#### Public Debt

Intermediate Macroeconomics - UCLA - Econ 102

François Geerolf

UCLA

November 18, 2020

### Section 1

Introduction

#### Links

There are several versions of these slides:

- Handouts. html / pdf
- Slides. html / pdf

If you want to know more, there also exists a more advanced version of these slides (Ph.D. Level), as well as some related research of mine - this is absolutely not exam material:

- Handouts. html / pdf
- Slides. html / pdf
- Related Research. Dynamic inefficiency. Secular stagnation.

#### Plan

- Data on government debt
- Worries about government debt
- Public Debt and Wars
- r and g, Sustainability of Public Debt
- 2007-2009, 2010-2013 and public debt
- Arguments for government debt

### Section 2

Data on Government Debt

### Debt to GDP: % or years?

- Standard practice is to express debt to GDP ratios as %.
- Mathematically speaking, this does not make much sense: Debt is a Stock (measured in dollars), GDP is a Flow (measured as dollars per year, or dollars per quarter). Dividing a stock by a flow gives you a notion of time (duration), not a %.
- So when people say: U.S. public debt is over 100% of GDP, in fact they should be saying: U.S. Debt is over 1 year of production.
- Years should then be compared to years: for exemple, the maturity of the debt, etc.

# High Debt to GDP Ratios

Country	Public Debt (2015)	Cape Verde		
Country	Tublic Debt (2015)	Cyprus		
Japan	248 %	Belgium		
Greece	177 %	Barbados		
Lebanon	138 %	USA		
Italy	133 %	Singapore		
Portugal	129 %	Barbuda		
Azores	129 %	Antigua		
Madeira Islands	129 %	Spain		
Eritrea	127 %	Canary Islands		
Jamaica	122 %	,		

France	96 %
Clipperton Island	96 %
Bhutan	95 %
Jordan	93 %
Gambia	92 %
Canada	91 %
Grenada	91 %
Mauritania	91 %

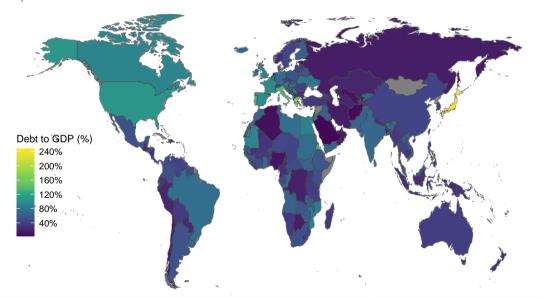
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121 %
109 %
106 %
105 %
105 %
104 %
104 %
99 %

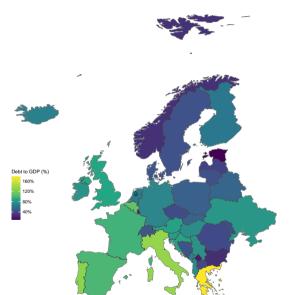
### Low Debt to GDP Ratios

Country	Public Debt (2015)	Nigeria	12 %
San Marino	20 %	Kuwait	11 %
		Uzbekistan	11 %
Democratic Republic of the Congo	19 %	Solomon Islands	10 %
United Arab Emirates	18 %	Estonia	10 %
Chile	18 %	Algeria	9 %
Swaziland	17 %	Afghanistan	6 %
Botswana	17 %	Saudi Arabia	5 %
Russia	16 %	Brunei	
Iran	16 %		3 %
Oman	15 %	China:Hong Kong	о %
· · · · · · · · · · · · · · · · · · ·	9		
Equatorial Guinea	14 %		

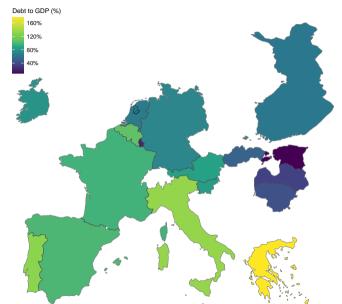
### Debt/GDP around the World



# Zooming in on Europe



### Eurozone



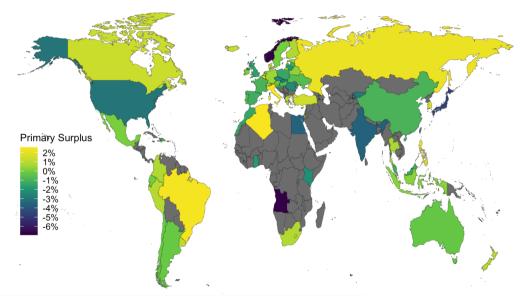
# Cycl. Adj. Primary Surplus (% of Pot. GDP)

Country	Primary Surplus (1995-2019)	New Zealand	0.82 %
-		South Africa	0.8 %
Italy	2.56 %	Colombia	0.78 %
Belgium	2.5 %	Finland	0.75 %
Algeria	2.49 %	Thailand	0.62 %
Brazil	2.38 %	Switzerland	0.52 %
Russian Federation	2.18 %		
Philippines	2.04 %	Israel	0.5 %
Korea, Republic of	1.63 %	Germany	0.48 %
Turkey	1.46 %	Malta	0.42 %
,	•	Netherlands	0.38 %
Canada	1.4 %	Belarus	0.31 %
Iceland	1.33 %	Estonia	0.23 %
Denmark	1.28 %	Indonesia	0.23 %
Luxembourg	1.28 %	Ireland	0.12 %
Uruguay	1.06 %		0.11 %
Greece	1.03 %	Cyprus	
Peru	0.91 %	Mexico	0.07 %
_ 32 00	2.72 /0	Sweden	0.01 %

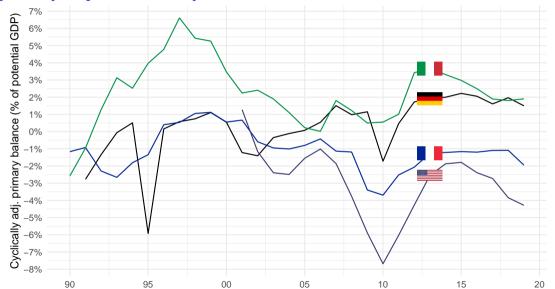
Cycl. Adj. Primary Deficit (% of Pot. GDP)

, ,		,	
Country	Primary Surplus (1995-2019)	Croatia	-1.29 %
		Morocco	-1.41 %
Ecuador	-0.01 %	Poland	-1.44 %
Slovenia	-0.05 %	United Kingdom	-1.6 %
Austria	-0.13 %	Ghana	-1.75 %
Argentina	-0.18 %	Lithuania	-1.9 %
Chile	-0.18 %	Kenya	-2.2 %
Australia	-0.25 %	Romania	-2.35 %
Ukraine	-0.62 %		
Portugal	-0.63 %	Czech Republic	-2.42 %
NA	-0.7 %	Hong Kong, China	-2.56 %
Hungary	-0.79 %	Kyrgyzstan	-2.83 %
0,		Slovakia	-2.91 %
France	-0.95 %	<b>United States</b>	-2.96 %
China	-0.95 %	Egypt	-3.59 %
Latvia	-1.15 %	India	-3.62 %
Dominican Republic	-1.19 %	Japan	-4.67 %
Spain	-1.21 %	Angola	-6.74 %
Malaysia	-1.25 %	U	
	J	Norway	-6.93 %

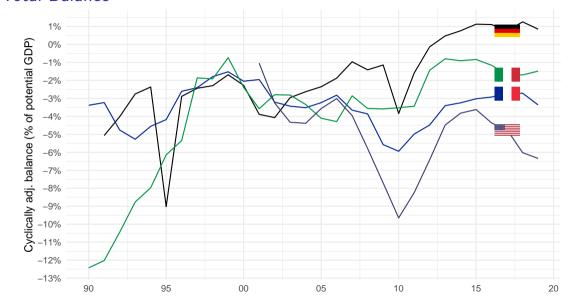
### Primary Deficits around the World



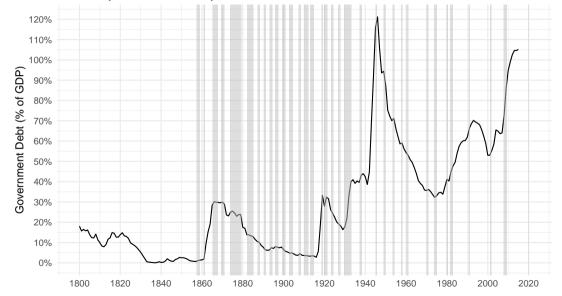
# Cyclically-Adjusted Primary Deficits



### **Total Balance**



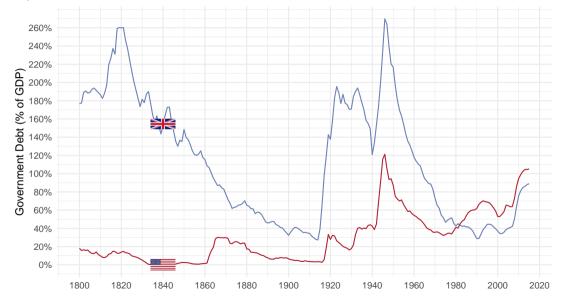
## United States (Source: IMF)



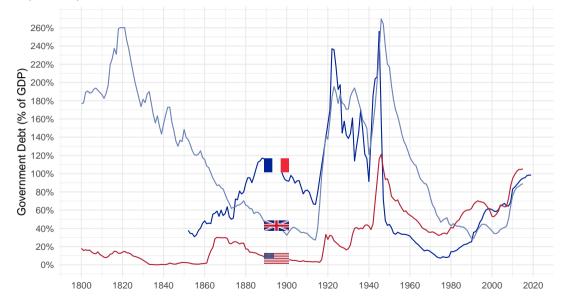
### United Kingdom (Source: IMF)



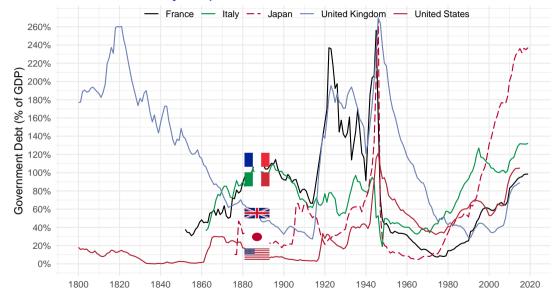
U.S., U.K.



### U.S., U.K., France



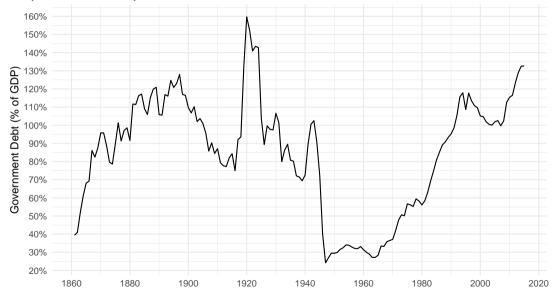
### U.S., U.K., France, Italy, Japan



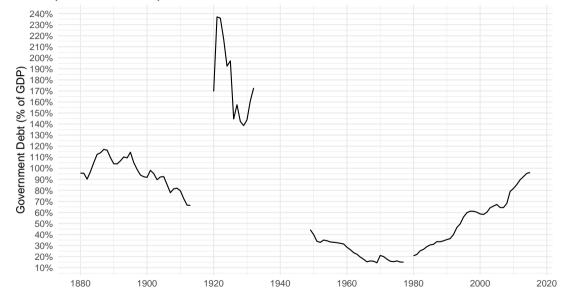
Japan (Source: IMF)



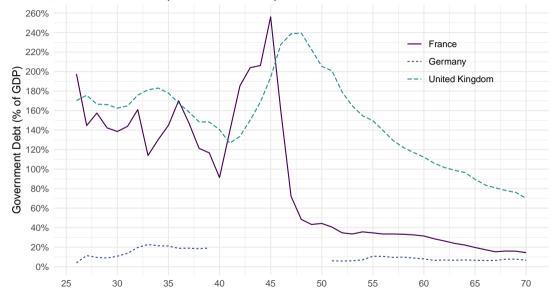
# Italy (Source: IMF)



## France (Source: IMF)

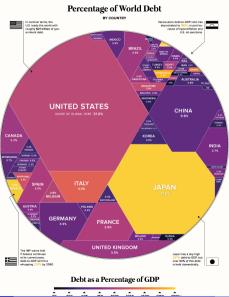


# Germany, France, UK (Source: GFD)



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#### World Government Debt



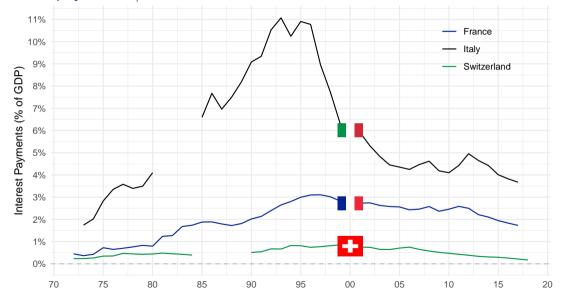
### Size of Public Debt

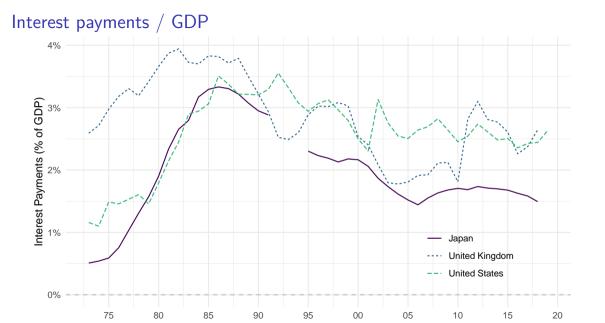
Rank 🕏	Country	Debt to GDP	<b>\$</b>	Gross Debt (\$B)	•	% of World Total	<b>\$</b>
#1	United States	104.3%		\$21,465		31.0%	
#2	<ul><li>Japan</li></ul>	237.1%		\$11,788		17.0%	
#3	China, People's Republic of	50.6%		\$6,764		9.8%	
#4	<b>■</b> Italy	132.2%		\$2,744		4.0%	
#5	■ France	98.4%		\$2,736		3.9%	
#6	## United Kingdom	86.8%		\$2,455		3.5%	
#7	Germany	61.7%		\$2,438		3.5%	
#8	<b>≖</b> India	68.1%		\$1,851		2.7%	
#9	<b>S</b> Brazil	87.9%		\$1,642		2.4%	
#10	<b>!•</b> ] Canada	89.9%		\$1,540		2.2%	
#11	<b>□</b> Spain	97.1%		\$1,386		2.0%	
#12	<b>■</b> Mexico	53.6%		\$655		0.9%	
#13	™ Korea, Republic of	37.9%		\$652		0.9%	
#14	📇 Australia	41.4%		\$588		0.8%	
#15	■ Belgium	102.0%		\$543		0.8%	

## Debt / GDP is not a great measure

- GDP is an annual flow.
- By contrast, government debt is a stock.
- Debt/GDP is a bit misleadingly high because it compares a stock in the numerator, to a flow in the denominator.
- It's much better practice to compute Interest payments / GDP, comparing a flow with a flow.
- Or to compute Debt / Wealth, comparing a stock with a stock.
- In the following slides, we shall do just that.

### Interest payments / GDP





#### Section 3

Worries about Government Debt

### **United States**



Germany: "Schwarze Null"



## Deutschland ist Geldsmeister (Haushalt 2015 ohne neue Schulden)





## War es wirklich klug?



# War es wirklich klug?

- German: Frau Pharao, Herr Wesir, sehr beeindruckend, die Schwarze Null. Aber war es wirklich klug, unseren GESAMTEN Etat dafür zu opfern ?
- Miss Pharaon, Mr. Wisir, the "black zero." But was it really wise to sacrifice our ENTIRE budget for it?

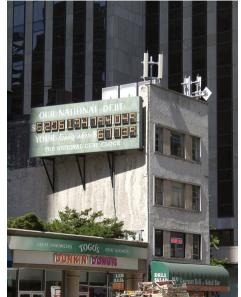
Germans complaining about low interest rates



#### U.S. National Debt Clock

- Popularity of "national debt clocks" shows that at least some people are worried about national debt.
- More data: https://www.usdebtclock.org.
- Iphone app (!). Link

### United States - National Debt Clock



Germany Debt Clock



# German tax lobby's debt clock



**Public debt in Germany** 

# **Black books**

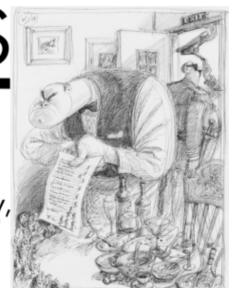
Politicians and economists clash over whether to borrow in order to invest

Oman Taxpayers' Federation in Berlin, a display tracks the public debt in real time.

Public debt and dictatorships

When Dictators Borrow, Who Repays the Loan?

By Michael Kremer and Seema Jayachandran



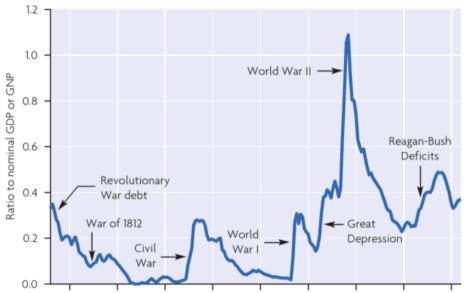
#### Section 4

Public Debt and Wars

#### Context

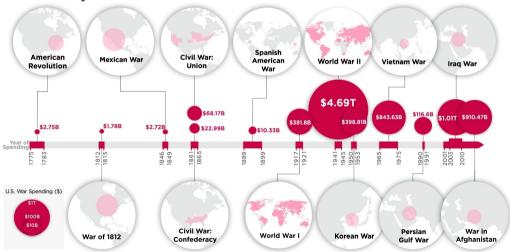
- Historically, large increases in public debt have been used to finance wars.
- United Kingdom in 1820: 260% of GDP.
- 1820-1910: Public debt = 260% of GDP to 30% of GDP.
- As we shall see later, this is perhaps also the cause of excess savings at the end of the XIXth century, start of the XXth century.
- Alternative to taxation of wealth during wars: buying bonds is "voluntary."

# United States (Source: Barro)



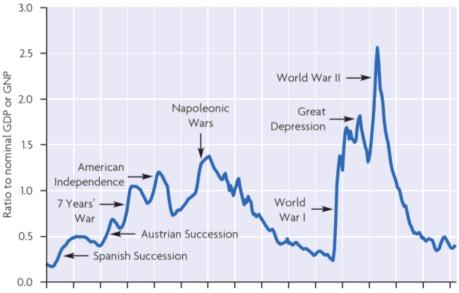
#### Costs of U.S. wars from How much

# **Most Expensive Wars in U.S. History** Total Military Cost of Wars



Note: All figures are ajusted for inflation. Article & Sources

# United Kingdom (Source: Barro)



**Buy Victory Bonds** 



#### Government Debt to Finance the War





# Buying a bond is no sacrifice



Imaged by Heritage Auctions, HA.com

#### Section 5

r and g, Sustainability of Public Debt

### Assumptions

- We denote everything in terms of goods (that is, in real terms), to avoid thinking about the complicated issues surrounding inflation.
- $G_t$ : government spending at period t.
- $T_t$ : taxes in period t.
- $(G_t T_t)$  the government (primary) deficit in period t, which is the excess of government expenditures over taxes levied by the government.
- When  $G_t T_t > 0$ , there is a primary deficit in the budget, so that the government must borrow.
- When  $T_t G_t < 0$ , there is a primary surplus in the budget.

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#### Law of motion

• If the interest rate that the government pays is given by  $r_t$ , then the law of motion of government debt is given by:

$$B_t = (1 + r_t)B_{t-1} + G_t - T_t.$$

• **Total** government deficit, which is equal to the change in government debt  $\Delta B_t$ , is equal to the sum of **interest payments** and the **primary deficit**  $G_t - T_t$ :

$$\mathsf{Deficit}_t = \Delta B_t = B_t - B_{t-1} = \underbrace{r_t B_{t-1}}_{\mathsf{Interest Payments}} + \underbrace{G_t - T_t}_{\mathsf{Primary Deficit}}$$

# Law of motion for debt to GDP ratio 1/2

• From the above equation, the evolution of the debt to GDP ratio  $B_t/Y_t$ :

$$\frac{B_t}{Y_t} = (1+r_t)\frac{Y_{t-1}}{Y_t}\frac{B_{t-1}}{Y_{t-1}} + \frac{G_t - T_t}{Y_t}.$$

• Let us denote the debt to GDP ratio by  $b_t$ :

$$b_t \equiv \frac{B_t}{Y_t}.$$

# Law of motion for debt to GDP ratio 2/2

• Therefore:

$$b_t = (1 + r_t) \frac{Y_{t-1}}{Y_t} b_{t-1} + \frac{G_t - T_t}{Y_t}.$$

• Assuming that GDP grows at rate g, we have that:

$$\frac{Y_t}{Y_{t-1}} = 1 + g.$$

Therefore:

$$b_t = \frac{1 + r_t}{1 + g} b_{t-1} + \frac{G_t - T_t}{Y_t}$$

# Condition for Sustainability of Public Debt

• Imagine that all future primary surpluses were equal to zero after  $t=t_0$ , that is:

for all 
$$t \geq t_0$$
,  $G_t = T_t$ ,

• Assume that interest rates are constant after  $t \geq t_0$ :

$$r_t = r$$
.

#### Debt to GDP Ratio

• We then have:

$$\text{for all } t \geq t_0, \quad b_t = \frac{1+r}{1+g} b_{t-1}.$$

• Debt to GDP ratio would be given by:

$$\boxed{ \text{for all } t \geq t_0, \quad b_t = \left(\frac{1+r}{1+g}\right)^{t-t_0} b_{t_0} }$$

#### 3 possible cases

There are three possible cases, depending on how r (real interest rate) and g (real growth rate) compare:

- **1** If r < g a situation called **dynamic inefficiency** the debt to GDP ratio goes to 0. (Indeed, when a < 1,  $a^t \to 0$  when  $t \to +\infty$ .) Therefore, the **debt to GDP ratio goes to zero**.
- ② If r = g, the debt to GDP ratio stays constant. Then, the **debt to GDP ratio stays** constant.
- **1** If r > g, a situation called **dynamic efficiency**, the debt to GDP ratio goes to infinity. Indeed, when a > 1,  $a^t \to +\infty$  when  $t \to +\infty$ . Then, the **debt to GDP ratio goes to infinity**. Therefore, we have a snowballing of government debt.

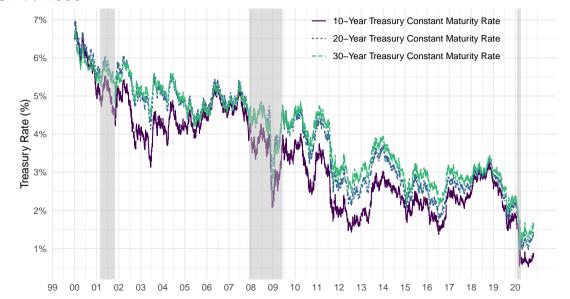
# U.S.: Dynamically inefficient

- Which of these three cases is relevant for the U.S. economy? = Is public debt sustainable in the U.S.?
- How do the real interest rate r and the growth rate of GDP g compare?
- Up until now, I would argue that it's fair to say that r < g.
- Therefore, the **snowballing effect of government debt actually is negative**. So a Ponzi Scheme is much easier to run in these conditions.

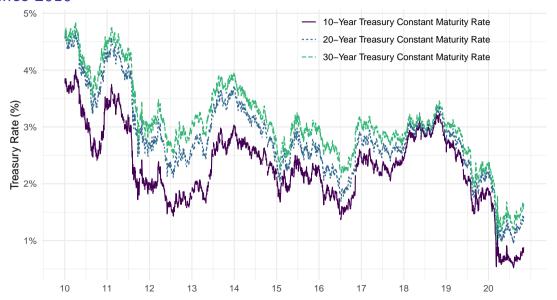
# U.S. 10Y, 20Y, 30Y Treasury Rate



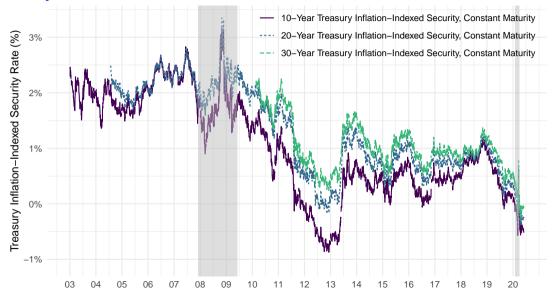
#### **Since 2000**



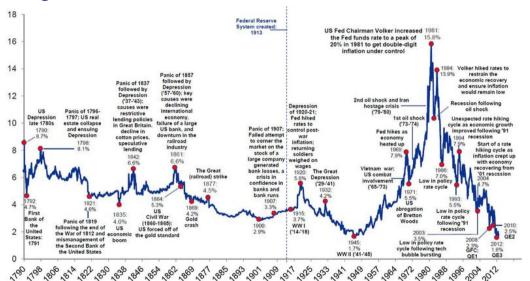
#### Since 2010



# Treasury Inflation Protected Securities



# U.S. Longer Run



# 10-Year Government Bond Yields in Europe

#### Europe, Middle East & Africa 10-Year Government Bond Yields

COUNTRY	YIELD	1 DAY	1 MONTH	1 YEAR	TIME (EST)
Germany »	-0.34%	+4	-8	-55	11:59 AM
United Kingdom »	0.55%	+4	-20	-71	11:59 AM
France	-0.09%	+4	-13	-69	11:59 AM
Italy	1.03%	0	-34	-163	11:59 AM
Spain	0.31%	+4	-9	-90	11:59 AM
Netherlands	-0.25%	+4	-13	-55	11:59 AM
Portugal	0.33%	+3	-4	-131	11:59 AM
Greece	1.16%	+1	-25	-286	11:59 AM
Switzerland	-0.74%	+4	-16	-50	11:17 AM

### 10-Year Government Bond Yields in Asia

#### Asia Pacific 10-Year Government Bond Yields

COUNTRY	YIELD	1 DAY	1 MONTH	1 YEAR	TIME (EST)
Japan »	-0.05%	+0	-4	-4	
Australia »	0.95%	-14	-35	-126	
New Zealand	1.32%	-11	-30		2:37 PM
Hong Kong	1.45%	+O		-41	
Singapore	1.55%	-8	-13	-63	5:29 AM
South Korea	1.60%	-11	-7		5:29 AM
India	6.57%	+2	+7		6:26 AM

# r-g across Countries

Country	i	pi	r = i-pi	g	r - g	Mexico	6.87%	7.4%	-0.53%	2.69%	-3.22%
Australia	1.020/	2 = 80/.	4 ==0/.	-		Netherlands	-0.31%	1.71%	-2.02%	2%	-4.03%
	1.03%	2.58%	-1.55%	3.12%	-4.67%	New Zealand	1.16%	2.05%	-0.89%	2.93%	-3.82%
Austria	-0.2%	1.56%	-1.76%	1.84%	-3.6%	Norway	1.26%	3.62%	-2.36%	2.03%	-4.39%
Belgium	-0.16%	1.55%	-1.71%	1.85%	-3.56%	Poland	1.96%	3.97%	-2.01%	4%	-6.01%
Canada	1.45%	1.89%	-0.44%	2.39%	-2.83%	Portugal	0.19%	2.26%	-2.07%	1.34%	-3.41%
Czech Republic	1.32%	2.75%	-1.43%	2.52%	-3.95%	Slovak Republic	-0.2%	2.78%	-2.98%	3.8%	-6.78%
Denmark	-0.43%	1.78%	-2.21%	1.59%	-3.79%	Spain	0.2%	2.04%	-1.84%	2.13%	-3.97%
Finland	-0.21%	1.63%	-1.84%	2.18%	-4.02%	Sweden	-0.16%	1.57%	-1.73%	2.5%	-4.23%
France	-0.16%	1.25%	-1.41%	1.61%	-3.02%	Switzerland	-0.51%	0.4%	-0.91%	1.91%	-2.82%
Germany	-0.47%	1.05%	-1.52%	1.42%	-2.94%	United Kingdom	0.64%	1.92%	-1.28%	2.09%	-3.38%
Greece	1.34%	2.17%	-0.83%	0.8%	-1.63%	United States			-0.16%		
Hungary	1.94%	6.19%	-4.25%	2.45%	-6.71%		1.71%	1.87%		2.44%	-2.6%
Iceland	0.84%	4.33%	-3.49%	3.53%	-7.01%	Chile	2.94%	4.19%	-1.25%	3.77%	-5.01%
Ireland	0%	2.3%	-2.3%	5.42%	-7.72%	Israel	0.88%	2.8%	-1.92%	3.65%	-5.56%
Italy	1%	1.93%	-0.93%	0.59%	-1.52%	Slovenia	-0.09%	3.73%	-3.82%	2.64%	-6.46%
Japan	-0.15%	-0.58%	0.43%	0.86%	-0.43%	South Africa	8.93%	6.69%	2.24%	2.66%	-0.43%
Korea				4.18%		Latvia	ο%	4.68%	-4.68%	3.9%	-8.59%
	1.58%	2.17%	-0.59%		-4.77%	Costa Rica	10.2%	8.32%	1.88%	3.97%	-2.1%
Luxembourg	-0.39%	2.38%	-2.77%	3.43%	-6.2%	Lithuania	0.31%	3.58%	-3.27%	4.09%	-7.36%

#### Section 6

2007-2009, 2010-2013 and public debt

- Stimulus package was implemented in the U.S., however fiscal policy turned more restrictive starting in 2010.
- 2011: Greek debt crisis. Europe implemented a series of austerity plans in 2011-2013.
- Many economists were on the side of advocating in favor of more austerity:
  - Alan Greenspan, Robert Barro, etc.
  - ▶ But also Olivier Blanchard, etc.
- Few people arguing on the other side: Paul Krugman (very forcefully).

### Alan Greenspan: U.S. and Greece

# U.S. Debt and the Greece Analogy

Don't be fooled by today's low interest rates. The government could very quickly discover the limits of its borrowing capacity.

By Alan Greenspan
Updated June 18, 2010 12:01 am ET

RECOMMENDED VIDEOS



REAL TIME ECONOMICS

# **ECB Paper Makes Case for Expansionary Austerity**

By Brian Blackstone

■ 0 RESPONSES

Jul 12, 2011 1:19 pm ET

The **European Central Bank** has taken heat in academic circles for its insistence that fiscal belt-tightening, rather than continued stimulus, is the best way to achieve economic growth by boosting confidence among consumers and businesses.

It's not backing down. "Expectations indeed matter" when it comes to government finances and their effect on economic activity, according to a paper co-written by a pair of ECB economists.

"We find that fiscal shocks that are followed by an expected future reversal in spending have a positive effect on output, private consumption, and investment," the authors, which include an economist from the **Graduate Institute of International Studies** in Geneva, wrote.

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# Mario Draghi's July 2012 "Whatever it takes"

# [1] "Link to the video:"
# [1] "econ102/public-debt.html"
# [1] "or https://www.youtube.com/embed/hMBI50FXDps"

### IMF's 10 commandments



# Ten Commandments for Fiscal Adjustment in Advanced Economies

IUNE 24, 2010	
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(Version in عربي 中文 Français Русский Español)	

### IMF's 10 commandments

#### Ten Commandments for Fiscal Adjustment in Advanced Economies

JUNE 24, 2010

By Olivier Blanchard and Carlo Cottarelli

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Source: <a href="https://blogs.imf.org/2010/06/24/ten-commandments-for-fiscal-adjustment-in-advanced-economies/">https://blogs.imf.org/2010/06/24/ten-commandments-for-fiscal-adjustment-in-advanced-economies/</a>

Advanced economies are facing the difficult challenge of implementing fiscal adjustment strategies without undermining a still fragile economic recovery.

Fiscal adjustment is key to high private investment and long-term growth. It may also be key, at least in some countries, to avoiding disorderly financial market conditions, which would have a more immediate impact on growth, through effects on confidence and lending. But too much

### Section 7

Arguments for government debt

# Public debt and heresy

- Disclaimer: on public debt, I am less worried than most economists. Many economists, policymakers are worried about excessive public debt.
- Full disclosure: I have a stake in this! I defended my ph.D. in July 2013, arguing that
  government debt was actually useful to remedy excess saving, and that more public debt
  was needed. This used to be controversial, particularly in 2010-2013 when many
  policymarkers were pushing for austerity in Europe, following the Greek government debt
  crisis.
- Still, I am going to give you arguments in favor of public debt, because I believe that public debt is not such a big problem.
- In fact, I think that our economic difficulties would be even greater without it, and that
  more public debt in fact a good thing. I think that Trump's recent stimulus shows this once
  again.

### Should the average level of public debt be zero?

- Many economists think that public debt is an issue.
- According to New-Keynesian economics, deficits should rise during bad times, but they should fall during booms. Indeed, for New-Keynesians, public debt is useful only to reduce the volatility of GDP.
- According to Neoclassical economics, public debt is bad because it crowds out useful capital accumulation.
- I will now cite two authorities:
  - ▶ Alesina, Favero, Giavazzi in their recently released book Austerity.
  - ▶ Ricardo Reis, a famous macroeconomist at the London School of Economics.

# Petrodollar recycling - Graeber (2011)

background, explaining how, during the '70s oil crisis, OPEC countries ended up pouring so much of their newfound riches into Western banks that the banks couldn't figure out where to invest the money; how Citibank and Chase therefore began sending agents around the world trying to convince Third World dictators and politicians to take out loans (at the time, this was called "go-go banking"); how they started out at extremely low rates of interest that almost immediately skyrocketed to 20 percent or so due to tight U.S. money policies in the early '80s; how, during the '80s and '90s, this led to the Third World debt crisis; how the IMF then stepped in to insist that, in order to

# Quote from Austerity

From Austerity, by Alesina, Favero, Giavazzi:

If governments followed adequate fiscal policies most of the time, we would almost never need austerity. Economic theory and good practice suggest that a government should run deficits during recessions—when tax revenues are low and government spending is high as a result of the working of fiscal stabilizers such as unemployment subsidies—and during periods of temporarily high spending needs, say because of a natural calamity or a war. These deficits should be balanced by surpluses during booms and when spending needs are low. In addition, forwardlooking governments might want to accumulate funds for "rainy days" to be used when spending needs are temporarily and exceptionally high. If governments followed these prescriptions, austerity would never be

### Widely Shared View

This view is widely shared, even among (mainstream) Keynesians. Reis (2018) - "Is Something Really Wrong with Macroeconomics?"

Among all fields of economics, macroeconomics seems to be one of the ones that attracts the most attention from the popular media. At the same time, macroeconomists are very far from running the world. In deciding the size of the budget deficit, or whether a fiscal stimulus or austerity package is adopted, macroeconomists will often be heard by the press or policy-makers, but almost never play a decisive role in any of the decisions that are made. Most macroeconomists support countercyclical fiscal policy, where public deficits rise in recessions, both in order to smooth tax rates over time and to provide some stimulus to aggregate demand. Looking at fiscal policy across the OECD countries over the last 30 years, it is hard to see too much of this advice being taken. Rather, policy is best described as deficits almost all the time, which does not match normative macroeconomics. Moreover, in popular decisions, like the vote in the

### Two "dovish" speaches: 2013 and 2019

- In November 2013 Larry Summers, at the IMF Fourteenth Annual Research Conference in Honor of Stanley Fischer, argued in favor of "secular stagnation," or the idea of an excess of savings over investment.
- In his January 2019 address to the AEA, "Public Debt and Low Interest Rates," Olivier Blanchard (2019) argued that the costs of public debt were probably lower than previously believed:
  - ▶ Although he did not explicitely push for more government debt, this is how it was received.
  - ▶ He did not say that there were excess savings but he did emphasize the importance of the fact that r < g.
- On my side, I agree more with Larry Summers' secular stagnation view.

### Secular stagnation

- With deficient aggregate demand, and too much savings, the only alternative is asset pricing bubbles (see Summers (2015)).
- More later on theoretical controversies.



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# Summers' Secular Stagnation Speech

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# [1] "Link to the video:"
# [1] "econ102/handouts/public-debt.html"
# [1] "or https://www.youtube.com/embed/KYpVzBbQIXO"
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### Important quote: is Keynesian economics about fluctuations?

In particular, at 6:24, he says:

It is a central pillar of both classical models and Keynesian models that stabilization policy is all about fluctuations – fluctuations around a given mean – and that the achievable goal and therefore the proper objective of macroeconomic policy is to have less volatility. I wonder if a set of older and much more radical ideas that I have to say were pretty firmly rejected in 14.462, Stan, a set of older ideas that went under the phrase secular stagnation, are not profoundly important in understanding Japan's experience in the 1990s, and may not be without relevance to America's experience today.

# Or is it about increasing the average level of economic activity?

Let me say a little bit more about why I'm led to think in those terms. If you go back and you study the economy prior to the crisis, there is something a little bit odd. Many people believe that monetary policy was too easy. Everybody agrees that there was a vast amount of imprudent lending going on. Almost everybody believes that wealth, as it was experienced by households, was in excess of its reality: too much easy money, too much borrowing, too much wealth. Was there a great boom? Capacity utilization wasn't under any great pressure. Unemployment wasn't at any remarkably low level. Inflation was entirely quiescent. So, somehow, even a great bubble wasn't enough to produce any excess in aggregate demand.

### I also agree with Larry Summers here

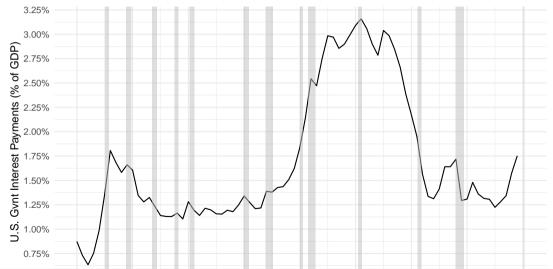
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# [1] "or https://www.youtube.com/embed/4YwmUg454wI?start=4335"
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# Reis (2018)

- Reis (2018): "Most macroeconomists support countercyclical fiscal policy, where public
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  stimulus to aggregate demand. Looking at fiscal policy across the OECD countries over the
  last 30 years, it is hard to see too much of this advice being taken. Rather, policy is best
  described as deficits almost all the time, which does not match normative
  macroeconomics."
- I think in contrast that because of the paradox of thrift, GDP would be even lower with all that government debt.
- In my view, policymakers have been right to disregard the advice from (mainstream) "normative macroeconomics."

### Should you worry about Public Debt?

I don't: interest payments are lower than 2% of GDP in the U.S.



François Geerolf (UCLA) Public Debt November 18, 2020

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### Public debt is a Ponzi scheme



**State-sponsored quackery in China** 

**Guatemala's unfunny president** 

America's biggest private firm opens up

When Ponzi schemes make sense

**Overlapping generations** 

# Kicking the can down an endless road

The final brief in our series on big economic ideas looks at the costs (and benefits) of passing on the bill to the next generation

#### Ponzi scheme

- With a Ponzi scheme, you promise high returns to investors. You pay these returns using the contributions of new contributors to your fund.
- Of course, at some point, it must run out. Indeed, you run out of investors to convince, and the game stops.
- Or does it? Imagine that you can tap previous investors, and their saving grows at a rate higher than the promised return.
- Then you can maintain the Ponzi scheme.

# One interpretation of public debt

- One interpretation of public debt is that it corresponds to "voluntary expropriation of the rich."
- The rich maybe save largely because "they do not know what to do with their money."
- From the New York Times, Why Don't Rich People Just Stop Working?
  - Literally, in a matter of weeks, certainly a couple of months, the phone calls have had a different tone to them," Mr. Rickards said. "What I'm hearing is, 'I've got the money. How do I hang on to it?' 'Are gold futures going to hold up or should I have bullion?' 'If I have bullion, should I put it in a bag in a private vault?'"
  - ► "It's a level of concern that I've never heard from the superrich," he said. "The tone of voice is, 'I need an answer now!'"

#### Wealth Taxation and Public Debt

- Option 1: Consider a wealthy family who accumulates wealth, passes it on to their children, and never consumes it. (because their children are successful too, they never need to consume the corresponding wealth) That wealthy family accumulates wealth in the form of government debt, which is then passed on from generation to generation.
- Option 2: Assume now that this wealth is instead taxed at a high rate (for example, under Elisabeth Warren's wealth tax plan), and that the proceeds are used to repay the public debt.
- The two options are perfectly equivalent, in terms of macroeconomic aggregates, as well as individual consumption. The only difference is that the rich are probably more unhappy with option 2: they prefer voluntary expropriation (which they choose by never consuming) than expropriation imposed by the state.