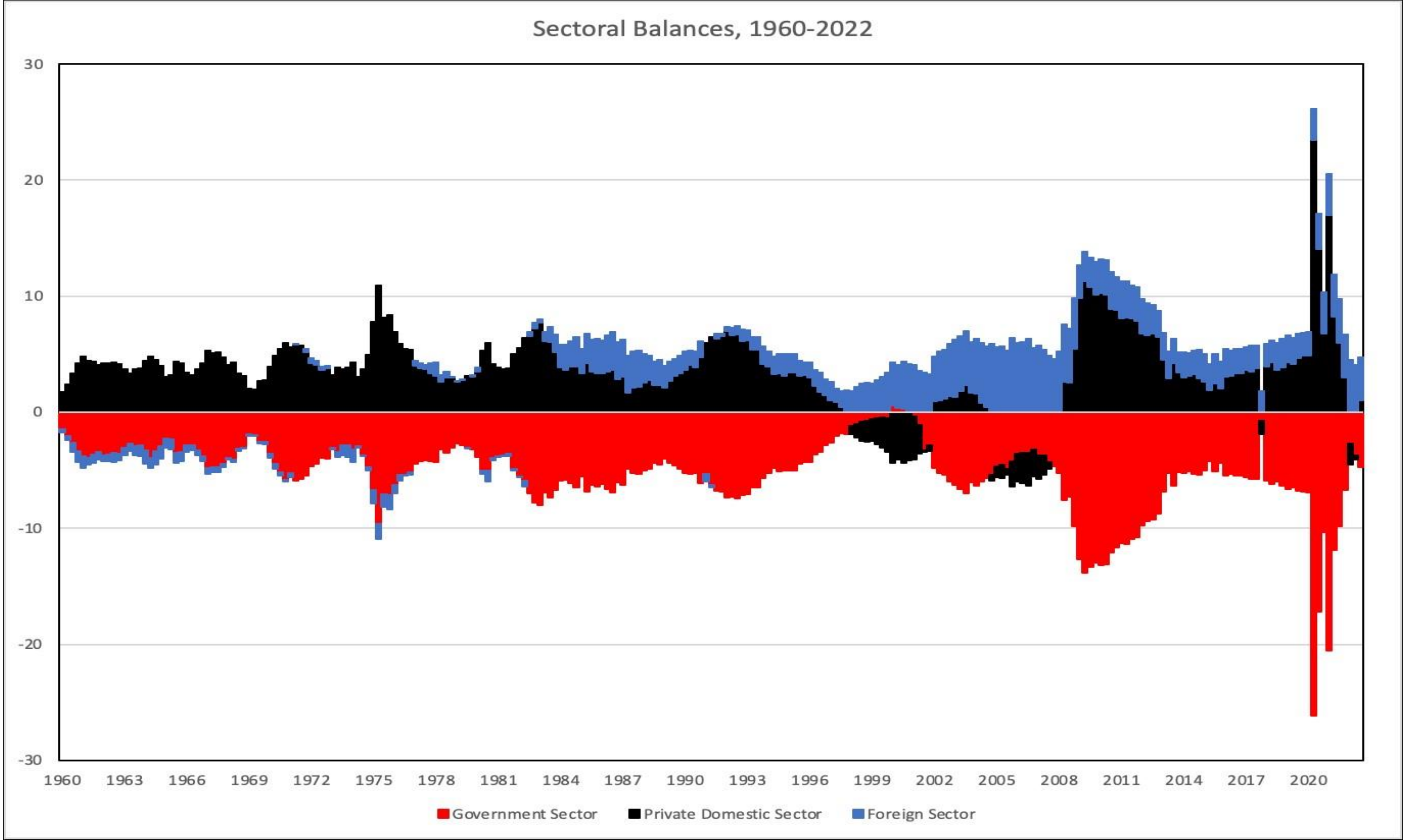


Source: BEA and author's calculations. Note: growth is measured over the same quarter of two years. Data has been smoothed using a moving average.


Federal Government Receipts and Expenditures
(QoQ Change)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
Transfer Payments
Consumption Expenditures
Tax Receipts
2005-I
2005-II
2005-III
2005-IV
2006-I
2006-II
2006-III
2006-IV
2007-I
2007-II
2007-III
2007-IV
2008-I
2008-II
2008-III
2008-IV
2009-I
2009-II
2009-III
2009-IV
2010-I
2010-II
Source: Bureau of Economic Analysis and Author's Calculations

Godley’s Sectoral Balance Approach

- At Aggregate Level: sum of private domestic, government, and foreign sector balance must equal zero:
  - (G-T) + (I-S) + (NX) = 0
  - The government’s balance (G-T) plus the private sector’s balance (I-S), plus the balance with the rest of the world (net exports) is zero.
  - If external balance is zero, a government deficit (G-T>0) means the private sector has a surplus (I<S)
  - Given that the USA runs a persistent current account deficit, the private sector cannot run a surplus without a government deficit


Sectoral Balances, 1960-2022
30
20
10
0
-10
-20
-30
1960
1963
1966
1969
1972
1975
1978
1981
1984
1987
1990
1993
1996
1999
2002
2005
2008
2011
2014
2017
2020
Government Sector
Private Domestic Sector
Foreign Sector

Implications for Discretion Over Budget

- Given the private sector’s desire to accumulate saving, the USA must run larger deficits to account for foreign surpluses.
- The bigger deficits are “baked-in”—by the foreign sector’s desire to accumulate net dollar assets.
  - for any level of desired domestic saving, and for any given level of growth of GDP, the implied size of the deficit of the USA government has grown along with the size of its current account deficit.
- To the degree that the domestic private sector and the foreign sector have discretion, the government does not
- Functional Finance: the government’s budget balances the economy
- But, much of the benefit of a government deficit “leaks out”
  - Supports foreign saving desires
  - Kalecki profit equation: supports foreign profits
  - It is not surprising that deficits and debt ratios have tended to rise, with the USA’s transition to its position as a big net importer

What about a Net Exporter?

- Current account surpluses support domestic saving and profits
- Compare Japan and Singapore

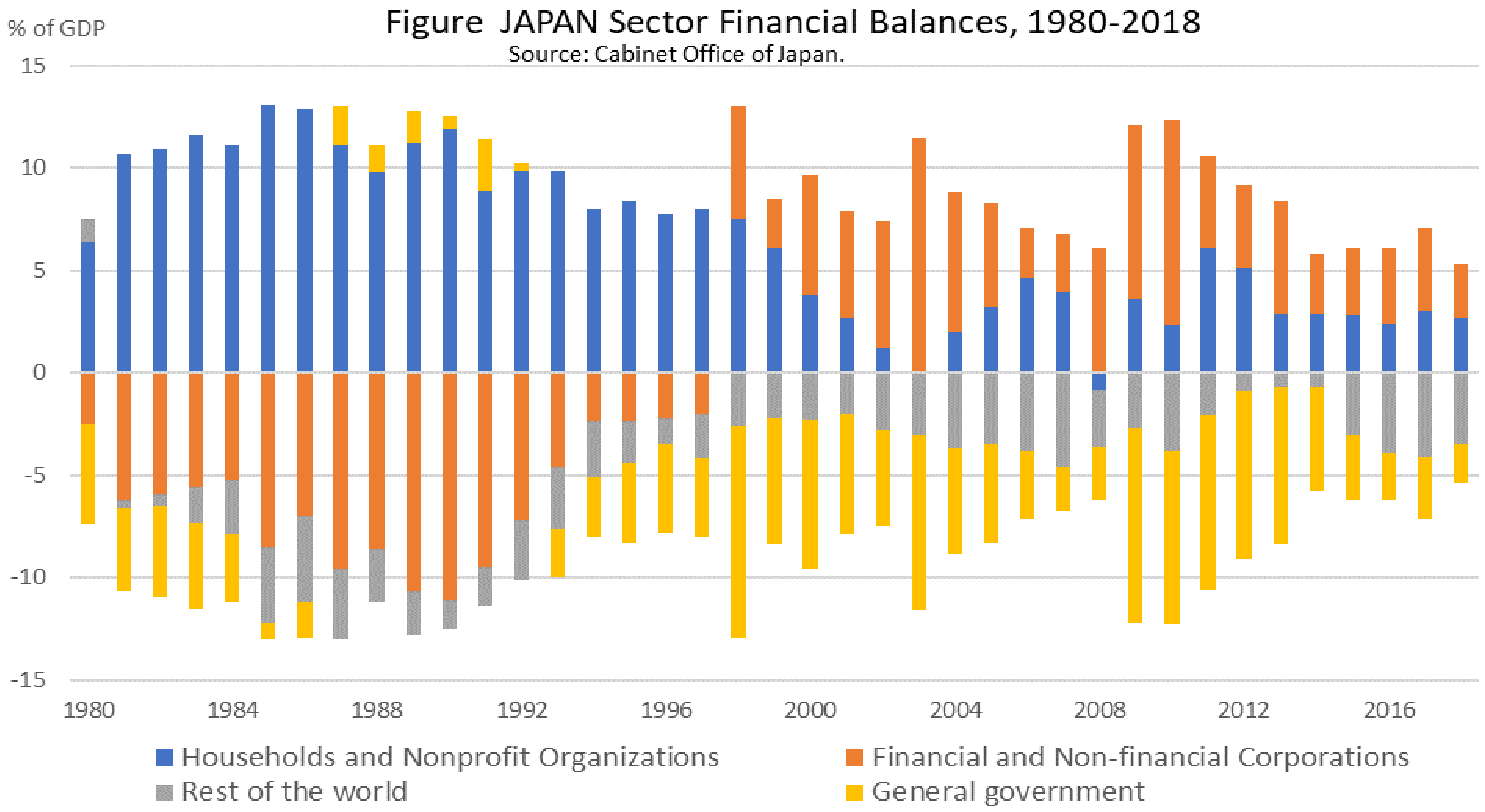
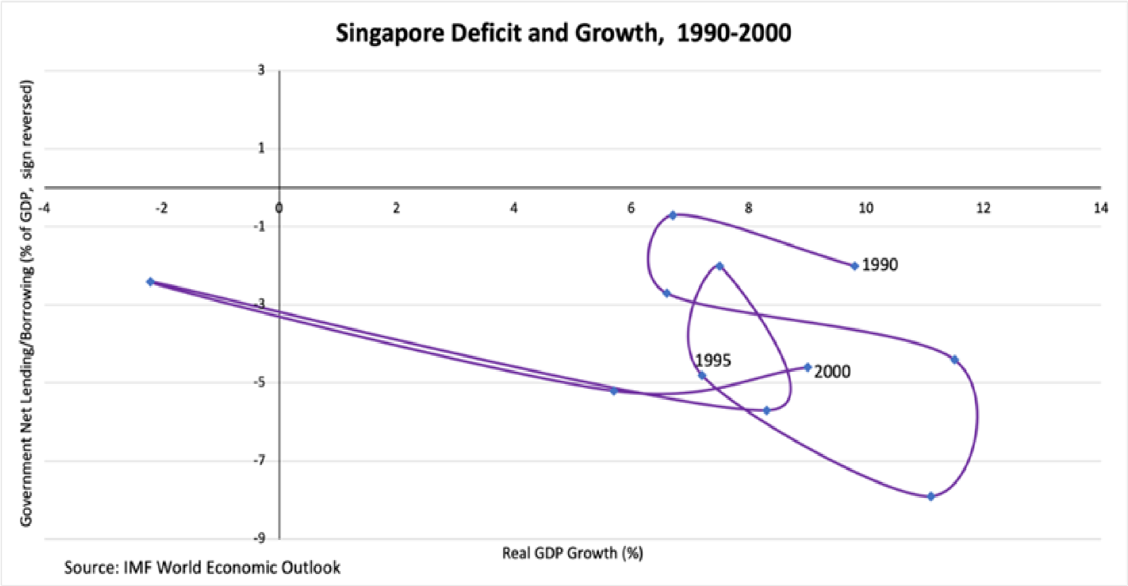


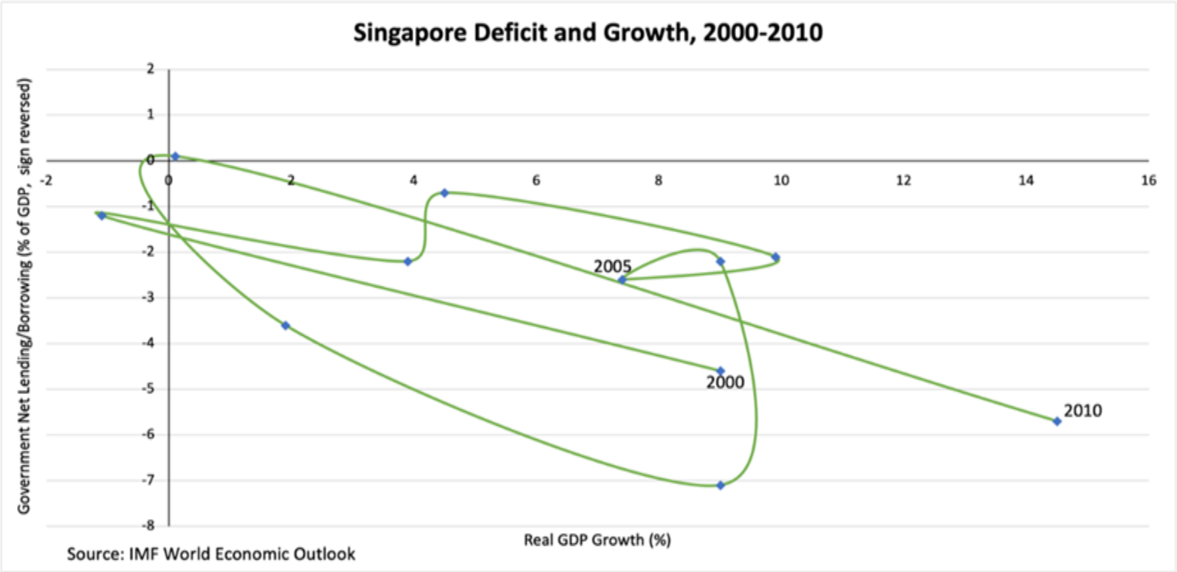
Figure JAPAN Sector Financial Balances, 1980-2018
Source: Cabinet Office of Japan.
% of GDP
15
10
5
0
-5
-10
-15
1980
1984
1988
1992
1996
2000
2004
2008
2012
2016
Households and Nonprofit Organizations
Financial and Non-financial Corporations
Rest of the world
General government

Conclusion: What Happened to Japan?

- Private firms became net savers after 1997—which contributed to slower growth.
- That slower growth, in turn, affected government tax revenue so budget deficits tended to be higher.
- Household saving fell considerably at the end of the 1990s, and again in 2008 (when it fell below zero) although it increased as the GFC spread around the world.
- The solution is not consumption tax increases, but higher aggregate demand, more investment to produce for domestic consumption, more security to reduce saving rates

- What about Singapore: another net exporter


Singapore Deficit and Growth, 1990-2000
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
1990
1995
2000
Source: IMF World Economic Outlook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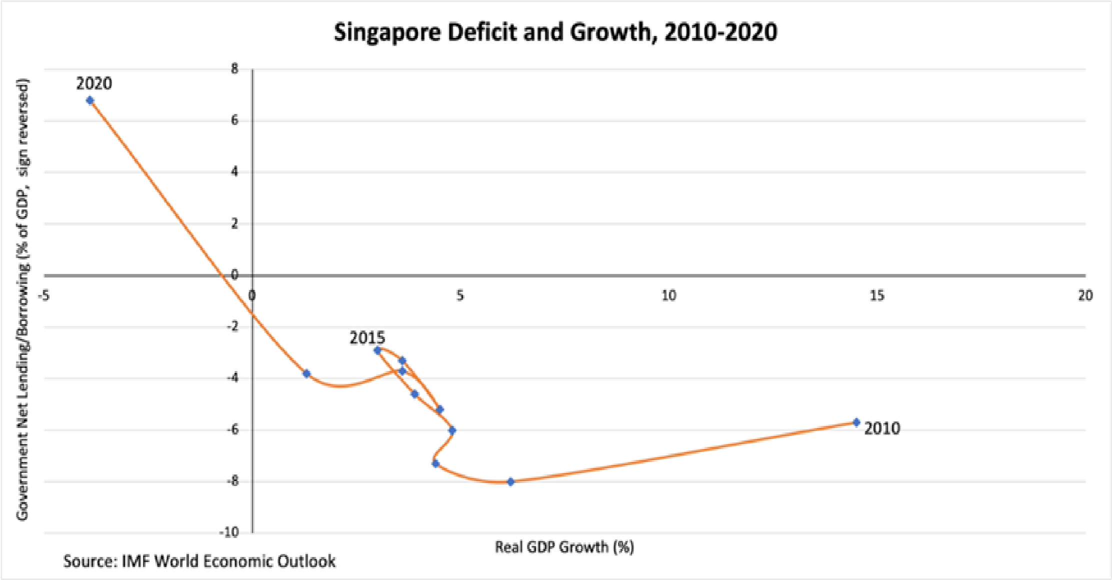
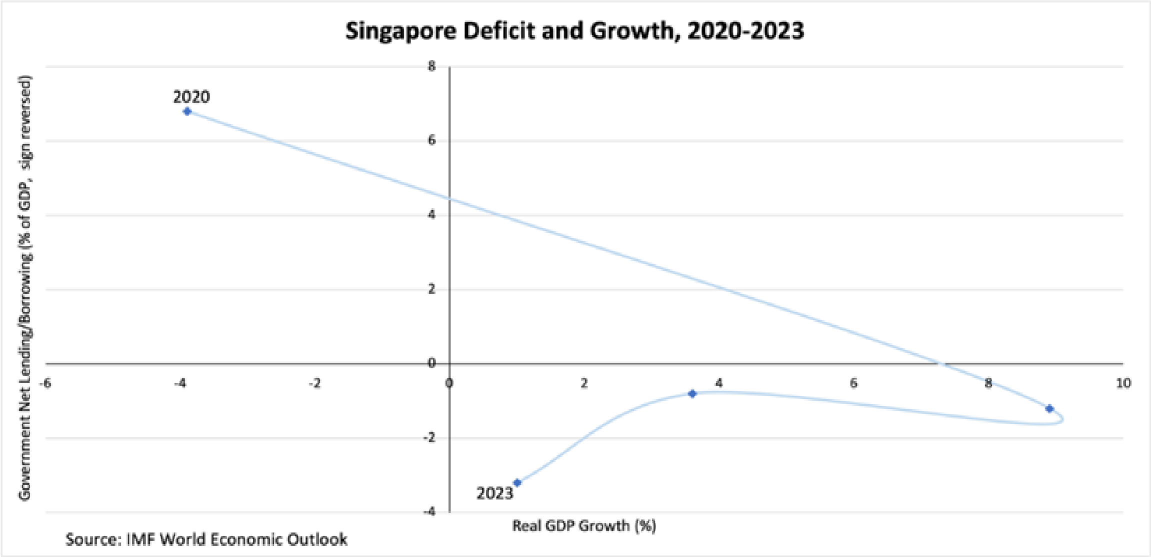
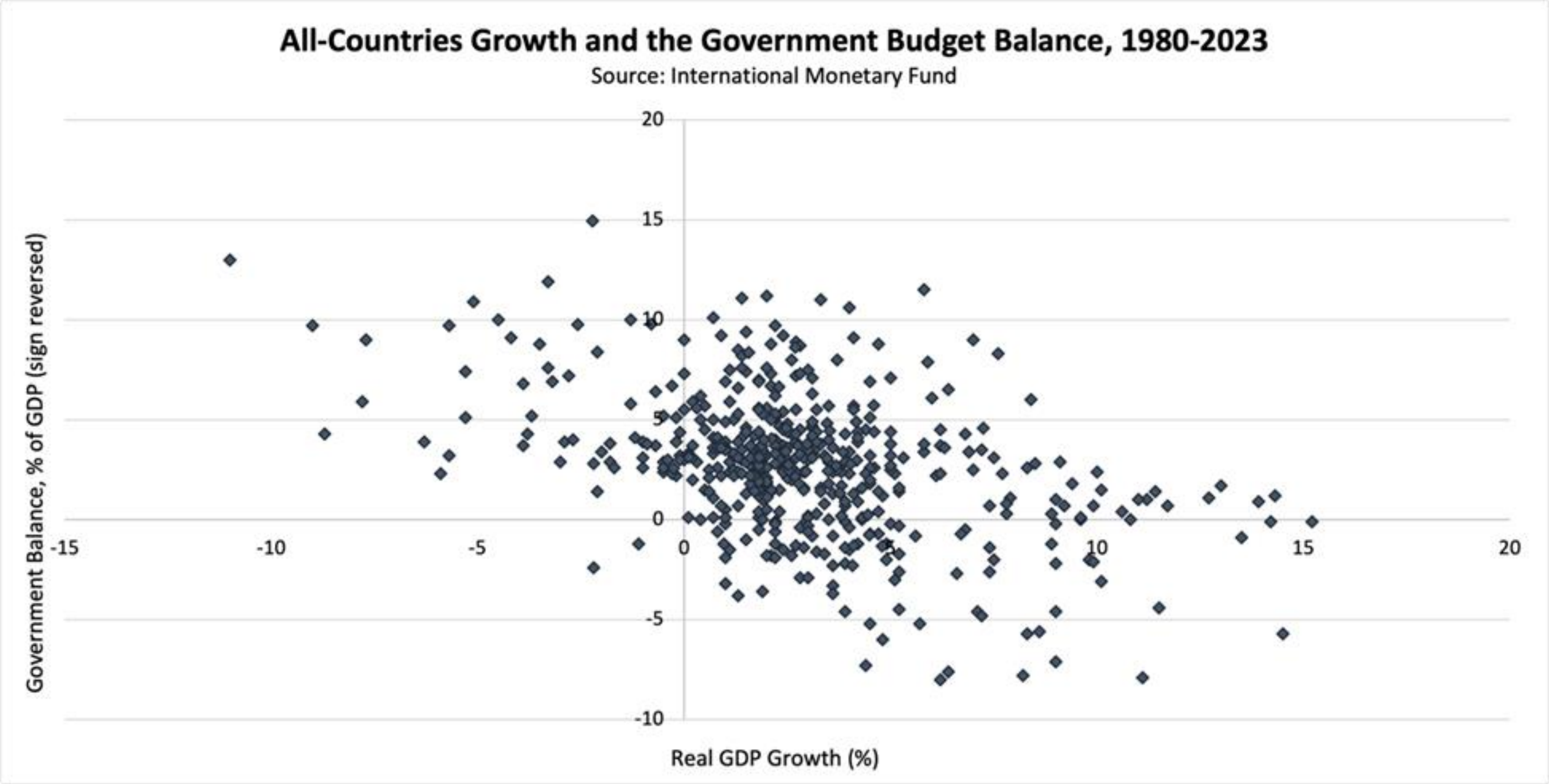
2005
2010
Source: IMF World Economic Outlook


Singapore Deficit and Growth, 2010-2020
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2010
2015
2020
Source: IMF World Economic Outlook


Singapore Deficit and Growth, 2020-2023
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2020
2023
Source: IMF World Economic Outlook

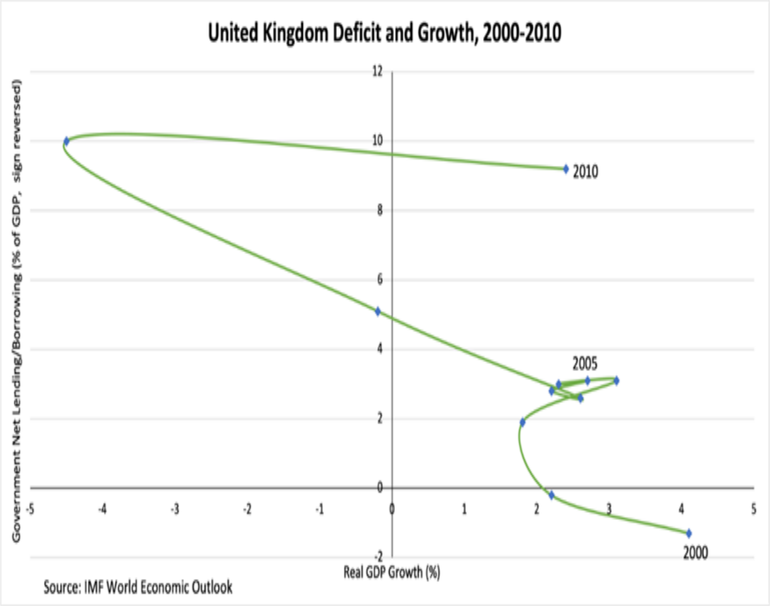
Repeat: All Countries

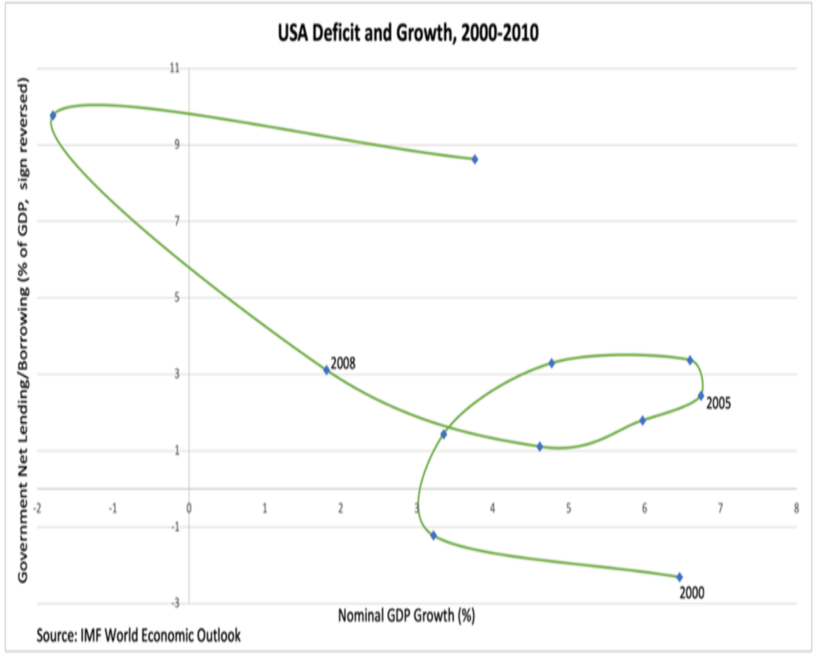


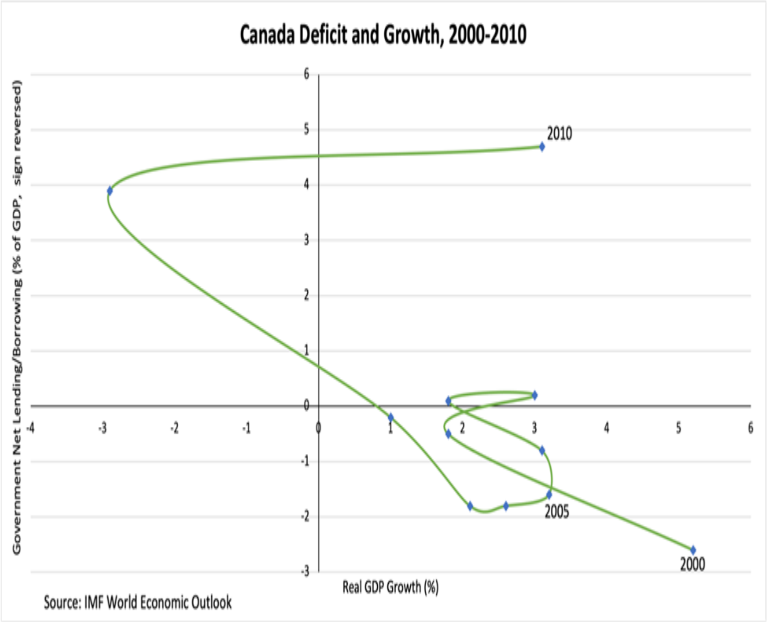
Country	**Ugly Deficit** (slow growth + growing deficit for 3 or more years)	**Good Deficit** (rising growth + growing deficit for 3 or more years)	**Good Deficit** (rising growth + growing deficit for 2 or more years)
Russia	2013 – 2016	N/A	N/A
China	N/A	1990 – 1992	1991 – 1992
Japan	1990 – 2003, 2006 – 2012, 2018 – 2022	1994 – 1996	1984 – 1985, 1995 – 1996
Singapore	N/A	N/A	N/A
Canada	1988 – 1992	1982 – 1985	1983 – 1984, 1992 – 1993
United States	2005 – 2009	2001 – 2004	2003 – 2004
Brazil	2012 – 2020	2005 – 2010	2006 – 2007
Mexico	2000 – 2003, 2010 – 2016	1995 – 1998	1996 – 1997, 2003 – 2004
United Kingdom	1989 – 1993, 2000 – 2012	1980 – 1987	1982 – 1983, 1993 – 1994
Germany	1991 – 1995, 2000 – 2005	N/A	N/A
France	1989 – 1993, 2000 – 2003, 2006 – 2009, 2017-2020	1983 – 1988	1984 – 1985, 1985 – 1986,
Netherlands	1991 – 1993, 2000 – 2003, 2009 – 2013	1982 – 1989	1983 – 1984
Italy	1988 – 1993, 2000 – 2020	N/A	2016 – 2017

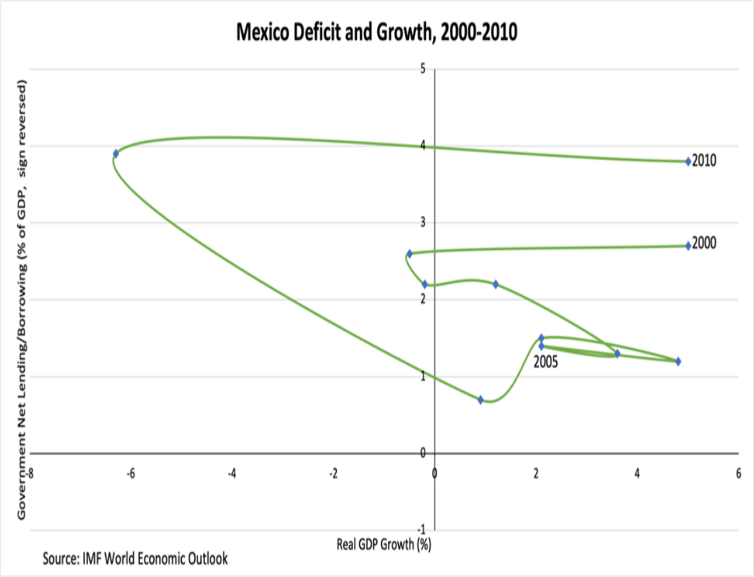
Bad Deficits Dominate

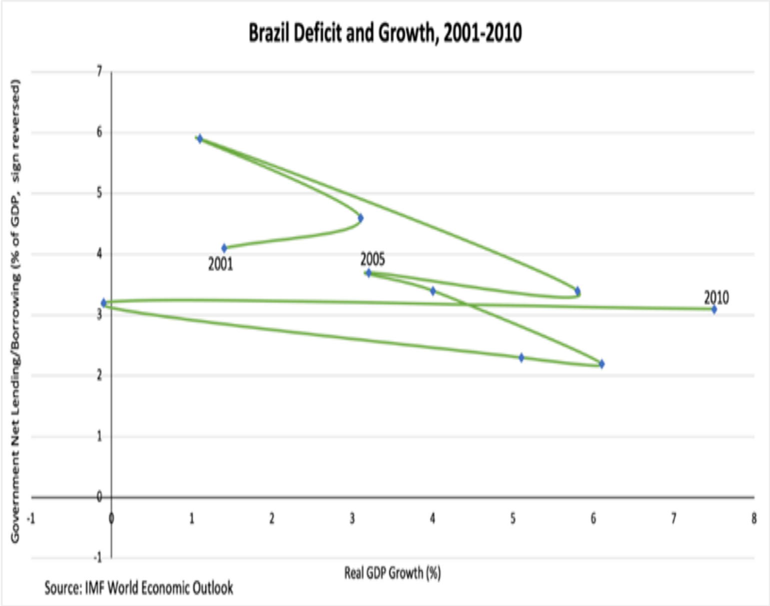
- Take a look at period 2000-2010 as iconic example
- Most countries have low deficits and good growth at the beginning of the decade
- The GFC collapse wiped-out growth and led to high deficits
- Recovery saw deficits decline and growth increasing

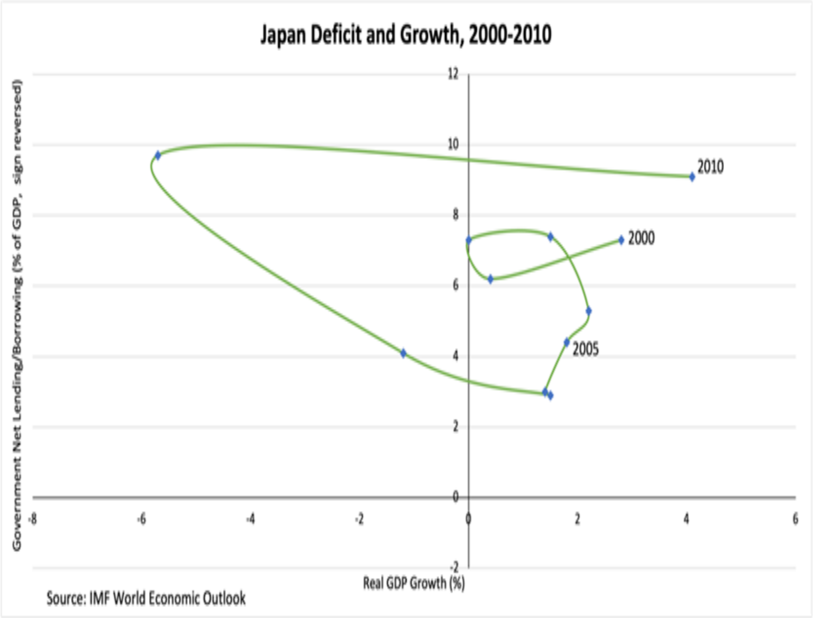

United Kingdom Deficit and Growth, 2000-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2010
2005
2000
Source: IMF World Economic Outlook


USA Deficit and Growth, 2000-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Nominal GDP Growth (%)
2008
2005
2000
Source: IMF World Economic Outlook


Canada Deficit and Growth, 2000-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2010
2005
2000
Source: IMF World Economic Outlook


Mexico Deficit and Growth, 2000-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2010
2000
2005
Source: IMF World Economic Outlook


Brazil Deficit and Growth, 2001-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2001
2005
2010
Source: IMF World Economic Outlook


Japan Deficit and Growth, 2000-2010
Government Net Lending/Borrowing (% of GDP, sign reversed)
Real GDP Growth (%)
2010
2000
2005
Source: IMF World Economic Outlook

Final Point: Interest on Debt (Minsky and Mosler)

- With a high debt ratio, monetary policy becomes perverse: raising rates ***can be*** a strong stimulus
- Minsky on Volcker: Raised overnight rate to around 20%
  - Because of the deficits of 1981-1985 the total **national debt increased by about $1000 billions**.
  - Government spending is now **some $100 billions greater** than would have been needed when Reagan took office (after Powell, more like a $1000 billions)
  - We increased the proportion of income coming from interest; in large part assets are held abroad, by higher income people, and by the FIRE sector.
  - Benefits of deficits leak abroad and into pockets of the already rich
  - This kind of government spending is very inefficient; it neither boosts private spending nor promotes capital development of the economy
  - So it requires a much bigger baseline deficit (and adds to current account deficit) to generate the growth that produces tax revenue to close the deficit

Minsky: Fiscal Reform

1. The spending side requires a large overhaul. The Keynes phrase **"the socialization of investment**" means that the **government spending program needs to finance a significant part of the resource creation of the economy**.
2. **Income from work, where if necessary the work is provided by government (Job Guarantee), should replace much of today's transfer payment schemes (he included interest payments as transfers)**.
3. While government's debt would grow overtime, its **budget would be structured to move toward balance only when the economy exceeded full employment**.

   Minsky assumed balanced trade—today the USA current account deficit will probably run at about 4% of GDP at full employment, requiring a budget deficit of at least 4%

L. RANDALL WRAY

MODERN MONEY THEORY

THIRD EDITION

A Primer on Macroeconomics for
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