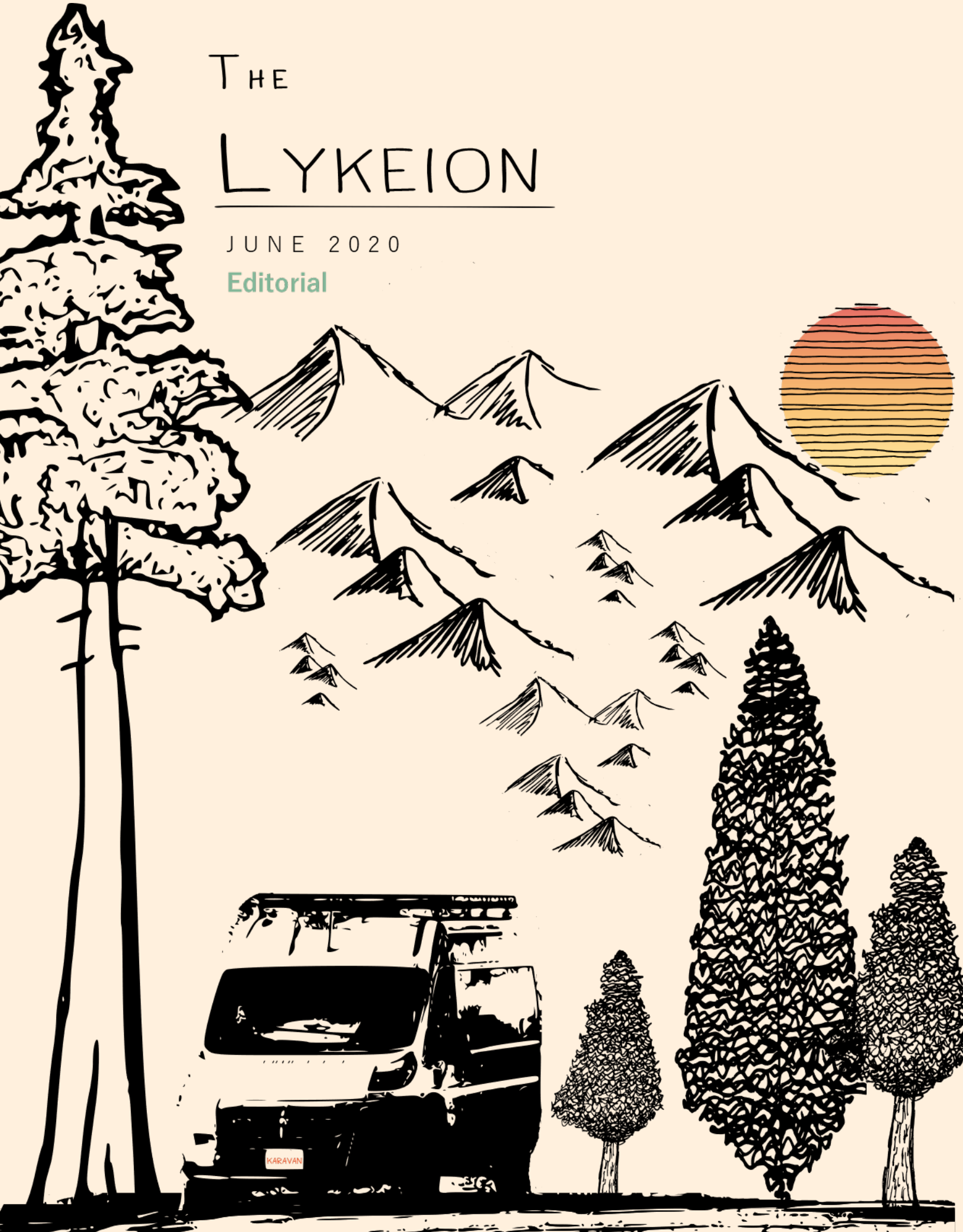
The Lykeion

JUNE 2020

Editorial



Debts, Deficits, and Future Financing

EDITORIAL PRINT FOR JUNE 2020 · BY TIM PURCELL

Key Takeaways:

- U.S. government debt has grown to +$26 trillion today and for the first time in history, total debt to GDP will rise above 100% in 2021 (potentially 2020 depending on continued COVID response)
- Non-Federal Research buyers of treasures may be thinning out, forcing the hand of central bankers to become a more permanent fixture to provide future budget financing.
- Unsustainable growth in debt levels will, at some point (we don't know when), force the current system to change. How that may happen and what that may look like is what we are out to explore.

"As GAO has previously reported, projected federal spending will increase more rapidly than revenue. Absent action to address this imbalance, the federal government faces an unsustainable growth in debt...GAO has suggested that Congress consider alternative approaches for managing the level of debt." – ***Government Accountability Office (GAO) November 2019 Financial Audit***

The Government Accountability Office (GAO) is the audit, evaluation, and investigative arm of Congress and is tasked with, "supporting Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people." Their reports are riveting, they read like a cross between a Vonnegut sci-fi thriller and a Stephen King horror novel. Except it's a real-life story and their investigations reveal a potential looming debt disaster to which few, if any, have ever put forward meaningful and realistic fixes to the problem.

The goal of this Editorial is to set the stage to understand how the U.S. debt machine works, what the future holds in terms of financing the budget, and how long 'the system' can last in its current form.

Historical Growth in Federal Debt

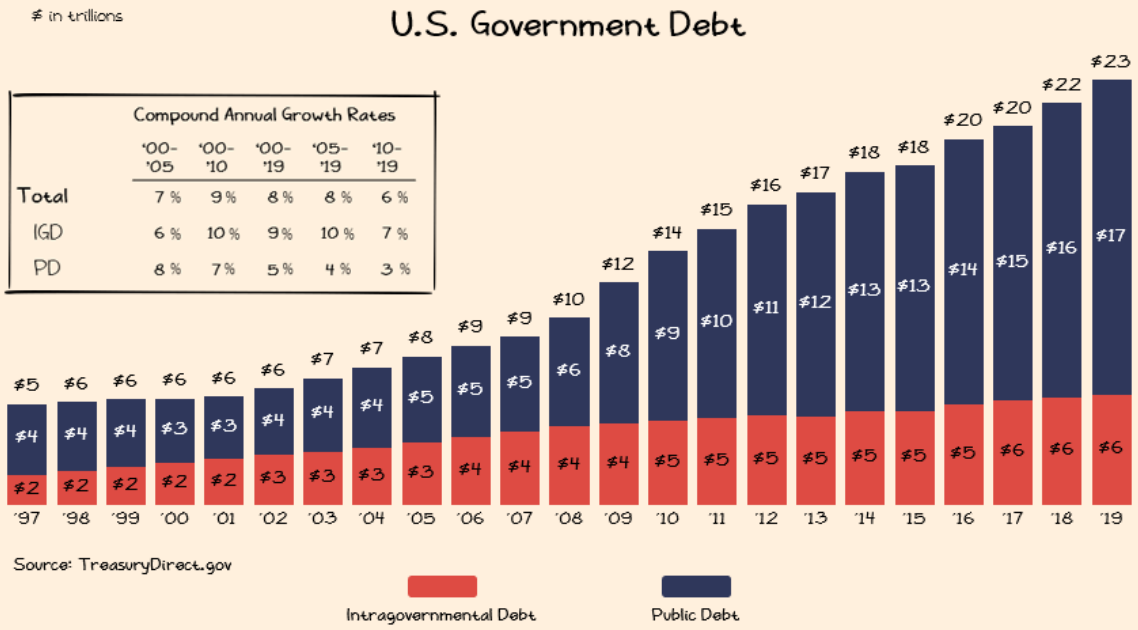
The GAO began auditing the U.S. Treasury back in 1997, and since then total federal debt has grown from $5.4 trillion to over $26 trillion (as of June '20), and the debt ceiling (the theoretical cap on Congressional spending) has been raised 19 times. For the sake of this report, we'll assume the debt ceiling does not exist because this cap placed on Congress' spending is more of a political posturing tool than a financial management one. In 2019 alone, the ceiling was 'temporarily' suspended for about 7 months of the fiscal year. On August 2nd, the ceiling was suspended through July 31st, 2021, and if a new ceiling is not enacted by then, it automatically increases. A perpetually raised ceiling equates to a non-existent ceiling.

Article I, Section 8 of the U.S. Constitution allowed Congress to authorize the use of borrowing money against the credit of the United States, and up through 1917 Congress would directly authorize each new bond that was issued. During the U.S. involvement in WWI, in order to free up Congress from having to directly issue each new bond to finance the war effort, the Second Liberty Bond Act was authorized, which established an aggregate limit to how much Congress could spend, which alleviated the requirement to issue individual bonds to finance deficits. Then,

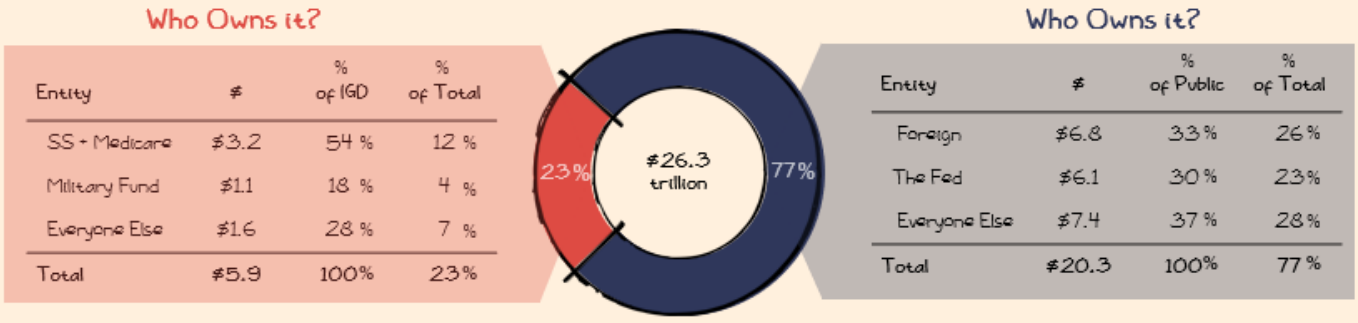
the Public Debt Acts of 1939 and 1941 established the debt ceiling, meaning that although Congress no longer needed to authorize each bond, it had to adhere to a limit on spending. However, because these Acts are amendable, they have been less than effective, to put mildly.

With essentially no legal limit to the amount the government can spend, federal debt has been in constant growth since the birth of the nation. Even in the years where the federal budget ran a surplus ('98 – '01), gross federal debt still increased because of the increase in Intragovernmental Debt (IGD). The mechanical differences between IGD and Public Debt (PD) are actually quite fascinating (if you're into that sort of thing), and one that we'll explore in this print.

Here is the historical growth in total federal debt, split between its two subcomponents, Public (PD) and Intragovernmental (IGD):



And here is where we stand today, broken out by type of debt and by type of holder:



Source: IGD Holdings from GAO November 2019 Financial Audit. Share of holdings is as of Sept. '19 and used to estimate based on total IGD outstanding as of 6/23/20. Foreign holdings from treasury.gov and are as of 4/30/20. The Fed holdings from FRED as of 6/17/20. Both "Everyone Else" categories are backed into based on remainder amounts and subtotals.

These holders of debt are the financiers that allow the U.S. government to continue running its operations. Understanding the profile of debtholders is quite important, especially in an economy that consistently runs deficits, subsequently growing its total debt and increasing the risk profile of being a debt holder.

Public Debt (PD)

This is the debt held by the public and primarily represents the amount the federal government has borrowed to finance cumulative cash deficits. It is held across various types of holders, including, but not limited to, foreign governments and institutions, the Federal Reserve, insurance companies, mutual funds, state and local governments and others. The two largest holders of Public Debt are Foreign and The Fed.

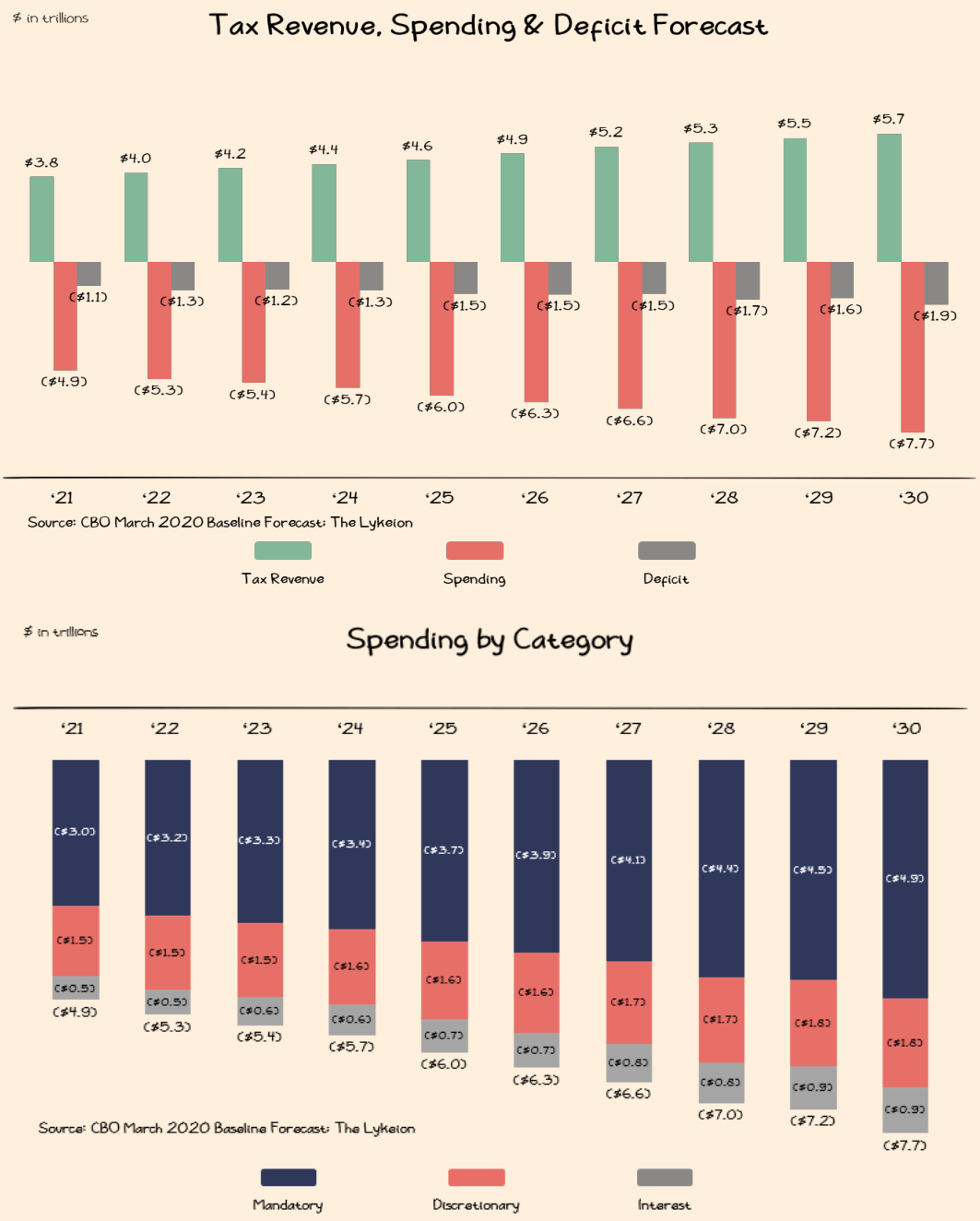
> Foreign: as of April '20, total foreign holdings add up to $6.8 trillion, and the two largest holders by far are Japan ($1.3 trillion) and China ($1.1 trillion). The next eight (UK, Ireland, Brazil, Luxembourg, Hong Kong, Switzerland, Cayman Islands, and Belgium) own in aggregate $2.1 trillion.
>
> The Fed: as of June '20, owned $6.1 trillion (including Mortgage Backed Securities (MBS) issued by the three government sponsored mortgage companies, Fannie, Freddie, and Ginnie)
>
> Everyone Else: insurance companies, mutual funds, etc. They own the remainder of about $7 trillion

Intragovernmental Debt (IGD):

This is the debt held by government accounts, 245 of them, but by far the largest accounts are the Social Security Trust fund, followed by the Military Retirement Fund, and Medicare. If you take one thing away from this section, it's this; IGD represents the excess contribution that these trust funds receive above their disbursements and are required by law to invest in U.S. treasury securities. So, when the Social Security fund receives excess payroll taxes above what was paid out, it is required to invest that excess, and by law must invest the entirety of those excesses in U.S. treasuries. *Investments into U.S. treasuries create a debt burden the government must repay, but because IGD is considered government debt owed back to themselves, sometimes it gets excluded from the total debt numbers. That being said, the reality is that it's not debt owed back to the government, but rather debt that is owed to taxpayers, so there really is no reason why it should not be accounted for when looking at total debt. From our vantage point, we look at IGD as a consistent buyer of debt creating a semi-permanent financing of the budget (for as long as contributions to Social Security exceed disbursements) , but also as a holder that very much needs to be repaid, and in relative short order.*

With that background, one of the big questions we're trying to answer is, **how much future financing is required, and who is going to finance budget operations on top of re-financing maturities as they come due?**

Enter the Congressional Budget Office and their budget forecasting for revenue, mandatory and discretionary spending, interest, and new deficits.



The above charts are the CBO baseline forecast for cumulative deficits over the next 10 years. Because the latest forecast is from March, i.e. produced pre-COVID, the substantial increase in debt and associated increase in interest had not yet been accounted for (their next forecast comes out end of June). Therefore, we adjusted their model to include current debt figures from the Treasury Department, and an estimate for continued 2020 deficit financing (another $700 billion through the end of the year). **All accounted for, the 10-year adjusted forecast for the federal deficit amounts to ~$14.5 trillion of new debt (the equivalent of adding 70% of new debt to 2021 GDP).**

Additionally, according to the GAO audit of the treasury debt maturity schedule, "as of September 30th, 2019, $9,890 billion, or 61%, will mature within the next four years. As of September 30th, 2019, and 2018, total **marketable debt**

held by the public maturing within the next 10 years totaled $14,078 billion and $13,185 billion, respectively, an increase of $893 billion".

All told, total deficits to be financed ($14.5 trillion) and total maturities to be re-financed ($14.1 trillion), add up to about **~$29 trillion dollars of required financing over the next 10 years.**

The question, "where will this financing come from?" seems borderline rhetorical to ask, because the obvious answer is "The Fed will have to finance it" à la Modern Monetary Theory (which we will explore in later Editorials). But because the goal of this piece is to explore the debt and deficit financing in detail in order to facilitate intelligent conversations about the go forward options, let's look at the historical sources of funding so that we can systematically rule them out.

Future Financing

Intragovernmental Debt Accounts?

In 2019, IGD increased by $157 billion, which means these accounts helped fund $157 billion of the budget through the purchase of federal debt. That increase, however, was not driven by the largest trust fund, Social Security. Instead, the GAO reports that the increase was primary created through "1) the Military Retirement and Health Care funds of $98 billion, 2) an increase in the FHA, Mutual Mortgages Insurance Capital Research Account of $24 billion, 3) an increase in the Civil Service Retirement and Disability Fund of $18 billion, and 4) an increase in the Unemployment Trust Fund of $12 billion."

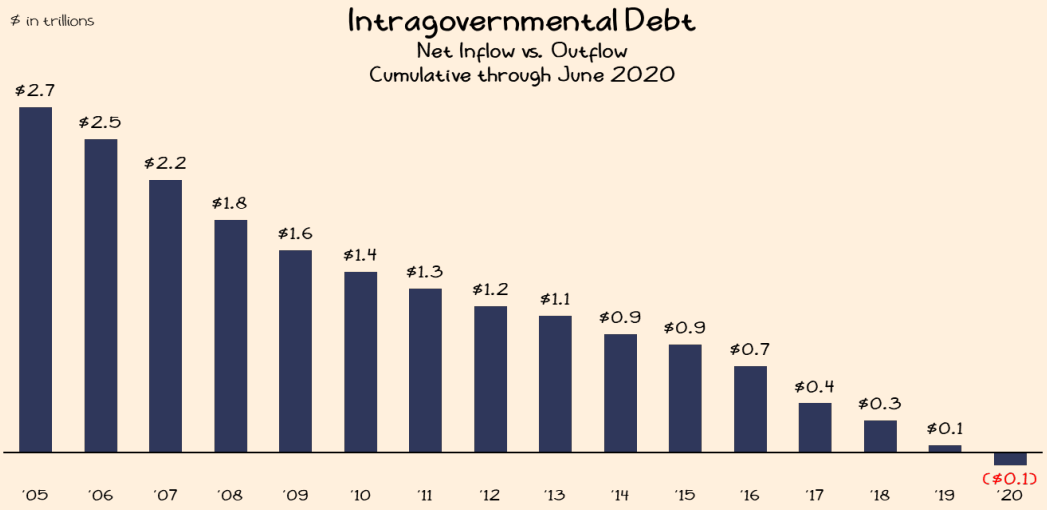
Declining excess inflows from Social Security intuitively should make sense; the Boomers are retiring en masse, and as such, we would expect to see outflows from Social Security and Medicare, not inflows.

According to the Social Security Administration 2020 Fact Sheet:

- 65 million Americans will receive a total of over one trillion dollars of Social Security Benefits
- Nearly nine out of ten individuals age 65 and older receive Social Security Benefits
- Social Security benefits represent about 33% of the income of the elderly

Beginning in 2011, Boomers began turning 65, and through 2030 an estimated 10,000 will retire a day. That is *a lot* of Boomers. If we look back at the current breakdown of U.S. federal debt, within IGD, Social Security + Medicare makes up about 54%, or $3.2 trillion of the holdings. Remember, these are the excess trust funds that were required to purchase treasuries.

It's not farfetched to imagine that in the short to medium term this large and obligated buyer of treasuries begins to thin out, if not completely, then most assuredly in a meaningful way as Baby Boomers, the largest generation by birth numbers in U.S. history, continue to retire. And as IGD depletes, and the debt matures, those accounts will need to be paid in cash, not re-financed, in order to pay out the Boomers. The "Intragovernmental Debt Net Inflows vs. Outflows" chart below sums up all the inflows and outflows from a start year, then nets them together to define a net inflow or net outflow, cumulative through today. An inflow would represent excess funds into Intragovernmental Accounts, meaning these accounts financed the budget via the purchase of treasuries. For example, since 2005 through today, the net inflows vs. outflows of IGD was +$2.7 trillion (inflow). From 2013 through today, that net number was +$1 trillion (inflow). From 2018 through today, that net number was just +$255 million (inflow). 2019 may well be the first year where IGD is a net outflow.

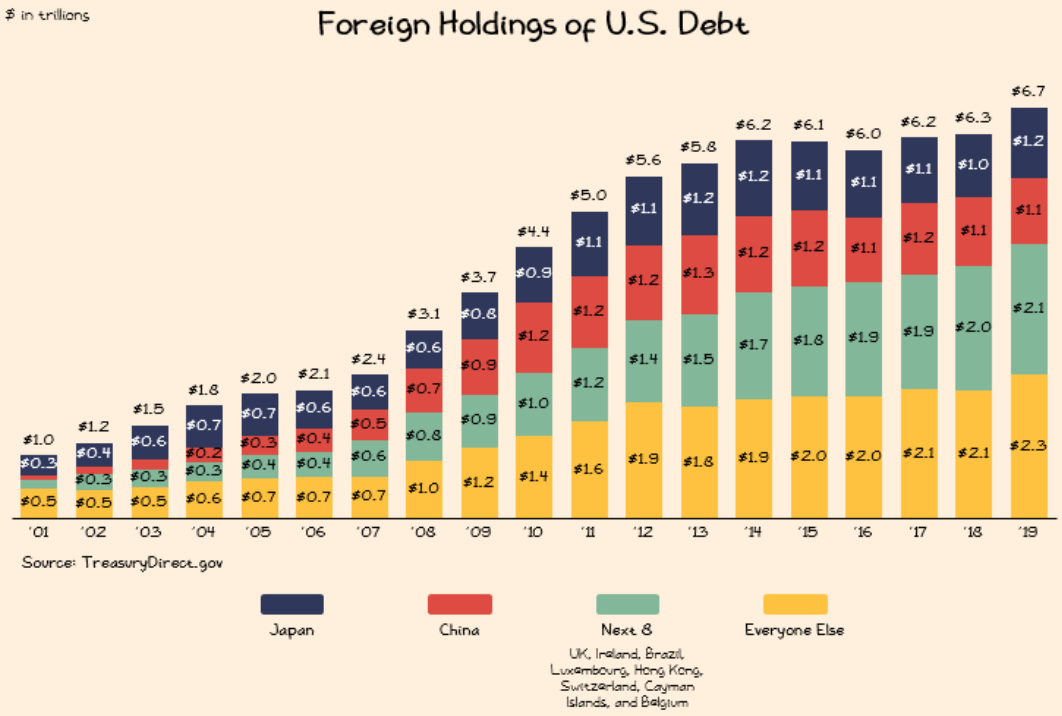


We don't want to sound like alarmists, but IGD looks like it may have peaked sometime around Q1 of this year. Which means budget deficit financing from IGD may be going away soon, and less IGD budget financing creates an increased reliance on public debt for financing.

Takeaway: In the near-term future, IGD may become a financing need, as opposed to a financing source.

Public Debt – Foreign Buyers?

If there is one thing to understand about the foreign holdings of U.S. federal debt, it's the substantial growth over the last two decades, from ~$1 trillion in '01 to almost ~$7 trillion today. The largest holders and subsequently the drivers of that growth are by far Japan and China, combining to hold 33% of total foreign debt, and both contributing significantly to the financing of the federal deficit over the same time.



We try to maintain a level of perspective so as to not jump to irrational conclusions, but with the COVID pandemic unfolding the way it has, we are not underestimating one of the major storylines to have materialized; the "shifting of supply chains" to ensure that when the next crisis hits, issues of stability and control of these supply chains critical to national security are not disrupted as they have been in this current crisis. Read differently, the world of the future may well be one that is less globalized, more insular, and therefore less dependent on foreign countries for the production of goods and services (at least for those that can provide for themselves). Again, trying to maintain perspective and not sound overly dramatic, but 2019 may have seen peak globalization, with COVID acting as the catalyst to de-connect the world, at the very least, a little, and potentially on a much larger scale.

The re-domestication of supply chains has been on the rise even in a pre-COVID world. The Trump Administration's trade war with China has been well documented, but the U.S. is not alone in trying to protect its domestic businesses. The U.S. – China dispute has already forced Southeast Asian countries to begin shifting production out of China as they reassess their supply chain strategy. Brexit has set the stage for continental Europe to begin re-domesticating trade to the EU. Reuters recently reported that "India plans to impose higher trade barriers and raise import duties on around 300 products from China and elsewhere…"

Not always, but sometimes, where there is smoke, there is fire.

Purchases of foreign debt carries with it an implicit quid pro quo for the goods and services of the buyer nation that tends to get little attention until it becomes very noticeable. Meaning, in a hyper-connected, globalized world, purchases of government debt with key trading partners makes sense as they are financing your budget operations, and you are purchasing their goods and services, therefore creating a mutually beneficial cycle that allows all boats to rise. However, if that cycle is broken, then the mutually beneficial relationship ceases, and one or both of the parties involved will look elsewhere to finance their countries operations.

The U.S. may well decide to onshore the production of critically important antibiotics away from Chinese supply chains, which makes total sense from a national security standpoint. Additionally, the U.S. may decide to run an 'America First' campaign for the auto industry to drive more sales of Ford and Chevy away from Japanese brands, which again, (kind of) makes sense from an economic standpoint to circulate capital internally, driving up velocity of money, the elusive growth rate of inflation, as well as keeping money in the pockets of more Americans. However, less money to the Chinese and the Japanese from Americans also means these countries will be less likely, willing, and able to buy the one thing the U.S. produces the most of, and needs to sell the most of in order to stay alive…debt.

We're not saying that foreign investment into the U.S. is going away, but what we are suggesting is the plausibility of a world in which large industrial countries pursue more insular and protected supply chains to the point where financing stagnates, and more likely than not, contracts, until foreign financing as a percent of total deficit financing drops significantly. Yes, driving incremental internal production for the consumption of goods and services will drive additional tax revenue, in theory contracting the deficit, but that assumes that the U.S. government starts saving instead of spending… (remember, they've also raised the debt ceiling 19 times…)

Takeaway: Foreign investments may have peaked in 2019, and as supply chains re-domesticate, this source of budget financing may well be in decline.

Public Debt – Everyone Else

Everyone not named 'Foreign' or 'The Fed" represents the remainder of total public debt.

Everyone Else*
Values as of December '19

	$ of Total	%Of Total*
Other Investors	$2.7	10
Mutual Funds	$2.3	9
State & Local Governments	$1.1	4
Depository Institutions	$0.9	4
Private	$0.7	3
Insurance Companies	$0.2	1
U.S. Savings Bonds	$0.2	1
Total	**$8.1**	**31%**

Source: June 2020 Treasury Bulletin. *Note, This breakout of 'Everyone Else' does not match the Total U.S. Government Debt chart above because Treasury Bulletin updates quarterly, whereas the Fed and Foreign Holders are more recent numbers

We group Everyone Else together for two reasons:

1. Not one of these investor types represent a large portion of debt; the 'Other' category above is an aggregate of seven different investor types (not broken out in the Treasury Bulletin) and together only holds 10% of total debt. Every mutual fund in the country in aggregate holds less than 10% of total debt outstanding.
2. For the most part, these are discretionary investors who have the choice, not the obligation, to purchase treasuries, which is an important distinction from the other types of buyers. If the price of treasuries in the open market is not of an appropriate risk vs. reward ratio, investors (mutual funds, insurance companies, etc.), are not forced to buy.

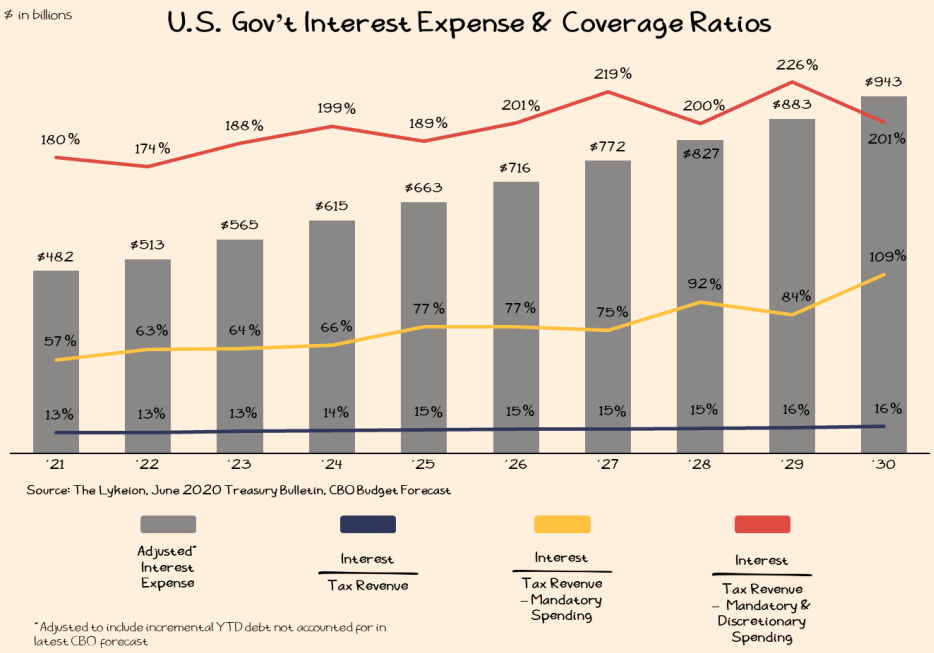
Takeaway: No single investor here carriers enough significance in terms of weight to finance future deficits

This leaves us with the answer to our rhetorical question above. The Fed.

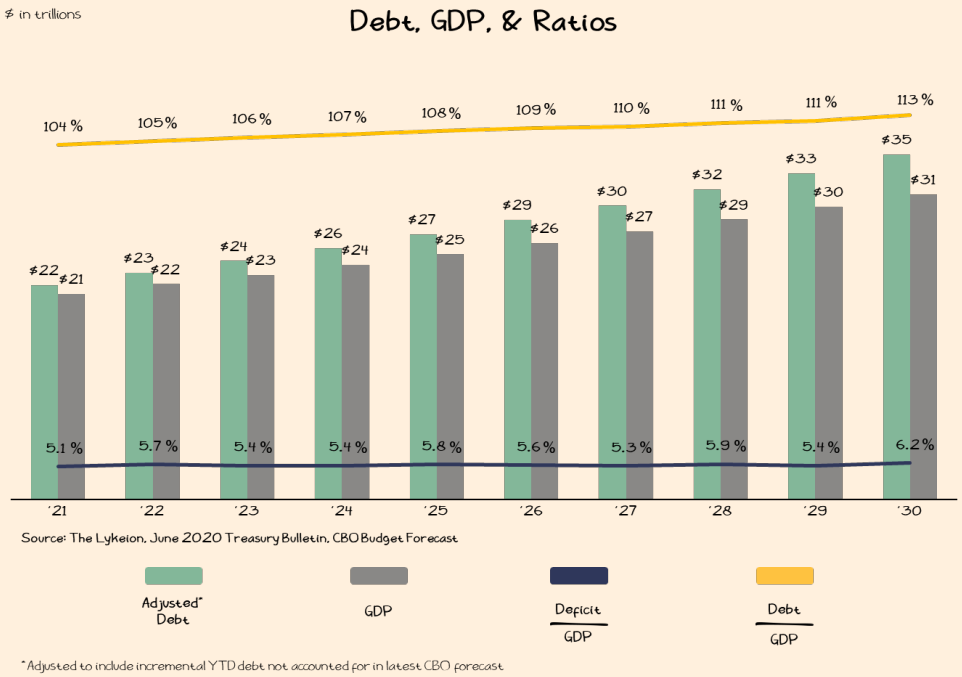
Public Debt – The Federal Reserve

The lender of last resort currently holds > 20% of all U.S. debt.

IGD is going away, foreign financing is likely thinning, and everyone else not named the Fed is not going to continue buying debt of an entity, even one backed 'by the full faith and credit of the United States', at a point when real creditworthiness gets called into question. When will that be? We honestly do not know, and yes, we do realize U.S. treasuries are currently the safest asset on the planet. But, even Brady will be forced to retire, Caesar crossed the Rubicon, and from Connery, to Moore to Craig, nothing can, or should, last forever, no matter its level of greatness. Larger brains than ours are required to figure out the timing, but at some point, we can no longer hide behind the cloak of history and assume that U.S. debt will always and forever be AAA rated.



We believe interest coverage ratios may give us at least a little insight into "when" real creditworthiness gets called into question. The two ratios in focus should be "Interest to tax revenue less mandatory spending" and "Interest to tax revenue less mandatory and discretionary spending". A >100% reading on the latter tells us that the U.S. will need to issue new debt to service its interest after mandatory and discretionary budget expenditures. A >100% reading on the former tells us that the U.S. will need to issue new debt to service its interest after only paying for its mandatory expenditures. Once you cross the threshold of issuing new debt just to service your interest, you enter into a ponzi-scheme type grey area, taking in new cash from investors just to hand it over to owners of your previous obligations. Viewed through this lens, the above chart should be quite jarring.



Debt to GDP will be >100% next year, maybe this year depending on how the remainder of the COVID stimulus plays out. The baseline budget forecast runs almost a trillion-dollar deficit each year, without accounting for interest. New debt issuance is needed just to service interest, and that number is increasing. **Growth in debt is not slowing down anytime soon, if anything, with COVID response increasing fiscal spending and the associated increases in interest expense, debt growth is accelerating.**

Central bank money printing is, out of necessity, likely here to stay, not just to stimulate the economy, but to keep it alive. The lender of last resort understands that the debt obligations they buy from the U.S. government to finance their budget is little more than a promise of needing even more money in the future to repay debt compounded by interests. In a sense, the money the central bank prints today was already spent in the past. How do we get out of this vicious cycle in which we borrow more just to pay back what we've already borrowed?

As Dr. Lacy Hunt argues: "An increase in debt is an increase in current spending in exchange for a decline in future spending, unless that debt generates an income stream to repay principal and interest. And so, while these measures were essential and popular [as a response to the Covid-19 pandemic], they simply do not meet that test".

We have a debt addiction that we need to urgently and systematically reduce our dependence on, but realistically speaking, the alternatives are not popular, and likely require the world to endure economic and political pain for an extended period of time, primarily because we have spent decades living beyond our means.

We're going to end this piece with some open-ended questions, of which, we do **not** have answers to. In the coming months, we will try to have conversations with people with larger brains than ours to try to figure out what's next. It's not going to happen tomorrow, next month or probably not even next year. But change is coming, and we want to try to understand what that altered reality may, or may not, look like.

- What is the role of debt in a system where all forward growth has largely been pulled forward, meaning that the income generated from debt will not be sufficient to pay back interest plus principal?
- What does 'the system breaking' look like? What are the mechanics? What is the catalyst for the current unsustainable debt trajectory driven by budget deficits and compounding interest expense? Austerity measures do not seem realistic because switching from a trillion-dollar deficit to a trillion-dollar surplus would drive the country and probably the world into a prolonged depression. And even then, it would take multiple decades to pay the current and baseline new debt down to manageable levels.
- If austerity is not realistic, and global debts continue at their current clip, what breaks first?
- If the Federal Reserve has committed to perpetual financing of the budget, should they consider direct payments to citizens (Universal Basic Income)? What are the pros and cons of a system like this?