

REEXAMINING THE ECONOMIC COSTS OF DEBT

HEARING BEFORE THE COMMITTEE ON THE BUDGET HOUSE OF REPRESENTATIVES ONE HUNDRED SIXTEENTH CONGRESS FIRST SESSION

HEARING HELD IN WASHINGTON, D.C., NOVEMBER 20, 2019

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REEXAMINING THE ECONOMIC COSTS OF DEBT

WEDNESDAY, NOVEMBER 20, 2019

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
Washington, D.C.

The Committee met, pursuant to notice, at 10:05 a.m., in Room 210, Cannon House Office Building, Hon. John A. Yarmuth [Chairman of the Committee] presiding.

Present: Representatives Yarmuth, Moulton, Higgins, Khanna, Schakowsky, Panetta, Morelle, Horsford, Scott, Peters, Cooper; Womack, Woodall, Johnson, Smith, Norman, Roy, Meuser, Crenshaw, Hern, and Burchett.

Chairman YARMUTH. This hearing will come to order. Good morning, and welcome to the Budget Committee's hearing on Reexamining the Economic Costs of Debt. I want to welcome our witnesses here with us today.

This morning, we will be hearing from Dr. Olivier Blanchard, a senior fellow at the Peterson Institute for International Economics, and professor of economics emeritus at MIT; Dr. L. Randall Wray, professor of economics at Bard College, and senior scholar at Levy Economics Institute; Dr. Jared Bernstein, senior fellow at the Center on Budget and Policy Priorities; and Dr. John Taylor, professor of economics at Stanford University, and senior fellow at the Hoover Institution.

Welcome to all of you. We look forward to your testimony. I will now yield myself five minutes for an opening statement.

Once again, I would like to welcome our witnesses. We appreciate you coming here to help us discuss the changing economics of debt and its implications for fiscal policymaking. There is a wide array of views on this subject at the witness table, across the aisle, and even within our caucus, and within the Republican conference. So it is my hope that we can use this hearing as an opportunity to learn more about the different perspectives driving this important debate and hear from the experts on what Congress must evaluate when considering the real costs of debt in this new economic era.

I say, "new economic era," because today's economy defies many of the core principles of traditional economic theory. We have been operating under the long-held assumption that persistent budget deficits and rising government debt would increase interest rates and inflation, harming our economy over the long run.

However, contrary to these predictions, we have seen interest rates and inflation fall to record lows, while debt has soared to its

highest level since just after World War II. We are truly in a new era that has economists reassessing entire economic theories in light of these unexpected outcomes.

If the Budget Committee is to promote effective and responsible fiscal policy, it is important that we learn more and participate in this growing debate.

In our hearing last week, Federal Reserve Chair Powell made it clear that the fiscal challenge we face is a long-term one, not an immediate crisis. Our aging population and growing health care costs have put our debt on an unsustainable path. We will need to take steps to address this issue over the next several decades.

But, in the meantime, persistently low interest rates have made reducing deficits in the near term less urgent, even counter-productive, given the risk to economic growth. It has also increased Congress's fiscal space, empowering lawmakers to make responsible investments now that will improve our future economic outlook.

But that doesn't mean we should be spending like a drunken sailor, without thought or discretion. I apologize to any current or former sailors in the room. Deficits, and what they are used for, matter. Failing to tackle severe and persistent infrastructure, education, and health gaps is, arguably, more damaging to our economic and fiscal outlooks than the risk posed today by higher debt.

Policies that support working Americans in an economic downturn, provide much-needed investments in our families, communities, and environment, and have a positive impact on our long-term fiscal health, are responsible uses of deficits.

Every dollar invested in infrastructure increases near-term economic output by \$1.50 and boosts our economy's productivity over time. A dollar for pre-disaster mitigation efforts saves \$6 in future disaster costs. Investments in children's health care and preschool and college attainment pay for themselves over the long run. Housing programs that move children out of poverty can increase lifetime earnings by \$300,000.

Moreover, low interest rates will supercharge these investments. They will be cheaper to make today, and likely provide a bigger boost to the economy later.

On the other hand, deficit-financed tax cuts for the wealthy and big corporations are clearly an irresponsible use of deficits. The Republicans' 2017 tax law is the poster child for wasteful deficit-financed policy. It has failed to provide any meaningful boost to the economy but increased our debt by at least 1.9 trillion and counting, worsening our already serious revenue problem. Skyrocketing the deficit for this purpose, while uninsured rates increase, air pollution worsens, and our children's reading scores decline is appalling.

At the end of the day, carrying debt still carries risks. But by investing strategically in responsible policies that reflect our nation's values, and by having a more sober and evidenced-based understanding of the costs of debt, we can lay the groundwork for a productive and dynamic 21st century economy.

I know we will hear different points of view as we examine this, which is the point of this hearing. But despite critical differences, both mainstream and alternative schools of thought increasingly

agree that government debt appears to be less risky, less costly, and less urgent than traditional economic thought suggests. Today's hearing will provide a platform for experts and policymakers to share their ideas, whether practical, or aspirational, conventional, or controversial.

Once again, I look forward to hearing from our witnesses about what they believe Congress can and should be doing in this new economic era, how we can invest responsibly in our future, and what fiscal policies best support American families.

[The prepared statement of Chairman Yarmuth follows:]

**Chairman John Yarmuth
Hearing on Reexamining the
Economic Costs of Debt
Opening Statement
November 20, 2019**

I'd like to welcome our witnesses – we appreciate you coming here to help us discuss the changing economics of debt and its implications for fiscal policymaking. There is a wide array of views on this subject – at the witness table, across the aisle, and even within our Caucus and the Republican Conference. So, it is my hope that we can use this hearing as an opportunity to learn more about the different perspectives driving this important debate and hear from the experts on what Congress must evaluate when considering the real costs of debt in this new economic era.

I say new economic era because today's economy defies many of the core principles of traditional economic theory. We have been operating under the long-held assumption that persistent budget deficits and rising government debt would increase interest rates and inflation, harming our economy over the long run. However, contrary to these predictions, we've seen interest rates and inflation fall to record lows while debt has soared to its highest level since just after World War II. We are truly in a new era that has economists reassessing entire economic theories in light of these unexpected outcomes. If the Budget Committee is to promote effective and responsible fiscal policy, it's important that we learn more and participate in this growing debate.

In our hearing last week, Federal Reserve Chair Powell made it clear that the fiscal challenge we face is a long-term one, not an immediate crisis. Our aging population and growing health care costs have put our debt on an unsustainable path. We will need to take steps to address this issue over the next several decades. But in the meantime, persistently low interest rates have made reducing deficits in the near-term less urgent – even counterproductive given the risk to economic growth. It has also increased Congress's fiscal space, empowering lawmakers to make responsible investments now that will improve our future economic outlook.

But that doesn't mean we should be spending like a drunken sailor, without thought or discretion (I apologize to any current or former sailors in the room). Deficits – and what they're used for – matter. Failing to tackle severe and persistent infrastructure, education, and health gaps is arguably more damaging to our economic and fiscal outlooks than the risks posed today by higher debt. Policies that support working Americans in an economic downturn, provide much-needed investments in our families, communities, and environment, and have a positive impact on our long-term fiscal health are responsible uses of deficits. Every dollar invested in infrastructure increases near-term economic output by \$1.50 and boosts our economy's productivity over time. A dollar for pre-disaster mitigation efforts saves \$6 in future disaster costs. Investments in children's health care, and preschool and college attainment pay for themselves over the long run. Housing programs that move children out of poverty can increase life time earnings by \$300,000. Moreover, low interest rates will supercharge these investments; they'll be cheaper to make today and likely provide a bigger boost to the economy later.

On the other hand, deficit-financed tax cuts for the wealthy and big corporations are clearly an irresponsible use of deficits. The Republicans' 2017 tax law is the poster child for wasteful deficit-financed policy: It has failed to provide any meaningful boost to the economy but increased our debt by \$1.9 trillion and counting, worsening our already serious revenue problem. Skyrocketing the deficit for this purpose while uninsured rates increase, air pollution worsens, and our children's reading scores decline is appalling.

At the end of the day, carrying debt still carries risks. But by investing strategically in responsible policies that reflect our nation's values – and by having a more sober and evidenced-based understanding of the costs of debt – we can lay the groundwork for a productive and dynamic 21st century economy.

I know we will hear different points of view as we examine this – which is the point of this hearing. But despite critical differences, both mainstream and alternative schools of thought increasingly agree that government debt appears to be less risky, less costly, and less urgent than traditional economic thought suggests. Today's hearing will provide a platform for experts and policymakers to share their ideas, whether practical or aspirational, conventional or controversial.

I look forward to hearing from our witnesses about what they believe Congress can and should be doing in this new economic era, how we can invest responsibly in our future, and what fiscal policies best support American families.

Chairman YARMUTH. With that I yield five minutes to the Ranking Member, Mr. Womack.

Mr. WOMACK. I thank the Chairman for holding this hearing. I think it is an appropriate continuation of the conversation we began last week with the Federal Reserve Chairman.

Last week I likened Chairman Powell's assessment of the economy to a checkup with your doctor. We received an encouraging bill of health. Our economy is strong. Forward momentum continues, thanks to the pro-growth policies enacted last Congress and under this Administration. Americans are confident, and rightly so.

We should certainly celebrate this historic economic prosperity but cannot ignore the fact that we continue to face serious long-term fiscal challenges, particularly the ever-increasing federal debt. Simply put, the debt is on a completely unsustainable trajectory. The national debt is \$23-plus trillion and is projected to grow more—to more than \$34 trillion within a decade. Soon thereafter, on our current path, the federal debt will reach the highest level in American history as a percentage of our economy.

CBO also projects that by 2049 the federal debt will equal \$248,000 per American, almost \$1 million for each family of four. After that, it continues to grow. Interest payments will increasingly crowd out the other federal spending that is directed toward programs many Americans rely on. CBO projects interest payments on the debt will amount to \$390 billion in fiscal 2020, an 11 percent amount of our federal tax revenue.

Mr. Chairman, your hearing title provocatively asks us to reexamine the debt. And I suspect we will hear from some voices today that suggest we should not worry too much about it, or we will hear it is wrong—the wrong time to deal with it. Allow me to underscore just how irresponsible that thought process is.

The way our government is operating is the same as an American family trying to make difficult financial decisions about mortgages, health insurance, and bills when they must first direct a significant portion of their family budget just toward paying the interest on a growing credit card balance. We call that the minimum payment due.

Not only is this, the way we are doing business, fiscally irresponsible and unsustainable, CBO also found that a growing federal debt has a negative impact on business investment, productivity, and economic growth. It simply does not make sense to champion our present economic successes while ignoring the long-term challenge that is the debt.

I hope we can have a realistic discussion today about the scenarios that are in front of us in the future. We could do nothing. We could try not to make things worse. We could spend even more and add new mandatory spending programs like we did yesterday on the CR, as many in this institution are proposing. Or we could work together and address the debt.

What happens to the economy and the financial future of our children and grandchildren under each of these scenarios? I certainly don't want to—want my grandkids to see the crisis scenario, in which the interest rate on the debt will skyrocket abruptly because investors will no longer have confidence in our government's ability to pay its bills.

That is why I am seriously concerned that it seems today as though many lawmakers have shifted from a willingness to address the debt with real bipartisan solutions, and instead are buying into this modern monetary theory, which tells us that the debt doesn't matter because we can, essentially, just print more money.

This notion is absurd. We cannot simply wish our problems away. Last week, before this very Committee, Chairman Powell made the point himself that—when he said the idea that the debt doesn't matter is simply wrong. Yet our colleagues serving in the House used this theory to justify the costs of programs like the Green New Deal.

So at this point I cannot help but wonder how many neutral outside experts Congress needs to hear from before we wake up and act. Congress must come together in a bipartisan, bicameral fashion to reduce the debt, deliver on our Article I responsibilities and make good on our responsibility to the American people who have to balance their own budgets each month.

Finally, I would like to congratulate my friend, Mr. Burchett from Tennessee, the former mayor of Knox County, Tennessee, and Mr. Case from Hawaii, for working together to introduce a new bipartisan idea to address the national debt.

I am often asked at home: when are you guys going to get together and do something, instead of fighting with each other? H.R. 5178 suggest creative approaches for how Congress could look at the debt in a bipartisan way, involving the House and the Senate. I am proud to support the bill authored by my friend, the mayor from Knox County, and his Democrat cosponsor, Mr. Case.

Thank you, Mr. Chairman. I yield back the balance of my time, and I look forward to the Q&A.

[The prepared statement of Steve Womack follows:]



Ranking Member Steve Womack (R-AR) Opening Remarks at Hearing Entitled: Reexamining the Economic Costs of Debt

As Prepared for Delivery:

Thank you, Chairman Yarmuth, for holding this hearing. I believe it is an appropriate continuation of the conversation we began last week when Federal Reserve Chairman Powell testified before the Committee.

Last week, I likened Chairman Powell's assessment of the economy to a check-up with your doctor – and we received an encouraging bill of health. Our economy is strong, and the forward momentum continues thanks to the pro-growth policies enacted last Congress and under this Administration. Americans are confident, and rightfully so.

We should certainly celebrate this historic economic prosperity, but we cannot ignore the fact that we continue to face serious long-term fiscal challenges, particularly the ever-increasing federal debt.

Simply put, the debt is on a completely unsustainable trajectory. The national debt is \$23 trillion, and it is projected to grow to more than \$34 trillion within a decade. Soon thereafter, on our current path, the federal debt will reach the highest level in American history as a percentage of the economy.

CBO also projects that by 2049, the federal debt will equal \$248,000 per American – almost a million dollars for each family of four. After that, it will continue to grow.

Interest payments will increasingly crowd out the other federal spending that is directed towards programs many Americans rely on. CBO projects interest payments on the debt will amount to \$390 billion in fiscal year 2020, which is 11 percent of federal tax revenue.

Mr. Chairman, your hearing title provocatively asks us to reexamine the debt, and I suspect we will hear from some voices today that suggest we should not worry too much about it – or we will hear it's the wrong time to deal with it.

Allow me to underscore just how irresponsible this is. The way our government is operating is the same as an American family trying to make difficult financial decisions about mortgages, health insurance, and bills when they must first direct a significant portion of their family budget just towards paying the interest on a growing credit card balance.

Not only is the way we're doing business fiscally irresponsible and unsustainable, CBO also found that a growing federal debt has a negative impact on business investment, productivity, and economic growth. It simply does not make sense to champion our present economic successes while ignoring the long-term challenge that is the debt.

I hope we can have a realistic discussion today about the scenarios that are in front of us in the future. We could do nothing. We could try not to make things worse. We could spend *even more* and add new mandatory spending programs, as many in this institution are proposing. Or, we could work together and address the debt. What happens to the economy and the financial future of our children and grandchildren under each of these scenarios? I certainly don't want my grandkids to see the crisis scenario, in which the interest rate on the debt will skyrocket abruptly because investors will no longer have confidence in our government's ability to pay its bills.

That's why I am seriously concerned that it seems today as though many lawmakers have shifted from a willingness to address the debt with real bipartisan solutions and instead are buying into Modern Monetary Theory, which tells us that the debt doesn't matter because we can essentially just print more money.

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Finally, I would like to congratulate my friend Mr. Burchett from Tennessee, the former mayor of Knox County, and Mr. Case from Hawaii, for working together to introduce a new bipartisan idea to address the national debt.

I am often asked at home: when are you guys up there going to get together and do something instead of fighting with each other? H.R. 5178 suggest creative approaches for how Congress could look at the debt in a bipartisan way, involving the House and the Senate. I'm proud to support this bill authored by Mr. Burchett and Mr. Case.

Thank you, Mr. Chairman. I yield back the balance of my time.

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Chairman YARMUTH. I thank the Ranking Member for his opening statement.

In the interest of time, if any other Member has an opening statement, you may submit those statements in writing for the record.

Once again, I want to thank our witnesses for being here this morning. The Committee has received your written statements, and they will be made part of the formal hearing record.

You each will have five minutes to give your oral remarks. Dr. Blanchard, you may begin when you are ready.

You know that in Arkansas and Kentucky you would be Blanchard. And I don't know how many people on the Committee will butcher your name, so I apologize in advance for that.

You are recognized for five minutes.

STATEMENT OF OLIVIER BLANCHARD, PH.D., SENIOR FELLOW, PETERSON INSTITUTE FOR INTERNATIONAL ECONOMICS, AND PROFESSOR OF ECONOMICS EMERITUS, MIT; L. RANDALL WRAY, PH.D., PROFESSOR OF ECONOMICS, BARD COLLEGE, AND SENIOR SCHOLAR, LEVY ECONOMICS INSTITUTE; JARED BERNSTEIN, PH.D., SENIOR FELLOW, CENTER ON BUDGET AND POLICY PRIORITIES; AND JOHN TAYLOR, PH.D., PROFESSOR OF ECONOMICS, STANFORD UNIVERSITY, AND SENIOR FELLOW, HOOVER INSTITUTION

STATEMENT OF OLIVIER BLANCHARD, PH.D.

Dr. BLANCHARD. Thank you. I have accepted the fact that I am called Blanchard. The—Mr. Chairman, Members of the Committee, thank you very much for giving me the opportunity to testify on what I think is, really, indeed, a crucial topic.

In my testimony today I would like to make five points. The first, nominal and real interest rates are likely to remain low for a long time to come. Indeed, nominal interest rates are forecast to be lower than the growth rate of nominal GDP for the next 20 years. Now, this being said, it is not an absolute certainty, and one should indeed be ready to act if the circumstances changed. That was the first point.

The second point is that, as a matter of logic, low real rates have three implications for fiscal policy.

Fiscal costs are lower. The cost of debt, inflation adjusted, is currently negative, slightly negative, more or less zero.

Primary deficits, which are the deficits not including interest payments on the debt, must be offset by primary surpluses in the future, but smaller primary surpluses—in other words, lower taxes today require smaller increases in taxes in the future, just again, as a matter of arithmetic.

Fiscal risks are also smaller. The probability that there is a market-induced debt crisis in the U.S. reflecting the inability of a government to pay its bills is smaller or, more or less non-existent, for the moment.

So this is implications of lower rates for fiscal policy.

My third point is about implications of low rates for monetary policy, and we are all familiar with what these implications are. The low nominal rates put sharp limits on the use of monetary pol-

icy, and the most that the Federal Reserve can do is—to stimulate the economy is to decrease nominal interest rates to zero, or very close to zero. Once at the lower bound, monetary policy cannot help. But fiscal policy can. That is, I think, a very central point.

Fourth, as a result of my first three points, the implication is lower—on the one hand, lower fiscal cost and a higher potential benefits imply a larger role for fiscal policy as a macro stabilization tool. Put another way, the tradeoff between debt stabilization and output stabilization has shifted as a result of low rates in the direction of output stabilization, which would be relatively more concerned about output stabilization than debt stabilization.

My fifth point is to try to translate these general principles into concrete conclusions about U.S. fiscal policy. And here I see two main implications.

First, the deficits are running at a bit above 5 percent of GDP at this point, and they are very large. So, unless they are used to finance an ambitious and credible public investment plan, ambitious capital spending, they should be decreased. Decreasing them too fast, however, would be risky, because they might well reduce demand, and there is little room for the Fed to have set this decrease in demand for low interest rates.

Therefore, the reduction in the deficit, which is highly desirable, should be contingent on the strength of private demand. This strategy might lead to further increases in the ratio of debt to GDP from the already fairly higher levels, but I believe that it is an acceptable risk, that maintaining output is very, very important.

The second and final conclusion is that, if a recession materialized, monetary policy would be likely constrained. There is very little room for maneuver, making it essential to use fiscal policy. Automatic stabilizers, which is a fiscal instrument which has been used in the past, are too weak in the U.S. to do the job. Better ones focusing, for example, on larger payments to low income households should be designed soon. This is an urgent matter. Thank you.

[The prepared statement of Olivier Blanchard follows:]

Prepared testimony for the Hearing “Reexamining the Economic Costs of Debt”

Olivier Blanchard

Fred Bergsten Senior Fellow, Peterson Institute for International Economics

Robert Solow Professor Emeritus, Massachusetts Institute of Technology

U.S. House of Representatives

Committee on the Budget

November 20, 2019

Mr Chairman, Members of the Committee,

Thank you for the opportunity to testify on this important topic. In my testimony today, I would like to make five points.

1. Nominal and real interest rates are likely to remain low for a long time to come. Indeed, nominal interest rates are forecast to be lower than the growth rate of nominal GDP for the next 20 years. It is not an absolute certainty however, and one must take this uncertainty into account.
2. Low real rates have three implications for fiscal policy. Fiscal costs are lower: The cost of debt is currently negative. Primary deficits now and in the near term require smaller primary surpluses in the longer term. Fiscal risks are accordingly lower: There is little chance of a market-based US debt crisis in the foreseeable future.
3. Low nominal rates put sharp limits on the use of monetary policy. The most the Federal Reserve can do to stimulate the economy is to decrease nominal rates to zero or close to zero. Once at the lower bound, monetary policy cannot help much. But fiscal policy can.
4. Lower fiscal costs and higher benefits imply a larger role for fiscal policy as a macro stabilization device. Put another way, the trade-off between debt stabilization and output stabilization has shifted in favor of output stabilization
5. How these conclusions apply to the United States.

First: Deficits, running at more than 5% of GDP, are large. Unless they are used to finance an ambitious and credible public investment plan, they should be decreased. Decreasing them too fast would be risky however, as there is little room for the Fed to decrease interest rates. The reduction in the deficit should be contingent on the strength of private demand. Following this strategy might lead to further increases in the ratio of debt to GDP, but this is an acceptable risk.

Second: If a recession materialized, monetary policy would likely be constrained, making it essential to use fiscal policy. Automatic stabilizers, as they currently exist, are too weak. Better ones should be designed soon.

Let me elaborate briefly on each of these points:

1. Interest rates are likely to remain low for a long time.

This is certainly the belief embodied in US bond prices. The yield curve shows 30-year rates below 3%, very likely lower than nominal output growth rate over the same period. Option prices indicate that investors put little probability on a sharp increase in rates in the future. For example, investors put the implicit probability that the short rate will exceed 4% in five years at less than 10%. And low rates reflect a worldwide phenomenon: Rates are low in most advanced economies, indeed lower than in the United States.

History tells us that markets do not always get it right, and that they tend to react too late and then by too much. Thus, it is important to look for what factors may have triggered these low rates, and whether they can be expected to remain or to change in the future.

What is clear is that the low rates reflect more than the lasting effects of the financial crisis. Their decline is a long standing trend, starting in the mid-1980s. It is fair to say that, while many factors have been identified as potential causes, ranging from an aging population to precautionary saving, to lower growth, to a higher demand for safe assets, we are still uncertain as to the role of each one. What can be said however with more confidence is that none of these factors appears likely to reverse any time soon.

Finally, when it comes to fiscal policy implications, even if rates were to increase substantially in the future, the government can largely lock-in the low rates by issuing long maturity bonds. The bond market looks sufficiently deep up to long maturities to absorb a substantial increase in the supply of such bonds.

2. Low rates have three main implications for fiscal policy.

The first is, rather trivially, that they decrease the fiscal costs of debt. The proposition can be put in an extreme, provocative, but useful way: When the interest rate is less than the growth rate, an increase in the deficit today, due, say to higher spending or lower taxes, does not need to be offset by higher taxes or lower spending in the future: While debt will increase at the rate of interest, the economy will increase at the rate of growth, leading to a decrease in the ratio of debt to GDP over time. The proposition comes with strong caveats, as one cannot be sure that the interest rate will be less than the growth rate in the future, but it is nevertheless a useful counterweight to the proposition that debt has very high fiscal costs.

The second implication, which is closely related, is they decrease the fiscal risks of debt. Fiscal crises typically come from the perception by investors that the primary surpluses that need to be generated to stabilize the ratio of debt to GDP are becoming so large as to be

politically unfeasible, forcing the government to default. When the interest rate is less than the growth rate however, stabilization of the debt to GDP ratio does not require a primary surplus, but instead allows for a small primary deficit (based on current numbers, the Federal government can run a primary deficit of 1-2% and maintain a roughly constant debt to GDP ratio.) This makes any debt crisis very unlikely.

The third implication is less obvious, but in some ways more important. It is that debt has not only low fiscal costs, but also low economic (or, equivalently, welfare) costs. Other things equal, higher public debt leads to less capital accumulation, and thus to lower future output. This cost however depends on the rate of return to capital. And the signal sent by the low safe rate, which we can think of as reflecting the risk-adjusted rate of return to capital, is that, risk adjusted, the rate of return to capital is low. Thus, crowding out of capital, to the extent that it takes place, is not very costly. This conclusion again comes with plenty of caveats (having to do with uncertainty, with measurement issues, and so on), but it is again a strong counterargument to those who argue that high debt will kill growth.

3. The fact that low nominal rates decrease the room of maneuver of monetary policy is now well understood. Nominal rates cannot go far below zero before triggering a shift to cash. This constraint used to be called the zero lower bound. The experience of foreign central banks has shown that the nominal rate can be slightly negative, leading the constraint to now be called the "effective lower bound."

Combined with low inflation, this bound implies that real rates cannot go very negative. (The issue would be less relevant, were the inflation rate higher, but this is another discussion.) The last ten years have shown that the Fed has other tools than the policy rate to boost activity, but it is also clear that it does not have enough room today to react as it would like to a serious decrease in activity, whether this decrease is accidental or is the result of a fiscal contraction. A back of the envelope computation suggests that a fiscal contraction of say 1% of GDP might force the Fed to return the funds rate down close to the zero lower bound.

4. Lower costs of debt on the one hand, and limits on monetary policy on the other, change the trade-off between debt and output stabilization. This has two straightforward implications for fiscal policy.

Less emphasis on fiscal consolidation. It may still be that the desirable long run level of public debt is much lower than the current level. It may even be negative. Future fiscal and off-balance sheet obligations, intergenerational distributional preferences, the cost of fighting global warming and its implications are all relevant here, and I do not pretend to have an answer. But, even if the desirable level of debt is lower than the current level, it is still the case that low rates imply that fiscal consolidation is both less urgent and potentially more costly in terms of reduced output.

More willingness to use fiscal policy to fight a recession. Were aggregate demand to slow down and a recession become likely, fiscal policy should be used more aggressively than in previous recessions. The cost of higher debt from such an aggressive response is likely to be much smaller than the output cost from a more limited response.

5. Going from these general principles to specific recommendations for US fiscal policy at this juncture is, as always, more difficult, and there is room for disagreement. Nonetheless, these are my recommendations.

Current deficits are running at more than 5%. Current primary deficits are running at close to 3.5%, thus above the 1-2% level which would stabilize the debt to GDP ratio. Should they be decreased or increased, and if so, at what rate?

The case for increasing the deficits at present is not as irresponsible as it may sound first. Suppose that deficits were increased by, say, 1% of GDP, and that to avoid overheating, the Fed increased interest rates by 1-2%, thus getting further away from the lower bound. The cost of increased debt might be offset by the benefits of increasing the room for action by the Fed, in terms of insurance against the next recession.

That case however is sufficiently uncertain that I believe that the current goal should still be to decrease primary deficits. If so, the fiscal strategy should be to decrease them at a speed which allows the Fed to offset the adverse effects of consolidation through lower interest rates. The speed therefore should be contingent on the strength of private demand.

An increase in private demand, if it were to happen, would give more room for consolidation; persistent low demand may instead require maintaining large deficits for some time. In that case, the large deficits might lead to a further increase in the debt to GDP ratio; the fiscal costs of such an increase are likely to be smaller however than the output costs that would result from a faster consolidation.

To the extent that deficits remain large, they should ideally be used for capital spending rather than current spending. Gross government capital spending has decreased from 3.9% of GDP in 2000 to 3.2% today. Over the same period, net government capital spending has decreased from a small 1% of GDP to an even smaller 0.5%. This is a worrisome evolution, especially in the light of increased demands to slow global warming and deal with some of its worst implications.

In short, judicious use of deficits as a way of simultaneously sustaining demand and output in the short run and financing public investment and increasing output in the long run appears today to be the best strategy.

Finally, given the limited room for monetary policy to help, fiscal policy must be ready to fight the next recession, when it comes. US automatic stabilizers are weak. Discretionary policy measures take too long to pass and to implement. It is thus essential and urgent to put in place "semi-automatic stabilizers", automatic changes in the tax system or in spending, triggered by the evolution of unemployment or output. Several proposals are on the table. They should be examined, and some of them should be adopted, sooner rather than later.

Chairman YARMUTH. Thank you very much for your testimony. And now, Dr. Randall Wray, you have five minutes.

STATEMENT OF L. RANDALL WRAY, PH.D.

Dr. WRAY. Okay, thank you for the opportunity to speak here.

In my statement I argue that federal deficits and debt are not so scary. Neither is on an unsustainable path. Rather, persistent deficits and rising debt are normal. They are not due to out-of-control spending now or in the future. They serve a useful public purpose. They are largely outside the control of Congress. And it is hard to imagine a scenario in which they create a financial crisis, lead to insolvency or high inflation, or trigger an attack by bond vigilantes.

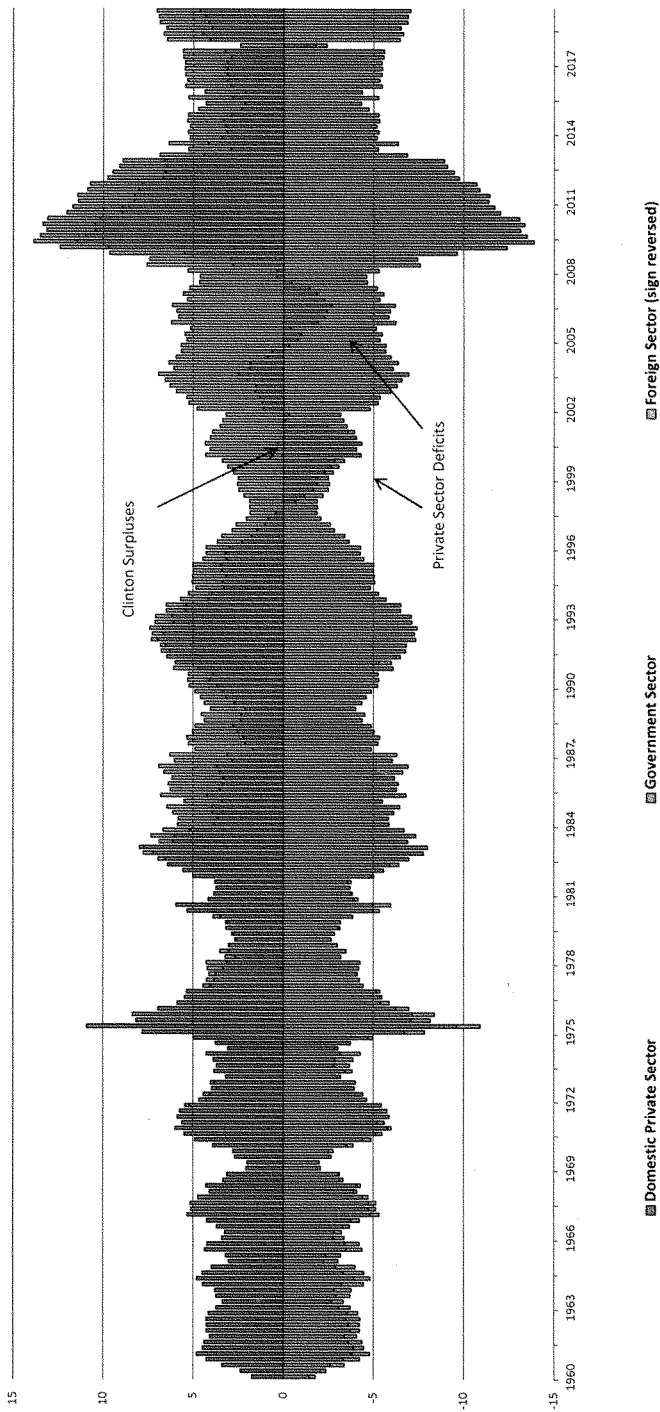
I want to focus on two graphs to back up these claims, and I don't know if these can be shown.

Dr. WRAY. Okay, there we go.

Figure 7 shows sectoral balances. In the aggregate, spending equals income. One sector can run a surplus only if at least one other runs a deficit.

[Slide].

Figure 7. US Sectoral Balances 1960-2019Q2



Source: BEA. Note: The government balance in the fourth quarter of 2017 reflects a one-time deemed repatriation tax on foreign earnings accumulated after 1986.

The government sector is in red in this graph. And, except for the Clinton years, it is always in deficit below the line.

The private sector is blue, including firms and households. It is almost always in surplus, except for the decade after 1996, when the private sector spent more than its income.

The foreign sector is green, and in surplus since the Reagan years. That is because we run a current account deficit reflected in our trade deficit. So the usual case is the government's deficit equals the sum of the private-sector surplus and the foreign surplus against us.

This is an identity. You can't change one without changing at least one other balance. Those wanting to eliminate deficits have to tell us which of the other two balances will change to allow that to happen.

Will they put the private sector in deficit? That is what happened in the dot.com and housing bubbles, leading to the global financial crisis.

Or we will get foreigners to run trade deficits. How? We have had a current account deficit for 40 years.

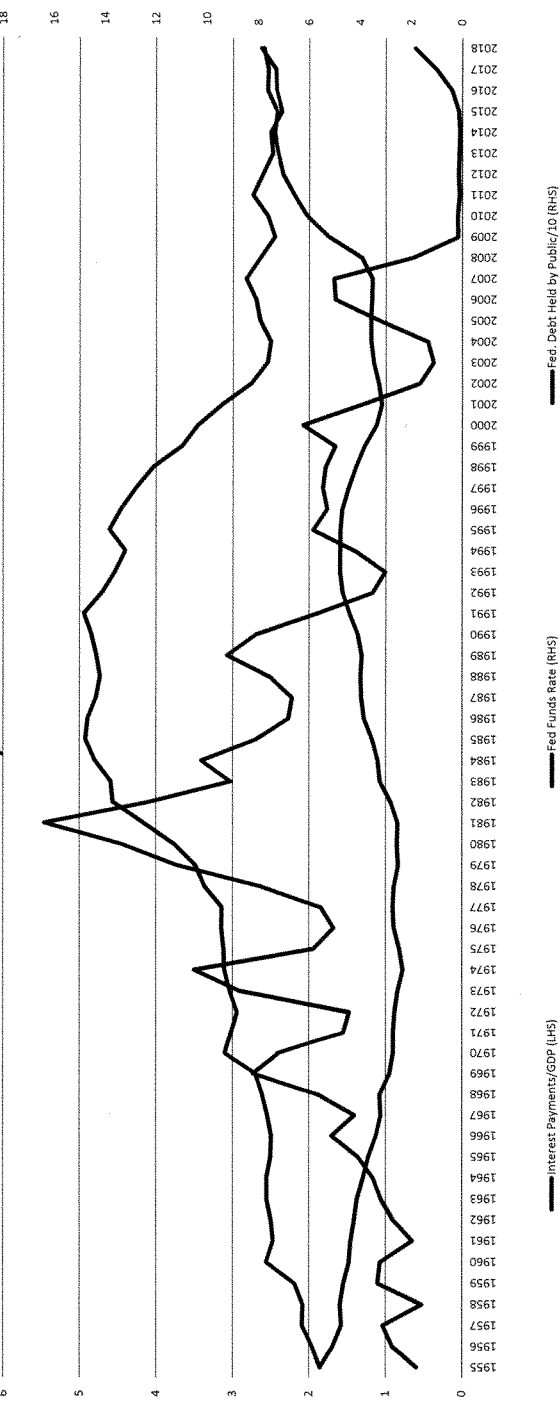
Understanding sectoral balances shows why the federal balance is not under the control of Congress, as it depends on the other two sectors.

Finally, let's address the bond vigilantes and projections of exploding interest payments on the debt.

Dr. WRAY. Figure 11 shows debt service is driven by interest rates, not by the debt ratio, and interest rates are determined by monetary policy, not by the debt ratio, nor by bond vigilantes.

[Slide].

Figure 11. Interest Payments, Fed Funds Rate, Federal Government Debt, 1955-2018



Source: FRED for the Fed Funds Rate; BEA and author's calculations for Interest Payments; OMB for Federal Government Debt. Note: Interest payments are expressed as a percent of GDP. Federal debt held by the public includes holdings by the Federal Reserve. The debt ratio is divided by 10 to scale it.

So what do I recommend, going forward? I actually agree with a lot of the comments made.

We don't need tax hikes or spending constraint now, when growth seems to be moderating, and there is no inflationary pressure. Indeed, doing that now might depress growth so that the deficit would actually increase, as it always does in recession. The time to rein in the deficit will be when growth booms and inflation threatens.

I am not saying all deficits are good and created equal. I prefer well-targeted taxes and spending. The recent tax cuts were inefficient, because the main beneficiaries were high-income earners. This raised the deficit without boosting growth. It makes sense to shift taxes away from low to moderate incomes, and onto high income and wealth. That raises consumption and encourages investment. Spending should be targeted to job creation and productivity increases.

I don't take long-term projections very seriously. I remember when President Clinton projected budget surpluses for 15 years, retiring all the debt. The dot.com crash wiped out the surplus, and we have had deficits ever since. We at the Levy Institute warned in 1997 that that would happen.

Current CBO projections have the debt ratio rising continuously. This is based on the twin erroneous assumptions that debt raises interest rates and lowers investment and growth through crowding out. That ignores positive impacts of deficits on the private-sector surpluses. This doesn't crowd out spending, but it increases net wealth and encourages growth.

Instead of worrying about long-term projections that will be wrong, we should focus on formulating good policy today. So I suggest three recommendations.

First, strengthen the automatic stabilizers. Spending should be more counter-cyclical, while taxes should be pro-cyclical. Policy changes weakened them over the past decades.

Second, if discretionary policy is possible, raise taxes or cut spending only when the economy is overheating. There is no point adopting austerity today only because the deficit might be bigger in the distant future.

And finally, increase efficiency of both spending and taxing. The goal should be sustainable growth, rising living standards, reduction of inequality, and not to achieve some arbitrary deficit or debt number. Thank you.

[The prepared statement of L. Randall Wray follows:]

CONGRESSIONAL TESTIMONY

Hearing before the House Budget Committee, Nov 20 2019

Reexamining the Economics of Costs of Debt

Statement by L. Randall Wray¹**Introduction**

In recent months a new approach to national government budgets, deficits, and debts—Modern Money Theory (MMT)—has been the subject of discussion and controversy². A great deal of misunderstanding of its main tenets has led to declarations by many policy makers (including Federal Reserve Chairman Jerome Powell and Japan’s Prime Minister Shinzō Abe) that it is crazy and even dangerous. Supposedly, it calls on central banks to just print money to pay for ramped-up spending. It is purported to claim that deficits don’t matter. It is said to ignore the inflationary consequences of spending without limit, and even to invite hyperinflation.

None of these claims is true. MMT is based on sound economic theory. Most of it is not even new. Rather it represents an integration of a number of long-standing traditions that here-to-for had not been linked. It does reach some surprising conclusions, but these conclusions are more consistent with real world outcomes that mainstream theory has trouble explaining. Further, a growing number of prominent economists and financial market participants have recognized that it is worth examining MMT. Its conclusions—especially those regarding the fiscal policy space available to sovereign governments—are being embraced by some policymakers.

In this testimony I do not want to rehash the theoretical foundations of MMT. Instead I will highlight empirical facts with the goal of explaining the causes and consequences of the intransigent federal budget deficits and the growing national government debt. I hope that developing an understanding of the dynamics involved will make the topic of deficits and debt less daunting. I will conclude by summarizing the MMT views on this topic, hoping to set the record straight.

But first let’s look at the indisputable facts.

1. Growth of government spending:

Despite all the talk of government spending running amok, over the past 60 or so years government spending relative to GDP has been rather constant. Figure 1 shows postwar growth of government spending, both on a per capita basis and relative to GDP. As we can see, federal government spending essentially stopped growing relative to GDP around 1960, while state and local government spending stopped growing around 1970. In 2006, just before the Great

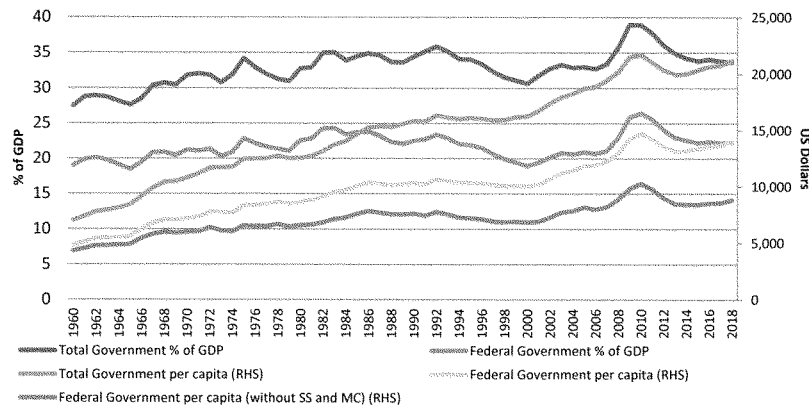
¹ Senior Scholar, Levy Economics Institute and Professor of Economics Bard College, Annandale-on-Hudson, NY. He thanks Yeva Nersisyan, Associate Professor, Franklin and Marshall College, Lancaster, PA, for substantial help in preparing this document, and Eric Tymoigne for help with Table 1 and Figure 12.

² Modern Money Theory itself is not recent; it has been developed and refined over the past quarter of a century.

Recession, US Federal Government spending was 20.7% of GDP, only slightly above its value in 1960 at 20.1%. It had decreased steadily in the 1990s and only increased again due to the government's response to the Great Recession. State and local government spending grew through the 1960s, stabilizing at around 11-12% of GDP after that. In 2019 state and local spending stood at 11.59% of GDP, slightly above its value of 11.35% in 1975.

Figure 1 also shows that Federal Government inflation-adjusted per capita spending has been rising at a pace similar to growth of GDP per capita. If we remove Medicare and Social Security spending, Federal spending has been growing at a slower pace than per capita GDP, indicating that much of the growth of per capita Federal spending has been due to an aging society in which retirement and healthcare spending on the elderly has grown.

Figure 1. US Government Spending, 1960-2018



Source: BEA for Government Expenditures and GDP; FRED for Population and author's calculations. Per capita spending figures are adjusted for inflation.

To conclude: neither state and local government spending nor federal government spending has been growing rapidly relative to GDP and population growth. It does not appear that rising government debt is due to profligate government spending.

2. Federal government deficits and debt:

While politicians and commentators tend to talk about the Federal Government deficit as if it's abnormal and a problem that needs to be solved, a Federal deficit has been the norm for at least the past century. Figure 2 shows the Federal budgetary outcome (deficit or surplus—with the deficit as a negative number) as a percent of GDP since 1930. There are several striking features worth noticing. First, the budget deficit reached above 25% of GDP during WWII, and then rebounded to nearly a 5% surplus when the war ended. After that, the deficit moved in an

increasingly countercyclical manner—with the budget moving toward a surplus before each recession (shaded areas) and then turning sharply to deficit in the downturn. After the mid 1950s, surpluses virtually disappear until the second half of the 1990s—that is, over the past 70 years, deficits have become the norm—and they have increased on trend relative to GDP. Even the long recovery and expansion phase that followed the Global Financial Crisis (GFC) has not been able to produce a budget surplus, as the deficit only fell to about 2.5% of GDP before rising even in the continuing expansion phase after 2015.

Figure 2. Federal Government Deficit (-) or Surplus (+) as Percent of GDP, 1930-2018

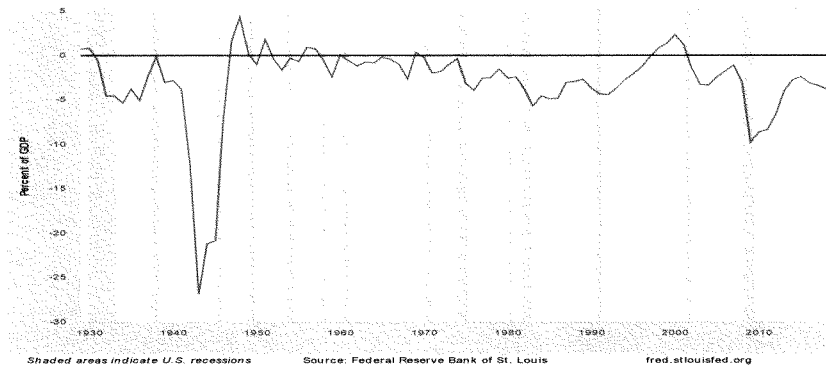
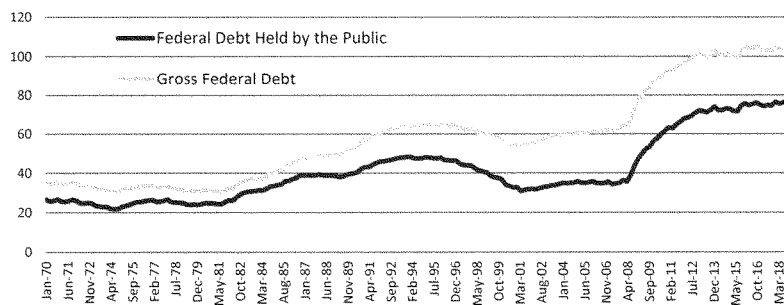


Figure 3 shows the post-1970 outstanding Federal Government debt as a percent of GDP. With the exception of the second half of the 1990s, the ratio has consistently risen because debt has grown faster than GDP. Note that these deficit and debt outcomes are not due to runaway government spending—which has been relatively flat as discussed in the first section.

Figure 3. Federal Government Debt as percent of GDP 1970-2018



Source: Federal Reserve Bank of St. Louis and U.S. Office of Management and Budget, retrieved from FRED

However, as Table 1³ shows, this is not an entirely new phenomenon. Even over the period 1791 to 1930, the debt-to-GDP ratio grew on average at a rate of 0.31% per year; since 1931 it has grown at a rate of 4.22% per year—for an average of 1.82% over the entire period. What has changed is the pace of growth. As Tymoigne (2019) shows, until the 1930s the main cause of more rapid growth was war (and this was also true in WWII, of course), but since 1931, the debt ratio fell in only 5 years while it rose in 83 years. Although a growing debt ratio is normal as a long-term trend, what changed after WWII is that there are few years in which the ratio falls.

Table 1. Change in Gross Public Debt Relative to GDP, 1791–2018.

Time Period	Change is		Average Size of Change in Gross Public Debt (% of GDP)
	Positive	Negative	
1791-1930	66	74	0.31
1931-2018	83	5	4.22
1791-2018	149	79	1.82
Sources: Treasury Direct, Bureau of Economic Analysis. Note: Division by GDP does not influence the type of changes (positive or negative) in the absolute gross public debt.			

3. Countercyclical movement of Budget Deficits—the role of taxes and transfers:

In the postwar period recessions have become the most important drivers of the growth of debt. Specifically, the main contributor to recent growth of deficits and the debt ratio is the collapse of tax revenue in recession. In general, tax revenues are strongly pro-cyclical, while government spending is only mildly countercyclical.⁴ Let us first look at the spending side and then turn to tax revenue.

a) Counter-cyclicity of spending:

Federal government transfer payments rise sharply, with some delay, when recession hits and then fall over the recovery. Unemployment benefits, Medicaid and Supplemental Nutrition Assistance Program (SNAP) are the transfer programs that move countercyclically with unemployment insurance accounting for, on average, half of the automatic increase in spending over the 1965-2014 period (Russek and Kowalewski 2015, 13). However, the countercyclical swing has been diminished since the recession of the early 1990s. Even the severe downturn following the GFC only boosted transfer payments slightly—and they fell off sharply in the recovery after 2009. One of the reasons for this may be the 1996 welfare reform, which replaced the Aid to Families with Dependent Children (AFDC) with the Temporary Assistance to Needy Families (TANF) program. Under TANF, the federal government provides fixed block grants to states, the value of which does not change automatically with the cycle. AFDC, on the other

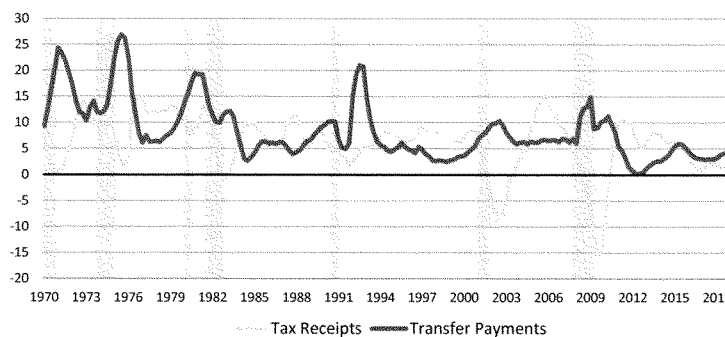
³ This table is borrowed from Tymoigne 2019.

⁴ In contrast to the federal government, state and local government actions can often be pro-cyclical. As a case in point, while the federal government was trying to stimulate the economy in the aftermath of the GFC, state and local government budgets had a contractionary effect of about -0.4% of GDP in 2009. (Follette and Lutz 2010, 17).

hand, was based on eligibility, did not have fixed funding, and hence would be expected to increase in a downturn. Indeed, the value of TANF block grants, \$16.5 billion, hasn't changed since the inception of the program (Schott, Floyd and Burnside 2019, 3).

In general, reforms over the past few decades have tried to make it harder for people to get transfer benefits. Hence, it's not surprising that transfers are not as effective as stabilizers. For example, the same legislation that replaced AFDC with TANF also made changes to the food stamps program. Some of the changes that could affect the utilization of the program included eliminating the eligibility of legal immigrants and placing a "a time limit on food stamp receipt of three out of 36 months for able-bodied adults without dependents (ABAWDs) who are not working at least 20 hours a week or participating in a work program".⁵

**Figure 4. Growth in Government Tax Revenue and Transfer Payments
1970-2019**



Source: BEA and author's calculations. Note: the graph depicts annualized quarterly growth rates. Data has been smoothed using a moving average.

Lastly, even though transfer payments swing widely over the cycle, their share in government spending is rather small. Hence these swings do not affect the budget as much as changes in tax revenue. For instance, during the Great Recession, spending on the Supplemental Nutrition Assistance Program reached a peak of 1.32% of government's current expenditures and unemployment benefits peaked at 2.5% of spending in 2010. Medicaid is somewhat larger and has increased steadily overtime to reach about 8-9% of government spending in 2018. However, it is much less countercyclical than the other two programs.

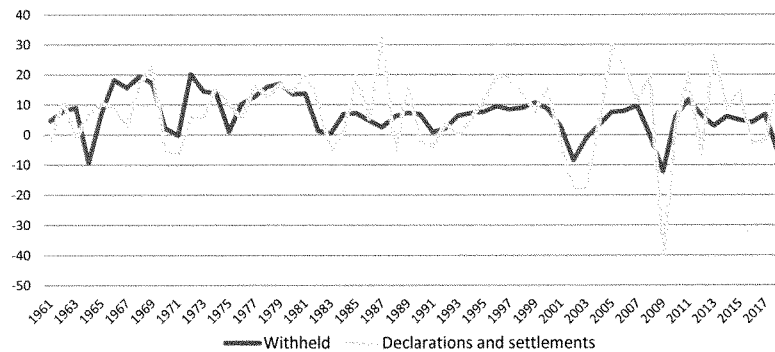
⁵ The restrictions on immigrants were changed through subsequent legislation allowing access to children and the disabled and to "qualified aliens who have been in the United States at least five years." Source: <https://www.fns.usda.gov/snap/short-history-snap#1999>

b) Pro-cyclical movement of taxes

On the other hand, the pro-cyclical movement of tax revenues increased since the 1970s: as shown in the figure above, the growth rate of tax revenues rises sharply in recovery and falls more sharply in recession. For example, in the boom of the early 2000s, tax revenues grew rapidly, reaching a peak growth rate of 15% quarter over quarter in 2005. Tax receipts literally fell off a cliff in both of the recessions of the 2000s; during the GFC, tax revenues plummeted at a rate of 15% per year in 2009. Revenue growth rates have also been falling in the current long expansion—which is unusual. In previous expansions, growth of revenues has remained relatively flat—at above a 5% pace of annual growth. However, by 2018 tax revenue was not growing at all.

The following graph shows tax revenue growth by two categories: withheld taxes versus declarations and settlements. Taxes withheld are cyclical, growing in expansion and falling rapidly in recession. However, the movements of non-withheld taxes are greater—and the amplitude of the swings increased significantly since the mid-1980s, as shown in the following figure. The increasingly large swings of revenues explain much of the volatility of deficits.

Figure 5. Growth in Tax Revenues: Withheld vs. Declarations and Settlements



Source: BEA and author's calculations

A CBO working paper reaches similar conclusions—the pro-cyclical movement of tax revenues, rather than fluctuation of spending is the main driver of the automatic increase in deficits in recessions. Over the 1965-2014 period, three quarters of the impact on the budget from automatic stabilizers has been due to declining tax revenues (Russek and Kowalewski 2015, 17).

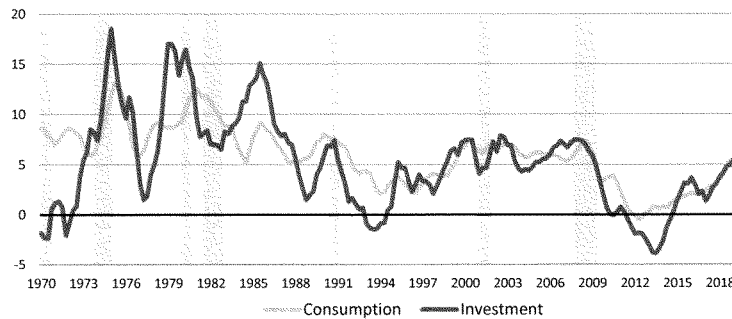
Although the automatic changes in both tax revenues and spending affect the federal balance, the effect is not symmetrical. According to the CBO working paper, during the 1965-2014 period, while the deficit increased by 0.8% of potential GDP during the typical downturn, it went down

by only 0.7% in the upturn. In addition, there were more periods of GDP coming in below its capacity than above it over this period (34 episodes of slack vs. 16 episodes of GDP being above its potential). (Russek and Kowalewski 2015, 17). As I explained, growth below potential increases the size of the deficit, while growth above it usually decreases it. Based on these two observations, we can conclude that the net impact of automatic stabilizers on the budget over the past fifty or so years has been negative (i.e. biased toward deficits).

4. The role of Federal Government consumption and investment expenditures:

Figure 6 plots Federal Government consumption and investment expenditures. Unlike transfer payments, these are somewhat procyclical—growing faster with the boom and slower (or even decreasing) once a recession gets underway. This offsets to some degree the procyclical movement of tax receipts. Rather than helping to stabilize growth, government’s consumption spending reduces the automatic stabilizer effects of transfer payments and tax revenues. In the aftermath of the GFC, the falling rate of growth of consumption spending by government exerted a strong drag on the economy—falling to zero by 2011.

Figure 6. Growth in Government Consumption and Investment, 1970-2019



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.

Even when the government provides discretionary stimulus, it is often in the form of tax cuts, rather than spending increases. According to the CBO paper, “[i]n all but one fiscal year—1975—of the nine years when the budget deficit without automatic stabilizers rose during a year of recession, revenues (with the effects of automatic stabilizers removed) declined relative to potential GDP, and in five of those years—1971, 1982, 1983, 2001, and 2002—the decline in revenues accounted for most of the fiscal stimulus.” (Russek and Kowalewski 2015, 19).

Overall, it seems that the stabilizer functions of government spending have weakened in recent years -- and to the extent that they have helped, it has mostly been transfer payments rather than consumption spending (which is more discretionary than transfers). Tax receipts have been more

effective as a stabilizer, rising sharply in booms and falling sharply in downturns, however even there it looks like tax receipts may not be strongly “leaning against the wind” in the current recovery. As the CBO concludes: “[t]he largest addition to the federal deficit from the automatic stabilizers in a single year was 2.5 percent of potential GDP in 1983, followed by 2.2 percent in 2010. In those two years, the automatic stabilizers accounted for 46 percent and 26 percent, respectively, of the total deficit. By contrast, the largest subtractions from the budget deficit were in the late 1960s, when the economy was operating above its potential and the unemployment rate was below the underlying long-term rate. The automatic stabilizers subtracted the most (1.4 percent of potential GDP) from the budget deficit in 1966, followed closely by the effect in 1967 (1.3 percent of potential GDP).” (Russek and Kowalewski 2015, 17)

In conclusion, the weakening of the countercyclical movement on the spending side has played the biggest role in reducing the automatic stabilizers, although in recent years tax revenues have failed to move as much as they used to in expansions. As a result, deficits increase sharply in recession but do not fall as sharply in expansion. It is possible that changes on both the spending and the taxing side made during the administration of President Trump have further weakened the automatic stabilizers. On the spending side, there might be less stimulus in the next recession; on the other hand, tax revenue seems to have stopped growing even in the currently on-going expansion, which has probably contributed to the rising budget deficit.

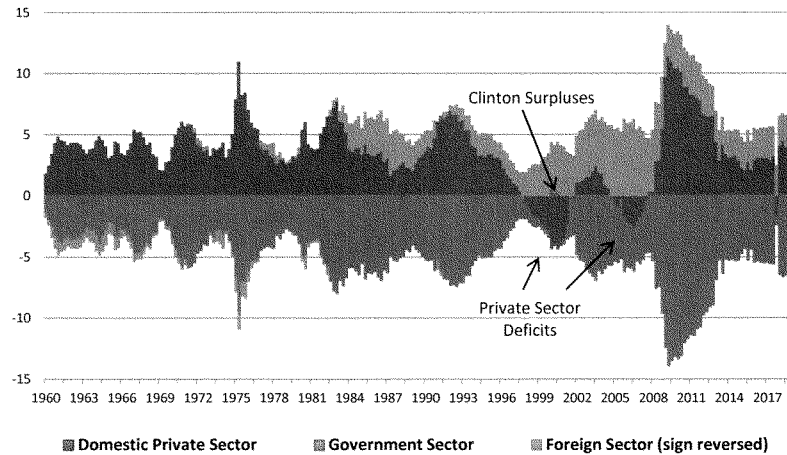
5. Sectoral Balances:

One of the concepts that Modern Money Theory economists use to elucidate the impact of budget deficits on the economy is the *sectoral balance identity* developed by Wynne Godley (1996). At the level of the economy as a whole, aggregate spending is identically equal to aggregate income—every dollar spent is received as income. It is useful to divide the economy into three sectors: government (national, state, and local), domestic private (households and firms), and foreign (rest of the world). If one sector spends more than its income (deficit), at least one other must spend less than its income (surplus) to maintain the aggregate identity that total spending equals total income. The balances (income minus expenditure) of the three sectors have to add up to zero since we are adding up all the income in the economy and subtracting all the spending, which are equal by identity.

We can then write the aggregate identity as: Government balance + domestic private balance + foreign balance = 0. For the USA, the government balance taken as a whole is usually negative (government spending is greater than its revenue--mostly taxes); the domestic private balance is usually positive (approximated as saving is greater than investment⁶); and the foreign sector balance is positive (the rest of the world has a surplus in relation to the US since our current account balance is a deficit). Figure 7 shows the US sectoral balances, with each sector's balance presented as a percent of GDP:

⁶ This is also referred to as net saving of the private sector since investment is a type of expenditure and saving is what's left after consumption. In other words, we are looking at what is left of disposable income after the private sector consumes and invests.

Figure 7. US Sectoral Balances 1960-2019Q2



Source: BEA. Note: The government balance in the fourth quarter of 2017 reflects a one-time deemed repatriation tax on foreign earnings accumulated after 1986.

It is easy to see that the government balance (red) is negative (deficit) with the exception of a brief period at the end of the 1990s. This is driven by the Federal Government's balance, as state and local governments generally run small surpluses. The domestic private sector (blue) is usually positive, with the exception of two periods—the second half of the 1990s (dot com bubble) and the mid 2000s (housing bubble). Finally, since the time of the administration of President Reagan, the US runs a chronic current account deficit (so the rest of the world runs a positive or surplus balance) that has trended upward. The typical case is that the US government's deficit equals the sum of the private sector's surplus and the foreign sector's surplus (which equals the US current account deficit, green in the chart, with the sign reversed).

The foreign sector surplus increased in the 1990s reaching a high of 6.2% of GDP in Q3 of 2006. This period of relatively large current account deficits also coincided with private sector deficits. Hence it was the private sector's deficits (some of which took the form of purchasing foreign output) rather than the government's deficit (that fell and turned into a surplus) that pushed the current account deficit higher. With the financial crisis and the Great Recession, the foreign surplus decreased to a little over 2% of GDP and has stayed at about that level for the past decade (2.5% average over 2009-2019). The changes in the government deficit have therefore largely been reflected in the domestic private sector's balance (which has been running between 3 and 4 percent of GDP).

The government deficit increased in 2018 and 2019, largely due to the Trump administration's tax cuts. What is less understood is that with the current account not moving much, the government deficits have added to private sector surpluses. For example, the government's

balance in Q3 of 2017 was a deficit of about 5.6% of GDP while the private sector ran a surplus of 3.2% of GDP. As the government balance moved to a deficit of over 7% of GDP in Q4 of 2019, the private sector surplus increased to 4.63% of GDP.

The sectoral balance relationship described above is an identity that must hold true. The government's overall deficit (driven by the Federal deficit) is always at the right level to offset the sum of the private sector surplus and current account deficit (sign reversed). While we cannot necessarily ascertain causation—which could be quite complex—the sectoral balance tells us that if the US domestic sector spends less than its income (“saves”) and the US runs a current account deficit, the government will run a deficit (equal to the sum of the first two). And because state and local governments normally run small surpluses, it will be the Federal budget that is generally in deficit. This is in spite of the will of Congress—whether Congress pursues a balanced budget, by imposing fiscal constraint in the form of tax hikes or spending reductions, the Federal budgetary outcome will be a deficit equal to the sum of the state and local government surplus, the private sector surplus, and the current account deficit. In other words, the identity constrains what is a possible budgetary outcome.

The US current account deficit, in turn, is affected by both domestic conditions and foreign conditions. US net imports generally move with the business cycle—when US growth is strong, net imports rise, and when the US economy slumps, net imports fall. US policy can affect the current account balance, although policy and economic performance in the rest of the world can foil attempts to reduce the US deficit. For example, recent tariff policy might have reduced US imports, but the rest of the world has retaliated so that the final outcome is uncertain. As the US has run significant current account deficits since the administration of President Reagan, it is prudent to assume that this is not likely to be reversed in the near future by US policy, alone. In other words, we can take a current account deficit as largely independent of domestic policy.

The domestic private sector generally runs a surplus; this is largely driven by the household sector, which usually spends less than its income. The business sector often runs a surplus, too, but even when it runs a deficit, this is not usually big enough to offset the household sector's surplus. The decade from 1996 to 2006 was an exception, as noted above, because the household sector ran large deficits (which led to rising indebtedness)—fueled by bubbles in dot com stocks, housing, and commodities.⁷ To find a similar period of sustained deficit spending by the private sector we have to look back to the 1920s. In both cases, the private sector deficits were followed by severe downturns and financial crises (the Great Depression and the Great Recession, respectively). Private sector deficits create fragile financial positions and are ultimately unsustainable. The normal/sustainable balance for the private sector is, therefore, a surplus.

If we recognize that the private sector will usually run a surplus and that the rest of the world is likely to continue to run a surplus against the US, we are of necessity concluding that the Federal Government will be running a deficit. As the US transitioned to a chronic current account deficit in the mid 1980s, it is not surprising that larger Federal deficits became the norm, and will likely

⁷ Deficits in the business sector before 2000 contributed to the overall private sector deficit, however, after 2000 the business sector ran a surplus—albeit smaller than the household sector's deficit.

persist in spite of Congressional will to reduce them. We must accept the relation presented in the identity: in order to reduce the government deficit we must see a reduction of the domestic private sector's surplus and/or the foreign surplus (our current account deficit). Unfortunately, the balance with the rest of the world is not under our close control, and attempts to reduce the Federal deficit may well backfire by inducing changes in the surplus (or saving) desired by the private sector. For example, cutting government spending or raising taxes might reduce household and business confidence and spending—generating greater attempts to accumulate saving.

6. Federal deficits and GDP growth rates:

The discussion above leads to the conclusion that Federal deficits are largely outside the direct control of Congress—they are largely endogenously determined. As discussed, the deficit will always be at the right level to ensure the sectoral balance identity holds. This doesn't mean that policy is completely impotent—but it does mean that attempts to reduce (or increase) the size of the Federal deficit can be thwarted by movements of the other balances. Moreover, any attempt to reduce government deficits must be analyzed in the context of the sectoral balances. If policymakers want to lower the government's deficit, which other balance do they expect to adjust? Are they advocating that the domestic private sector move toward a deficit? Or are they advocating for a current account surplus? This makes a difference—moving toward a private sector deficit would likely invite another serious financial crash; moving toward a current account surplus will require adjustments by our trading partners. It isn't possible to talk about reducing the Federal budget deficit without considering one or both of these strategies.

On the other hand, faster growth could reduce deficits without necessarily producing fragile finances in the domestic private sector. As we have seen, two important factors that can affect the budgetary outcome are movements of tax receipts and transfer payments, both of which are influenced by the growth rate of GDP. As growth picks up, revenue grows faster and transfer payments grow more slowly (or even fall)—which would together tend to reduce the size of the federal deficit.

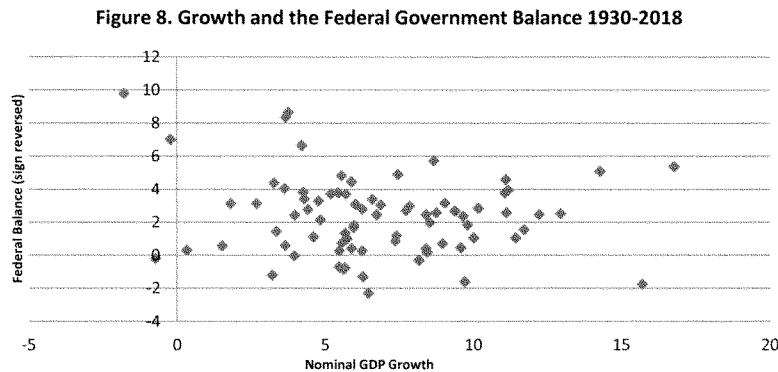
At the same time, faster growth is associated with movement of the domestic private sector balance toward smaller surpluses (and even to deficits). However, this is attenuated by growth of imports relative to exports (which moves the current account balance toward bigger deficits). In this case the fall of the Federal budget deficit would equal the sum of the reduction of the domestic private surplus less the increase of the current account deficit. This would be strictly true only if there were no impact on state and local government balances—but generally faster growth increases their surpluses as revenues rise and some transfers fall (so that the reduction of the federal budget deficit would be somewhat smaller). Slower growth of GDP would affect the Federal budget outcome in the opposite direction, generally increasing the deficit. This is likely to increase the government debt ratio for two reasons: deficits add to outstanding debt, and if the debt grows faster when GDP grows more slowly, that will boost the debt ratio.

If faster growth is accompanied by reduction of the Federal deficit and reduction of the private sector surplus, this doesn't necessarily put the private sector in a more financially precarious

situation. For example, if private sector income is growing robustly, its ability to service debt will be growing. Even if its surplus (or saving) is diminished, it may still be in a safe financial position. This would be a “good” way to lower the deficit. On the other hand, if the private sector’s surplus declined along with a reduction of the budget deficit in a period of slow growth, that would be a “bad” way to lower the deficit as servicing private debt could be difficult.

Moreover, as I have argued, the deficit itself is not an entirely discretionary variable. Congress can decide to spend less (or more) and to raise or lower tax rates, but the impact on the deficit and the debt ratio is not under direct control. For example attempts to lower the deficit could be counterproductive as they could lower the rate of growth of GDP and thus increase the budget deficit as private sector spending declines. On the other hand, while it is usually believed that a large increase of government spending (say, a fiscal stimulus package, or spending for a Green New Deal initiative) would increase the deficit and lead to a larger debt ratio, the actual budgetary outcome will depend in complex ways on the impact on economic growth, as well as on how the other two main sectors respond to such changes.

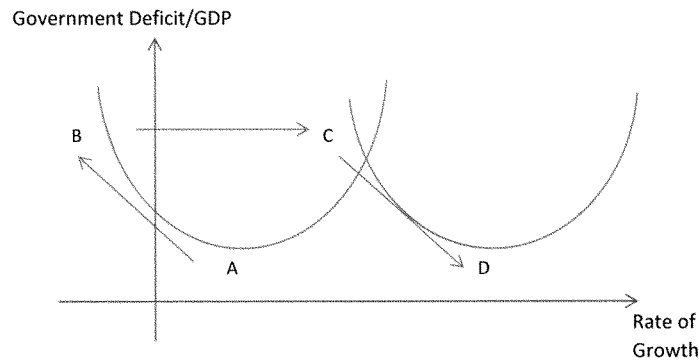
Figure 8 plots the combination of deficit-to-GDP ratio and the rate of GDP growth by year.



Source: BEA and author's calculations for GDP growth rate; FRB of St. Louis and Office of Budget Management for data on the federal balance (retrieved from FRED). Note: Data excludes outliers. The sign of the federal balance is reversed.

What the data show is that there is no determinate relation between deficits and economic growth. We can hypothesize that there are two paths to large deficits: the “good” way and the “bad” way. The good way would be a discretionary boost to aggregate demand through either a spending increase or a tax cut. While a deficit would be created, this would boost economic growth. The increase of the deficit could be temporary as faster growth would raise tax revenue (and some kinds of transfer spending would fall). Keynesians argue that this can happen through multiplier impacts set off by fiscal stimulus—that can “pay for itself” through growth of demand; Supply Siders use the Laffer Curve to explain that tax cuts can stimulate the supply side and generate the revenue to “pay for themselves”.

However, deficits can also be created in the bad way: slow growth reduces tax receipts (and increases some kinds of transfer spending). What this means is that we can achieve the same deficit ratio in either the “good” way or the “bad” way—and what will be different is the growth rate. We can hypothesize that each deficit ratio outcome is associated with (at least) two different growth rates, as the following curve shows:



Assume the economy is at Point A—say, a 3% deficit ratio and a 4% rate of growth. Now let us suppose that government imposes a new consumption tax (or cuts spending), reducing the growth rate. The economy moves up and to the left toward Point B (a budget deficit of 10%) as growth collapses (turning negative) and the deficit ratio rises. Even though the tax rate has risen, revenue falls because the recession scares households and firms, which reduce spending in an effort to build up savings.⁸ That allows total revenue to fall even if consumption taxes (both rates and even revenue from the consumption tax⁹) do rise.

We will come to rest where the higher government deficit equals the higher nongovernment sector’s desired surplus. This is in line with the sectoral balance approach discussed previously: the sum of the balances across sectors is zero. If, for example, we begin at Point A with a budget deficit of 3% and a current account deficit of 2%, the domestic private sector’s balance is a surplus of 1%. However, as the economy slows—moving toward Point B, the slower growth also reduces imports so the current account “improves” somewhat. From the sectoral balance

⁸ This sounds similar to the Laffer Curve’s prediction: if the tax rate is already above the optimal rate, raising taxes reduces revenue. However Arthur Laffer relied on supply-side effects while I rely on demand-side effects.

⁹ The new tax might raise more revenue even as the economy slows, but total tax take could still fall as income taxes, etc., fall.

perspective, the government's balance moves further into deficit (to, say, a 9% fiscal deficit), the current account deficit falls (say from 2% to 1%) and the private sector's surplus grows (to 8%, the sum of the other two balances). That's the ugly way to increase a fiscal deficit¹⁰.

What is the "good" path to bigger deficits? Measured and targeted stimulus (spending increase or tax reduction) designed to restore confidence of firms and households. In that case we move along the curve from Point A toward Point C. As the fiscal deficit increases, growth improves. Note, however, that the deficit boost will probably be temporary. As government spending rises, households and firms find their incomes rising, generating larger budget surpluses for them. Eventually their expectations become more optimistic and they increase discretionary spending, so their surpluses will fall. Tax revenues will increase—not because rates rise but because income increases. We will observe that the fiscal deficit falls as the domestic private surpluses decline. The current account surplus will fall, too, as imports rise. Precisely how much the deficit will fall depends on the movement of the private surplus and current account surplus—with the deficit falling to equality with the sum of the domestic and foreign balances.

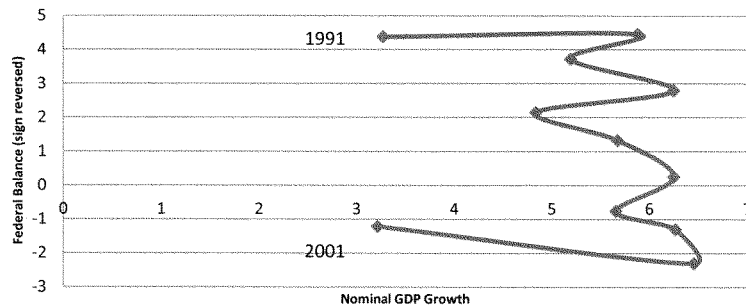
In the graph above, the curve shifts to the right. The new point D will be consistent with higher growth for a given deficit ratio (compared to the original point A). There's nothing natural about the deficit ratio at Point A—as it depends on the other two sectoral balances. In other words, the deficit ratio is always at just the "right" level to balance the other two sectoral balances. It makes no sense to speak of the government's balance without reference to the other two balances. And it is better to focus on economic growth rather than the deficit ratio—as a high deficit can be reached with both a reduction of stimulus or an addition of ramped up stimulus.

7. Recent US Experience with Deficit Ratios and Growth Rates:

The following graphs show US data from the past four decades. If we focus on the movement of the plots showing the combinations of the deficit ratio and the growth rate over the course of a cycle, we can see the relationships discussed above. For example, we can begin with the 1991-2001 period (Figure 9 below) which includes the recovery from the Bush recession, the Clinton expansion and the brief recession at the end of the 1990s (when the dot com bubble crashed). Starting at the top, as the recovery from recession gained steam in 1992, the growth rate/deficit ratio combination moved from (3.3/4.3) in 1991 to (5.9/4.5) in 1992—a horizontal movement that was boosted in part by a growing budget deficit (up from 2.7% in 1989 to 4.5% by 1992). As the growth rate continued to climb, settling at almost 6% per year through the rest of the 1990s, the deficit was eliminated by 1998 and a growing surplus was created (the zigzag line drops below zero). By 2000 the federal surplus reached its peak at 2.3% of GDP and growth reached its peak of 6.45%. However, growth could not be sustained as the budget surplus took demand out of the economy. By 2001 growth fell to 3.2% and the surplus fell sharply to just above 1%.

¹⁰ While it is beyond the scope of this paper to discuss the case of Japan, this seems to be the typical path of its deficit. The government engages in a fiscal stimulus as the economy slows, but withdraws it quickly as the economy seems to recover, slowing growth and increasing the budget deficit. The result has been three decades of stagnant growth and a government debt/GDP ratio of over 230%. For more on Japan, see Wray 2019b.

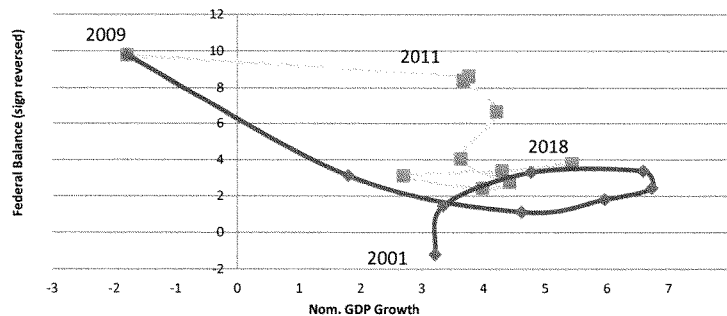
Figure 9. Growth and the Federal Balance 1991-2001



Source: BEA and author's calculations for GDP growth rate; FRB of St. Louis and Office of Budget Management for data on the federal balance (retrieved from FRED). Note: The sign of the federal balance is reversed.

The second graph shows the period 2001-09 and the period 2009-18. Start at the bottom of the zigzag. Beginning in 2001 with a growth rate/deficit ratio combination of (3.2/-1.2) (a budget surplus), a deficit returned and the deficit ratio grew to 3.3 in 2003 and 3.7 in 2004. The economy recovered quickly after 2002 growing by 6.6% in 2004 and 6.7% in 2005, as the deficit fell to 2.4% in 2005 and to 1.1% by 2007. Tax revenues grew at a rapid pace, contributing to economic headwinds. As the Global Financial Crisis began to slow growth, the deficit exploded to 9.8% in 2009 as growth plummeted to -1.8% (negative growth). Finally, the slow recovery has gradually reduced the deficit reaching a low of 2.4% in 2015 before increasing back up to 3.8% in 2018. Nominal growth averaged about 4% over 2010-18.

Figure 10. Growth and the Federal Balance 2001-09 and 2009-18



Source: BEA and author's calculations for GDP growth rate; FRB of St. Louis and Office of Budget Management for data on the federal balance (retrieved from FRED). Note: 2009 is an outlier. The sign of the federal balance is reversed.

None of this should be too surprising: the deficit moves in a countercyclical manner and helps to smooth the cycle as an automatic stabilizer. This movement is largely nondiscretionary—it is baked into the system, so to speak. More important, what these figures show is that there is no “natural” deficit ratio, and each deficit ratio is consistent with many different growth rates. It is not possible to say what the “right” deficit ratio is for achieving any given growth rate as each growth rate is also associated with multiple deficit ratios. In other words, simply looking at the deficit ratio cannot tell us whether the government is proactively stimulating the economy or whether it is merely the result of economic performance.

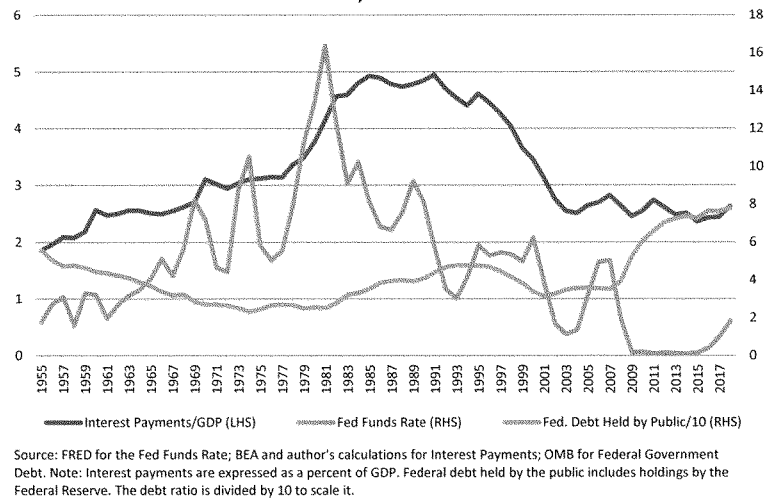
When, however, we observe the deficit falling significantly, we can surmise that it is pulling demand out of the economy and is likely to be followed by recession. The correlation is quite strong as I showed above: the deficit invariably falls as the economy peaks and then heads toward recession, rises quickly in recession, and then begins to fall over the course of the subsequent recovery and expansion. Of course, it is difficult to tell exactly how much of the movement is discretionary and how much is the result of policy activism—but in some sense that is almost beside the point. Armed with this understanding, policymakers could take a more active role—either building more powerful automatic stabilizers into the system (countercyclical spending and pro-cyclical taxes) or using discretionary spending and taxing as needed. Given the lags involved in discretionary policy, it probably makes more sense to strengthen the automatic stabilizers—which, as I argued above, have weakened over the recent past.

8. Debt and Interest Rates:

There has long been a belief that budget deficits and rising debt increase interest rates—whether based on loanable funds analysis (government borrowing competes with private borrowing for a scarce supply of savings) or the more technical ISLM model (rising money demand for a limited supply of money). Further, bond “vigilantes” are said to be likely to demand higher rates to compensate for a rising risk of government default as the debt ratio rises. Finally, economists worry about the sustainability of rising debt ratios in conjunction with rising interest rates. That would increase spending on debt service and could cause deficits to spiral.

The following graph displays the relationship among Federal Government interest payments (as a percent of GDP), the fed funds rate and the Federal Government debt ratio (scaled). The correlation between the debt ratio and the fed funds rate appears to be somewhat negative—with a falling debt ratio from 1955 associated with a generally rising fed funds rate, and with a rising debt ratio from the late 1980s associated with a generally falling fed funds rate. This is the opposite to the relation usually supposed.

Figure 11. Interest Payments, Fed Funds Rate, Federal Government Debt, 1955-2018



On the other hand, debt service (Federal interest payments as a percent of GDP) is not closely related to the debt ratio—rising in the early period (when the debt ratio was falling) and falling or holding steady over the later period as the debt ratio generally rose. It appears that debt service follows the fed funds rate, although with a lag of a few years. This makes some sense as the fed funds rate is the shortest-term rate so it takes some time for rising fed funds rates to feed through to higher rates on longer term government debt. Further, it takes time for a higher interest rate to lead to higher debt service costs as treasury rolls over maturing debt into higher rates.

The most important point to make is that the fed funds rate is entirely within the scope of policy—it is not determined by bond vigilantes but by the Federal Reserve. Since interest payments on the debt are strongly related to the fed funds rate, a major determinant of the “sustainability” of a rising debt ratio is Federal Reserve policy. We conclude that higher debt ratios do not seem to lead to higher debt service, and that it is within the scope of monetary policy to keep debt service costs low by maintaining low fed funds rate targets.

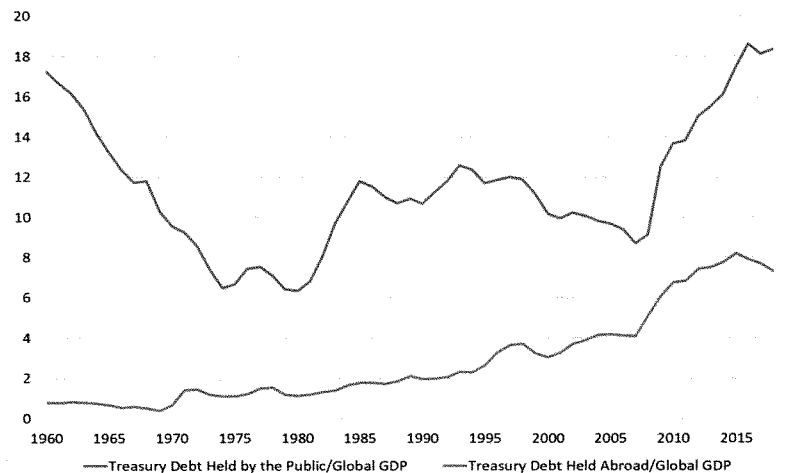
9. Foreign holdings of US Treasury debt:

Some claim that excessive US Federal indebtedness forces the Treasury to borrow from abroad and that at some point foreigners might refuse to lend more dollars. In recent years, foreigners hold nearly half the Treasury bonds held by the public. Foreign official holdings (in foreign central banks and treasuries) account for nearly two thirds of the total held abroad. Most of the foreign holdings are in countries that are net exporters, and almost all the rest is held in off-shore banking centers. Foreign individuals account for just 10% of foreign holdings. (Wray 2019a) The

following graph shows the total Federal government debt held by the public as well as the portion of that debt held by foreigners, both as a per cent of global GDP:

Figure 12: US Federal Government Debt to World GDP Ratio

(In percent. Sources: White House, Board of Governors of the Fed, World Bank)



As a percent of global GDP, the debt ratio has gradually climbed back to where it was in 1960. In 1960, however, the world was on the Bretton Woods system, in which the US dollar was pegged to—and competed with—gold as the international reserve. Today the dollar is the primary international reserve currency. As of 2016, the ratio of Federal debt to global GDP was about 18%, and the portion held abroad was less than 8% of global GDP.

This could be the more relevant yardstick for measuring the debt ratio for the international currency reserve. Other than the offshore banks, US treasury holdings are mostly accumulated by countries running bilateral current account surpluses against the US.¹¹ It is highly unlikely that the demand for US dollars is even close to satiation. International exporters trade with the US because they want US dollars—mostly because they need them for imports or to manage their exchange rates.

Further, during the last global financial crisis, there was an immediate run to dollars, only relieved by massive intervention of the Federal reserve—which originated over \$29 trillion in loans, of which approximately 40% went to foreign central banks and much of the rest went to private global banks. US treasuries are held as the safest financial assets in the world.

¹¹ When private exporters sell to Americans, they convert their dollar earnings to domestic currency deposits. Their domestic banks then convert dollars to domestic currency reserves held at their central banks. These foreign central banks hold dollar reserves at the Fed, which are converted to US treasury bonds to earn interest.

When the rest of the world finally gets all the treasuries they want, they'll stop targeting the US with their exports. That will allow our current account deficit to shrink, which will allow the budget deficit to fall for any level of the domestic private sector surplus. If the current account deficit were to fall to zero, the budget deficit would fall to equality with the private sector surplus. All else equal, this would lower the path of the growth of the debt to GDP ratio.

Conclusions: MMT and the Federal Budget

One of the common and oft-repeated misconceptions about MMT is that it claims government deficits do not matter. However, as I have argued in this paper, government deficits affect the economy in important ways. Deficits represent a net injection of spending into the economy and add to the private sector's surplus (holding the external sector's balance constant). The private sector usually tries to be in a surplus position. As the US current account has been and will continue to be in a deficit over the foreseeable future (and this is largely outside of the control of US policymakers, as the recent experience with tariffs has demonstrated), the government deficit has to be greater than the current account deficit to allow the domestic private sector to net save.

Moreover, as I demonstrated in this piece, the government deficit is largely endogenous. Congress can try to lower the deficit by lowering government spending or raising taxes, but these actions can have the opposite effect by lowering growth—which would tend to reduce tax revenues and increase spending on transfers. By the same token, if government stimulus boosts growth (through increased spending or tax cuts), the deficit ratio could fall and even move into surplus.¹² The ultimate result will depend on the other sectoral balances—we cannot look at the government's balance in isolation.

Using the sectoral balance framework, we can understand why government deficits are today's norm in the US economy. We can also understand that they *should be* the norm *given the nation's current account deficit*—in other words the functional purpose of the government's budget outcome should be to allow the private sector to normally net save (run a surplus). Only in an overheated expansion *should* the government's budget move to surplus to take demand out of the economy. This is why it is important to build automatic stabilizers into both spending and the tax system. It is in this sense that the final budgetary outcome doesn't matter – it shouldn't be the goal of policy but rather should depend on economic performance. Government spending and tax policy should be set to achieve multiple public purposes. But the final relation between total spending and total tax revenue will be determined simultaneously with the sum of the balances of the domestic private sector and the external sector.

Just as government deficits add to private sector surpluses, government debt adds to private sector net financial wealth (again, holding the external balance constant). Indeed, the total wealth of the private sector as a whole consists of real assets, claims on foreigners and claims on the government, i.e. government bonds plus currency, since private assets and liabilities add up to

¹² I am not necessarily asserting that a Laffer Curve result is inevitable—neither spending increases nor tax cuts necessarily “pay for themselves” by boosting growth sufficiently to balance spending against tax revenue. In our view, it depends on the nature of the spending and tax cuts (ie: where they are targeted) and also the reaction of the other two sectors to the policy change.

zero (within the private sector, someone's asset is someone else's liability). Hence growing Federal government debt implies that the private sector is accumulating net financial wealth.¹³

The US Federal Government can never be forced to default on its debt; it will always be able to service it since servicing debt by the national government involves exchanging one liability for another.¹⁴ While it is true that the legislated debt limit can get in the way of making payments—including payments of interest on the debt—the debt ceiling is entirely within the purview of Congress. It is not set by bond vigilantes or foreign governments. If the Treasury is forced to default, it will be Congress that forces it to do so, not the bond market.

Furthermore, the experience of the past decade has demonstrated that the fear that interest rates will rise due to high government deficits is misplaced. Despite historically high deficit and debt-to-GDP ratios, interest rates on government bonds have been extremely low. While some view this as anomalous, MMT demonstrates that government deficit spending always creates the wherewithal with which government bonds can be purchased since deficits add to private sector surpluses.¹⁵ Hence, interest rates need not rise with bond ratios as the government is not competing with the private sector for a limited pool of finance.

It is also important to note that the Federal Reserve has a large degree of control over interest rates. While it usually chooses to control only the short-term rate, it can control long-term rates as well, just as it attempted to do with its Quantitative Easing policy in the aftermath of the GFC. If desired, it can do this more directly—as it did in WWII—by standing ready to purchase bonds at higher prices and lower interest rates in the open market.

Although MMT has a set of policy prescriptions to achieve full employment and price stability, what I have discussed here is largely descriptive. MMT allows us to look at the economy through a different lens. While economists and policymakers may advocate for reducing government deficits and debt, MMT cautions that what we might be reducing is economic growth, as well as the private sector's surpluses and net financial wealth.

Hence, instead of saying they want to reduce government deficits and debt, supporters of “fiscal consolidation” and other such policies should say that they want to lower growth and lower private sector net saving since that's what the impact of their policies is likely to be. At the very least, supporters of austerity should indicate which of the other two balances will be reduced

¹³ It is possible for both the US government and US domestic private sectors to run deficits—leading to external accumulation of financial claims on both of these sectors. However the normal situation is for the US government sector to run a deficit, and for both the external and US domestic sector to accumulate net financial claims on the US government. See Wray 2019a for discussion of foreign holding of US Federal government debt.

¹⁴ Servicing US Federal government debt takes the form of credits of reserves at accounts held at the Federal Reserve. Interest and principal are paid by reserve credits to recipients and simultaneous debits to the Treasury's account at the Fed. It is true that the Treasury might need to sell bonds in the new issue to obtain the deposits at the Fed that will be debited. Dealer banks must stand ready to buy these new issues, or else risk their status as primary dealers (FRB New York, Primary Dealers: <https://www.newyorkfed.org/markets/primarydealers>).

¹⁵ The US current account deficit means that some of the net saving created by the government's deficit is accrued abroad; this saving is then largely allocated to Federal Government bonds. See Wray 2019a for evidence.

along with the Government's budget deficit, and how they will do this. The budget deficit cannot be reduced without reducing the private sector surplus and/or the current account deficit.

When we reframe the issue of deficits and debt and look at it from the perspective of how government actions affect the private sector, we get a completely different perspective on the economy. This is what MMT economists try to do – to evaluate government (fiscal and monetary) policy actions based on their impact on the private sector, rather than on some vague metric of what is an acceptable level of deficits and debt.

As I argued, high deficits can be correlated with high growth, but also with slow growth. Similarly, there is a good way and a bad way to reduce deficits. We can try to reduce deficits through austerity measures, in which case the response of the economy may end up increasing the deficit, as it slows growth. Or we may choose to boost growth through proactive fiscal policies which could then increase tax revenues and reduce transfer spending thus lowering the deficit. Because the deficit or the debt ratio is not a good indication of economic performance, it should not be the focus of policy making in any case.

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Chairman YARMUTH. Thank you very much for your testimony. I now recognize Dr. Bernstein for five minutes.

STATEMENT OF JARED BERNSTEIN, PH.D.

Dr. BERNSTEIN. Chairman Yarmuth, Ranking Member Womack, I thank you for the chance to speak to this evolving area, where economics intersects public finance.

My testimony starts by noting that current deficits are unusually high for this stage of the economic recovery. And yet these deficits are not pushing up interest rates or inflation. If the increased flow of deficits and the resulting higher stock of debt are not having obvious negative economic consequences, does that mean deficits don't matter, and policymakers should blithely put all of their preferences on the national credit card?

My answer is no. The evidence does not relieve policymakers of budget constraints. It does not negate the revenue-robbing impact of the 2017 tax cuts that, in my framing, are exhibit A in wasteful, inequitable debt accumulation.

But the evidence provides a more nuanced, far less cramped understanding of the economic costs of budget deficits and the potential benefits from investing in people and places who have long needed the help.

The coexistence of high deficits and debt amid low interest rates belies the traditional crowd-out arguments where public and private borrowing compete over a fixed lump of capital. In fact, our economy is large and open with deep liquid global credit markets, and our debt is considered among the world's safest to invest excess savings.

The central bank is also in the mix. The Fed has kept its benchmark interest rate below 1 percent for most of the past decade, and convinced investors that inflation would remain low and stable.

Other evidence suggests that deficits are not leading to faster inflation and higher rates because the U.S. economy has not been operating at full capacity. For either public or private spending to generate overheating conditions, aggregate demand must exceed supply such that any extra demand, save for more deficit spending, would generate not more jobs and higher real incomes, but just more inflation.

Priors in this area of economics also require updating, most notably regarding the lowest unemployment rate thought to be consistent with stable prices. Thus, it is a serious mistake to assume that deficits will pressure interest rates, especially when there is economic slack, strong capital flows, excess savings over investment, and well-anchored inflation.

Moreover, with the economy's growth rate outpacing the relevant interest rate, the fiscal cost of debt stabilization is diminished. These facts should push strongly against knee-jerk, austere fiscal policy, but they should not obviate concerns about our persistent fiscal imbalances.

First, interest rates could eventually rise that would be served—such that we would be servicing a much larger stock of debt, thus devoting a larger share of national income to debt payments. Prudent risk management does not assign a zero probability to higher future rates.

Second, financing more of our public debt with foreign capital has led to an increasing share of our GDP leaking out through debt payments abroad. Back in 1970, public debt held by foreigners amounted to less than 2 percent of GDP. Most recently, that share was 30 percent.

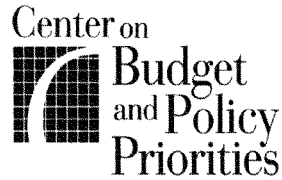
Third—and this is the concern that I find most worrisome—is the lack of perceived versus actual fiscal space. When the next recession hits, the Federal Reserve will reduce the cost of credit. But because interest rates have been so low, the Fed is likely to have reduced monetary space, less room to lower their benchmark interest rate. Counter-cyclical fiscal policy does not face an analogous limit. However, were Congress to take insufficient action to offset a downturn, it would be a fateful mistake, one that would disproportionately harm those who are already economically vulnerable and who are, at least—and who are least insulated from recessions.

In closing, our evolving understanding of the role of fiscal debt provides us with both opportunities and risks. The former implies more leeway to use deficit spending to make necessary productive investments. The latter means avoiding adding to our already historically elevated debt for non-productive or wasteful spending and/or tax cuts.

It is, thus, essential to define good debt from bad debt. Good debt invests in people and places that need the help. Bad debt does not. Considering the set of unmet needs we observe in communities across the country, along with the threat from climate change, there exists a deep, rich set of good debt investment opportunities. Tens of millions remain under-insured, in terms of health coverage. The impact of climate change is already being felt in volatile and costly weather patterns. The cost of colleges is a constraint to many families of moderate means. Much of our public infrastructure needs upgrading. Long-term wage stagnation has constrained the living standards of many working households, and there are significant swaths of people and places that have been left out of the current expansion.

I am happy to elaborate on what I believe are good debt opportunities in those spaces during our future discussion. Thank you very much.

[The prepared statement of Jared Bernstein follows:]



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Deficits and Debt in Contemporary U.S. Fiscal Policy: Updating Our Priors

Jared Bernstein¹

In recent years, U.S. fiscal policy has been historically unusual. Instead of the fiscal consolidation we might expect in the midst of a historically long expansion with the economy closing in on full capacity, our fiscal accounts have grown more unbalanced. I've sometimes referred to this phenomenon as "upside-down Keynesianism:" applying fiscal stimulus in a pro-cyclical manner, i.e., to an improving economy, versus the much more traditional counter-cyclical approach.

And yet, there is no evidence that our unusually elevated deficits have led to the kinds of economic problems many economists and policy makers have long associated with such fiscal imbalances, such as inflationary "overheating," or upward pressure on interest rates. To the contrary, and this is longer-term result—it applies beyond the last few years—the costs of fiscal imbalances in terms of macroeconomic distortions have been largely elusive.

Though policy makers still often voice concerns about rising deficits and debt, their actions suggest less concern, as both spending and tax cuts have been almost exclusively deficit financed in recent years. The analysis below examines the origins of the current fiscal situation, but it also asks: Is this situation problematic? Do deficits matter anymore?

I argue that they do, and that steps should be taken to consolidate our fiscal accounts as we close in on full employment, steps that should include progressive tax increases.² But I also stress new research and evidence that should lead us to update our prior views regarding the importance of deficit reduction. Knee-jerk deficit reduction, without regard for the distinction between useful and wasteful debt, is highly counter-productive. It ignores key lessons in recent public finance and its burdens invariably fall on the most economically vulnerable persons.

¹ Senior fellow, CBPP. The views herein are my own. Thanks to Kathleen Bryant, Richard Kogan, Joel Friedman, and Katie Windham for helpful comments and formatting. Any mistakes are my own.

² Chuck Marr, Samantha Jacoby, and Kathleen Bryant, "Substantial Income of Wealthy Households Escapes Annual Taxation or Enjoys Special Tax Breaks," Center on Budget and Policy Priorities, November 13, 2019, <https://www.cbpp.org/research/federal-tax/substantial-income-of-wealthy-households-escapes-annual-taxation-or-enjoys>.

But I also argue that deficits still matter, and that sensible risk management requires greater concern about our growing fiscal imbalances. One problem I stress is the constraint posed by the perception of diminished fiscal space. That is, if—more likely “when”—the U.S. economy enters the next recession with an historically elevated debt-to-GDP ratio, there is a worrying likelihood that Congress will do too little in terms of deficit-financed countercyclical fiscal policy. In this regard, my testimony strongly emphasizes the difference between limited *perceived* fiscal space, and *actual* fiscal space, the latter of which should be ample to offset whatever demand contraction the next downturn delivers.

In other words, new fiscal evidence does not relieve policy makers of any budget constraints, nor does it suggest that any desired spending should blithely go on the national credit card. But it does provide a more nuanced, far less cramped understanding of the economic costs of budget deficits and the potential benefits to society’s welfare of investing in people and places who have long needed the help.

The Current Fiscal Situation and Outlook

According to the Congressional Budget Office, the deficit in fiscal year 2019 was about \$980 billion, or 4.6 percent of GDP.³ Historically, as the table below shows, when the unemployment rate, currently 3.6 percent, has been below 4.5 percent, the average deficit as a share of GDP has been about zero and the average debt ratio has been less than half of its current level.

TABLE 1

Debt and Deficits as Shares of GDP for Different Unemployment Rates: Fiscal Years 1965-2017

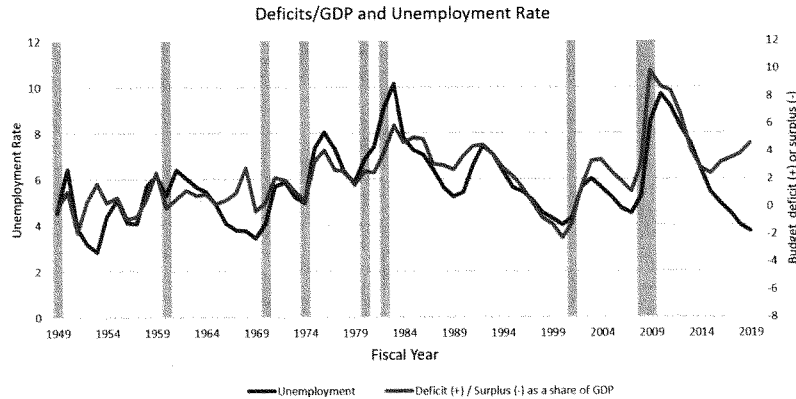
FY Unemployment Rates	Average Deficits/GDP	Average Debt/GDP
3.5% - 4.5%	0.0%	32.7%
4.5% - 6%	1.9%	41.1%
6% and higher	4.5%	42.6%
FY2019: (3.7%)	4.6%	79.2%

Source: Congressional Budget Office, Bureau of Labor Statistics; deficits/debt shown as positive.

This makes sense, because when an advanced economy like ours, with a mature system of taxation in place, is in a long expansion, we expect to see deficits shrink relative to GDP. More employment generates more labor income, more consumer spending and investment generates more capital income (profits), and these in turn spin off more revenue for the Treasury. Figure 1 shows this historical relationship by plotting the co-movements in the unemployment rate and the deficit-to-GDP ratio. The end of the figure, however, reveals that this trend has recently reversed. Our large, current deficit relative to our low unemployment rate is telling us that something important, and, in my view, worrisome, has changed. One of the points of this testimony is that the main thing that has changed is the revenue function described above and shown in the figure has been partially dismantled by the 2017 tax cuts.

³ Congressional Budget Office, “Monthly Budget Review: Summary for Fiscal Year 2019,” November 7, 2019, <https://www.cbo.gov/publication/55824>.

FIGURE 1



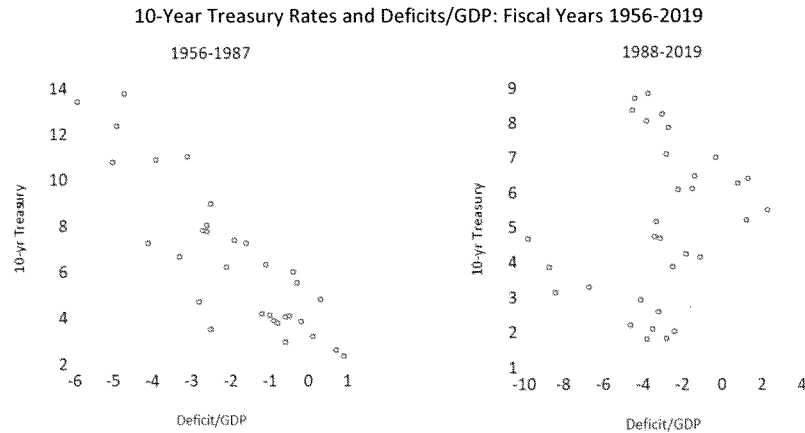
Spending matters too, of course, but the data show that the current (FY2019) spending share of GDP is about what we expected before the tax cuts, while the revenue share is well below our pre-tax-cut expectation (See Table 2).

Our unusually large federal budget deficits in an economy with such low unemployment (see Table and Figure 1) might be expected to put upward pressure on interest rates.⁴ Such expectations were born of a model predicting that as the economy heats up, private investors compete with the government for loanable funds, putting upward pressure on the cost of borrowing. But this prediction isn't just wrong today. It has been wrong for many years now. As the scatterplots below show, there was a time when deficits and interest rates were clearly negatively correlated, but that hasn't been the case for years.⁵

⁴ Some argue the unemployment rate overstates the tightness of the labor market, as it leaves out those who have given up the job search. As I've previously shown, however, the unemployment rate still correlates quite highly with numerous other, more inclusive measures. See: Jared Bernstein, "No question, the unemployment rate paints an incomplete picture...and yet...", *On the Economy*, July 15th, 2019, <http://jaredbernsteinblog.com/no-question-the-unemployment-rate-paints-an-incomplete-picture-and-yet/>.

⁵ The deficit/GDP ratio is lagged two periods (fiscal years) as this lag produced the most negative correlation between the two variables. However, the figures look very similar using one lag or coincident timing.

FIGURE 2



Note: Data are for fiscal years; deficit/GDP lagged 2 years.

Thus, I devote the next section to updating our prior views and beliefs about the impact of public deficits. As I will argue, the random scatterplot on the right should not be taken to mean that deficits simply don't matter anymore. They do. But if it was ever warranted, knee-jerk antipathy to budget deficits, and the austere policies such views often promote, is clearly both wrong-headed and outdated.

The fiscal impulse from our currently elevated deficit (Table 1) added to growth in 2017 and 2018, but as that impulse has faded, real GDP growth has downshifted from about 3 percent per year to its prior trend of about 2 percent.⁶ A notable point in this context—a point relevant to our current fiscal situation—is that the alleged “supply-side” effects that were a selling point by proponents of the 2017 tax cut (TCJA) have not yet materialized.⁷ Consider, as a particularly salient example, the recent trend in business investment, one of the first links in the claimed chain of outcomes from the sharp cuts in corporate taxes at the heart of the TCJA. In fact, such investment has slowed considerably since the tax cuts and turned negative in terms of its contribution to GDP growth in

⁶ See: Brookings Institution, “Hutchins Center Fiscal Impact Measure,” October 30, 2019, <https://www.brookings.edu/interactives/hutchins-center-fiscal-impact-measure/>. These fiscal-impulse dynamics are clear in this tracker from the Brookings Institution’s Hutchins Center. Note the forecast for a slight negative fiscal contribution beginning next year.

⁷ The claim is that tax cuts targeted at the wealthy will boost the growth of the economy’s key supply-side variables: productivity and labor supply. The cuts will thus lead to faster growth which will help offset their revenue costs.

both of the past two quarters.⁸ Moreover, prior research has shown the lack of correlation between high-end tax cuts and the supply-side chain of higher investment leading to faster productivity growth.⁹

For these reasons, claims that the tax cut would pay for itself are belied with every new Treasury Report on our fiscal accounts.¹⁰ Predictably, a key factor in the growth of recent deficits has been the loss of revenues due to the tax cut.

In the just-completed FY2019, revenues as a share of GDP were 16.3 percent, below both the long-term average of 17.4 percent, and more germanely, below the 40-year average at comparable points in prior business cycles of 18.4 percent.¹¹ That is, based on the revenues generated by prior tax regimes, the current economy should arguably be spinning off more than 2 percentage points of GDP higher revenue, or over \$400 billion. Given that the top corporate rate was cut sharply in the TCJA, from 35 to 21 percent, it is notable that FY19 receipts from corporate taxes—1.1 percent of GDP—were, according to CBO, “among the lowest recorded since 2009 and below the 50-year average of 1.9 percent of GDP.”¹² FY2019 spending of 21 percent of GDP was also higher than its long-term average of 20.4 percent, in part reflecting demographic pressures from retiring baby boomers.

To provide a clearer context within which to judge the impact of the tax cut on the current fiscal outlook, it is useful to compare today’s actual numbers to those projected prior to the tax cuts. The figure below does so by using CBO’s June 2017 budget forecast, its last before it factored in the impact of the tax cuts. Back then, CBO predicted that FY19 revenues would equal 17.8 percent of GDP and spending, 21.2 percent. The actual results show spending came in slightly lower than predicted and revenues significantly lower, by 1.5 percent points of GDP.

⁸ Jason Furman, “‘Not much’: What macroeconomic data say about the impact of the Tax Cuts and Jobs Act,” American Enterprise Institute, September 18, 2019, <https://www.aei.org/economics/not-much-what-macroeconomic-data-say-about-the-impact-of-the-tax-cuts-and-jobs-act/>.

⁹ Jared Bernstein and Ben Spielberg, “Three Reasons Trickle-Down Tax Cuts Don’t Work,” *The American Prospect*, January 31, 2017, <https://prospect.org/economy/three-reasons-trickle-down-tax-cuts-work/>.

¹⁰ Damian Paletta and Max Ehrenfreund, “Trump’s treasury secretary: The tax cut ‘will pay for itself,’” *The Washington Post*, April 20, 2017, <https://www.washingtonpost.com/news/work/wp/2017/04/20/trumps-treasury-secretary-the-tax-cut-will-pay-for-itself/>.

¹¹ Congressional Budget Office, 2019; Jared Bernstein, “My attempt to cut through the fog of our fiscal debate,” *The Washington Post*, May 29, 2018, <https://www.washingtonpost.com/news/posteverything/wp/2018/05/29/my-attempt-to-cut-through-the-fog-of-our-fiscal-debate/>.

¹² Congressional Budget Office, 2019.

TABLE 2

Revenues and Spending as Shares of GDP: Pre-Tax Cut Forecast and 2019 Actual

	Pre-Tax Cut Forecast for 2019	Actual, 2019	Difference
Revenues	17.8%	16.3%	-1.5
Spending	21.2%	21.0%	-0.2

Source: Congressional Budget Office

This comparison says nothing about the appropriateness of the *levels* of spending or revenues: we can and should have robust arguments about both. Its point is that it is analytically inconsistent with widely accepted baseline projections to argue that the increase in the current deficit was due to unexpected spending increases. It is instead clearly a function of lost revenue due to the tax cuts.

Longer-term expectations are for further increases in deficits and debt. In a recent report, my CBPP colleagues forecast that the debt ratio, currently 79 percent, would rise to 93 percent by 2029 and 111 percent by 2044 under current law.¹³ Note that these estimates assume the expiration of those parts of the TCJA scheduled to expire post-2025. But if “policymakers made current tax policies permanent without offsetting the cost, [CBPP’s] projected debt ratio in 2044 would rise from 111 to 139 percent.”¹⁴

The forces driving these long-term forecasts are increased spending on retirement and health security—driven not by spending on new policies but by our aging demographics and rising health costs—insufficient revenues, especially if the tax cuts are extended, and increased interest payments.

Notably, one force *not* driving the rising debt-ratio forecast is non-defense discretionary spending, which is expected to fall to historical lows as a share of GDP. These programs, whose funding is still below their 2010 real level, include “priorities such as education, scientific research, infrastructure, national parks and forests, environmental protection, some low-income assistance, and public health, as well as many basic government operations including law enforcement, courts, and tax collection. The category also includes many programs related to national security, including foreign aid, homeland security, and services for veterans.”¹⁵ Non-defense discretionary spending also funnels resources through states or local school districts to support K-12 education, along with Head Start. Below, when I talk about the need to invest in public goods, these are some of the sorts of investments about which I’m thinking, especially given the disinvestment path they’ve been on.

¹³ Congressional Budget Office, 2019; Richard Kogan, Paul N. Van de Water, and Kathleen Bryant, “Long-Term Budget Outlook Has Improved Substantially Since 2010 But Remains Challenging,” Center on Budget and Policy Priorities, October 10, 2019, <https://www.cbpp.org/sites/default/files/atoms/files/10-10-19bud.pdf>.

¹⁴ CBPP’s forecast also includes revenues from the enactment of the so-called “Cadillac tax” on high-cost health plans, despite the fact that bipartisan forces have thus far prevented the tax from taking effect.

¹⁵ Center on Budget and Policy Priorities, “Policy Basics: Non-Defense Discretionary Programs,” updated August 12, 2019, <https://www.cbpp.org/research/federal-budget/policy-basics-non-defense-discretionary-programs>; Richard Kogan, “Budget Deal Still Leaves Non-Defense Appropriations Below 2010 Level,” Center on Budget and Policy Priorities, August 6, 2019, <https://www.cbpp.org/blog/budget-deal-still-leaves-non-defense-appropriations-below-2010-level>.

Updating our Priors

Thus far, this testimony has highlighted two seemingly contradictory facts. One, fiscal deficits are unusually high for this stage of the economic recovery, and two, these deficits are not pushing up interest rates. There is, in both the current economy and in market expectations for the future, no evidence of either “crowding out”—higher interest rates due to public borrowing competing with private borrowing for loanable funds—or overheating (quickly rising inflation and/or wage growth).

These two facts raise two questions: Why are historically large, persistent deficits not creating upward pressure on interest rates, and if the increased flow of deficits and the resulting higher stock of debt is not having negative economic consequences, does that mean deficits don’t matter and policy makers should continue putting their preferences of the national “credit card?”

The answer to the first question is that it is and always was mistaken to think of “loanable funds” as a fixed lump of capital that borrowers from the public and private sector must fight over. For one, the U.S. prints its own currency, meaning that the supply of credit and the interest rate vary with rate-setting policies of the central bank (our sovereign currency also means that, inflationary concerns aside, the U.S. can always finance its debt). It is thus not incidental that the Federal Reserve held its benchmark interest rate below 1 percent for most of the past decade (the average effective federal funds rate has been 0.6 percent from 11/2009-11/2019). The Fed’s successful “anchoring of inflationary expectations” has also contributed to lower interest rates by reducing inflation premiums required by bond investors.

The fact that our economy is large and open, with deep, liquid, global credit markets, and that global savings net of investment has increased considerably in recent decades also plays a role.¹⁶ Finally, our debt is considered among the world’s safest places to invest excess savings, even at historically low rates (though U.S. rates are higher than those in most other advanced economies). Taken together, these evolving monetary and global capital dynamics help explain high deficits at low interest rates.

Aside from the lump-of-loanable-funds fallacy, simple macroeconomics suggests that deficits are not leading to faster inflation and higher rates because the U.S. economy has not been operating at full capacity, even with the considerable fiscal stimulus from the deficit-financed tax cuts and spending in the last few years. For either public or private spending to generate overheating conditions, aggregate demand must exceed supply, such that any extra demand (say, from more deficit spending), would generate not more jobs and higher real incomes, but just more inflation. Priors in this area of economics also require updating, most notably the unobserved so-called natural rate of unemployment, or the lowest unemployment rate consistent with stable prices. In recent years, the jobless rate has been persistently below conventional estimates of the natural rate, yet inflation has failed to accelerate, and wage growth has also been somewhat sluggish. Under these conditions, fiscal stimulus is more likely to contribute to growth and jobs.

¹⁶ Lukasz Rachel and Lawrence H. Summers, “On Secular Stagnation in the Industrialized World,” Brookings Institution, Spring 2019, https://www.brookings.edu/wp-content/uploads/2019/03/RachelSummers_web.pdf

One further data relationship that requires updating comes from research papers by Kogan et al¹⁷ and more recently, by my co-panelist Olivier Blanchard.¹⁸ These papers emphasize the fact that when the economy's growth rate is greater than the interest rate on its debt, a given stock of debt will decline as a percent of GDP without tax increases or spending cuts. Of course, the phrase "a given stock of debt" means that you are not adding to it by raising less in revenues than the cost of federal programs. For this reason, and as I discuss in a moment, debt stabilization also depends on the size of the deficit net of interest payments on the debt (the "primary" deficit), which has been climbing in recent years. But if the primary deficit stays low enough, when the growth rate is higher than the interest rate on government debt, the government can keep rolling over its debt and not only will the debt ratio not rise; it will fall. Conversely, when the interest rate exceeds the growth rate, the debt-to-GDP ratio will rise even if the government is collecting enough revenue to pay for its programs (i.e., even if the primary deficit is balanced).

The question is thus: what does the historical record tell us about the relative magnitudes of the growth rate and the interest rate? Both Kogan et al and Blanchard find that over most of our history, on average, the growth rate has exceeded the interest rate. For example, in Blanchard's analysis, since 1950, the average nominal interest rate "has been substantially lower than the average nominal growth rate, 3.8 percent versus 6.3 percent."

Why, then, has our debt ratio gone up? Because we haven't just *maintained* the level of our deficit spending; we've sharply increased it. The debt arithmetic in these papers doesn't say the debt ratio will never increase if growth rates stay above interest rates. It says that the debt will stabilize conditional on how much is being added to the primary deficit.¹⁹

How do the relevant values stack up today? In recent years, the nominal GDP growth rate has been on the low side, historically, but interest rates have been even lower. To smooth out the volatility in both rates, it's useful to take moving averages. Through 2019, the 10-year average growth rate is 3.9 percent while the relevant interest rate is 2.3 percent. At this level, debt stabilization will occur with a primary deficit of 1.1 percent of GDP, over \$200 billion. That fact that our current primary deficit is more than twice that level explains why, even with these favorable debt/growth dynamics, the debt-to-GDP ratio is rising.²⁰

Which takes us to the second and perhaps most portentous question posed by this hearing: Do increasing deficits and debt matter?

¹⁷ Richard Kogan, Chad Stone, Bryann DaSilva, and Jan Rejeski, "Difference Between Economic Growth Rates and Treasury Interest Rates Significantly Affects Long-Term Budget Outlook," Center on Budget and Policy Priorities, February 27, 2015, <https://www.cbpp.org/sites/default/files/atoms/files/2-27-15bud.pdf>

¹⁸ Olivier Blanchard, "Public Debt and Low Interest Rates," Peterson Institute for International Economics, February 2019, <https://www.piie.com/system/files/documents/wp19-4.pdf>

¹⁹ Kogan et al point out that the debt stabilization occurs net of financial assets held by the government, such as its student loan portfolio.

²⁰ I thank Richard Kogan for providing these calculations.

Yes, deficits matter. Here's why.

The key lessons of this testimony so far are that it is a serious mistake to assume that deficits will pressure interest rates, especially when there's economic slack, strong capital flows, excess savings over investment, and well-anchored inflation. Moreover, when the growth rate surpasses the interest rate, the fiscal cost of debt stabilization is diminished. These facts should push strongly against knee-jerk, austere fiscal policy. When borrowing is cheap, they should lead policy makers to willingly consider deficit-financed investments in growth-oriented public goods, a point I return to below.

But, for the following reasons, these facts should not obviate any concerns about our persistent fiscal imbalances.

Interest rates could, of course, eventually rise.

As the scatterplot above shows, there was a period when deficits and interest rates were negatively correlated. Correlation is not causation, so this concern does not necessarily reflect a return of "crowd-out." It is just saying that prudent risk management does not assign a zero probability to future higher rates. Such risk assessment must incorporate the fact that the growing magnitude of our stock of publicly held debt means that for any rate increase, more national income must be devoted to debt service.

More leakage of interest payments.

One consequence of financing more of our public debt with foreign capital is that an increasing share of our GDP "leaks out" of the U.S. in debt payments abroad. Back in 1970, public debt held by foreigners amounted to less than 2 percent of GDP; most recently, the share was 30 percent. As a result of this increase, a larger share of the income generated in the U.S. flows to residents of other countries rather than to residents of the U.S.

The absence of perceived fiscal space.

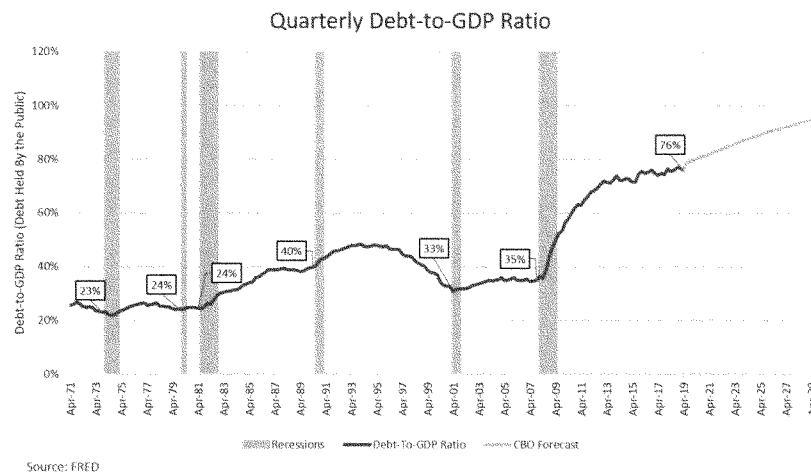
When the macroeconomy weakens due to a negative demand shock, the two main policy responses derive from monetary and fiscal policy. The former involves actions by the Federal Reserve to reduce the cost of credit, while the latter takes the form of deficit-financed, countercyclical fiscal policy, both automatic (e.g., Unemployment Insurance, nutritional support) and discretionary. For some of the same reasons discussed above as to why interest rates have been low, the Fed is likely to have reduced monetary space—room to lower their benchmark interest rate—in the next downturn. In this case, monetary space is limited by the fact that zero forms an effective lower bound on interest rates.²¹ Fiscal space, conversely, does not face an analogous limit.

²¹ While some central banks have used negative interest rates, the US Federal Reserve has historically rejected this option. The federal funds rate may be around 2 percent when the next downturn hits, when in past downturns, the funds rate was lowered an average of around 5 percentage points. Pushing the other way, however, are recent comments by former Fed chair Ben Bernanke that non-funds-rate stimulus tools of the Fed, including forward guidance and balance sheet policies, can add the equivalent of 3 percentage points on the funds rate. See: Ben Bernanke, "What's (not) up with inflation?: So what are the implications for policy?," Brookings Institution, October 4, 2019, <https://youtu.be/lmZkpqwtKLU>

However, research by Christina Romer and David Romer finds that countries that go into recessions with high debt-to-GDP ratios, e.g., over 80 percent, tend to do less countercyclical fiscal stimulus than is needed to offset the demand contraction relative to a country headed into a downturn with less public debt.²² Empirically, Romer and Romer find the growth consequences of this bias is economically significant: “The fall in GDP with fiscal space is just 1.4 percent. The fall in GDP following a crisis without fiscal space reaches a maximum of 8.1 percent.”

The figure below shows that historically, the U.S. has entered recessions with a debt-to-GDP ratio between 25-40 percent, less than half the debt ratio that will almost surely obtain when the next downturn hits. This, to my thinking, is one of the most worrisome aspects of our current, elevated debt levels, especially given the fact that monetary policy, which faces an actual (as opposed to a “perceived”) space constraint, may be unable to contribute the necessary jolt of stimulus necessary to help offset the next downturn.

FIGURE 3



I have, in this regard, a strong message for this committee: while the historical pattern does raise the specter of an inadequate fiscal response to the next downturn, at least in the U.S. case, the limiting factor is not actual fiscal space, it is perceived fiscal space. That is, even if—I’d guess “when”—the nation enters the next recession with historically high debt-to-GDP levels, we should

²² The Romer/Romer paper uses 96 percent as a rough cutoff for countries lacking perceived fiscal space, but their figure is for gross public debt, which corresponds to around the 80 percent debt-held-by-the-public value used in the text.

Christina D. Romer and David H. Romer, “Why Some Times are Different: Macroeconomic Policy and the Aftermath of Financial Crises,” University of California Berkeley, October 2017, <https://eml.berkeley.edu/~dromer/papers/Romer&RomerCrisesandPolicyRevised.pdf>.

apply all the necessary, deficit-financed countercyclical policy necessary to offset the recession. To do otherwise—to practice fiscal austerity when fiscal support is needed—is to needlessly consign millions of Americans to economic losses that could be avoided, and, paradoxically, to risk worsening the debt ratio.²³ Moreover, based on who is and isn't insulated from the pain of recession, these Americans will disproportionately be economically vulnerable, low-income, and persons of color.

Greater difficulty funding priorities.

A final reason why deficits still matter is that, especially if interest rates rise, they could make it harder to achieve political support to fund current obligations, and even harder to support outlays on new priorities. CBPP estimates that over the next 25 years, stabilizing the debt at its current level of 79 percent of GDP would require raising revenues or cutting spending by an average 1.5 percent of GDP, equivalent to over \$300 billion in 2019 alone.²⁴ To be clear, standard spending projections show that federal spending as a share of GDP is expected to rise not because of new programs but because of demographic and, as regards health care, price pressures on existing programs. These pressures create the likelihood that rising debt service will generate political competition between debt reduction and other budget functions that would be diminished if debt were stabilized.

How should policymakers with updated priors think about fiscal policy?

For these reasons, policy makers charged with fiscal authority should neither ignore deficits nor be hamstrung by them in the face of useful and necessary expenditures. Here are guidelines I believe are justified by our updated priors.

As the economy closes in on full employment, the deficit should be moving towards primary balance.

That is, the debt ratio should be first stabilized and then reduced as the economy approaches full capacity. Clearly, I have argued that repairing the connective tissue between economic growth and higher revenue that was torn by the TCJA is necessary. Usefully, we are in the middle of a robust debate about ways to progressively repair the damage to the tax code, and I'd be happy to comment on what I believe are the most promising ideas in this space.

Reducing spending pressures is also necessary, and one important place in the budget to so is health care.²⁵ As my colleague Paul Van de Water wrote, while policy makers “should pursue

²³ Alan J. Auerbach and Yuriy Gorodnichenko, “Fiscal Stimulus and Fiscal Sustainability,” National Bureau of Economic Research, September 2018, <https://www.nber.org/papers/w23789.pdf>

²⁴ This is the “fiscal gap.”

Richard Kogan, Paul N. Van de Water, and Kathleen Bryant, “Long-Term Budget Outlook Has Improved Substantially Since 2010 But Remains Challenging,” Center on Budget and Policy Priorities, October 10, 2019, <https://www.cbpp.org/research/federal-budget/long-term-budget-outlook-has-improved-substantially-since-2010-but-remains>

²⁵ Defense spending is too often ignored in this part of the discussion but evaluating it in this context is beyond my expertise.

opportunities to reduce cost growth in Medicare and Medicaid...they should do so in ways that don't place burdens on people of modest means...and don't reduce access to health care or compromise the quality of care.²⁶ Even with a vigorous effort to control costs, however, spending on the federal government's major health programs is bound to rise significantly [due in part to demographic pressures] as a percentage of GDP, and consequently so will federal spending overall."

Today, we benefit from a robust debate about the health reform agenda that might ultimately reduce cost pressures while protecting vulnerable populations. After all, while our uninsured rate is about 9 percent, or 29 million persons,²⁷ comparably-wealthy countries to the U.S. generally provide universal coverage with equal or better outcomes (especially regarding longevity of less-well off persons) while spending about half as much, per capita, as we do.²⁸ In earlier Congressional testimony, I suggested a number of policy reforms designed to accomplish this goal.²⁹

There's good debt and bad debt.

One conclusion from this testimony is that economic cost of public deficits has proven to be lower than conventional wisdom previously maintained. But even if they're less binding than many economists heretofore believed, budget constraints still exist and, as I've outlined, there are reasons for Congress to better manage the risks posed by our current fiscal outlook. In other words, our evolving understanding of the role of fiscal debt provides both opportunities and risks. The former implies more leeway to use deficit spending to make necessary, productive investments; the latter means avoiding adding to our already historically elevated debt for non-productive, or wasteful spending and/or tax cuts.

I've written about this duality under the rubric of good debt (GD) and bad debt (BD):³⁰

"No matter how low interest rates are, it will always make more sense to borrow for GD than BD. The challenge, of course, is that we need a definition of GD that works for most of us. Mine is simple: *GD invests in people and places that need the help; BD does not.*

²⁶ Paul N. Van de Water, "Federal Spending and Revenues Will Need to Grow in Coming Years, Not Shrink," Center on Budget and Policy Priorities, September 6, 2017, <https://www.cbpp.org/research/federal-budget/federal-spending-and-revenues-will-need-to-grow-in-coming-years-not-shrink>

²⁷ Matt Broaddus, "Census: Health Coverage Progress Eroded in 2018," Center on Budget and Policy Priorities, September 10, 2019, <https://www.cbpp.org/blog/census-health-coverage-progress-eroded-in-2018>

²⁸ Bradley Sawyer and Cynthia Cox, "How does health spending in the US compare to other countries?," Peterson-KFF Health System Tracker, December 7, 2018, <https://www.healthsystemtracker.org/chart-collection/health-spending-u.s.-compare-countries/#item-average-wealthy-countries-spend-half-much-per-person-health-u.s.-spends>

Lola Fadulu, "Study Shows Income Gap Between Rich and Poor Keeps Growing, With Deadly Effects," *The New York Times*, September 10, 2019, <https://www.nytimes.com/2019/09/10/us/politics/gap-income-gap-rich-poor.html>

²⁹ Jared Bernstein, "Let's be honest: We also have a revenue problem," Testimony to the House Financial Services Committee, December 11, 2018, https://financialservices.house.gov/uploadedfiles/12.19.2018_jared_bernstein_testimony.pdf

³⁰ Jared Bernstein, "A very good economic idea may be about to replace a very bad one," *The Washington Post*, January 10, 2019, <https://www.washingtonpost.com/outlook/2019/01/10/very-good-economic-idea-may-be-about-replace-very-bad-one/>

Thus, a countercyclical Keynesian stimulus, meaning deficit spending in a recession to offset a demand contraction leading to higher unemployment, is GD, because under those conditions, a lot of people need help. However, what I call “upside-down Keynesianism” — stimulating an economy that’s already closing in on full employment with tax cuts to the wealthy and corporations ... well, that’s some seriously BD. Instead, had the \$2 trillion in deficit-financed tax cuts instead gone to poverty reduction, jobs for those left behind, housing for those lacking shelter, affordable health and child care, productive infrastructure investments the private sector won’t make ... well, now we’re talking about GD.”

Considering the set of unmet needs we observe in communities across the country, along with the threat from climate change, there exists a deep, rich set of GD investment opportunities. Tens of millions remain un- or under-insured in terms of health coverage, the impact of climate change is already being felt in volatile and costly weather patterns, the cost of college is a constraint to many families of moderate means, much of our public infrastructure needs upgrading, long-term wage stagnation has constrained the living standards of many working households, and there are significant swaths of people and places that have been left out of the current economic expansion.³¹

A final macroeconomic point ties these public investment opportunities back to the low interest rates that have prevailed even as deficits have grown. As noted above, interest rates have fallen in recent decades in advanced economies across the globe, and literature on “secular stagnation” has noted that this is consistent with a high level of desired private saving relative to desired private investment. However, if private investors are underinvesting relative to available savings, there is even greater reason for the public sector to invest in the problem areas just noted. Not only would such “GD” help to boost productivity by investing in physical and human capital, but it would help replace some of the demand shortfall characterized by “secular stagnation.”

Conclusion

Evidence from recent decades suggests the need for policy makers to update widely held views about the impact of budget deficits on economies. There is, for example, little evidence to support the claim that budget deficits in expansions will necessarily lead to “overheating” or upward pressure on interest rates. In fact, our current deficit is unusually high given the near-full capacity of the current economy, yet interest rates and inflation remain low. There are reasons for this, including robust capital flows purchasing U.S. debt, some degree of untapped capacity, and monetary policy that has kept its benchmark rate below 1 percent, on average, for the past decade.

However, these developments should not be taken to imply that budget constraints no longer exist. Deficits and debt still matter.

Interest rates could, of course, rise, and given our highly elevated stock of public debt, this would increase the share of both the budget and national income devoted to debt service, more of which would flow out of the country relative to earlier periods when almost all of our debt was domestically held. Other reasons deficits matter including the lack of perceived (versus actual) fiscal space, threatening an inadequate fiscal response to the next downturn.

³¹ “Infrastructure Report Card,” American Society of Civil Engineers, 2017, <https://www.infrastructurereportcard.org/>

These concerns argue for a fiscal policy with more responsible risk management that would achieve fiscal consolidation when the economy closes in on full capacity, which in turn calls for repairing the damage done by the TCJA to our revenue function. This invokes the need for more progressive taxation.

Perhaps most importantly, it calls for recognizing the difference between useful, productive debt that invests in necessary public goods, both human and physical capital, and wasteful, inequality-inducing debt that redistributes income upward with no tangible benefits for the economy or most of the people in it.

Chairman YARMUTH. Thank you very much for your testimony. And now, finally, Dr. John Taylor, you have five minutes.

STATEMENT OF JOHN TAYLOR, PH.D.

Dr. TAYLOR. Chairman Yarmuth, Ranking Member Womack, Members of the Committee, thank you for inviting me to testify on this important topic, reexamining the economic costs of debt. At previous hearings of this Committee at which I testified, including the 19—including a 2015 meeting that was titled “Why Congress Must Balance the Budget,” in that hearing I showed that basic economic theory grounded in real-world data implies that high federal government debt has a cost. It reduces real GDP and real income per household compared to what these would be with lower debt levels.

A reexamination of the economic costs conducted for this hearing yields the same results. In work with John Cogan, Volker Wieland, and myself, we used modern economic models to estimate the effect of a decline in federal expenditures as a share of GDP. This fiscal consolidation plan led to an immediate and permanent increase in real GDP, according to the model calculations. Similar fiscal consolidation strategies were simulated in later years.

Recently the Congressional Budget Office reported similar results. They compared their extended baseline in which—that goes to 144 percent of GDP—with an extended alternative fiscal scenario in which the federal debt goes up to 219 percent of GDP. This alternative scenario has the total deficit rising to 15.5 percent, compared with 8.7 percent in their extended baseline.

The CBO also finds that real GDP is 3.6 percent lower when the debt is higher. So clearly, according to these analyses, the higher debt has real economic costs.

CBO also analyzed scenarios in which the debt is lower as a share of GDP, 42 percent and 78 percent. In the 42 percent scenario, real GDP would be 5.8 percent higher; in the 78 percent scenario real GDP would be 3.7 percent higher.

With the Congressional Budget Office’s currently projected increase in the deficit and the federal debt in the United States, this reexamination implies the need for a credible fiscal consolidation strategy. Under such a strategy, spending still grows, but at a slower rate than GDP, at least for a while, thereby reducing both spending as a share of GDP and the debt as a share of GDP, compared with current projections.

Such a fiscal strategy would greatly benefit the American economy. It would also reduce the risk of the debt spiraling up much faster than is currently projected by the CBO. I believe these conclusions are robust to different ways of thinking about the world.

Professor Blanchard has emphasized that if the growth rate of the economy is greater than the relevant interest rate and the public debt, then there will be a tendency for the debt-to-GDP ratio to decline over time. In many of the simulations reported by Professor Blanchard, the primary deficit is held to zero. However, any projection at this point has a primary deficit far, far above zero. And according to Congressional Budget Office, it is growing over time.

Moreover, the economic costs reported here do not distinguish between the primary and the total deficit. It is the increase in the

debt via the total deficit that creates economic costs. Of course, different views of the relative size of the growth rate and the interest rate are important, but they do not diminish the estimated costs of high debt.

Another view of the economic costs of debt is related to what is sometimes called modern monetary theory. It is difficult to determine how this approach would work in the future, and it is frequently associated with large spending programs, and even wage and price controls. Model simulations would be useful, to be sure, but history can also be a valuable guide.

In the 1970s the United States imposed wage and price controls, and the Federal Reserve helped finance the deficit by creating money. The result was a terrible economy, with unemployment and inflation both rising. This ended when money growth was reduced in the late 1970s and early 1980s. As explained in a new book by George Shultz and myself, it is an example where poor economic reasoning led to poor economic policy, which led to poor economic performance. It was only reversed when good economics again prevailed and policy changed. Thank you.

[The prepared statement of John Taylor follows:]

The Economic Costs of Rapidly Growing Federal Government Debt

John B. Taylor¹

Testimony Before the
Committee on the Budget
U.S. House of Representatives

November 20, 2019

Chairman Yarmuth, Ranking Member Womack, members of the Committee, thank you for inviting me to testify at this hearing on “Reexamining the Economic Costs of Debt.”

At previous hearings at the House Committee on the Budget at which I testified, including a June 17, 2015 hearing entitled “Why Congress Must Balance the Budget,” I showed that basic economic theory and associated empirical models with data imply that high federal government debt has a cost: it reduces real GDP and real income per household compared to what these would be with lower debt levels.

A reexamination of the economic costs conducted for this hearing yields the same results. With the Congressional Budget Office’s currently projected increase in the deficit and federal debt in the United States, this reexamination implies the need for a credible fiscal consolidation strategy. Under such a strategy spending still grows, but at a slower rate than GDP at least for a while, thereby reducing both spending as a share of GDP and debt as a share of GDP compared with current projections of the Congressional Budget Office (CBO). Such a fiscal strategy would greatly benefit the American economy. It would also reduce the risk of the debt spiraling up much faster than projected by the CBO.

This conclusion is robust to other considerations including situations where the relevant interest rate is less than the economic growth rate, where interest rates have declined over several decades, and where money financing of deficits is again being put forth as an option.

The Economic Costs of High Federal Debt on the Economy.

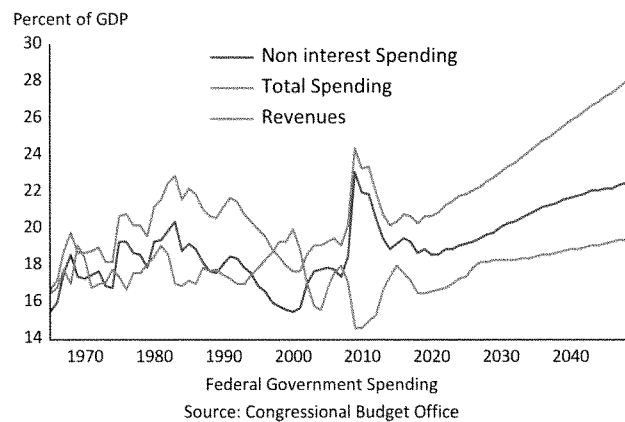
Let me begin with calculations first reported in Taylor (2015a) based on research by Cogan and Taylor (2013) using a modern economic model described in Cogan, Taylor, Wieland, and Wolters (2013a 2013b)). That model is part of an expanding and impressive collection of economic models maintained by Volker Wieland and used for policy analysis.

In that research we considered a decline in federal expenditures as a share of GDP from 22.2 percent of GDP to 19.1 percent of GDP over a ten-year period, or a 3.1 percentage point

¹ Mary and Robert Raymond Professor of Economics at Stanford University and George P. Shultz Senior Fellow in Economics at Stanford’s Hoover Institution

decline in expenditures as a share of GDP. Spending rose in the simulation, but less rapidly than GDP. The publicly held federal debt also declined. This fiscal consolidation plan led to an immediate increase in real GDP, according to the statistically estimated economic model, and, when combined with modest tax reform that was part of the calculation, raised GDP by 3 percent in ten years and increased GDP per household by \$4,000 per household.

We showed that such a reduction in government expenditures would increase GDP immediately compared to a policy without spending restraint. I understand that this is contrary to the views of critics of fiscal consolidation who indicate that there would be negative impacts on GDP at least in the short run. We used a modern structural model of the economy that incorporated opportunity costs, forward looking expectations, and incentives. GDP rose in the short run because households understood that the spending plan helped to avoid future increases in tax rates. Lower taxes encourage work, investment and production relative to a scenario without fiscal consolidation and thus generate higher economic growth.



The figure above shows spending and revenues now and in the future through 2049 according to the Congressional Budget Office. Spending growth did not diminish as much as in the 2015 calculations, and total federal spending did not come down to 19.1 percent of GDP. Moreover, spending—both total and noninterest spending—has increased and is projected to rise sharply in the future under current policy. Federal spending as a share of GDP is estimated to be 20.9 percent in 2021 according to the Congressional Budget Office. Holding it at 20.9 percent in 2030 would represent a change compared to the 23.1 percent now projected for 2030, but it would still allow federal spending to continue to grow. Again, according to the previous analysis, we would expect an increase in real GDP and an increase in GDP per household, and the implied

reduction in the ratio of debt to GDP would be a benefit to the American economy compared with current projections.

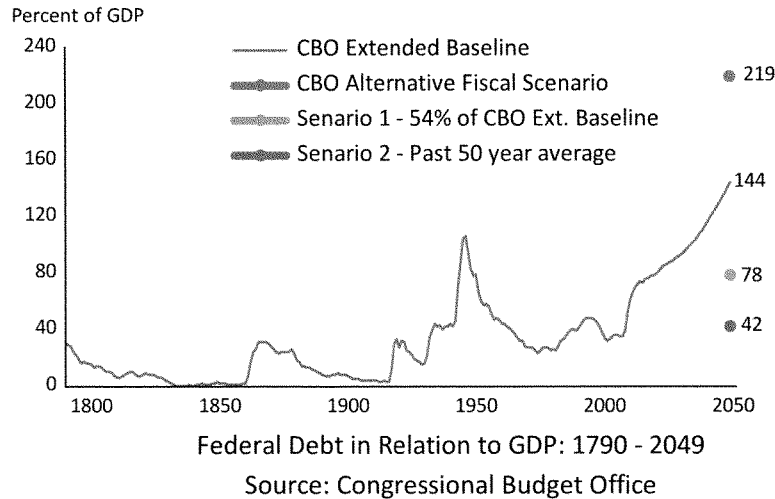
These results are not special to particular time periods. Similar fiscal consolidation strategies were simulated in later years. These model simulations regularly show a positive impact on real GDP in the short run and the long run. Real GDP increases in the short run because the consolidation of government finances boosts economic activity in the private sector sufficiently to overcome the reduction in government spending. Consumption and output increase at the start of the program. Investment rises by less in the short run, and by more in the long run.

The economic rationale for these positive results is straightforward: With a gradually phased-in and credible budget plan, households take account of future reductions in government spending and higher expected future incomes. Of course, to realize these benefits, it is essential that the consolidation plan be credible.

Again, these are not new ideas in the debate over the debt as I stated at the Senate Budget Committee in 2008. At the House Budget Committee on July 1, 2010 I argued that, "A clear and credible path of fiscal consolidation is clearly needed and would do much to remove uncertainty about future policy and thereby build confidence. The reason why such a plan is not being articulated and carried out now is an apparent concern that such a consolidation would remove needed stimulus from the economy." (Taylor (2010a).

There is also evidence of long run positive effects in recent Congressional Budget Office calculations, again based on simulations of models. The calculations of the economic costs of the federal budget debt are reported the in CBO (2019a, 2019b) in terms of foregone economic

growth and income per capita. They are consistent with the results in Cogan and Taylor (2013)



The figure above shows four possibilities examined by the CBO. The “extended baseline” is the blue line going forward and thus extending the ten-year CBO baseline; it is spliced with the earlier years representing U.S. history. The debt to GDP ratio goes up to 144 percent under that path as explained in CBO (2019a).

The CBO’s “extended alternative fiscal scenario,” shown by the red dot in the graph, has the federal debt rising to 219 percent of GDP compared with 144 percent in its extended baseline. In the alternative fiscal scenario, the CBO projects a primary deficit of 6.1 percent of GDP in 2049 compared with 3.0 percent of GDP in its extended baseline. The total deficit in 2049 is equal to 15.5 percent compared with 8.7 percent of GDP in the extended baseline.

CBO estimated the economic effects using a long run growth model. They find that real GNP is 3.6 percent lower in 2049 and real GNP per person is about \$3,400 lower in the same year than in the extended baseline. Thus, the higher level of debt has real economics costs.

The CBO also analyzed two other scenarios in which deficits are lower as a share of GDP. These are also illustrated in the previous figure. These scenarios reduce the deficit by constant percentages of GDP in order to lower the debt in 2049 to 42 percent of GDP and 78 percent of GDP. (Note that 42 percent is the average level of debt over the past 50 years.) To achieve the 42 percent target, the primary deficit is 2.9 percent of GDP less than in CBO’s extended baseline projections every year beginning in 2020. To meet that 78 percent target, the

primary deficit would be 1.8 percent of GDP smaller than in the extended baseline every year beginning in 2020.

In the scenario in which debt falls to 42 percent of GDP, real GNP in 2049 would be 5.8 percent higher, and real GNP per capita would be about \$5,500 higher, than in the extended baseline projections where the debt is 144 percent of GDP.

In the scenario in which debt falls by a smaller amount—to 78 percent of GDP, real GNP would be 3.7 percent higher in 2049, and real GNP per capita would be about \$3,600 higher in the same year, compared with the extended baseline projections.

The results are summarized in the following table with the impact on real GDP and income measured relative to the extended baseline. Note that there is a clear inverse relationship between real GDP and the federal debt as a share of GDP as shown by the impact in 2049. The higher is the debt the larger is the negative effect on the economy; the lower is the debt the larger is the positive effect on the economy.

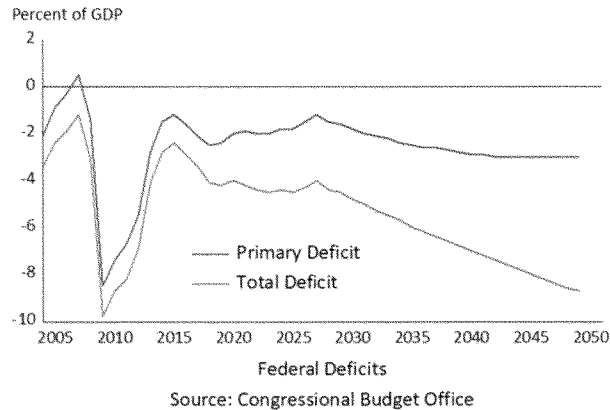
	<u>Primary deficit</u>	<u>Total Deficit</u>	<u>Debt</u>	<u>Impact on real GNP, income</u>	
				Percent	Per capita
Extended baseline	3.0	8.7	144%		
Alt. fiscal scenario	6.1	15.5	219%	-3.6	- \$3,400
Scenario 1	2.9		42%	+5.8	+\$5,500
Scenario 2	1.2		78%	+3.7	+\$3,600

Source: CBO (2019a) and CBO (2019b)

In reporting these results the CBO indicates (CBO 2019b) that shorter run Keynesian effects are not considered, and that these would likely be negative. It would be useful for the CBO to have a model which combines long run and short run as explained in Taylor (2015b) and as often used in public policy research. While the CBO has done an excellent job of incorporating long-term issues through a growth model, having models which handle both the short run and the long run would be significant improvement (Taylor 2016).

The Interest Rate and the Growth Rate

Blanchard (2019) has pointed out and emphasized that if the growth rate of the economy is greater than the relevant interest rate on the public debt, then there will be a tendency for the debt to GDP ratio to decline over time. He illustrates this with simple and easy to understand debt dynamic equations. He also shows that interest rate is often lower than the growth rate in U.S history.



In many of the debt to GDP simulations reported by Blanchard (2019), the primary surplus is held to zero, and in that case the debt dynamics are clearest. However, as is evident in the above chart, the primary deficit is far from zero and it is getting larger according to CBO.

Moreover, the economic costs reported earlier in this testimony do not distinguish between the primary and the total deficit. It is the increase in the debt via the total deficit that creates economic costs. Bringing the primary deficit to zero may be an important part of a good fiscal consolidation plan, but different views of the relative size of the growth rate and the interest rate on the debt does not diminish the estimated costs of high debt.

Other Views of Debt and Money

Another view that has bearing on reexaminations of the economic costs of debt is the set of ideas that are sometimes called “Modern Monetary Theory.” The ideas pertain to major countries that can borrow in their own currency—and that certainly includes the United States. A basic principle of the theory is that countries should not borrow in other country’s currencies. These ideas are often associated with proposals for government programs such as a jobs guarantee program or a reconstruction of the economy to deal with environmental risks. To move the resources from one part of the economy to another, controls over prices and wages as in wartime are often suggested

The basic idea is that money or deposits at the central bank could be used to finance the budget deficit, and thus a link between monetary policy and fiscal policy is created. The automatic stabilizers of fiscal policy would still work.

It is difficult to determine how this approach would work in the future, and Bernstein (2019), Rogoff (2019), Shiller (2019), Summers (2019) have considered alternative

implementations. I think history can be a guide. In the 1970s the United States imposed wage and price controls and the Federal Reserve helped finance the federal deficit by creating money. The result was a terrible economy in the 1970s with unemployment and inflation both rising. This only ended when money growth was reduced in the late 1970s and early 1980s. As explained by Shultz and Taylor (2020), it was an example where poor economic reasoning led to poor economic policy and poor economic performance. It was reversed when good economics again prevailed, and policy changed.

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Chairman YARMUTH. Thank you for your testimony and, once again, thanks to all the witnesses. We will now begin our question-and-answer session.

As a reminder, Members can submit written questions to be answered later in writing. Those questions, and the answers from our witnesses, will be made part of the formal hearing record. Any Members who wish to submit questions for the record may do so within seven days.

The Ranking Member and I will defer our questions until the end. So I now yield five minutes to the gentleman from New York, Mr. Morelle.

Mr. MORELLE. Thank you very much, Mr. Chairman, for holding such an important hearing. I feel a little bit like being at a panel where I have just listened to the four leading cosmologists in the world talk about string theory, multiverses, blackholes, the origin of universe, and my first question is, like, how does gravity work? So I apologize, because this was a lot to process.

But I did want to—just to go back to—and I think perhaps, Dr. Bernstein, you touched on this, as maybe—you all did, to some degree, but textbook economic theory, as I understand it, predicts that persistent budget deficits and rising government debt essentially raises interest rates, fuels inflation, crowds out, as you talked about, or depresses private investment, and triggers financial and fiscal difficulties.

We are, obviously, not seeing that. The publicly held debt, I think, in the United States is roughly 80 percent of GDP. It has actually grown, which I think is unusual to grow as a percentage of GDP during an economic expansion, which we have seen over the last 10 or 11 years. The 10-year note is at lower interest rates than it was 20 years ago.

So, since that was the sort of expectations, and it hasn't played out, is it that the assumptions that we made are incorrect? Or are we in sort of a unique period, or the circumstances have changed, where no longer those expected results are present? And what is the lesson that we, as policymakers, should take from that?

Dr. BERNSTEIN. I think it is more accurate to say that the assumptions were right at one point in time and they no longer are.

So in my testimony I show a scatterplot between budget deficits and interest rates. And actually, if you go back a few decades, that lines up pretty negatively, much like the theory would predict.

And, by the way, you comprehended everything that we were talking about perfectly well. So just being clear that you—we are on the same page here.

But, as I stressed in my testimony, dynamics, global credit, the role of the Federal Reserve, anchored inflationary expectations, excess savings over global investment, all of those have contributed to fundamentally change the relationship such that the crowd-out hypothesis simply doesn't bind in the data.

Now, I try to be very clear in my testimony that that doesn't mean that interest rates won't go up and create a serious problem for us. I think the way I put it was that, you know, it is not good risk management to assume, you know, a zero threat from that possibility. But it is really that the old assumptions no longer hold.

Mr. MORELLE. I would like to just shift. Last week we had the Fed Chair—Chairman Powell was here, talked about debt level sustainability. And I just want to read what he said. “I would define sustainable as the debt is not growing faster than the economy. Our debt is growing faster than our economy now by a margin. And so, by definition, it makes it unsustainable. You have to have an economy that is growing faster than your debt, and you have to do that for 10 to 20 years. That is how you successfully handle this. If you don’t do it, over time you will be crowding out private investment.”

I am just curious, Dr. Bernstein, as a follow-up, would you agree with that, or do you think—would you dissent from that view?

Dr. BERNSTEIN. I would broadly dissent in the spirit that I just showed you. I think it is really an empirical question.

However, John Taylor makes a fair point when he says that, you know, yes, it is true that growth rates surpass interest rates, but because the primary deficit, or the deficit net of interest payments has been large and growing, that is putting upward pressure on the debt. I don’t think that means that crowd-out is around the corner, or at least in any perspective that I can see.

I think what it does mean is that, to the extent that we do engage in deficit spending, it should be on the kinds of productive—I put it under the rubric of good debt.

Mr. MORELLE. Yes, and I did—I wanted to ask a question on the—something else, but—the automatic stabilizers, and perhaps someone else will ask about that.

But while you are on the subject, could you just define perhaps a couple of examples of bad debt? You have mentioned some of good.

Dr. BERNSTEIN. I think the most—I think exhibit A is really in a debt that comes from tax cuts, and particularly tax cuts that are regressive. That is, that return far more benefits to those at the top of the wealth scale. To me, that is a classic example of both inequitable, revenue-robbing, bad debt.

Mr. MORELLE. Very good. Thank you, Mr. Chairman, I will yield back.

Chairman YARMUTH. The gentleman yields back. I now recognize the gentleman from Missouri, Mr. Smith, for five minutes.

Mr. SMITH. Thank you, Mr. Chairman. As of today it has been 219 days since the deadline has passed for us to propose a budget in this Committee.

While this Committee might not realize it, there is several reasons why we go through the budget process. One, it gives guidelines to the appropriators; two, in a budget resolution, we also set the 302(a) number allocations, which establishes the overall spending numbers. Yesterday on the floor we saw a continuing resolution passed again, yet we still don’t have the 302(a) numbers.

I am glad that this Committee hearing at least is moving more towards a hearing that a Budget Committee would have when you are talking about the national debt. So I think that at least that is a step in the right direction, even though we are 219 days behind.

Earlier this—I just want to make a comment in regards to what some of the witnesses had said earlier about good debt investing

in people. Mr. Bernstein made that statement. I think a lot of times folks up here in the swamp get confused, and they think of government-funded, government spending, but it is not government-funded, it is not government spending, it is not government debt. It is taxpayer-spending, taxpayer funded, and taxpayer debt.

So when we talk about debt, it is not government debt, it is taxpayer debt. It is every one of the 320-plus million Americans that have the debt. And let's not get blinded by a different entity, by saying "government," because it all has to be paid for someday. And it is all the citizens of this country. It is the taxpayers. So remember the difference between government debt and taxpayer debt. It is taxpayer debt.

I know the Tax Cut and Jobs Act was brought up a couple of times. I represent a congressional district that is one of the poorest in the nation. And I can tell you, under the Tax Cut and Jobs Act, where our median household income of a family of four is just right at \$40,000 a year, the people of my district benefited greatly from the Tax Cut and Jobs Act. And a family of four with a median income household of 40,000 is not a lot. It is in the lowest bracket of median household incomes in the nation of 435 congressional districts.

And I can tell you, by traveling the 30 counties of southeast and south central Missouri, how people have benefited from the Tax Cut and Jobs Act by the doubling of the standard deduction, by the doubling of the child tax credit. These were real numbers that helped drive the economy in a very rural, impoverished economy.

So I do know that there was huge benefits, and there wasn't any robbing of the poor people in southeast Missouri. In fact, they benefited from the Tax Cut and Jobs Act, at least the people that I represent and the 30 counties that call 20,000 square miles home in southeast Missouri.

You know, the bootheel of Missouri used to be a swamp, by the way. And we drained it. And now it is some of the most fertile land in the country. And I think that is what President Trump is trying to do up here in Washington, D.C. And let's hope that it is working.

Mr. Taylor, I have a question for you. CBO reports that an increasing public debt harms per-capita gross national product, whereas reducing the debt improves per-capita gross national product. Given the negative consequences of our nation's current fiscal path, if we were to actually legislate and put the federal budget on a sustainable course, what would be the positive economic effects?

Dr. TAYLOR. I believe if the plan, if you like, the credible consolidation plan, budget deficit reduction plan, was somehow passed or agreed to—as multi-year would be best, to be sure, so it is credible—I think it would have a beneficial effect on the economy.

So often the models that people use emphasize any reduction in government spending of any kind as contraction, and I don't believe that is the case. If it is credible, if it is understood, if it is planned, it has been beneficial. And that is what our models show. That is what our simulations show.

I think it would be a benefit—and people have talked about this in the past—a strategy to reduce the debt-to-GDP over time. And it would be beneficial, according to models that I use, and I think other people have used. So I would very much hope that that would

be the direction. I know it is not what you are focused on right now, but I wish there was more focus on that multi-year discussion, and what is going to happen.

If you look at the expenditure growth, it is astounding, what is being projected. So I think that needs to be fixed.

Mr. SMITH. I see my time expired, Mr. Chairman.

Chairman YARMUTH. Yes. Thank—the gentleman’s time has expired. I now recognize the gentleman from Nevada, Mr. Horsford, for five minutes.

Mr. HORSFORD. Thank you very much, Chairman Yarmuth, and to the Ranking Member.

I know we are here today to reexamine how we view debt and deficits with respect to our economy. And my good friend, Mr. Smith from Missouri, he and I serve on the Ways and Means Committee, as well, we have had some good, lively debate in both this Committee and our other Committee.

But what I find interesting sometimes is that the other side will view tax cuts for the very wealthy as investments. But when we talk about investing in resources and programs that we know will benefit our children and their future, somehow that is not something that is worth investing in.

So I want to go directly to the numbers that impact my constituents. Mr. Smith talked about his.

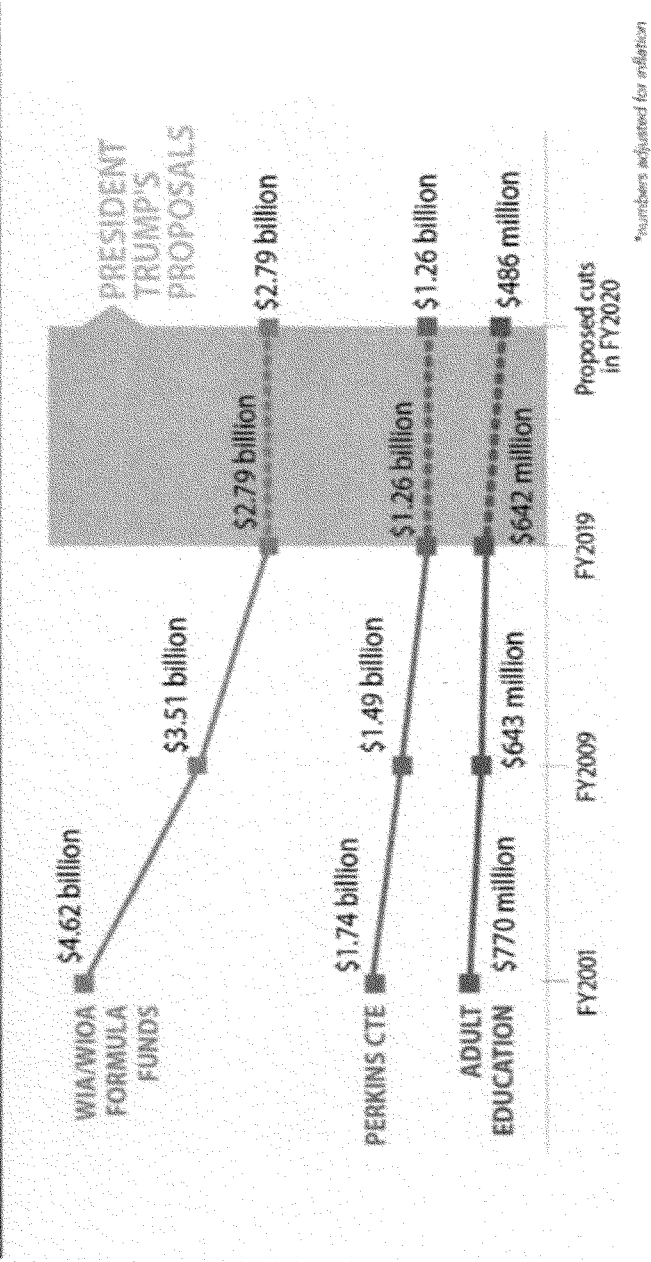
During the 2017–2018 school year, Nevada, which has 355 Title I schools, over 200 thousand children in those schools—Clark County is the fifth largest school district in the country, nearly half of the students are Latino students, limited English proficient students. Had we received the full allocation of funding, we would have been budgeted \$379 million in Title I funding from the federal government.

However, our schools received only \$130 million. That is \$250 million funding deficit for our students that need it the most. And I have been to these schools. I have seen what these teachers are dealing with, with overcrowded classrooms, with inadequate textbooks, with not having the after-school resources, early childhood investments that we know will improve the educational outcomes of young people and improve their quality of life.

Mr. HORSFORD. Let me give you another example to turn to the chart. We have seen cuts to various skills training programs such as the Workforce Innovation Opportunity Act and the Perkins Career and Technical Education Act, as well as adult education. As you can see from this chart, WIOA was funded at \$4.6 billion in fiscal year 2001. These are programs to train people for the 21st—skills of the future, but it only received \$2.8 billion in funding for fiscal year 2019.

[Chart].

After two decades of cuts, we need real investment in skills training.



So Mr. Bernstein and Dr. Blanchard, do you think the long-term economic and fiscal consequences of neglecting investments in critical areas such as education and skills training could be more damaging than the consequences of increasing our debt?

Dr. BERNSTEIN. I will start. I do worry about precisely that, and this is a good example of what I am talking about when I say good investment, in terms of deficit spending versus wasteful inequitable spending.

And it is important to just broaden out your comments slightly, and I will get out of the way so Olivier can jump in. One force that is clearly not driving the debt ratio forecast that we have all been talking about is precisely this kind of spending. So this is non-defense, discretionary spending. It is expected to fall to historical lows as a share of GDP. It is—precisely the area where we should be investing is where we are doing the least.

Mr. HORSFORD. Dr. Blanchard?

Dr. BLANCHARD. I very much agree. I think the deficits, as they are now, are not used for the right purposes. There is a number of programs, measures which could increase growth, decrease inequality. It would be a much better use of these deficits than is currently the case.

Mr. HORSFORD. Thank you. So I just want to note, Mr. Chairman, that the President and my Republican colleagues again passed a \$1.9 trillion tax cut, and they did so in 51 days without one hearing. They rammed through that job tax cut bill. That \$1.9 trillion my Republican colleagues in the Trump Administration passed, that benefited only the top 1 percent. That could have been used to fully fund Title I in my state. It could have been to invest in some of these programs that we know people need in order to compete for American jobs.

We are talking about getting ready to work on USMCA. Trade is important, but guess what? We also have to invest in our workers in order to have the skills to compete.

So when we talk about competition in a global economy, it is trade, it is skills in our workforce, and it is having a competitive tax rate. My colleagues focused on only one of those areas. They did it in 51 days, and they did it without regard to the majority of the American people who would benefit the most. I yield back.

Chairman YARMUTH. The gentleman's time has expired. And I, unfortunately, neglected to, while Mr. Smith was still in the room, to correct one thing he said for the record—and he may have misspoken.

But there—we do have 302(a) numbers for next year. We don't have 302(b) yet. We are working on that. But anyway, I just wanted to correct that for the record.

I now recognize the gentleman from South Carolina, Mr. Norman, for five minutes.

Mr. NORMAN. Thank you so much. Thanks to each of you for being here.

Let me just re-emphasize what Mr.—Congressman Smith said. You know, when you say government debt, that is taxpayers' debt. This thing we call government is made up of taxpayers. They are the ones who put the money in the coffers to make government

work. So that is not some term that is—I think it is misunderstood or misused by the left.

Secondly, I have heard several talk about tax cuts for the rich, tax cut for those at the top. Where did the bonuses come that President Trump—that we passed that President Trump has put into practice, where did the bonuses go? They went to people, people that make up the corporations.

So it is interesting that, you know, we talk about this, we think of government in terms—as if it is not people. We talk about corporations, the rich. I think the people who have benefited the most are those that have a job now. I think the growth rates under the President Trump are real, as opposed to the obvious low growth rates under the previous Administration, which hovered over 1.2, 1.5 percent. There is a reason people have jobs. There is a reason the growth has occurred in this economy like never before.

Mr. WRAY, let me ask you, have you ever run a private business?

Dr. WRAY. No.

Mr. NORMAN. Okay. So you have never had to hire—make a payroll, balance up—I guess, other than your household budget, you never had to balance, make a product, or use—make sure things—you are making a profit so that you can pay the police, you can pay our schools, you can pay our first responders. You have never done that.

Dr. WRAY. That is correct.

Mr. NORMAN. Okay. Let me ask you about the modern monetary theory, which I think you buy into. And I think the basis of that—tell me if I am wrong—budget deficits can be financed by nations who control the currency.

Dr. WRAY. Yes.

Mr. NORMAN. Okay. Are you familiar with the monetary policy of some Latin American economies, Chile?

Dr. WRAY. Some Latin American countries, yes.

Mr. NORMAN. Okay. What about Peru?

Dr. WRAY. Not Peru, no.

Mr. NORMAN. Okay. Are you familiar with some of the inflation rates? And I mentioned Chile. You—do you remember what that is, the inflation rate in Chile?

Dr. WRAY. No, I don't—

Mr. NORMAN. It is 500 percent. Do you remember the inflation rate in Peru by just printing money? Seven thousand percent.

What about Venezuela? How has that worked out? That was 10,398 percent.

So hyperinflation hurts the little man that you are talking about you protect.

You know, in Venezuela today we are witnessing the effects of Socialism, a socialistic economy that doesn't work for the people that you say you protect. Those are the consequences of the very monetary policy that you say you promote.

And I guess—let me ask each one of you. I have got a minute, 31. As you look at priorities in this country that we spend on, is—does the Green New Deal add up as the top priority?

And I would start with—well, Mr. WRAY, let me start with you.

Dr. WRAY. I do think that we face a very serious challenge that will require federal government involvement and federal government spending.

Mr. NORMAN. What would it cost?

Dr. WRAY. It depends on what you include in the Green New Deal. Say—

Mr. NORMAN. Pick a number.

Dr. WRAY. Well, say the complete package of greening programs could be as much as 5 percent of GDP for the next 10 years.

Mr. NORMAN. Which is? Give me a number. Just pick a number, because I have heard—

Dr. WRAY. Okay.

Mr. NORMAN.—73 trillion, I have heard—

Dr. WRAY. No.

Mr. NORMAN. Not that?

Dr. WRAY. No.

Mr. NORMAN. But it is top of the list over national defense, over education—

Dr. WRAY. I don't think that we have to make a choice like that.

Mr. NORMAN. Okay.

Dr. WRAY. If we are talking about adding 5 percent of GDP to total spending, we don't have to eliminate defense. That would bring government spending up to about 25 percent of GDP.

Mr. NORMAN. Okay. Mr. Taylor?

Dr. TAYLOR. I think the highest priority is to have a faster-growing economy which benefits large parts of this economy. And—as you have emphasized.

Mr. NORMAN. Which is what the tax cuts have done. That is—

Dr. TAYLOR. They have been effective.

Mr. NORMAN. Right. That is—I am out of time. Thank you, Mr. Chairman.

Chairman YARMUTH. Do either of the other two witnesses want to respond to the question? Dr. Blanchard?

Dr. BLANCHARD. The Green New Deal is, indeed, a priority. Is it the top priority? There are many other things which need to be repaired in this country, from bridges to other infrastructure. Should it be financed by debt or by taxes? I think the answer is by a mix of the two.

Dr. BERNSTEIN. The only thing I will add is when you are contemplating the cost of the Green New Deal, or any other action against climate change, it is very important to factor in the costs of not doing anything about climate change. Those costs are becoming increasingly significant, and they must be netted out of whatever numbers we are throwing around.

Chairman YARMUTH. Thank you. The gentleman's time has expired. I now recognize the gentleman from Tennessee, Mr. Cooper, for five minutes.

Mr. COOPER. Thank you, Mr. Chairman. And I welcome such a distinguished panel of economists. I appreciate your patience, because you must know when you come there will be a lot of partisan sparring.

I must admit, I actually watched the YouTube video of Mr. Blanchard's address, because when I saw the headline that he apparently said, according to the press, that deficits don't matter, I had

to see for myself what, in fact, you had said. And I regret the distortions that were made of your, what, AEA speech that prompted some journalists to mischaracterize it.

I worry, in general, that the nuance that is in all of your testimony largely escapes Members, so I worry that you end up looking like pinatas, hit by whatever is the opposing side. Because, as we well know, when the other side is in the majority, there will be three John Taylors on the panel, instead of the only one we have today. I am not suggesting you be cloned.

But the real issue is whether we can get at the truth. And perhaps no hearing this year is going to be more important in helping us ferret out the truth, because, as we deal with short-term, medium-term, long-term tradeoffs, I worry that there is a certain learned behavior here, when we refuse to acknowledge nuance, when we refuse to try to get things right and look beyond the horizon, that we could be committing grave errors today.

And literally, none of us really has skin in the game, because the average congressional tenure is six to eight years. We will be gone. Some of you have tenure. Even with that, you will be gone.

So our real obligation is to our children and grandchildren, great-grandchildren. And it really matters, even though some of these issues are measured in small percentage points, whether we get it right. Because the difference between 1 percent growth, 3 percent growth, 5 percent growth is monumental.

I worry that, on behalf of your profession, there is not sufficient humility, because my guess is that none of you correctly predicted the 2008 recession, because hardly anyone did, and those who claim they did sometimes exaggerate their foresight.

But I think John Maynard Keynes said that all economists should be humble, like dentists. And I am not saying, you know, from the profession, a dentist type humility or ability—because at least dentists have to talk to their patients and try to make sure the patient understands brush your teeth every day, otherwise you will have cavities.

So, if you could help me understand, because, to me, there is more commonality in the testimony than would appear on the surface, and yet you are being separated three to one, as if, you know, one side is good, one side is bad. Dr. Bernstein even characterizes good debt, bad debt. That is a pretty Manichean view of the world.

You know, it all depends on what your favorite programs are. And both parties end up having similar sins. We both love spending if it is our sort of spending. We both decry debt if it is not our sort of debt. So I am worried we are really talking past each other here.

So would any of you admit that there is really more commonality than first appears?

Dr. BERNSTEIN. I mean, I—first of all, let me just say that embedded in my testimony is more humility than perhaps I showed. And I totally agree with your point on that. And the idea is that we should be humble about our ability to predict the future, say the correlation between deficits, debt, and interest rates. And so I really emphasize the empirical relationship. And I think that is the important one.

In terms of good debt and bad debt, I was just—that is sort of trying to be somewhat of a cute framing to suggest the debt that is incurred in the interest of productive investment is very different than debt that is incurred for what I would consider wasteful tax cuts.

Now, we can have a good argument about that, but I just wanted to be clear about that point.

Mr. COOPER. Dr. Blanchard?

Dr. BLANCHARD. Thank you. I thought, listening to the three others, that there was, indeed, a lot of commonality, in the sense that I think we would all say that debt, per se, is not good in the long run, that it has—we can disagree about how bad it is, but nobody argued that it was good.

There was some difference about the short run. I think a few of us believe that, if there was a sharp fiscal consolidation, this would lead to a decrease in demand and potentially a recession.

John, I think, was more optimistic about the fact that animal spirits triggered by fiscal consolidation could undo the direct effects. I am very skeptical of this. But beyond this, I think there was agreement.

The last point is I think there was agreement that if that is used for good stuff, public investment, R&D, growth-enhancing measures, then there is some justification for using debt in that case, the same as would be true for a private firm.

Mr. COOPER. I see that my time has expired, Mr. Chairman.

Chairman YARMUTH. The gentleman yields back. I now recognize the other gentleman from Tennessee, Mr. Burchett, for five minutes.

Mr. BURCHETT. Thank you, Mr. Chairman and Ranking Member. I want to thank you for your kind words. I think about my folks when somebody says something nice about me, and I hope, where they are, they can see that. I think they would be very pleased. And I thank you, brother, for that.

My question today is for the entire panel. And I am always concerned about China. I guess it is almost genetic. My father, actually, after the Second World War, was in the Marine Corps actually went to China and fought the Communists for a short while, and was, I think, amazed at their abilities that they had, and just their view of totalitarianism, and very little regard for human lives. And I think that scared him.

And with that, I would like to know—China, of course, holds the most of our debt, with \$1.1 trillion. What are the economic impacts if these foreign countries decide to collect on that debt?

I hear that a lot. Put it down on my level. I took first quarter economics for a good reason. I was asked to. So I—the second time around I was told to. So if you all could—I would appreciate every one of you all giving your response.

Dr. BLANCHARD. I think we have to worry about China. As I mentioned, that particular one worries me less than some of the others, in the sense that, if they were to want to sell the large amount of treasury bills and bonds that they have, they would make a very large capital loss on their holdings. I think that is sufficient reason not to want to do it, from their own point of view.

So I would not worry very much about the fact that China holds quite a large quantity of government, U.S. Government, bonds.

Dr. WRAY. Can I add? If you look at who are the holders of U.S. Government bonds abroad—and that is almost half of the debt we have been talking about—they are the exporters to the United States, plus offshore banking centers. The way that they get the bonds is by selling output to us. We use dollars to buy it. They accumulate dollar reserves at the Fed, and then they convert those into U.S. treasuries.

So, as long as China and other exporting nations want to sell their goods to us, they are going to accumulate dollars, and they are going to very rationally convert those to U.S. treasuries. I think that any transition out of U.S. Government bonds is going to be very slow. China will eventually run a trade deficit. It is going to become too wealthy; its incomes are going to become too high to be the low-cost exporter in the world. Their population will buy more imports, and so that will reverse. But it is going to be very, very gradual.

So I agree with Professor Blanchard, this is really not a worry.

Dr. BERNSTEIN. Since I agree with Blanchard, let me just briefly say that if you owe the bank \$100, they own you. If you owe the bank \$1 million, you own them. That is kind of what Olivier was saying, and I share that view.

Dr. TAYLOR. Yes, I think we should be concerned because our debt is growing very rapidly. And many people are buying it. They won't always buy it. There is a risk. And that is not built into the usual forecast, but you can't ignore that. It could be a spiral up, and some people would say no, that is enough. So I think it is a risk.

I think that China is much more than that. I think there—they seem to be going back, away from some of the market principles that made debt economies so successful with Deng Xiaoping, originally.

I think the U.S. needs to be concerned about its own economy, its growth, its tax system, et cetera, and continue to stress that philosophy that we have had for many years and has worked. China seems to be going in the wrong direction. That is bad for them, bad for the world, as well.

Mr. BURCHETT. Thank you, Mr. Chairman. Thank you all very much for being here.

Chairman YARMUTH. The gentleman yields back. I now recognize the gentleman from New York, Mr. Higgins, for five minutes.

Mr. HIGGINS. And thank you, Mr. Chairman, and thank you, panelists, for being here. Let's just be clear about a couple of things.

First of all, the job creators in the strongest economy in the history of the world, a \$21 trillion economy which is 70 percent consumption, are the American people. And with higher wages, you have higher demand. With higher demand you have higher growth. So fiscal policy and tax policy has a major, major impact.

Some talk about bad debt, and, you know, debt does matter. What is absurd is the hypocrisy of Republican actions that created lots of bad debt that served the interests only of the hyper-rich, and not the general good.

Two questions: Did the \$1.5 trillion over 10 years corporate tax cut produce economic growth beyond that which was projected before the tax cut? It did not. And I would defy anybody to argue the contrary.

Did every American household receive \$4 to \$9,000 increase in household income that the White House Council of Economic Advisors explicitly said would occur, and on a recurring basis, because of the tax cut? Absolutely, it did not.

Here is who it benefitted, and this is why it is bad debt. In fiscal year 2017, FedEx owed more than \$1.5 billion in taxes. The next year, after the full year that the tax cut went into effect, it owed nothing. FedEx's effective tax rate went from 34 percent in 2017 to less than zero, meaning that the federal government owes FedEx a rebate. FedEx spent \$2 billion on stock buybacks and dividend increases in 2019, more than double the amount that FedEx paid for buy-backs and dividends in 2017, before the tax cut. The FedEx chief executive officer received \$16 million in compensation in 2019, and the five top executives below him received compensation averaging \$6.2 million in compensation.

So it seems to me that it is very, very clear after a very short period of time that this tax cut was bad debt. We spent \$1.5 trillion and didn't get any measurable return accruing to the public good.

Under President Trump, he has accumulated almost \$4 trillion in new debt. That will be by the end of the fiscal year 2020, the final year of his first term. The U.S. budget deficit grew to almost \$1 trillion this year, and we project \$1 trillion deficits for the next several years, moving forward.

Now, it would seem to me a company like FedEx would be promoting good debt for the general purpose. I mean that is a company, as I understand it, that is a logistics company. They move product by ship, by plane, but a lot by trucks. And my sense is that the better use of debt would have been \$1.5 trillion in infrastructure bill that would have produced economic growth and helped this economy, our \$21 trillion economy, function much more efficiently.

Dr. Bernstein, your thoughts?

Dr. BERNSTEIN. Yes, if you look from the first quarter of 2018, which is when the tax law took effect—this is broadening out from the FedEx point, just to the broader business community—companies have spent almost three times as much on dividends and stock buy-backs than they have on increased investment. If you actually look at the investment record, it is exhibit A against the argument that the tax cut was going to have these trickle-down effects that would generate faster investment, faster productivity, and then faster income growth.

In fact, in the prior two quarters business investment has been a negative on GDP, and it is widely agreed-upon that this is one of the most conspicuous failures.

And that is what I mean when I talk about debt that I view as both wasteful, inequitable, and robbing the treasury of revenues it needs to make the kinds of investments that we have been talking about earlier.

Mr. HIGGINS. Dr. Blanchard?

Dr. BLANCHARD. Whatever the case for corporate tax rate reduction as boosting investment, I think the evidence so far is that it has not. And therefore, indeed, I think the money could have been spent much better, along the lines that you suggested.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentleman from Georgia, Mr. Woodall, for five minutes.

Mr. WOODALL. Thank you, Mr. Chairman, and thank you for holding the hearing. If I have learned anything with you over these 11 months now, it is that we should stop passing bills that are only supported by one party or the other.

When Mr. Womack was chairman, we spent much of our time debating the merits of the Affordable Care Act and the unmet promises that were there, and now we are debating the merits of the Tax Cut and Jobs Act. We are not debating the 1983 Social Security amendments that raised taxes and cut benefits and solved the system for a generation. We are not debating the 1996 welfare bill, we are not debating the 1997 Medicare amendments, we are not debating the 2005 Medicare Part D, all of those things that we did in partnership.

And against that backdrop I ask, here we are, with a three-to-one ratio—and yes, if Mr. Womack was chairman, we would have a three-to-one ratio going the other way—I want to find what those things are we agree on, because the three of us had an opportunity to serve on a bipartisan, bicameral budget process reform committee last cycle, and I think we have heard that broad agreement, that we can't keep doing things the way we are doing them, that we can do better. Even if we can keep doing things the way we are doing them, we can do better.

In your testimony, Dr. Bernstein, you point out that non-defense discretionary spending isn't the problem. It absolutely, positively is not the problem. Now, we will spend more time in Congress this year debating those issues than we will any of the problem issues. But it is not the problem.

Dr. Blanchard, you said unless they are used to finance ambitious, incredible public investment plans, deficits should be decreased. I serve on the Transportation and Infrastructure Committee. I promise you we were supposed to debate ambitious, incredible infrastructure development plans this year, and we haven't. We have been focused on other, smaller issues.

So what is the big picture item that, across this panel, we can agree on?

And the plug I would put in would be a debt-to-GDP target that had enforceable mechanisms. It has to be revenue; it has to be dealing with mandatory spending growth. But that—to bring people together, I have got to have a common set of rules and goals. If we all agree we can do better, tell me what that proposal is you would make. Dr. Bernstein?

Dr. BERNSTEIN. Well, I think you said it. I am not going to give you a number or a debt rule. What I am going to say is that I think both sides agree that our infrastructure, our public infrastructure, is really in trouble. And I must say I don't understand, especially given how low interest rates are, why we are not doing more in-

vestment in that. Maybe you can help me understand that. But that would seem to be an area of bipartisan agreement.

Mr. WOODALL. Now, given that everyone testified that they thought interest rates would remain low for some time to come, I thought we had a sense of urgency to get to work on taking advantage of low interest rates. I feel less of that sense of urgency, listening to you all. I sometimes think we need that sense of urgency. If interest rates were 5, 6, 7 percent on federal debt, I promise you we wouldn't be having the debt conversation we are having now. We have made it too easy.

Dr. Wray, you have been the target of a lot of conservative attention. But that also makes you someone who could help me bring my colleagues with me to the center. What is your counsel?

Dr. WRAY. Well, we have to remember that the debt ratio is a compound term. And if we increase GDP, and if we get growth going, the debt ratio will come down in two ways. High growth increases tax revenue tremendously. It reduces some kinds of transfer payments. So total spending goes down. And second—so the debt is smaller. And second, we are increasing the denominator. GDP is higher. And that is the best way to reduce the debt ratio.

And that is typically what has happened in the past. Our debt ratio was 100 percent in World War II. And then it declined over the whole post-war period until relatively recently, when it started going back up again to 80 percent.

Mr. WOODALL. I was looking through each of your written testimonies, looking for that dramatic change in productivity, women entering the workforce, all of those dramatic factors that led to economic growth over the past 50 years. I didn't see any of those transformative things, which had me worried about repeating that.

Even at these high consumption—our debt is not fueling the investment we have talked about. It is fueling consumption. It is fueling transfer payments. Even at these levels that—you believe that we can only deal with one side of the equation, which is growing GDP? I love to grow GDP; I just don't think it is—I don't think—I am a growth guy. I can't do it by growth alone, I have got to have revenue, I have got to have reductions in spending.

Do you disagree with that, fundamentally?

Dr. WRAY. I don't think we need reductions of spending, no.

Mr. WOODALL. Thank you, Mr. Chairman.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentleman from Virginia, Mr. Scott, for five minutes.

Mr. SCOTT. Thank you, Mr. Chairman.

Dr. Bernstein, you mentioned the offsetting costs of climate change. What did you mean by that?

Dr. BERNSTEIN. I could cite various studies that project the costs of climate change, in terms of destruction of property, destruction of businesses, destruction of homes. But I don't have to cite studies. You can just open the newspaper. We see much more volatile weather that scientists tell you is related to climate change; droughts; fires. That is what I was referring to.

If we are going to contemplate the cost of doing something about that on the budget side, we must net out the cost of not doing something about it, which are in the hundreds of billions, according to estimates I have seen.

Mr. SCOTT. Thank you. In terms of fiscal responsibility, they say we should run the budget—run the federal budget like families run their budgets. Isn't it true that a fiscally responsible family will routinely go into debt buying a house, buying a car, and sending children to college? What are comparable good debt on the government's behalf?

Dr. BERNSTEIN. I think the analogy that the government is like a family is extremely misguided in this regard. In fact, it goes the other way. When families are tightening their belts, say in a downturn, the federal government, which has the ability to borrow—and, again, at particularly low rates—should be loosening their belts.

So the idea that the federal government would contract when the private sector is contracting is a recipe for austerity, more specifically, for—more pain for the people least insulated from the pain, the most economically vulnerable families.

Mr. SCOTT. But families do go into debt for houses. That is not considered fiscally irresponsible.

Dr. BERNSTEIN. No. I mean I think that is a good example of the kinds of debt distinctions that I am making.

I mean people will go into debt for a college education, for a housing—it—you know, it really gets back to this idea that growth rate versus the interest rate—and that applies to families, too.

Why does a college education often make sense to people? Because—a college loan often make sense to people? Because you are becoming indebted in the interest of improving your earning power. And so that is the kind of calculation that I think families make, and governments ought to, as well.

Mr. SCOTT. Now, it has been pointed out that there is no noticeable difference in trajectory in unemployment rate and jobs created after the \$1.5 trillion tax cut, an economic plan about twice as expensive as the Obama stimulus package, which had a profound change in trajectory in terms of jobs and unemployment rate.

Why did the Trump—why was the Trump initiative so ineffective?

Dr. BERNSTEIN. Well, first of all, I have noticed many Members citing \$1.5 trillion cost of the—the CBO says \$1.9, and that, I think, is more accurate.

Mr. SCOTT. I think it is a question of whether you add the interest in, I think, is the question.

Dr. BERNSTEIN. The answer—my answer to your question actually comes to predictions that not just myself, but were widely made before the Trump tax cuts, that it would not have anything like the investment effects that were projected. And the reason why many of us thought that was because the cost of capital was already so low, and that firms were sitting on large piles of retained earnings.

So there was no reason to think that, as an economist would say, there was a large elasticity to tap there. That is, firms had access to all the investment capital they needed, we made it a bunch cheaper by cutting taxes, and, guess what, they didn't respond on the investment side. Once again, supply side, trickle-down fairy dust didn't work.

Mr. SCOTT. You mentioned debt held—foreign-held debt went from 2 percent to 30 percent of GDP. What is the problem with that?

Dr. BERNSTEIN. Well, the problem with that is that more of our national income leaks out to lenders from abroad. So if you are concerned about one of the costs of increasing debt, meaning that income that we produce in this country ends up in the pockets of lenders from other countries, you know, that is a germane concern at 30 percent, not so much at 2 percent.

Mr. SCOTT. And interest rates are set on—we talk about crowd-out, and we used to be concerned about the federal deficit. Is our interest rate set on a domestic basis or an international basis?

Dr. BERNSTEIN. I would say very much on an international basis. But I would also stress that the Federal Reserve, or the central bank—and not just our Central Bank—are very much in the mix. And, as I point out in my testimony, if you average out over the last decade, the central bank's interest rate has been .6 percent, on average. So they are in the mix, as well.

Mr. SCOTT. And if the international rate went up, an international rate over which we have very little control, what would happen?

Dr. BERNSTEIN. Well, that is one of the reasons why I argue deficits matter, because we are exposed with a larger stock of debt to that kind of problem.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentleman from Oklahoma, Mr. HERN, for five minutes.

Mr. HERN. Thank you, Mr. Chairman. I am thankful today in the House Budget Committee that we are actually talking about taxpayer debt for the first time. I have been here a little—one year, and it is the first time we have talked about it. It is encouraging.

But I am also discouraged to hear that, you know, that we don't think deficits and debts matter when we talk about the monetary theory, and that countries that can print their own money can just take care of their issues, and we don't really have a responsibility.

Last week we had the opportunity to talk to the Fed Chairman, Jerome Powell, sitting in your seat. And I asked him specifically about the modern monetary theory. And his—he stated, "The idea that countries that borrow in their own currency can't get into trouble is just wrong. And the idea that debt does not matter is also wrong."

Additionally, we have—more than 40 leading economists were asked whether they agree with the underlying tenets of modern monetary theory by the University of Chicago's Booth School of Business. One hundred percent of the respondents disagreed or strongly disagreed with the economic principle.

I don't believe that Members of Congress are naive enough to believe in MMT as a way of servicing our debt. I believe that this is just a way to justify their multi-trillion-dollar wish list. They simply cannot face up to the reality that their free proposals like the Green New Deal, Medicare for All, the Green Housing Deal are not at all free.

When asked about how to pay for these programs, they can't get a straight answer. Some just argue that "We will." Some settle on

the convenient MMT. This is not realistic. The Green New Deal, Medicare for All, and the Green Housing Deal are not realistic, and our kids and grandkids will pay the price tag. By pretending that we can afford these outrageous proposals, we are indebting our future generations to pay for them all.

We have all talked about the 2017 Tax Cut and Jobs Act of being just so destroying of our economy. Would you all agree that we are—this year we will have the highest revenues in the history of this country?

Dr. BERNSTEIN. Not nearly as a share of GDP, which, in my view, is the right way to—

Mr. HERN. But we will—from a pure dollar standpoint, we will have the highest revenues ever in the history of this country. Is that correct?

It is yes or no. I mean it is not hard. You guys are economists, all doctorates, the last time I checked.

Dr. BERNSTEIN. That statement is probably true every quarter in our history, except when we are in recession.

The relevant measure is as a share of GDP. I mean this is a—this is not a partisan statement. This is a CBO view. And as a share of GDP, we are collecting 16.3 percent of revenues in fiscal year 2019. That is a historical low point.

Mr. HERN. So, you know what? I have been here one year. I will tell you that, no matter what the revenue is, that we will figure out how to spend it. I mean would you agree with that, as well?

Dr. BERNSTEIN. Yes.

Mr. HERN. Okay, good. We got a yes-or-no on that one, for sure. Yes, we will figure out how to spend it. There is no sense of fiscal accountability in this House.

And so, to say that it is wrong to put a little bit of money back in the people's pocket—because I will tell you, back in the hinterland, when you get out of the beltway, they don't believe we can control any kind of spending. And to put money back in their pocket is not wrong, because they don't just go bury it in their backyard, contrary to what you would like to make everybody believe. They go spend it in their economies, their local economies, which pay taxes to fund their schools, to fund their roads, to fund everything else in their area not dependent upon the federal government.

Those are just facts. You can agree or disagree, but those are facts.

You know, as we go forward here, I like what you said, Mr. Bernstein, about we have good debt and bad debt. In fact, I introduced a pro-growth budgeting act two weeks ago. It will never see the light of day, because, contrary to popular belief, most people here don't believe that you actually invest using debt.

And when we talk to the ordinary people in the world, the people that are not in this room—except for our guests, I appreciate our guests being here—but those of us that are here talking at each other, when you talk about debt you have some reasonable expectation of paying it back. That does not occur in Congress. You borrow money and you never pay it back. It has only been paid back four times in—four years in a row, 1997, 1998, 1999, and 2000—and

2001, a little bit. But since then we have been running deficits every year, which means we are not paying down any debt.

So we have a different definition of debt in this world up here. So I would encourage you to look at that and give me your thoughts because it says if we spend \$1 or borrow \$1, it is being borrowed and spent to actually grow the economy. I would encourage you to look at it. It has got a lot of reviews, a lot of people signed onto it. Not Members of Congress, but a lot of people signed onto it. So, anyway, I would like you to take a look at that.

You know, as we go forward here, I would like to talk about the Green New Deal, Mr. Wray. If it is not \$93 trillion or \$83 trillion, what is the number that we are talking about? Because it is getting used a lot around here. I know you guys, you see this, and you hear about it, and it is in the press. But in our hearings, every hearing, every committee, 22 committees, has some component of a conversation of Green New Deal. Can you give me just your best guesstimate of what that is going to cost?

Net, net. I get it, you know, you are going to save money and all that stuff, Mr. Taylor and others. But what is that number?

Dr. WRAY. As I said, it depends on what you include in the Green New Deal, and it could be about 5 percent of GDP.

Mr. HERN. So only \$100 billion a year? Is that what you are saying? Is that roughly—wow. Trillion? Trillion dollars a year. So a trillion versus \$9 trillion?

Dr. WRAY. Yes.

Mr. HERN. That is a big difference, I mean—

Dr. WRAY. Sure.

Mr. HERN.—because up until now I have not really heard many people argue the \$9.3 trillion a year number that—

Dr. WRAY. Yes.

Mr. HERN. So—

Dr. WRAY. I have looked at the \$93 trillion number, which is an outlier. And they don't count reduction of spending on, say, the destructive activities.

Mr. HERN. So you are saying the \$8.3 trillion is what we would save, versus spending on net trillion. That is—man, I don't know. That is a pretty good return.

Dr. WRAY. Well, as I said, that was an outlier.

Mr. HERN. Yes.

Dr. WRAY. Other estimates are nowhere near that number.

Mr. HERN. Obviously, we don't have 20 minutes to ask questions. But Chairman, I thank you for your indulgence.

Chairman YARMUTH. I always enjoy giving you more time.

Mr. HERN. No, thank you, Mr. Chairman. I really appreciate it. I thank the witnesses for being here.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentleman from California, Mr. Khanna, for five minutes.

Mr. KHANNA. Thank you, Mr. Chairman. Thank you to the distinguished panel. I want to welcome Professor Taylor, who is from the Bay Area. I taught as a lecturer in economics at Stanford for four years. And while I am more with Professor Krugman than I am with you, Professor Taylor, I will say that I had students in my

class who wore a tee shirt with your face on it, and the Taylor Rule. So you certainly were a popular professor.

I want to ask the panel about our strategy that allowed us to win the Cold War. I think we forget that, post-Sputnik, our government did great things. We created satellites. We remain the only country that has ever sent someone to the moon. We invented the Internet. We invented navigation systems.

And I would argue that there were two comparative advantages to American policy: one, we had a policy of talent acquisition from around the world. If you were creative, smart, entrepreneurial, we wanted you here; and two, we had almost 3 percent of our GDP in fundamental science and technology investment.

And so I would like to ask the panel, putting aside partisanship, if we want to lead the 21st century against China, would you recommend, as a growth strategy, that we invest in smart infrastructure, smart broadband, smart new technologies, quantum computing, artificial intelligence, new fields of biology? And would you recommend that we have a policy of talent acquisition? Dr. Bernstein or Dr. Taylor, either.

Dr. TAYLOR. So, thank you, fellow professor.

Mr. KHANNA. Lecturer. I never would be tenured at Stanford.

Dr. TAYLOR. So I think you are correct, that what we did is—in technology is amazing. The Apollo 11 movie, it is a fantastic thing to watch. I encourage everybody to do that. It is the private-sector, public sector working together, and I think that is admirable.

I think we need to find out more ways to do that. I think it is partly working with the private sector. It has encouraged them. You know the private sector very well, and it is not bashing them, it is encouraging them, because it is very much part of our society and why we are successful.

I do think the question of crowding out of discretionary spending, what you are talking about, is other kinds of spending. I could see these projections of spending as a shared GDP, they are just going through the roof. And that means that other things, which haven't even come up yet in this hearing, are growing very rapidly, because we know that funding for the things you are talking about are not going.

So I think the focus should be what are you going to do to control the growth of those items, because they are crowding out the things that you want and we want. That is what is happening. And it is not really benefitting people very much.

So that is where I would look. What is—why is that spending path exploding? It is exploding. What can you do about that, and what can this Budget Committee do about it?

It is probably the targets that Mr. Woodall suggested. What should the—maybe 42 percent of GDP, like we had averaged over 50 years is okay. What is wrong with that? And have a deliberative process of how do you get to that.

So I would suggest having an overall view would be very important.

Mr. KHANNA. Dr. Bernstein, do you want to—

Dr. BERNSTEIN. Very quickly, I would say that I wouldn't characterize our spending in the areas that John did as exploding. I would characterize them as completely predictable, given pressures

from demographics and health care costs. And I do think there are savings to be had there in health care reform.

To answer your—let me just give you one granular answer to your question. And I know, Congressman, this is—I think this will appeal to you, because I know that you think about this in a granular way.

So green technology wasn't on your list, but I am sure it was implicit. And think about battery storage. Now, I happen to know that—I pay attention to this—countries are now trying to figure out—kind of competing, fighting for who is going to dominate the global market when it comes to storing energy in battery technology. And that is a fight that we are not even in, and I think it is extremely consistent with your view.

Mr. KHANNA. If I could ask one more quick question to the panel, putting aside your view on the wealth tax, I ran around—across a statistic that 87 percent of American wealth is in the United States, 87 percent. Only 2 percent is in the Cayman Islands, 1.5 percent in Britain, 13 percent overseas.

And so people who say, okay, if you have a tax on wealth people are going to leave, remind me of my friends who said if Donald Trump was going to win the presidency, they would leave America. They didn't, because this is the best place to live in the world. And don't you think this is the best place, still, to invest in the world?

Dr. BERNSTEIN. That is a rhetorical question. Yes.

[Laughter.]

Yes, I do, and I think you make an interesting point that hasn't really been brought to bear on the wealth—I mean I think it is true that, given the mobility of wealth, and proclivities for avoidance and evasion, we do need a structure that holds hands with other countries to monitor that. But your point is well taken.

Chairman YARMUTH. The gentleman yields back. I now recognize the gentleman from Pennsylvania, Mr. Meuser, for five minutes.

Mr. MEUSER. Thank you, Mr. Chairman. Thank you all for being here with us.

So the federal government does have a serious spending problem, as do state governments, truly trying to be all things to all people. Even just hearing today, it sounds like he wants the government to get into the battery business.

We don't so much have a revenue problem. According to CBO projections, the federal government's revenue will total \$46 trillion over the next 10 years. Revenues will grow by 63 percent, about a 6 percent range. Very healthy. That is—and last year our revenues grew about 7 percent, and that is after the Tax Act, which had extraordinary results.

So—but, however, mandatory spending over the next 10 years is projected to increase by \$3.1 trillion to \$5.3 trillion, a total of \$36.5 trillion over a 10-year period, almost as much as it will be—total as much as revenues. So without even discretionary, which will grow by \$14 trillion, we have already used up, just in mandatory spending, all the revenue growth.

So clearly, we have a spending problem. And that would put us in the neighborhood of a \$10 trillion—you know, 36 plus 14—deficit, or debt, in addition to where we currently are. So—and this

would lead to 79 percent of GDP today to 144 percent in—within a 10-year period.

So the way I look at it is we have two budgets, we have discretionary and we have mandatory budgets. Discretionary spending is up \$70 billion in 2018. Revenues, however, are also up \$70 billion. So just looking at that one budget, we have a balanced budget. Our problem is, as stated, with mandatory spending.

So what we have, though, is many proposals to add to our mandatory spending, such as Medicare for All, which has a \$32 trillion estimate cost over the next 10 years.

So, Dr. Taylor, I will ask you, I will start with you. In your opinion, how do you think the government would have to finance this program? And how high would taxes have to be raised to meet such a large level of additional mandatory spending?

Dr. TAYLOR. I think, if it is just in addition, it is not going to work. You have to go the other direction.

The simulations, the calculations, as you say, there is—mandatory spending is going very rapidly. It has got to be controlled. You don't have to reduce it, you have to slow the growth, compared to growth of GDP. There is proposals out to do that.

I think there would be—more discussion of those proposals would be very worthwhile. Much of the discussion is going to the opposite direction, the Green New Deal, et cetera, Medicare for All. I haven't seen those where they are really saving money. I know there are some people that argue that it would be.

But there really has to be some attention given to this—I would—because the projections, at least, are explosions of spending, and it is largely because of the so-called entitlement problem.

Mr. MEUSER. All right. Has there ever been a country that you can think of in history that has spent its way into prosperity, and increased taxes in order to pay for more government-run programs?

Dr. TAYLOR. I think the history is quite clear, that a solid fiscal policy, where you are balancing the budget as close as possible over the cycle, you have deficits and recessions and slumps, you have even surpluses sometimes and sometimes it works pretty well. It has worked well for the United States. When we got off of that, it has not worked very well.

So that should be the goal. We are a long way from that now. But some of the reforms that would go in that direction—I would actually encourage you to use CBO. Why doesn't CBO have a model that answers the questions about the short run and the long run?

Much of the debates and the focus is, oh, you can't even reduce the growth of spending, because it is going to be a hit to the economy. I don't believe that is the case. I think you can. And reasonable calculations, the models show that it is a benefit.

So I would encourage that part. Maybe it deals with some of the partisanship that we are seeing already.

Mr. MEUSER. Yes, agreed. I want to ask you this, then. The tax cuts that took place, they are being debated, they are saying they were not helpful. And clearly, we have an unbelievably booming economy. And they are being compared to the shovel-ready stimulus program from 10 years ago, which was—the data shows was relatively useless, and waste.

Can you just comment on the historical results that come from tax cuts, putting money in people's pockets, and gaining the multiplier effect, versus the federal government thinks it knows best what people's money—and on projects that are so-called shovel-ready and are presented based upon, very often, who knows who, and—which is also a symptom of a Socialist government?

Dr. TAYLOR. Thank you very much. I have written a lot on the stimulus packages, both in 2008 and later, the stimulus packages of President Obama. I don't think they had the impact that some people do. I think it actually was negative, in many respects. The states didn't spend the money as they thought they would, they pocketed the money. A lot of it was transfers. It really didn't work very well, and I have lots of studies that show that is the case.

I also am on the record for showing and arguing that the 2017 tax reduction reform was beneficial, and is not just the 35 to 21 percent, it is a lower rate on small businesses, it is expensing of investment. It is the kind of things that we know, at least in our theories—and I think it is true in reality—that more investment, more tools, better tools, better things that workers have to work with, they are going to be more productive, and their wages will go—that is the idea, and that is what is built into the CBO long-term calculations that I referred to before.

So I don't think economics has changed. I think it is basically working quite well. We can see anomalies, like the low interest rates that we have seen. But—negative interest rates around the world. But basic economic forces are still working very well, and I think we need to emphasize those more.

Mr. MEUSER. I apologize for going over my time, Mr. Chairman. I yield.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentleman from California, Mr. Peters, for five minutes.

Mr. PETERS. Thank you very much, Mr. Chairman, and thank you to the witnesses for being here.

I want to—I keep hearing about the Green New Deal. It is a straw man. Fewer than half the Democrats have sponsored it. It has already been killed in the Senate. So I don't think we should spend a lot of time talking about it. I mean there are component parts of it that have to deal with climate that I certainly think would be worth talking about, but it has become just this straw man, and it seems to end the discussion and not lead to much nuance.

The—with respect to nuance, I get the sense that there is kind of a consensus that it might be appropriate to debt-finance the kinds of things that would generate a return. So that might be infrastructure, a training investment in education for people who could add to their earning potential, basic research.

Of course, we did not develop GPS through the government, we did not develop the Internet, but we led the research that allowed the private sector to invest in those things, and I think, you know, it certainly was good for the country and good for the United States to be the locus of that, I think, as well, as I think your other statement implied.

But I do want to talk a little bit about bad debt. And I suspect that bad debt—and maybe, Mr. Bernstein, you could answer this—might be financing or borrowing money to pay your ongoing expenses, whether it is—particularly the ones that are non-cyclical.

So, if you think about the social benefit programs, I mean, is this something that we should be concerned about? Is it appropriate? Is that what you mean by bad debt?

Dr. BERNSTEIN. You know, it isn't. And the reason—

Mr. PETERS. What is an example of bad debt, then?

Dr. BERNSTEIN. Well, I think that—so I keep raising the tax cuts from my perspective. We don't have to rehearse that.

There is another one, though, that I haven't had a chance to talk about, and it gets to something you were just raising, which is, you know, the fact that other countries ensure their full populations for about 10 or 12 percent of their GDP, and we do so for 18 percent of our GDP. So call that 6 to 8 percent of GDP that is, you know, basically waste in the delivery system of the way we provide health care. So I think we could slow the cost of health care growth.

Getting back to your first question, though, I would want to do so in a way that protects vulnerable people.

Mr. PETERS. Okay, but—so you really—so would you think it is appropriate for us to debt-finance the cost of health care?

Dr. BERNSTEIN. Oh, well, we very much do so, of course, and yes, I think these are—I mean, whether it is health care or retirement security through Social Security, I mean, these are clearly essential public goods. And we are not raising enough revenue to pay for them. So yes, I consider that to be reasonable debt in this climate.

Mr. PETERS. Okay. I haven't found an answer yet, I don't think, but I will ask Mr. Taylor.

You advocate for the 2017 tax cut. Should we be cutting taxes more?

Dr. TAYLOR. I think we should be looking for tax reform that promotes more economic growth.

Mr. PETERS. So the—

Dr. TAYLOR. It also deals with other problems, but I think it is still an important issue for the United States.

Mr. PETERS. The knock on that bill was that—not that it didn't help some people, but that it helped a lot of people who didn't need help, and that by—if you give money back to people who already have swollen bank accounts and have a lot of savings, that is not going to generate the kind of economic activity.

And, in fact, all the economists surveyed by the University of Chicago—I think 38 of them—agreed that it wouldn't pay for itself. And I think even Mr. McConnell said—admitted we had to generate 4 percent growth in the economy to pay for those tax cuts.

So my question—and I guess it is rhetorical—is where does this end? And if our revenues are at a low point compared to GDP, isn't it really time to think about how to get more revenue in? And maybe should wealthy people pay more, the ones who have plenty of earnings to part with?

Dr. TAYLOR. I think it is time to—if there is something—

Mr. PETERS. More directly, what would you do, as—for American tax policy? What would be your next step to make sure—

Dr. TAYLOR. I would consider more ways to reform. There was very little done on the personal side. There could be done more on that [sic]. There is—the tax cuts are not permanent, anyway. They are going to disappear.

They—again, based on the basic economic theory, you want to have more encouragement of investment, because that is where more productivity comes from.

Mr. PETERS. Right.

Dr. TAYLOR. More productivity leads to higher wages and higher incomes. It is just sort of the most basic thing in economics. You don't want to discourage businesses from investing. You don't—you want to encourage them, because that will make their workers more productive in the system, as it has for many, many years. Another—

Mr. PETERS. We should tax people at some level. How would I—

Dr. TAYLOR. Yes, of course.

Mr. PETERS.—as a policymaker, determine what that level should be?

Dr. TAYLOR. I think the first thing is what do you want your spending level to be. And there is not a discussion about that. And then you have a way to finance that. I think there is reasons that sometimes you have a deficit—

Mr. PETERS. Assume I wanted my spending level to be what it is today, which is \$1 trillion more than we are taking in. What would I do to raise that—

Dr. TAYLOR. I think the projections of spending are that it is—I don't know, 28 percent of GDP is the projections.

Mr. PETERS. Well, I—

Dr. TAYLOR. So that is not going to work. So you have to—

Mr. PETERS. Assume it is 20 percent, and right now I am taking in 16 percent. What should I do to tax policy to raise that money?

Dr. TAYLOR. I think the tax cut that is in place will raise more. This notion that it is not paying for itself is not really true, if you look over the long term. It is true over maybe a couple years, or three years, but it is not true over the longer term. Growth increases. You don't have to be—

Mr. PETERS. I am out of time. But maybe I would ask you in writing.

Like, if I say 20 percent is a historical level at which we spend, invest, and we are taxing at 16 percent—

Dr. TAYLOR. Well, you—I think the Budget Committee of the Congress has to decide what is the right level. There is—

Mr. PETERS. I am not a professor at Stanford. That is why I ask you a question about how I would answer that question.

I mean we all would—we are all people of good faith who want to figure out what the right answer is. But, you know, all—I never hear from people, you know, what the appropriate way to set that number is. And it strikes me that some people are being under-taxed, and they are not the people who are paying payroll taxes.

So I guess we will have to continue this discussion later. But I would really like to know the answer to that question.

Dr. BERNSTEIN. Can I submit a memo on that to you?

Chairman YARMUTH. Absolutely, you may.

The gentleman's time has expired. I now recognize the gentleman from Texas, Mr. Crenshaw, for five minutes. Oh, sorry, no, the gentleman from Ohio, Mr. Johnson, for five minutes.

Mr. JOHNSON. Thank you, Mr. Chairman. And I am really enjoying these—thanks to the witnesses, by the way, for being here. I am enjoying these conversations today. You know, we are talking about the un-sustainability of the federal debt. And yet this Committee, that is responsible for producing a budget to address our spending, has not done one.

So, Mr. Chairman, I am going to submit to you that we got to get back on track on this Committee and produce a budget. That is our primary responsibility.

You know, the federal debt is an unsustainable trajectory. We all know that. The current debt burden on every American is \$70,000. Within three decades CBO says that it is going to be around \$248,000 per American, or almost \$1 million for a family of four.

So mandatory spending, including interest payments on the debt, is projected to increase from \$3.1 trillion in fiscal year 2019, to \$5.3 trillion in fiscal year 2029. This is a \$2.2 trillion—or 71 percent—increase.

So, Mr. Taylor, do you believe we should be focused on stabilizing current important programs, such as Social Security and Medicare, which—we know those are part of the mandatory spending that is driving the debt, right—so that we can make sure that they are preserved and strengthened? Or should we focus on expanding these programs and creating a bunch of new programs on top of them?

Dr. TAYLOR. I think the most important thing is to stabilize, in the sense of have them not growing faster than GDP. And that requires reform. And that requires projections. And I think they will work better in that case.

I think there could be more focus on this Committee, the other Committees of Congress, on finding ways to reform those programs. That is what I would focus on. They are crowding out other things that have been mentioned already in this room.

And then, once that is determined—that is the job of our society, our democracy, to determine that—then figure out about the financing.

And there are reasons why sometimes you have deficits and sometimes you have surpluses. Economists wrote about that all the time.

But I think the main thing is what should be the spending priorities, and I believe, now that it is—the so-called entitlements are growing too rapidly, many people have thought that—the same, so figure out a way to reform that. There are proposals out there. And that is the way I would go about it.

Mr. JOHNSON. Yes, and you used that ugly word, “entitlements,” because I can tell you the people where I live, where I represent, my 80-something-year-old mother, before she passed away, they hate that word, “entitlements,” because they invested in those programs. They view those programs as responsibilities of the federal government.

Dr. TAYLOR. Absolutely.

Mr. JOHNSON. And we have let them down by not doing budgets, by not managing the spending so that we protect those programs.

You know, interest payments on the debt are already high, and are projected to grow. This year interest on the debt is projected to be \$390 billion. By 2029 it will more than double to \$807 billion. Under CBO's longer-range forecast, interest on the debt will rise to 29 percent of federal revenue by 2049.

So, again, Mr. Taylor, are you concerned that an ever-rising federal debt and its associated interest payments will crowd out other important federal spending priorities such as defense, research, health care, and meeting our obligations that American people have paid into?

Dr. TAYLOR. Absolutely. I am concerned. That is why I focused in my testimony on the cost of doing that. I think it is the cost of the economy. It is—CBO agrees it is a long-term cost. I think it is also a short-term cost and would encourage CBO to adjust their analysis to capture that, as well.

But it is fundamental. It is really the most important thing that—I look at the budget. I don't know why it is going in the direction it is going. We need to change it, need to make it more—more sense, from an economic perspective.

Mr. JOHNSON. Okay. In my last 30 seconds, you know, some would say that modern monetary theory simply says that Americans shouldn't worry about how much we spend, because the dollar is the currency of the world, and because America owns the dollar, we just print it when we want it.

So my question to you is do you worry that implementing this kind of philosophy, the MMT, could cause a loss of confidence in U.S. financial markets?

Dr. TAYLOR. Yes, I have have worried about it for a number of reasons. It is really going back to policies that we know hasn't—haven't worked in the U.S. I gave my example of the 1970s, but it is going back to countries which have not been successful. It is high inflation.

I would like to see, at least, somebody run through particular proposals that are along these lines with some models, with the CBO model, so there can be some, at least, discussion about it. But right now it seems to me it is going back to policies which we know in history have not worked.

Mr. JOHNSON. Okay. Thank you, Mr. Chairman. I yield back.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the gentlewoman from Illinois, Ms. Schakowsky, for five minutes.

Ms. SCHAKOWSKY. Thank you so much. I wanted to go back to climate for a minute. I think it is, perhaps, the greatest challenge facing the 21st century.

We have just estimated 11 years to cut emissions by 45 percent. We have to achieve carbon neutrality by 2050 to stop temperatures from rising above 1.5 degrees centigrade. But creating a clean—but I see—but creating a clean economy will require sustained government investment. We have heard you talk about that.

In a Roosevelt Institute report economists Jay W. Mason and Mark Parke argue that the government can afford to finance de-

carbonization plans of at least 5 percent of GDP, as you mentioned, Dr. Wray, without causing substantial economic disruption.

So Mr. Bernstein and whoever else wants to comment on this, given our current economic conditions of persistently low interest rates, as you had mentioned before, and low inflation rates, would you agree that it is sound fiscal policy for the government to invest in a clean economy?

And let me also ask would you also agree that the economic and social cost of not addressing climate change is—climate change are far greater than any risk to incurring additional debt?

Dr. BERNSTEIN. I will be brief. I would like to hear my other panelists comment on this.

Ms. SCHAKOWSKY. Sure, thank you.

Dr. BERNSTEIN. Yes. As I have stated throughout the hearing today, we can't make this a one-sided equation. As you correctly pointed out, Congresswoman, we have to factor in the cost of the environmental damage from doing nothing. And if you simply look at your front page, those costs seem to be growing by the month.

And I guess my argument would be we can't afford not to do this. And to talk about this purely as an expense on businesses or something like that is to miss both the opportunity for game-changing investments, where, I believe, our country should play a role, and again, the costs of not doing enough.

Ms. SCHAKOWSKY. Yes, Dr. Blanchard?

Dr. BLANCHARD. There is a marvelous cartoon. It takes place in 2050. The world has become uninhabitable. But there is an old man who talks to a young man and he says, "Yes, it is uninhabitable, but look, we have reduced the debt."

I think that is a very deep cartoon. It is clear that we need to do something about global warming, that the cost will be high. The question, I think, is not whether it should be done. It should be done. The question is how much should be financed with taxation, additional taxation, and how much should be financed by debt.

I don't think there is a simple answer to that. Some of it can be financed by debt, but to a large extent what we do to fight global warming has very large social returns and very low financial returns to a state. And, therefore, if it is all financed by debt, it will complicate life later. So I think it is a mix.

There is no question that we should be doing it, and partly finance it by tax and partly financing by debt. The part which would be financed by debt would be called, I think by Jared, good debt. This is debt to improve the future.

Ms. SCHAKOWSKY. Dr. Wray?

Dr. WRAY. Yes. Can I add? Look, according to the scientists—and I am not one of those—we have the technical know-how, okay?

So the question is can we release the resources from current uses, plus put unemployed resources to work to tackle climate change? And I think the answer is, clearly, yes.

If it is 5 percent of GDP and use that as a measure of the resources we need, this is absolutely doable. Think about what we did in World War II. We had to move 50 percent of the nation's production to fight the war. We did it. The debt ratio went to 100 percent. The deficit reached as high as 25 percent. We managed to

keep inflation below 10 percent at the peak. And most of the years much below that.

We can, if necessary—I completely agree with Professor Blanchard—we may find we are going to need a tax increase. Or we may find that we need to postpone some consumption, to ask the workers to make a sacrifice for 10 years in order to enact what we need to do to turn around this trajectory of annihilation. And we will reward you later.

That is what we did in World War II. We gave benefits, Social Security, retirement, health care. All those things were promised at the end of the war. Workers got them. How did we come out of that experience with 100 debt ratio? The golden age of U.S. capitalism. That is what we got from that.

Ms. SCHAKOWSKY. Thank you. I yield back.

Chairman YARMUTH. The gentlewoman's time is expired. I now recognize the gentleman from Texas, Mr. Crenshaw, for five minutes.

Mr. CRENSHAW. Thank you, Mr. Chairman. Thank you, everyone, for being here. I want to clarify some things, because there has been some creative use of semantics about the debt.

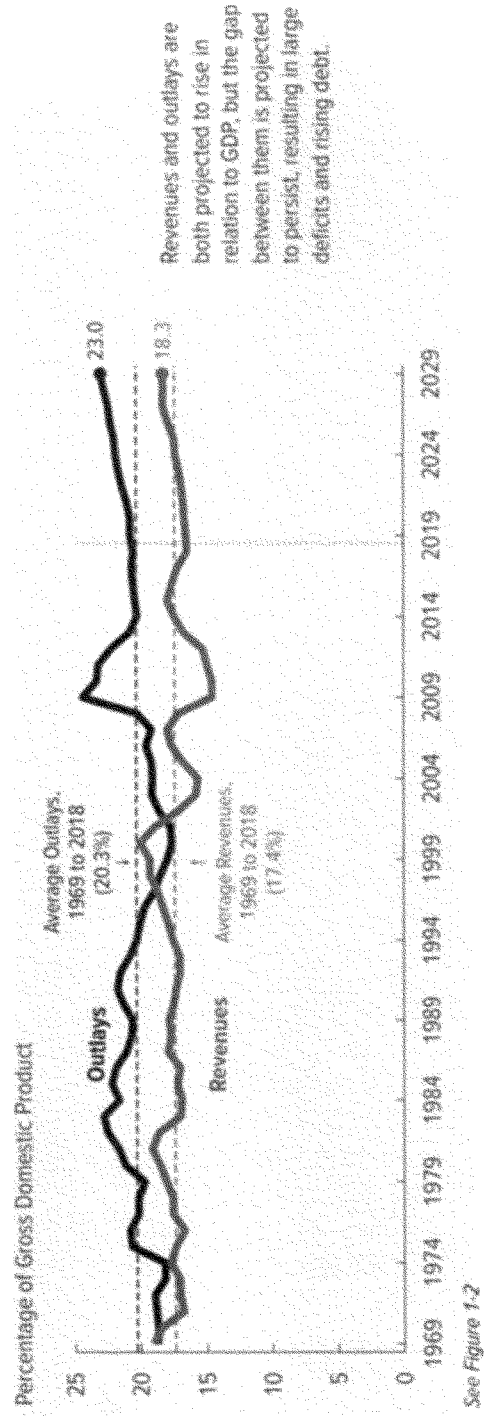
So, over and over again we hear that we aren't taking enough money from the American people, and the businesses that they create. If we let them keep their money, it is apparently classified as bad debt for the government, which is quite the take.

Dr. Bernstein, as you stated, apparently Americans spending more of their money because of the tax cuts is not useful investment, never mind that GDP growth rates have increased since the tax cuts and, according to the Fed and CBO, it has been largely due to consumer spending and some business investment. But I guess that isn't useful, because there is this belief—and it is a belief—that only the government can possibly make smart investments.

This is an odd thought, this notion that our debt is a result of not taking enough of our constituents' money, as opposed to us spending it on unsustainable entitlement programs, which, by the way, as a share of GDP, is the only category that is changing radically.

So federal revenue, in absolute terms, has continued to increase, increase by 4 percent last year. And as a share of GDP, it dropped, as Dr. Bernstein has noted, only slightly recently. But it is on track, as this graph notes.

[Graph].



Mr. CRENSHAW. It is on track to be back at historical levels within just a couple of years.

So if we don't cherry-pick the data, we see that we aren't that far from average federal revenue.

What has happened in the last couple of years? The fastest-growing wages have been in the bottom quintile of earners. And it is not even close—child tax credits have doubled, which matters to low-income earners. Businesses are hiring, which matters to all people, not just the 1 percent. Eighty percent of taxpayers are paying less this year, and we all know that it is the wealthy earners in high-tax states who ended up paying more. Let's stop pretending otherwise.

And this notion that we are regressive is interesting.

Dr. Bernstein, how does our country compare to others as it pertains—others in the OECD—as it pertains to progressivity of the tax code? Where does America stand?

Dr. BERNSTEIN. Pretty low, not only in terms of progressivity, but also in terms of the amount of tax collection of the federal government.

Mr. CRENSHAW. Yes, well, the OECD data completely disagrees. In fact, they have us at number one.

Dr. BERNSTEIN. Okay. So that is including state and local. You can't do anything about—

Mr. CRENSHAW. It includes all taxes?

Dr. BERNSTEIN. Yes. You can't do anything about state and local—

Mr. CRENSHAW. So number one. I mean—

Dr. BERNSTEIN. Federal taxes were made far more regressive by the tax cut. I mean that is not a debatable—

Mr. CRENSHAW. But, as a country, we are number one. And it is not even close. Ireland is second, and it is not even close—

Dr. BERNSTEIN. Number one in what?

Mr. CRENSHAW. Progressivity of the tax code. Okay.

Dr. Taylor, you said the tax cuts have been effective.

And I will give you this data, Dr. Bernstein, if you would like, to add context to the discussion.

Dr. Taylor, you said the tax cuts have been effective. A lot of others disagree with you. But how so? How have they been effective?

Dr. TAYLOR. Well, first of all, they have had increase in growth since they were passed. Growth has been higher in 2017 and 2018. Towards the end of 2017 it was passed. It was passed relatively quickly. Nobody think it would happen [sic]. But I think it has been a beneficial thing.

I think, long run, you will see more effects. There is a slow-down now in the economy. It could be due to other things; it could be due to this growing debt. But I think, ultimately, it is beneficial, and that is what theories show, the models show, the data show.

Mr. CRENSHAW. Thank you. And look, it doesn't actually seem like any of you are advocating for unlimited spending. That is not the—that is not what I am taking here.

And I do believe, Dr. Bernstein, you said in your statement that we would be better off, actually, decreasing our deficit somewhat, not zeroing them out—that would be radical, according to you—but

you want to get them on a more sustainable path. That is what I remember reading from your statement.

And so, Dr. Bernstein, what—here is what I want to ask you. What is the main driver of debt, okay? You, obviously—you do not want to touch discretionary spending, perhaps even increase it. But even if you had your way and you eliminated the recent tax cuts, it still wouldn't pay for the vast growth in entitlement programs.

So I want to know. Can we agree on this? Do we agree that Social Security and Medicare programs need to be addressed?

And do we have solutions for that that don't involve over-taxing my generation in order to increase benefits for your generation?

Dr. BERNSTEIN. Yes, I think we probably get—

Mr. CRENSHAW. And, Dr. Taylor, if you could also answer this after Dr. Bernstein.

Dr. BERNSTEIN. No, I think there is some agreement there.

I think the—where we disagree is on the revenue side. So you and your colleagues keep citing the—you know, these highest revenue collections ever, because you are talking billions and trillions. As I point out in my testimony—

Mr. CRENSHAW. Okay, I understand we disagree on that. But I really—

Dr. BERNSTEIN. Yes.

Mr. CRENSHAW. The main driver of debt, we do agree, is entitlements, right? We do agree on that.

Dr. BERNSTEIN. Yes, yes.

Mr. CRENSHAW. So I want to get a solution for that. I want—

Dr. BERNSTEIN. So the—

Mr. CRENSHAW. Drive the discussion towards that.

Dr. BERNSTEIN. So the—I have tried—so there is two solutions to that. One is we need to collect more revenues and do some more progressively. And two, we need to slow the growth of health care spending.

Mr. CRENSHAW. Okay. And, Doctor, if the chairman would allow it, if Dr. Taylor would like to answer that, as well?

Dr. TAYLOR. No, I think it is clear that the driver is the—you used the word “entitlement spending,” that is okay with me—is this growth, which is quite rapid, and a reform of those programs, a reform, I think, which will make them work better is what we need. And it is going to slow their growth, and that is what is key.

Mr. CRENSHAW. I would love to talk about that for hours, but only if the chairman would indulge me.

Thank you, Mr. Chairman.

Chairman YARMUTH. We would all love to do that. The gentleman's time has expired. I now recognize the gentleman from California, Mr. Panetta, for five minutes.

Mr. PANETTA. Thank you, Mr. Chairman.

Gentlemen, thank you very much for being here today, as well as your expertise on this very, very important crucial subject I believe that you have testified to. I apologize for not being here earlier, and so I probably will ask some questions that have already been asked. So let me just make that clear. But thank you very much for being here.

You know, we are here, as you know, to reexamine the economic costs of our debt. And obviously, we won't—before we do that,

though, we want to take the stock level of debt we have and the trajectory of our deficits and our debt. As you know, we got \$16 trillion in publicly held debt and \$6 trillion in inter-governmental debt, basically close to—we just passed—the debt surpassed \$23 trillion. And it is growing faster than our GDP.

And Dr. Blanchard, you testified that deficits running at 5 percent of GDP are a cause for concern.

Debt, as a share of GDP, is projected to rise from 79 percent in fiscal year 2019 to 95 percent by fiscal year 2029. And if we keep on going at this rate, it is going to be 144 percent by 2049.

Now, last week, in the very same—at the very same table that you gentlemen are sitting at, Federal Reserve Chairman—the Federal Reserve Chairman said that the level of debt that we currently are going at is just completely unsustainable. And I believe he is right.

But regardless of that level, and which level is healthy, there are clear dangers, I think we understand, of allowing our debt to continue to grow at this rate. And so, clearly, your testimony today is very important, not just to examine those risks, but to also look forward to some sort of solutions to responsible and smart budgeting.

If I may, Dr. Blanchard—you are closest to me—do you have an opinion as to what a healthy debt-to-GDP ratio is, and does 100 percent concern you? If not what about that 144 percent number I threw out there?

Dr. BLANCHARD. I believe that there is no magic number that could increase to a much higher level before starting or triggering a crisis in the markets.

This being said, there is no particular reason to want to do it because it can be done. And therefore, all things equal, I think that lower levels of debt than the ones we have are desirable, and that if we can get there without creating problems with the economy itself by slowing down public demand, I think we should try to get there.

Mr. PANETTA. Understood. Understood. Now, I wasn't here for your testimony, but I read your testimony. And you said that the deficit shouldn't keep us from making smart investments, clearly. But if we run deficits without considering the debt at all, we clearly run some risk, correct?

Dr. BLANCHARD. Yes, when you—you want to issue debt only for good reasons. One may be to sustain, basically, the demand and maintain output at full employment. Or for public investment, which makes sense. If you don't do this, neither of the two, then you should definitely worry about that. If you do this, I worry less about that increase in debt if I can justify it on the basis of your macro considerations or public investment.

Mr. PANETTA. Understood, okay. Thank you. Thank you.

And Dr. Bernstein, you were—in your testimony that I read you talked about the 2017 tax bill, obviously, and the drain that it had on revenue. Is there anywhere else that you would suggest we look to to increase revenue?

Dr. BERNSTEIN. Yes. I think it is an important question. Because so much of market income and market wealth has accumulated at the top of the scale, I think that some of the current debates about taxing wealth are relevant and worth thinking more about.

Now, whether we are actually talking about a wealth tax is a different question. So closing the step-up basis loophole would make a lot of sense to me.

Mr. PANETTA. Could you explain that, briefly?

Dr. BERNSTEIN. Sure. So when a wealthy person transfers a capital gain to an heir, the value or the basis of that capital is stepped up, meaning it is raised to the current market rate. And that gain is completely untaxed. So this is a way in which asset accumulation is—goes untaxed. And the more you put wealth or income or any sort of accumulation in a tax category that goes untaxed, the more people are going to figure out that is precisely the kind of income they have a lot of.

So I am not necessarily endorsing some of the more far-out ideas about new wealth taxes. I am saying we should tighten up what we have. We should bring capital gains rate closer to income rates. We should give the estate tax some bite. And we should definitely fund the IRS to close some of the tax avoidance gap that has cost us, literally, hundreds of billions per year.

Mr. PANETTA. Great, thank you. I yield back my time. Thanks again, gentlemen.

Chairman YARMUTH. The gentleman's time has expired. I now recognize the Ranking Member for 10 minutes.

Mr. WOMACK. And we are into the lunch hour, which is never a good thing for the two of us, who have a few minutes of questions.

First of all, thanks to the witnesses here today. I am going to come full circle and just ask each of you—we kind of started this way. I want to go back, because there has been a lot said. Does debt matter?

From the perspective of the United States taxpayer who may be watching this hearing, or hearing about it, to each of my panelists today, does the federal debt matter? Dr. Blanchard?

Dr. BLANCHARD. Debt absolutely matters—

Mr. WOMACK. Dr. Wray?

Dr. BLANCHARD. That was a “but,” but I didn’t—you didn’t give me time.

Mr. WOMACK. We may come back to the “but,” but—

Dr. WRAY. Yes, but probably not in the way you are implying.

Mr. WOMACK. You said “but” and kept going, and I wouldn’t let Dr. Blanchard do it.

Dr. BERNSTEIN. Yes.

Dr. TAYLOR. Yes.

Mr. WOMACK. Okay. Well, I am glad to hear that. My dad always said, “Don’t go into debt”—he is a very successful businessman—“Don’t go into debt for things that are not an appreciating asset.” Pretty sage advice, don’t you think?

Dr. BERNSTEIN. Yes.

Mr. WOMACK. Do I get any pushback from the—

Dr. BLANCHARD. No, you said my “but.”

[Laughter.]

Mr. WOMACK. Okay. And I think he is right. By the way, he operates a business today and has no debt, and has an extremely healthy business.

There have been some discussions here today about whether the family household budget that most of our constituents have a con-

text on versus the federal budget, and whether they should operate similarly when it regards debt.

Now, the household budget does not have to provide for the national defense. It is not in their constitution; it is in our—it is in the Constitution that we are responsible for up here.

But in terms of going into debt for purposes of investment, growth in the economy, those kinds of things, the principles, though, between the household and the federal budget are still similar in nature. Would you not agree?

Dr. BLANCHARD. I would not agree. The public debt, the government debt, plays a macro stabilization role that individual debt does not. So when the government decreases its debt or has a large surplus, this has an adverse effect on the economy, which it has to take into account. This is irrelevant to you or me or any household.

Mr. WOMACK. Dr. Wray, I saw a negative response from you.

Dr. WRAY. Right, because when you are looking at it from the point of view of the individual in the private sector, whether household or firm, at some point, yes, they need to repay their debt. The private sector, taken as a whole, never repays all of the debt. It grows over time, in the same way that the federal government's debt grows over time. It has been growing since 1791. It has been growing as—relative to GDP since 1791. It will continue to grow. So will the private sector's total debt.

So you can't look at it from the point of view of the individual in the private sector. Look at the private sector as a whole; their debt grows over time, too.

Mr. WOMACK. All right. Dr. Bernstein?

Dr. BERNSTEIN. Just as I said earlier, I think this idea that when the household is tightening their belt, the government actually needs to go in the other direction. So I am afraid I disagree, as well.

Mr. WOMACK. Dr. Taylor?

Dr. TAYLOR. I think the so-called automatic stabilizers are good when the economy is in a boom, revenues increase and spending increases. And I think, in a slump, it goes the other way.

Mr. WOMACK. Well, I guess here is where I am going with it, and that is that, unlike the federal government, for the American household there are consequences for going into too much debt, to the extent where you do not have the capacity to repay. And there are many examples of that. Student loan debt, I think, is a real good poster child for it, because there is a lot of people that went into student loan debt with a purpose of improving their earnings potential when, in fact, they didn't improve their earnings potential.

In fact, a quarter of that student loan debt is not even—did not even lead to a college degree. So I think it was purpose-defeating in that regard.

But there are consequences for my constituents for going into too much debt and not having the capacity to repay, as opposed to the U.S. Government, which leads me to this question.

If we agree that debt does matter, and it is just a discussion about the type of debt—bad debt versus good debt—and if the premise that the government should have the capacity to repay—and I am not talking about just minimum payment due, just the

net interest on the debt, but, I mean, start whacking away at the long-term structural challenges—if that is true, then this—the lack of the congressional process that this guy and I worked on, in addition to Mr. Woodall, to develop a budget of the United States Government, and to be able to put before the American people what our fiscal condition is, and to begin to make those prioritized decisions, discretionary versus non-discretionary, and—or the mandatory side—and remember, those mandatory programs are on autopilot, so unless the Congress acts, they continue to go completely unchecked, and it becomes a demographic challenge for the country, that our moving those costs higher, higher, in addition to health care spending that, Dr. Bernstein, you talked about.

So do you—would you agree with me that part of the problem that Congress has is it is not honoring the process that is designed to be able to put the spotlight on the fiscal condition of our country in such a way that we can begin to make those established priorities?

And again, not to—at the risk of using the word “poster child” again, let me remind you yesterday we passed a continuing resolution. We are seven, almost eight weeks into the fiscal year, we don’t have a budget, and we pushed the spending of the country again to the 20th of December, to Christmas, and we will probably do it again, and maybe two or three more times.

Is the lack of the execution of our process, or a better process, contributing to the problems that we are facing today, Dr. Blanchard?

Dr. BLANCHARD. I would not think of myself as an expert on these issues. But yes, from where I stand, at the distance, it looks like the congressional budget process it not ideal and could be substantially improved.

Mr. WOMACK. Dr. Wray? Or does the process matter?

Dr. WRAY. Look, capacity to repay, I am not sure what that would mean for a federal government that is an ongoing concern that has only repaid its debt one time, 1837, followed by our first depression.

We do not have to repay the debt. What we have to do is make the interest payments. That is what we need to do.

Mr. WOMACK. Okay. All right. Well—all right. So let me hit pause here a minute, and just focus on interest payments for just a moment.

Today, as evidenced by one of the—a couple of our Members have indicated that the net interest on the debt this year, with very low interest rates, is going to be somewhere in the neighborhood of \$400 billion, which is more than half of what we spend on our constitutional challenge to provide for the common defense of the country.

And there has been the term “crowding out” used many times here today. We are crowding out the investments that you gentlemen are suggesting that we continue to make to grow our economy, help vulnerable Americans, the things that we would normally spend that money on we are spending on the net interest on the debt. That is money that could be spent elsewhere, which I think makes my point that deficits and debt do matter, because it is

crowding out the available money that we have to be able to effectively fund the discretionary budget of the U.S. Government.

Dr. WRAY. Well, I mean, you put that constraint on yourselves. And I understand your political dilemma here. Interest payments, I think all three of us agree, are a very inefficient kind of spending. The first half of it is going abroad, and the other half is going into the United States. But it doesn't tend to go where you want it to go. It doesn't tend to lead to economic growth.

So I am not advocating trying to ramp up interest payments. Crowding out theory, there are two approaches, one loanable funds, the other is IS-LM. The evidence just does not show that there is crowding out. Now, it may crowd out your spending because you put constraints on the budgeting process. It doesn't crowd out in the real world by raising interest rates and reducing investment. All that government spending goes somewhere into the economy, and it creates net income for the private sector, which should encourage investment, rather than discouraging investment.

Mr. WOMACK. So the constraints that you suggest that we put on ourselves, they are only there for one reason, and that is not to explode this deficit and debt situation, even further exacerbate the situation as we currently have, which most people would agree is already beyond any capacity for us to be able to repay, and it is just going to lead to further complications in taxes for future generations.

Dr. Bernstein, real quickly, a thought from you, and then—

Dr. BERNSTEIN. Well, just on the process point, because I—what you said resonates with me. I am going to be straight with you about that, about the broken process.

But the—I immediately went back to—I believe it was 2011, and the balanced budget agreement that, you know, created this so-called super-committee, I view that as being, you know, just a huge process failure. So I—

Mr. WOMACK. That was 2011.

Dr. BERNSTEIN. Yes, 2011.

Mr. WOMACK. It was not our Joint Select Committee—

Dr. BERNSTEIN. No, no, no. I am just saying—

[Laughter.]

I said that I think the problems go deeper than process. I agree with you the process is broken, but I think there are fundamental differences about the kinds of investments that we are arguing about today, good versus bad, about the amount of revenues that we need to collect. And I feel like, before we can have a reasonable process, we probably have to talk more about those differences.

Mr. WOMACK. Dr. Taylor?

Dr. TAYLOR. So I think going back to regular order would be a tremendous—budgets come from the President, the Budget Committees go through it, the appropriations, and you got a budget by October 1st. It would just be so clear to people, compared to what is happening now. No one—this is a democracy; people are supposed to be somewhat informed. It would improve the process greatly. I would encourage you to try to do that.

Mr. WOMACK. Okay. And I have just got one final question, and it is related to our process, because our Committee—which I think did extraordinary work, we came up a little bit short, but not be-

cause we didn't really work hard at it, because we spent a year doing it.

But the one thing that I think we kind of rallied behind was, regarding debt, is some kind of a target. We have talked about it already today, debt-to-GDP, which I believe—I have given up hope that we are going to balance the books of the federal government. It is certainly not in the timeframe I am going to be here. But at some point in time should this country not have a reasonable target of debt-to-GDP? Pick the number.

I don't know if it is 42, the historical average, or if it is 65, or you—whatever that number is. But some kind of a target, so that we can at least begin to somewhat conduct ourselves as people who can constrain the absolutely growth of federal government, which can go out of sight if you don't.

Real quickly, from left to right.

Dr. BLANCHARD. I think that the issue is that we really do not have a good sense of what the debt target is. And choosing a number comes with dangers of trying to do something which may not be quite the right thing. So I am with you in spirit. I would have a very hard time deciding what the number should be.

Mr. WOMACK. Dr. Wray?

Dr. WRAY. I absolutely agree. I can't see any—I think you should focus on the things that are important: employment, rising income, economic growth, rising productivity, meeting the challenges that face us in the future.

Mr. WOMACK. Dr. Bernstein?

Dr. BLANCHARD. Yes, I would urge you to think about that much more dynamically. Imagine we had a debt target in World War II, and we didn't gear up to fight that existential battle. I am sure you would be opposed to that. So I don't think targets are a good idea.

Mr. WOMACK. Okay. Dr. Taylor?

Dr. TAYLOR. I think targets are a good idea with emergency clauses to deal with this.

Mr. WOMACK. Amen. I yield back my time. Thanks for allowing me to go over.

Chairman YARMUTH. Absolutely.

Mr. WOMACK. And congratulations on Louisville—number two, by the way.

Chairman YARMUTH. Thank you. We are loaded. People need to look out for us.

Well, I yield myself 10 minutes. Thanks again to all the witnesses for being here, and I think it has been a valuable discussion. I didn't have much economics education on my way through school, so I am using my chairmanship to become educated, and this hearing helped.

When Mr. Cooper earlier talked about nuances in some of these issues—and I fully agree—most everything we do up here has significant nuance. And we don't recognize that.

So I am interested—and we talked about the 2017 tax cut. When people say it is a \$1.9 trillion tax cut, it actually wasn't. It was a \$5 trillion tax cut, just that we are offsetting revenues that made it a \$1.9 trillion net tax cut.

So—and one of the biggest factors on the revenue side was the SALT taxes, eliminating the state and local tax deduction. There were many others.

And so, in terms of thinking about if we were to review the tax cut with an aim of keeping the parts that did benefit people and doing away with the part that had no societal benefit, I think that is an important thing, distinction, to make.

When Mr. Smith talks about his residents, yes, if you get a \$100 tax cut and you are making \$40,000 a year, or something less than that, that is a significant amount. When you are my classmate in college, Stephen Schwarzman, and you talk about cutting his tax rate by 2.6 percent at the top, that doesn't seem to serve any great societal benefit. So I think we often have to think about taxes like that.

And I also think about, when we talk about cutting mandatory spending, whatever we spend on Social Security, whatever—every Social Security benefit check that goes out every month, how much of that do you estimate goes back into the economy?

Dr. BERNSTEIN. The vast majority.

Chairman YARMUTH. Virtually all of it, right? And whatever you spend on Medicare and Medicaid goes back into the economy. So our \$4.—whatever it is, \$4.5 trillion spending at the federal level, with the exception of probably some of the defense budget and the interest on the debt, all of it is part of GDP.

So when we are talking about cutting federal spending, we are cutting GDP at the same time. And I think we lose sight of that sometimes, like all of a sudden, we just cut this, and the economy keeps roaring on. That is not necessarily the case.

Humana is based in my district. Humana is about a—right now, about a \$60 billion-a-year company. Eighty percent of their revenue is managing government health care programs. So you cut health care there, you are cutting a huge part of my economy in my district. And so, again, these things are all very nuanced.

Is there any difference, in your opinion—anybody can answer this—a tax cut that goes to a middle-income individual versus their Social Security check, in terms of macro-economic impact? Is there any difference?

Dr. BERNSTEIN. No, I think the likelihood is that they will both be spent.

Chairman YARMUTH. Right. So in one case you are dropping federal revenues, the other one you are writing a check. But they have the same impact on the economy.

And one of the things that I love about your statement, and it came up when Dr. Taylor talked about looking at models from CBO, and I saw a little smirk on your face. I may have misread it. But when you talk about empirical economics—and that is where I have—since I have been on this Committee, which is now—this is my 11th year—something that I have always been very interested in.

I remember several years ago when Tim Geithner was Secretary of the Treasury and came before the Committee, and at the time Paul Ryan was Chairman of the Committee. And he put up these charts showing spending on—mandatory spending, and so forth,

and the debt going out 50 years. So I asked Secretary Geithner, "How realistic do you think projections going over 50 years are?"

And he said, "I don't think going—anything longer than five years is reliable." And that is one of the things that I have been obsessed with, is that we live in a world that is changing more rapidly than anyone can possibly have forecast.

And making projections as to what is going to happen in the economy—I saw this morning there was a release of a story that some—a company that Bill Gates funded has come up with a process using artificial intelligence and solar panels that will increase—allows you to create heat at levels sufficient to do concrete and so forth, which is responsible for about 7 percent of global carbon emissions.

So it seems to me that the possibilities of technology and innovation change—radically changing some of our future needs, and maybe changing either—maybe increasing some of our needs is something that—it is going to be hard for us to project.

We say Congress's optimum efficiency moves at 10 miles an hour. This year it is two miles an hour. But the world is moving at 100, and I don't know how we make policy to accommodate that.

But one of the things, Dr. Blanchard, that I have been obsessed with is artificial intelligence. And we know artificial intelligence is going to have its productive uses, as it apparently has with this company, but it is also going to have disruptive uses in the economy. For instance, eliminating an awful lot of jobs. I heard one estimate that—this came from one of the top people at IBM, who said that, within the next three years alone, artificial intelligence would either eliminate or significantly change 120 million jobs around the world, and that is going to increase.

So given that, we know—we don't know the extent of disruption that is going to happen, but we know there is going to be a lot of disruption happening. What would you say that means for our priorities of spending in order to try to accommodate the changes we know will come, but we don't know to what extent?

Dr. BLANCHARD. I think, you know, AI has all kinds of implications. One of them is that the low productivity growth that we have might increase over time because we are rediscovering ways of doing things differently, in which case it would be good news for the economy. It would probably increase interest rates. But that is fine.

The—I think the other dimension, which is worrying people very much, is that there might not be enough jobs. And, as you know, this is an issue which has come with technological progress for at least two centuries. In the past it has always worked out okay in the sense that new jobs are being created. I think this time we are less sure. It may not, in which case we really have to think about everything we can do to help the people who may lose their jobs and not find one, which leads to issues of universal basic income—basically, money given to people who really cannot find jobs.

It means thinking again about the earned income tax credit and making it much more generous than it is.

I think we have to be ready for these contingencies. They may cost money.

Chairman YARMUTH. I am going to not ask any more questions. But you all have sat here a long time and listened to a lot, so I would like to give each of you a minute to respond to anything you heard, if you—if there is something you would like to comment on that you heard that you would like to either defend yourself or to make another point.

Dr. Taylor, do you want to start?

Dr. TAYLOR. So I think three things. Tax reform, if possible, should be revenue-neutral. So that is the idea of this SALT changes. You add restrictions on the state and local tax, and you had a reduction in the rate. So maybe that went too far for California and some states, but that is the concept, as useful.

I think it is not correct to say that every reduction in government purchases reduces GDP. If it is planned, if it is understood, if it is—the context is there, if there is a social safety net which is reasonable, I think it can benefit. And that is what my simulations tried to show. You can actually have a higher GDP growth.

And finally, the impact of artificial intelligence on jobs, I think the main lesson is let the private economy work. It is amazing, what it can do, and that is why the history that Olivier Blanchard referred to is so promising.

And the worst thing we can do is get in the way of what the market will do. Of course, you need to have a social safety net, which is working, but don't really make a mess of what otherwise could be a tremendous boon to productivity, not only in the United States, but globally.

Chairman YARMUTH. Thank you. Dr. Bernstein?

Dr. BERNSTEIN. I guess two points. One is—or maybe a point and a question. One is that we really do have a revenue problem. And I am—I guess the one thing I would argue is that it really doesn't make sense to cite revenue collections in the billions and hundreds of billions and argue that we are in some uniquely favorable space.

As a percentage of GDP—and I go through this in my testimony, if you can bear reading through it, I tried to do a careful job—the 2017 tax cut really broke down connective tissue between a growing economy and ample revenues. And I believe that it is essential that we fix that if we are going to address this problem.

I guess the question I have is, often when I come up here and talk about these issues, I hear much more reasonable conversation, much more agreement, much more fundamental understanding of the importance of key investments in public goods, and yet, at the other end of the process, we just don't see it.

And I have been a creature of the swamp here for decades, and I am still scratching my head as to why well-intentioned people—not everybody is well-intentioned, but a lot of people I heard from today on both sides are—can't get together, especially given the favorable rates that we have all been stressing, and make some of these investments.

Chairman YARMUTH. Well——

Mr. WOMACK. I want to respond to that, because if you just let Yarmuth and me fix all this, give us 30 minutes and a sandwich——

Dr. BERNSTEIN. Are you announcing that you are running for——
[Laughter.]

Mr. WOMACK. No, no, but we have had this conversation a lot. Chairman YARMUTH. Right.

Dr. WRAY. I just want to say—so there were several references to MMT, and they all seemed to equate it to printing money. That is not MMT. We described the way the government actually spends.

I think what they have in mind is something much closer to quantitative easing, in which the Fed spent \$3 or \$4 trillion buying assets, essentially, by crediting bank accounts with the reserves. That is nothing like what MMT is recommending.

We are asking you to look at government debt, deficits in a different way, to take account of sectoral balances. If you are going to reduce the budget deficit, we need to know which one of those other two sectoral balances is going to change.

Are we going to be reducing the private sector's surplus? Are we going to make the private sector run deficits? Are we going to somehow get the trading partners to decide not to sell stuff to the United States? Something has to happen. You can't just raise the tax rate and think that you are going to balance the budget or reduce government spending and think you are going to balance the budget, because one of those other two sectors, or both of them, has to change what they are doing.

Let me just—and cutting health costs is cutting GDP. Cutting government spending is reducing the injection of government spending into the economy. Reducing the amount of debt that is issued is also reducing the net financial assets that are being accumulated by the private sector. That is going to have some kind of consequences for the private sector.

So we need to look at both sides of the equation of government spending, but also of government debt, which is held as an asset, the safest asset in the world. The world wants more of it, you know. So why are we so worried about giving the world what they want.

The last thing on the robots taking away all our jobs, as Professor Blanchard said. That has been going on for 200 years. It is usually a good thing. I think it probably will continue to be a good thing.

But what should the government do about this? We do need training. We do need education, because robots are pretty good at taking away the jobs of the lower skilled and lower-educated workers. They are some way off from taking away our jobs. Maybe someday that will happen, but we need to worry about the people at the bottom end that will be replaced probably pretty quickly. We need to educate them.

I don't like the idea of basic income guarantee, or just telling people, "Look, sorry. In the modern economy there is nothing you can do." No, we have to find jobs for these people, and we need to train them for jobs.

Chairman YARMUTH. I thank you for that. And I—well, I was going to Dr. Blanchard, first.

Dr. BLANCHARD. I was looking at my notes. I have two points.

The first one is a nerdy one, which is that if you look at the interest rates and debt, it is true that interest rates have decreased while debt was increasing. To conclude from this that, therefore,

there is no effect of debt on interest rates would be wrong. This would be mixing correlation and causality.

I think what has happened is many other factors have led to a decrease in interest rates, which have nothing to do with debt. It may well be that debt has a positive effect on rates, it just is hard to see because of all the other things which have happened.

So I think we have to continue to assume that debt, in the long run, has some effect on interest rates. I think it would be dangerous to do something else.

The other is more general and related to a number of discussions which took place, which is I do not think that mandatory spending can be decreased substantially. I think there are some savings to be made, but there are also more demands, because of aging and dimensions have changed.

I suspect—I very strongly suspect that the way to take care of deficits and reduce them over time is for increasing taxes. I have no doubt that this is the case.

Chairman YARMUTH. Thank you. Just one comment. Watson apparently—IBM's Watson can now apparently do 70 percent of what lawyers do with greater reliability, and they can read CAT scans and MRIs more accurately than radiologists.

And when I was talking to my accountant, my Kentucky CPAs, when they were in town not too long ago, they said that is the number-one thing they talk about, the existential threat that artificial intelligence is to CPAs. So it is not just truck drivers.

Anyway, thank you all very much. Once again, it has been a stimulating discussion. And we appreciate your contributions very much.

With no further business, this hearing is adjourned.

[Whereupon, at 12:36 p.m., the Committee was adjourned.]

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CONGRESSWOMAN SHEILA JACKSON LEE OF TEXAS

HEARING STATEMENT: “REEXAMINING THE ECONOMIC COSTS OF RISING DEBT” COMMITTEE ON THE BUDGET 210 CANNON NOVEMBER 20, 2019 10:00 A.M.

- Thank you Chairman Yarmuth and Ranking Member Womack for convening this hearing on reexamining the economic costs of rising public federal debt.
- Let me welcome our witnesses:

Olivier Blanchard (Senior Fellow, Peterson Institute for International Economics)

Dr. Blanchard is a macroeconomist whose research has focused on the role of monetary policy, the determinants of unemployment, and the forces behind the recent global financial crisis. Prior to joining the Peterson Institute in 2015, Dr. Blanchard was a professor and chair of the economics department at MIT. In 2008, he took a leave of absence from MIT to be the chief economist and director of the research department at the International Monetary Fund.

L. Randall Wray (Professor of Economics, Bard College)

Dr. Wray is a professor of economics at Bard College and a senior scholar at the Levy Economics Institute at Bard. A pioneer of Modern Monetary Theory (MMT), he has written extensively on macroeconomics, banking, and full employment policy, including proposals to implement the Green New Deal. Dr. Wray is also a co-author of the first undergraduate textbook on MMT, which was released earlier this year.

Jared Bernstein (Senior Fellow, Center on Budget and Policy Priorities)

Dr. Bernstein's expertise includes economic and fiscal policies, income inequality and mobility, and financial and housing markets. He previously served as the chief economist and economic adviser to Vice President Joe Biden, executive director of the White House Task Force on the Middle Class, and a member of President Obama's economic team. Prior to joining the Obama Administration, Dr. Bernstein served as the Deputy Chief Economist of the Department of Labor under President Clinton.

John B. Taylor (Professor of Economics, Stanford University)

Dr. Taylor is a professor of economics at Stanford University and a senior fellow at the Hoover Institution. His fields of expertise include monetary policy, international finance, and fiscal policy. Dr. Taylor has decades of experience in public service, having served as a member of President George H.W. Bush's Council of Economic Advisers; adviser to the presidential campaigns of Bob Dole, George W. Bush, and John McCain; and as undersecretary of the Treasury under President George W. Bush.

- Thank you for being here and sharing your expertise with this Committee.
- Mr. Chairman, this hearing could not be more timely because the reexamination of increasing federal public debt is one of the exciting new movements in the economic discipline.
- The purpose of this hearing is to learn about a growing debate on the changing economics of debt and its implications for fiscal policymaking.

- Mr. Chairman, our nation is faced with once-in-a-generation challenges—widespread inequality, alarming climate change, crumbling infrastructure, and crippling household debt, among others—that can only be addressed with bold, progressive policies, many of which require significant government spending.
- Many legislators have proposed such policies but often they get pushback from skeptics asking, “*Can the government really afford these programs?*”
- The simple answer is yes.
- Given our current economic conditions, increased public spending and borrowing by the government is not a problem to be explained away; in fact, it is a desirable feature of policymaking that can both help our economy reach its full potential and enable policymakers to overcome today’s challenges.
- A growing number of economists are challenging the conventional economic wisdom that higher government spending, especially when financed through debt, is harmful for the economy.
- The idea that “we cannot afford more government debt,” if it is needed to meet national priorities, is based on outdated analyses that ignore the economic realities of our time.
- Despite headline numbers suggesting some indicators of a “good economy,” we are currently experiencing a long-term economic slump, reflected in persistently low interest rates and inflation as well as weak demand and a recession might very well loom on the horizon.
- In this economic climate, the risks of deficit spending are far lower than previously assumed, while the benefits may be much greater.
- Low interest rates mean little risk of out-of-control debt or inflation and more government spending offers the specific benefits of stimulating demand, spurring business investment, and even moderating future recessions.

- Our current economy stands only to benefit from increased public spending, and it should be seen as a feature—not a bug—of future economic policymaking.
- The fundamental macroeconomic problem we face today is that weak demand—i.e., total spending by households, businesses, and governments—consistently falls short of what is needed to reach full employment, or when all people who can or want to work are employed.
- This underperformance, sometimes referred to as secular stagnation, is reflected in persistently low interest rates and inflation, a dearth of private investment, depressed labor force participation rates, and long “jobless recoveries.”
- We currently have more workers than jobs available, and businesses are not producing at their full capacity and in this context, the typically cited dangers of deficit spending—skyrocketing inflation, a dragging economy, runaway federal debt—are unlikely to occur because:
 1. The inflation rate is low and unlikely to rise;
 2. With ample capital available for both government and private borrowing, “crowd-out” is unlikely; and
 3. The rate of economic growth is outpacing the rates we pay to borrow money, which means there is no risk of runaway debt.

IN AN UNDERPERFORMING ECONOMY, GOVERNMENT SPENDING CAN HELP THE ECONOMY REACH ITS FULL POTENTIAL

- Mr. Chairman, there are very costs to running an economy below its potential comes with real opportunity costs.
- For instance, the Great Recession and slow recovery saw an enormous amount of useful goods and services go unproduced, and an enormous number of unemployed people held productive capabilities that were left to decay.
- In fact, the shortfall between output and potential between 2008 and 2015 came to approximately \$5 trillion.

- A chronically underperforming economy also leads to stagnating wages and declining labor conditions.
- In the longer term, persistent unemployment can cause people to lose skills, eroding our long-term potential.
- Robust government spending is uniquely able to address these challenges because:
 1. Government spending stimulates the economy by boosting demand;
 2. Monetary policy alone cannot address secular stagnation; and
 3. In the longer term, an initial infusion of funds can set the economy on a positive growth trajectory, with lasting effects even after the spending has ended.
- Mr. Chairman, spending by the government can rebalance the power in the economy and tilt it toward those most vulnerable.
- This is because during periods of weak demand, when jobs are sparse and workers abundant, workers have little bargaining power.
- Those in low-wage and low-skilled jobs—disproportionately minority, female, and least educated people—are particularly vulnerable, since they are viewed as replaceable or expendable.
- In contrast, when labor markets are tight, employee wages and working conditions improve.
- With more jobs than available workers, employers must pay higher wages and offer more generous benefits to attract workers, even those in low-wage and low-skilled positions.
- We have seen this clearly in recent years; only since the unemployment rate has fallen below 4 percent have wages for low-paid workers begun to rise faster than those at the top.

- In tight labor markets, employers are also less inclined to discriminate or impose requirements or credentials that unnecessarily limit their labor pool.
- Thus, in helping to create a tight labor market, government spending can be an equalizing mechanism that can raise wages and bargaining power for those at the bottom of the income distribution.
- I look forward to hearing from our witnesses and thank them again for being here.
- Thank you, I yield back the remainder of my time.

Questions for the Record
Congressman Seth Moulton
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

- DR. BLANCHARD, in an article you coauthored earlier this year titled “Why Critics of a More Relaxed Attitude on Public Debt are Wrong,” you defended your recent argument that the fiscal and economic costs of public debt are lower than previously thought. You may be right: with public debt as a share of GDP at the highest level since just after World War II, the interest rate on a 10-year Treasury is less than half the rate seen during consecutive surpluses in the 90’s. What other evidence are you examining that makes you rethink the traditional view on the cost of debt?
- DR. BLANCHARD, you also acknowledge that, and I quote, “in the United States the current trajectory of anticipated deficits and debt is far from optimal. Because the Federal Reserve has some limited room to provide stimulus, primary deficits should be reduced, but slowly, and measures should be taken to reduce deficits in the long run.” You seem to suggest that the federal debt is less costly, but not costless. Debt still matters, just not as much as previously thought. At what level would you deem the federal debt unsustainable, and even if you cannot provide a specific level, what are the likeliest risks if it became clear that the federal debt has become unsustainable?
- DR. BLANCHARD, you also argue a “careful case for the use of primary deficits to sustain demand where needed, and for the use of these deficits to finance growth-friendly measures, such as the fight against global warming, or the financing of transition costs of reforms, or other types of public investment.” CBO projected the Tax Cuts and Jobs Act, which primarily benefits the wealthiest Americans and corporations, would add \$1.9 trillion to the federal debt over 10 years. We have also not seen the business investment that our Republican colleagues promised. Would you characterize a tax cut for the wealthiest Americans that costs \$1.9 trillion as the type of strategic deficit you recommend?
- DR. BERNSTEIN, do you agree with Dr. Blanchard’s assessment of the Tax Cuts and Jobs Act?
- DR. BERNSTEIN, the American Society of Civil Engineers (ASCE) suggests we invest \$4 trillion on transportation and infrastructure by 2025 and that failing to invest in our infrastructure may result in the loss in GDP by a roughly equivalent amount in the same time frame. If we are going to increase deficits, why are tax cuts for the wealthy less strategic than infrastructure investment?
- Transportation and infrastructure investment is incredibly popular among the American people. Tax cuts for wealthy Americans is not broadly popular, but confined to a narrow class of Americans that are able to make significant contributions to political campaigns. Republicans have called for fiscal responsibility for years, but their actions speak much louder: their actions show they are willing to spend money on the wealthy few, rather than on transit and aging infrastructure, which protect Americans’ health and increase their mobility, prepare our communities for the risks of climate change, and connect booming job markets with affordable housing options.

Questions for the Record
Congresswoman Ilhan Omar
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

For Dr. Jared Bernstein:

The CBO estimates that the 2017 Republican tax law will increase deficits by more than \$2 trillion over a decade. It's unclear what benefit these types of tax cuts to the wealthy and corporations really have – for any except the already-wealthy. The bottom 50% now have 1% of America's wealth, contributing to the largest wealth gap in almost a century. Additionally, this promised surge of investment and sustained job creation from such corporate tax cuts has not happened, with business investment actually declining in the last two quarters. ***Dr. Bernstein, do you think the Republican tax law was a good use of deficits for the benefit of the vast majority of Americans? Why should we instead center spending on working families?***

For Dr. Jared Bernstein:

If we want to build a truly inclusive, robust, and sustainable economy, we must make sure it works for everyone. The typical white household in America has about 10 times the amount of wealth of the typical black household. It's estimated that closing the racial wealth gap could add up to \$1.5 trillion to the entire U.S. economy. We need to center our economic policies on the people of color who historically have been and continue to be left behind, marginalized, and ignored. ***Dr. Bernstein, could you outline some fiscal policies that could help level the playing field for black people and others? Do you believe prioritizing significant investments, into our housing and education sectors for example, would be help in lifting up people of color?***

For Dr. Randall Wray:

You note in your testimony that a government deficit is equivalent to a private-sector surplus. Increasing government deficits, then, has the effect of increasing economic growth and wealth. My Republican colleagues either decide to take the complete opposite of this view with severe austerity in deficit spending or will argue that broad tax cuts for corporations and the wealthy will trickle down to spur economic growth for all. However, the U.S. now has the largest wealth gap in almost a century, and multi-billion-dollar corporations like FedEx and Amazon have reported \$0 in taxes for 2018, with reports emerging and citing a lack of sustained investment in their workers. ***Could you expand upon why more spending should be prioritized on directly impacting working families, instead of corporations and the wealthy few? Do we then have the fiscal space to pursue bold reforms like the Green New Deal to better prepare our workforce, economy, and greater society for the devastating effects of climate change being felt today?***

Responses to Questions for the Record
Congressman Seth Moulton
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

From Dr. Blanchard:

1. My argument is indeed based on the observation that current interest rates are very low, and that, given our understanding of the factors behind these low rates, they are likely to remain low for a long time.

The arithmetic of debt dynamics implies that this observation is enough to imply that there is more room for debt issuance, without substantial fiscal or economic costs, and without risks of market crises.

2. Indeed, the correct statement is that debt is less costly, but it is not costless: It decreases capital accumulation, shifting some of the burden of the debt to future generations, and may increase the need for distortionary taxation in the future. This does not imply that debt finance should not be used. But it should be used for measures which have substantial benefits, such as maintaining full employment when monetary policy is constrained, or financing infrastructure investment.

Sustainability is a related but different issue. Debt policy may be bad, but still not lead to issues of sustainability. I would argue that this is the case in the United States today. There is little risk that investors will start questioning whether the US Treasury will honor the debt. Yet, US deficits are larger than they should be.

3. Taking measures to encourage investment may sometimes be appropriate, and this was indeed at least the stated objective for the corporate tax cuts. In the event, the results have been worse than the proponents of these measures hoped for. Thus, at least in retrospect, the cut in taxes and the associated large increase in debt, was unwise.

Responses to Questions for the Record
Congressman Seth Moulton
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

DR. BERNSTEIN, do you agree with Dr. Blanchard’s assessment of the Tax Cuts and Jobs Act?

JB: Very much so. The Republican tax cuts were a very poor use of deficits from the perspectives I introduced in my testimony. Therein, I argued that “our evolving understanding of the role of fiscal debt provides both opportunities and risks. The former implies more leeway to use deficit spending to make necessary, productive investments; the latter means avoiding adding to our already historically elevated debt for non-productive, or wasteful spending and/or tax cuts.”

The Tax Cuts and Jobs Act falls solidly into the “wasteful” bucket. It mostly squanders valuable resources on wealthy households for whom “market forces” are already generating and directing disproportionate gains. Thus, it carries a high “opportunity cost” when considered against alternative ideas that, as I said in my testimony, invest “in people and places that need the help.”

Considering the set of unmet needs we observe in communities across the country, along with the threat from climate change, there exists a deep, rich set of such investment opportunities. “Tens of millions remain un- or underinsured in terms of health coverage, the impact of climate change is already being felt in volatile and costly weather patterns, the cost of college is a constraint to many families of moderate means, much of our public infrastructure needs upgrading, long-term wage stagnation has constrained the living standards of many working households, and there are significant swaths of people and places that have been left out of the current economic expansion.”

DR. BERNSTEIN, the American Society of Civil Engineers (ASCE) suggests we invest \$4 trillion on transportation and infrastructure by 2025 and that failing to invest in our infrastructure may result in the loss in GDP by a roughly equivalent amount in the same time frame. If we are going to increase deficits, why are tax cuts for the wealthy less strategic than infrastructure investment?

JB: In my testimony, I stressed that even while we’re learning important and fiscally liberating lessons about the macroeconomic impacts of deficits, such imbalances still matter. Budget constraints exist and ignoring them constitutes reckless policy. Thus, deficit spending should distinguish between “good debt” and “bad debt.” The former invests productively in people and places who need the help and in public goods upon which healthy societies depend. The wasteful 2017 tax law falls into the “bad debt” category, squandering valuable resources

on those who do not need the help, and who have long benefitted disproportionately from pretax, “market” forces.

A well-designed infrastructure package targeting deteriorating public goods could boost economic growth, create good jobs, and improve daily life for millions of people. Such projects should include maintenance of basic infrastructure—roads, bridges, etc.—the repair of deteriorating K-12 public schools, cleaning up toxic water systems, and mitigating the effects of climate change. In the spirit of pushing back on the very inequality that the tax cuts exacerbate, please recognize that these investments will be felt most in low-income communities and especially in communities of color—places where the damages of economic inequality have been most impactful.

Responses to Questions for the Record
Congresswoman Ilhan Omar
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

For Dr. Jared Bernstein:

The CBO estimates that the 2017 Republican tax law will increase deficits by more than \$2 trillion over a decade. It’s unclear what benefit these types of tax cuts to the wealthy and corporations really have – for any except the already-wealthy. The bottom 50% now have 1% of America’s wealth, contributing to the largest wealth gap in almost a century. Additionally, this promised surge of investment and sustained job creation from such corporate tax cuts has not happened, with business investment actually declining in the last two quarters. *Dr. Bernstein, do you think the Republican tax law was a good use of deficits for the benefit of the vast majority of Americans? Why should we instead center spending on working families?*

JB: The Republican tax cuts were a very poor use of deficits from the perspectives I introduced in my testimony. Therein, I argued that “our evolving understanding of the role of fiscal debt provides both opportunities and risks. The former implies more leeway to use deficit spending to make necessary, productive investments; the latter means avoiding adding to our already historically elevated debt for non-productive, or wasteful spending and/or tax cuts.”

The Tax Cuts and Jobs Act falls solidly into the “wasteful” bucket. It mostly squanders valuable resources on wealthy households for whom “market forces” are already generating and directing disproportionate gains. Thus, it carries a high “opportunity cost” when considered against alternative ideas—see my next answer—that would target families who need the help.

Why “center spending” on such families? Because these are the folks for whom both recent economic trends—globalization, the wage/productivity split—and long-term, institutionalized racism have been most punishing. Simply put, the Republican tax cut targeted exactly the wrong families.

For Dr. Jared Bernstein:

If we want to build a truly inclusive, robust, and sustainable economy, we must make sure it works for everyone. The typical white household in America has about 10 times the amount of wealth of the typical black household. It’s estimated that closing the racial wealth gap could add up to \$1.5 trillion to the entire U.S. economy. We need to center our economic policies on the people of color who historically have been and continue to be left behind, marginalized, and ignored. *Dr. Bernstein, could you outline some fiscal policies that could help level the playing*

field for black people and others? Do you believe prioritizing significant investments, into our housing and education sectors for example, would be help in lifting up people of color?

JB: *The most important fiscal policies to help close persistent and pernicious racial wealth gaps are those that will boost the relative economic status, opportunity set, and bargaining power of black households and other households of color. These include maintaining very tight labor markets, targeted jobs and apprenticeship programs, housing, education, “safety net,” infrastructure, and green policies.*

Today’s racial wealth gap between black and white households is the cumulative product of private discrimination and racist policy choices that have spanned centuries – from chattel slavery, to policies like redlining that explicitly excluded black families from wealth-building opportunities, to present-day injustices produced by mass incarceration, school and residential segregation, and employment discrimination. Because the racial wealth gap has been shaped by such a vast array of policies and practices over time, closing it will require an equally wide-ranging response across multiple policy fronts.

My work has emphasized the importance of running a full employment economy in economic expansions and making sure fiscal policy is poised to work quickly to offset demand in recessions. In the context of your question, these macroeconomic conditions are so important because black labor market opportunity is “high beta,” meaning it responds disproportionately positively toward upturns and vice versa. It has long—and accurately—been said: “when the economy snuffles, black people catch pneumonia.” But this function works in both directions.

In advance of the next recession, Congress needs to enact legislation that strengthens and expands automatic stabilizers, including SNAP, Unemployment Insurance, Medicaid, and state fiscal relief. I’ve also argued for a “full employment fund” to support subsidized jobs both in recessions and in places left behind in recoveries.

In a recent op-ed, my colleagues and I argued for a set of policies increase the supply of affordable housing. These include “...beefing up the tried-and-true programs dedicated to reducing the cost of development, including the Low-Income Housing Tax Credit and the New Market Tax Credit. These tax breaks have proven effective in addressing precisely the supply problem at issue. But instead of expanding them, last year’s tax cut reduced their value to developers.” The tax cut’s Opportunity Zone program could help in this regard as well, but only if vigilant oversight ensures its tax breaks are targeted to places that need the help. Other policies in this space include scaling up the Housing Trust Fund and Capital Magnet Fund and easing overly restrictive zoning laws.

A core priority of any infrastructure investments should be to direct substantial resources to low-income communities of color. There are many types of infrastructure investments that could help redress racial disparities in access to safe living conditions and economic opportunity, such as increasing funding for affordable housing, building and repairing public

schools, supporting well-designed public transit, securing water, air, and environmental safety and responding to climate change.

The tax code, also under the purview of fiscal policy, requires significant, progressive changes to address racial disparities in both income and wealth. These include expansions of refundable credits that efficiently and effectively target low-income workers—disproportionately persons of color—and the reduction of a broad set of “upside-down” measures that exacerbate racial disparities. See [here](#) for a discussion of such changes.

Finally, it is of course crucial to push back against Trump administration policies that actively undermine black families’ access to programs that target the historical and institutional racial discrimination discussed above. This includes the proposed HUD rule to [roll back progress on fair housing](#), [changes to SNAP](#) that will make it harder for many people of color to meet their basic needs, let alone build wealth, and efforts to change the poverty threshold that would artificially reduce measured [poverty](#).

Responses to Questions for the Record
Congresswoman Ilhan Omar
“Reexamining the Economic Costs of Debt”
House Budget Committee
November 20th, 2019

For Dr. Randall Wray:

You note in your testimony that a government deficit is equivalent to a private-sector surplus. Increasing government deficits, then, has the effect of increasing economic growth and wealth. My Republican colleagues either decide to take the complete opposite of this view with severe austerity in deficit spending or will argue that broad tax cuts for corporations and the wealthy will trickle down to spur economic growth for all. However, the U.S. now has the largest wealth gap in almost a century, and multi-billion-dollar corporations like FedEx and Amazon have reported \$0 in taxes for 2018, with reports emerging and citing a lack of sustained investment in their workers. *Could you expand upon why more spending should be prioritized on directly impacting working families, instead of corporations and the wealthy few? Do we then have the fiscal space to pursue bold reforms like the Green New Deal to better prepare our workforce, economy, and greater society for the devastating effects of climate change being felt today?*

Response by L. Randall Wray:

Thank you for your questions. My original testimony did not directly address the important question of the potential impact of fiscal policy on inequality. I will discuss that issue as well as the implications for financing the Green New Deal reforms.

As I argued, at the level of the economy as a whole, spending equals income by identity. It is useful to divide the economy into sectors for the purposes of analyzing the balance of spending and income within each sector. We often use three sectors for such purposes: the domestic private sector (households and firms), the government sector (Federal, state and local governments), and the foreign sector (the rest of the world). See Figure 7 in my Testimony for a graphical display. While income equals spending at the aggregate level, each of these sectors can run a deficit (spending is greater than income), a surplus (spending is less than income) or a balanced budget (spending equals income). In the case of the US, the typical outcome since the early 1980s has been for the domestic private sector to run a surplus (income is greater than spending, so that saving is positive) and the government sector runs a deficit (tax revenues are less than spending—with the Federal government’s budget driving the deficit). By identity, the foreign sector balance equals the government sector’s deficit minus the domestic private sector’s surplus.

Or, to rephrase it, given the US current account deficit (which is looking at the foreign sector’s surplus from the point of view of the US), the government’s deficit determines the size of the

domestic private sector's surplus. It is in that sense that "a government deficit is equivalent to a private sector surplus". Generally, private sector surpluses are desirable as they represent accumulation of private savings that strengthen the financial positions of our households and firms. Moreover, Federal government deficits lead to the issue of US Treasury bonds that are accumulated by savers (domestically and abroad) and are recognized as the safest financial assets in the world.

A fiscal policy stimulus—either a spending initiative or a tax cut—can increase the size of the Federal deficit, at least initially. If the spending or tax cut is well-targeted, this can boost economic growth and increase the nation's productivity. When that happens, the higher growth rate will quickly increase tax revenue and naturally reduce the budget deficit.

However, I also showed in my testimony that larger Federal deficits can be generated in the "bad" way: as the economy slows and moves into a recession, tax receipts fall quickly and the budget deficit grows. This can go on for a few years, with the deficit growing until the economy turns around. The growing deficit helps to put a floor to aggregate demand, acting as an automatic stabilizer to get the economy growing again. That will reduce the size of the deficit because resumption of growth generates growing tax receipts.

Poorly targeted spending and tax cuts can also produce "bad" deficits. For example, economists have long understood that tax cuts for high income and high wealth individuals are not likely to boost aggregate demand, hence, are unlikely to generate much growth. This is because the propensity to consume of rich households is considered to be quite low. Such households do not face binding financial constraints, so are not likely to increase spending merely because a tax cut has marginally increased their net income. We could extend this argument to cash-rich corporations that are accumulating net profits in excess of perceived investment opportunities. If a firm is purchasing its own stock because it cannot find a better investment option, it is highly unlikely that a tax reduction will cause it to start investing in plant, equipment, or innovations.

If we look at the recent tax cuts—which were targeted to high income and high wealth households and corporations—it would have been quite surprising to find that these boosted growth of consumption or investment. While it is too early to provide a definitive statement, it does not look like the growth rate has picked up significantly. However, the budget deficit has grown—and is projected to reach a trillion dollars. In my testimony I showed that tax revenue growth has fallen essentially to zero. This is very unusual for an expansionary period—and we are entering the 11th year of what is said to be the longest expansion ever. This increase of the deficit seems to be an example of a "bad" deficit that resulted from a badly targeted tax cut. Tax revenue growth plummeted to zero without boosting growth of GDP.

Spending must also be targeted to ensure it is efficient. Spending on interest is not efficient in terms of promoting employment and growth. Half of the Treasury's debt is held outside the US, so interest payments on that debt go abroad. That would boost US growth only if foreigners

increased their purchases of US exports. That did not seem to happen, and the Administration's new tariffs were probably counter-productive if the goal was to increase US exports.

Domestic bond holders include financial institutions, pension and insurance funds, nonfinancial corporations, and higher income and wealth households. While interest payments to domestic holders likely do have some positive effects on growth and employment, the “bang for the buck” is smaller than for government spending directly targeted to job creation and investment.

In particular, Federal government spending that benefits low income and wealth households is likely to provide the biggest boost to growth because their propensity to spend out of income is high. Further, increasing income security and reducing debt burdens of those of limited means helps to relieve stress and encourage investments in what economists euphemistically call human capital.

Our nation's most valuable resource is its labor force. For far too long, it has been neglected and even maltreated. Even after a decade of recovery, millions of people remain either unemployed or underemployed, working far fewer hours than they desire in part-time, contingent, “gig economy” jobs that do not make use of their skills and that pay them far too little to support a family. As we at the Levy Economics Institute estimated in 2018, there were still 15 million people who would take a full-time job if one were offered. Our nation desperately needs more jobs, better wages, better benefits, and better working conditions. We need a Federal Job Guarantee that offers a good job to all at a living wage of \$15 per hour.¹ That would boost economic growth in a sustainable manner.

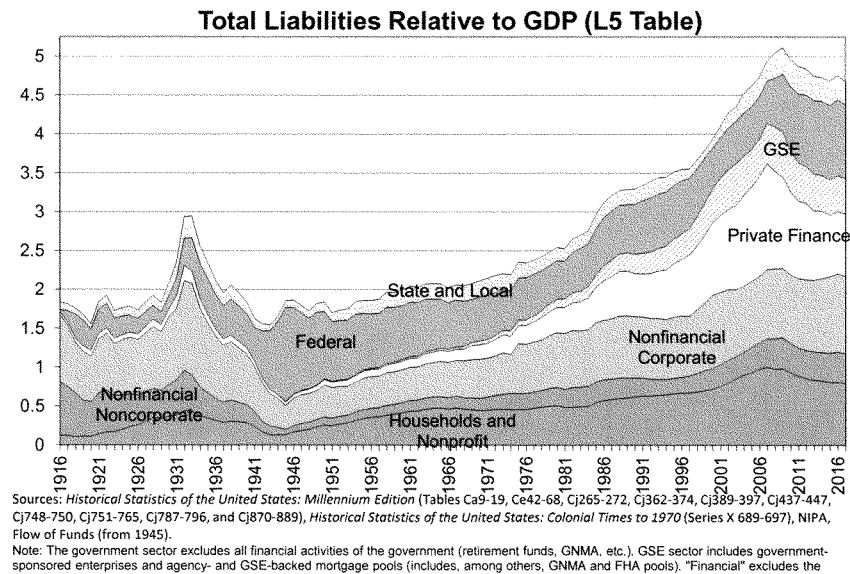
Finally let me address the issue of fiscal policy space and sustainability of Federal government deficits and debt, before turning to the topics of inequality and bold reforms such as the Green New Deal. While deficit hawks claim that the Federal government is just like a household or a firm that needs to balance its spending against its income, such an analogy is false and dangerous for several reasons. First, as I have argued above, at the level of the economy as a whole, spending equals income. It is prudent for households and firms to accumulate net financial wealth, but this would be impossible at the aggregate level if the Federal government balanced its spending against its tax revenues. The Federal government deficit by identity equals the sum of the surpluses run by the other sectors—firms, households, local and state governments, and foreigners.

Second, the claim that a firm or household needs to continually balance spending and income is not correct. Households borrow to purchase homes or to go to college. What is important is that they can service the debt out of income flows—debt, by itself, is not something that must always be avoided. Issuing debt is also normal practice for firms. At my testimony one of the

¹ See: PUBLIC SERVICE EMPLOYMENT: A PATH TO FULL EMPLOYMENT, by L. Randall Wray, Flavia Dantas, Scott Fullwiler, Pavlina R. Tcherneva, and Stephanie A. Kelton, Levy Economics Institute Research Project Report, April 2018, <http://www.levyinstitute.org/publications/public-service-employment-a-path-to-full-employment>.

Republican Congressmen asserted that his father's firm was well-run because he repaid all of his debt. But well-run firms may well increase their debt year after year while expanding their business. Again, what matters is whether gross revenues are sufficient to service the debt, cover other costs, and generate net profits. Well-run corporations may have continually rising debt ratios (debt-to-gross revenues) if their business is expanding.

This becomes even more obvious if we look at households and firms taken as a whole. Over the entire postwar period, the total amount of debt of the private sector has grown on trend—and this is sustainable so long as incomes rise on a pace to allow them to service the growing debt. The ratio of private sector debt to GDP has also grown on trend over the whole period—sometimes faster, sometimes slower, as the following graph shows. While everyone seems to focus on Federal government debt, the private sector's debt is about four times greater—and most of the growth of the total debt ratio has been due to private sector debt, not because of Federal government debt.



As I show in my Testimony, the ratio of Federal government debt to GDP has grown at an average pace of nearly 2% per year since 1791 (see Table 1). For 229 years Federal debt has increased faster than GDP. If something can continue over such a long period, one might begin to think that it is normal.

And here is the final point. The Federal government is the issuer of the currency, while households and firms are users of the currency. That makes a difference. The issuer cannot run out of its own currency. Modern governments spend through keystrokes that take the form of a central bank credit to a private bank's reserves. The private bank credits the account of the recipient of the government's spending. Whatever is budgeted by Congress can be spent. I realize that many view such a statement as exceedingly scary because they jump to the conclusion that this is a call for the government to spend without limit. Instead, it is a recognition that government is not financially constrained—except by the budgeting process—but it does face real resource constraints. Spending too much takes resources away from other uses and can generate inflation.

An array of data indicate that inequality of income and wealth today is as extreme as it was on the eve of the Great Depression. This causes a variety of social and economic problems and even threatens democracy—as a handful of billionaires wield outsized political influence. Achieving significant reduction of inequality will require a range of coordinated policies: raising tax rates on high income and wealth; new rules on maximum compensation permitted for top management of public corporations; a universal Job Guarantee that pays \$15 per hour with good benefits (establishing an effective minimum compensation package that all other employers have to meet in order to retain employees); Medicare for All; free public education through college and trade schools; free childcare for all; huge investment in public housing; reform of Social Security to raise retirement incomes for those who had the lowest wages over their working lives; a child allowance; and a stronger social safety net for those who cannot or should not work. Some of these reforms will release resources to be used for higher priorities; some will require more resources; and some will increase the supply of resources. It is appropriate to ask whether the net demand on our nation's available resources would be too great.

When we raise the question of adequate fiscal space, what we are referring to is a sufficient supply of resources that can be mobilized in the public interest. Normally the economy operates with substantial excess capacity—of labor, of plant and equipment, and of produced inputs to further production processes. If we were to undertake a huge new project—say, tackling climate change, providing free higher education for all, eliminating poverty, implementing a universal Job Guarantee program paying living wages, or providing Medicare for All—it is possible that we would exhaust that excess capacity. In that case, we would need to shift resources from inefficient and low priority uses to our new high priority programs. There are a variety of methods of accomplishing this. We can impose new taxes on activities, income, and wealth to free-up resources. As we do this, we want to ensure that the new tax really will release resources and that the tax burden falls on those best able to bear it (those with higher income and wealth). We can also use regulations and prohibitions to reduce undesired use of resources (such as banning fracking). And in extreme situations we might adopt the strategies used during WWII: rationing, wage and price controls, patriotic saving (war bonds) and postponed consumption.

Again, the goal is to release resources to tackle the new priorities, while ensuring that the burden does not fall on low income people.

In conclusion, the question is not really about financial affordability—Uncle Sam cannot run out of money. It is whether we have the technical know-how as well as the human, natural, and capital resources that will be required to implement a Green New Deal. At the Levy Institute we have taken a first step at estimating the resource requirement and availability—and we have discussed how we can go about mobilizing resources for a Green New Deal without sparking inflation.²

² Nersisyan, Yeva, and L.R. Wray, “How To Pay For The Green New Deal”, Levy Economics Institute Working Paper No. 931, May 2019, <http://www.levyinstitute.org/publications/how-to-pay-for-the-green-new-deal>.