Economics Group

Special Commentary

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The "Unsustainable" Path of Federal Fiscal Policy Part IV: A Lesson in Government Consumption Trade-Offs

In the fourth part of our series on what the Congressional Budget Office labels the "unsustainable" path of federal fiscal policy, we explore how decisions about federal fiscal policy impact both short-run and long-run economic activity.¹ In addition, we present the economic implications of continually delaying tough decisions that need to be made to put U.S. federal fiscal policy on a more sustainable path. Finally, we conclude with a summary of our paper series and present the implications of our findings for decision makers.

An Economic Framework for Understanding Fiscal Policy Trade-Offs

One of the key questions facing federal policymakers today is how fiscal policy affects short-run and long-run economic growth. A model frequently used by economists to understand policy trade-offs over time is the overlapping generations (OLG) model.² The OLG model divides time into two periods that can be thought of as the short-run and the long-run. In the first period, the model captures young individuals that are working and older individuals who are not working (retired). The young workers decide how to divide their income earned between savings and consumption while older workers consume their saved wealth and any capital payments (e.g., returns on savings and social security payments). In the second period of the model, younger individuals become older and thus, net consumers, while a new younger generation enters the workforce and makes decisions about their savings and consumption. In addition to understanding how consumers behave over time, the OLG model can be adapted to account for the government sector and fiscal policy and their effect on decision making.

Two key insights can be gleaned from the overlapping generations model. First, younger individuals in the model base their consumption and savings decisions on their expected lifetime after-tax labor income. Thus, when government purchases rise, younger workers recognize the rise in the future taxes and, thereby, reduce their current consumption and their after-tax savings falls.³ The second major implication of the OLG model is that the federal government has a long-run budget constraint, i.e. it cannot run large deficits in perpetuity, witness the problems in the Eurozone and Japan today, thus the government sector is forced to make trade-offs in its consumption over time the same way consumers are forced to make decisions over time about their consumption.⁴ Thus, in the current environment of large and growing federal and state government debt, the government has to choose some level of consumption (i.e., government spending) today at the cost of higher taxes tomorrow, or cuts to spending tomorrow given that deficit spending cannot continue in perpetuity. Conversely, the government can choose to consume less today or raise taxes today to reduce the deficit to consume or cut taxes in the future. This trade-off has direct implications for economic growth.

³ Romer, D. (2006). Advanced Macroeconomics: Third Edition. McGraw-Hill Irwin.

⁴ This budget constraint is formally referred to as the government's intertemporal budget constraint which states that the current level of debt must be equal to the present value of future budget surpluses. For further reading see Blanchard, O.J. and Fischer, S. (1989). Lectures on Macroeconomics. The MIT Press.



purchases rise, younger workers recognize the rise in the future taxes and, thereby, reduce their current consumption.

When

government

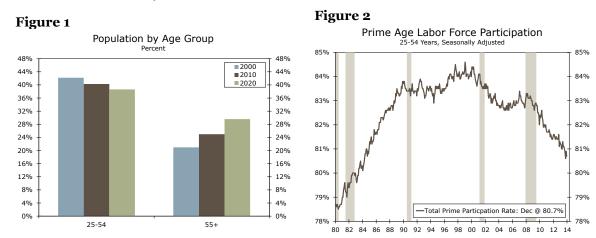
¹ Congressional Budget Office. (Sep. 2013). The 2013 Long-Term Budget Outlook.

² Romer, D. (2006). Advanced Macroeconomics: Third Edition. McGraw-Hill Irwin and Peter Diamond, (1965) "National Debt in a Neoclassical Growth Model." American Economic Review 55 (5): 1126-1150.

For example, if the government reduces the deficit today (i.e. cuts spending or raise taxes) the result is slower economic growth in the near term but the expectation is that the government has more flexibility to consume in the future (respond to crises) and/or lower taxes in the future, both of which provide support for long-run economic growth. While the OLG model, like many macroeconomic models, simplifies the current environment, it still contains important lessons for how public and private policy makers should think about the federal government's budget constraint and the importance of timing in fiscal policy decisions for economic growth.

For policymakers, the choices of fiscal policy reflect a deeper conflict on a vision of economic policy. In one policy vision, the best of the possibilities for policy and the economy exist within a constraint—the limits of our resources. Working within those constraints will be more productive than dissipating energies in an attempt to provide economic rewards outside of the ability of a society's resources to deliver without significant distortions. This constrained vision deals with real-world trade-offs rather than ideal solutions. Economics, unlike politics, is the science of making choices. While a politician running for office often makes promises on the campaign trail, the economist is always looking at the trade-offs. We see this in the concepts of a budget constraint, an income constraint, or balance sheets for governments and corporations.

In contrast, a policy vision that is unconstrained focuses on solutions—"let's just solve this problem." Policy positions such as the elimination of poverty or pollution, providing homeownership for all or health care for all, characterize a vision of an unconstrained set of policy options that will deliver an ideal result. The underlying philosophy is "let's do what is right." As noble as these unconstrained policy visions are, they have the potential to be inconsistent with the constrained fiscal reality of a nation.



Source: U.S. Department of Commerce, U.S. Department of Labor and Wells Fargo Securities, LLC

While some will seek the perfect policy vision, the reality is that now more than ever, today's fiscal policy environment dictates that a constrained policy vision is applied. The Congressional Budget Office (CBO) highlights in its latest *Long-Run Fiscal Policy Outlook* the importance of timing in addressing the current long-run fiscal policy imbalance. Reducing deficits in the near-term will require more sacrifices from older workers and retirees for the benefit of younger workers and future generations.⁵ In other words, some combination of tax increases and entitlement benefit cuts will make the older generation worse off for the benefit of better economic growth conditions for the younger generation in the second period, similar to the results of the OLG model. There is a budget constraint and tradeoffs must be addressed—an unconstrained policy vision fails to address these tradeoffs.

In addition, policy makers today are faced with challenging demographics. The number of individuals in the prime working age population continues to shrink and is expected to account for just 39 percent of the population by 2020. Conversely, the retirement age population

Today's fiscal policy environment dictates that a constrained policy vision is applied.

⁵ Congressional Budget Office. (Sep. 2013). The 2013 Long-Term Budget Outlook.

continues to rise and is expected to reach 30 percent of the population by 2020 (Figure 1). The fiscal policy challenge lies in the fact that besides a shrinking prime age working population, the participation rate among this prime working age demographic remains exceptionally low compared to historical norms (Figure 2). The smaller active workforce also has implications for tax policy going forward. For example, increased taxes on a shrinking share of the population will not likely produce as much revenue as historical tax increases of the same magnitude.

Choices on tax policy also reflect a deeper belief in the proper role of tax policy. For some, taxes are all about fairness—everyone should pay their fair share. However, for others, taxes are all about the incentives to work, save, invest and innovate. In addition, there is a split on the role of revenue. For some, revenue increasing measures should be neutral across economic activities but for others, there should be special tax breaks to direct individual activity such as subsidies or special industry tax breaks. It is easy to see that for tax policy, whatever the special interest group, there is a search for an exemption to tax neutrality.

Therefore, tax policy represents a significant challenge to the search for a predictable policy framework as households, businesses and investors have to look at the long-term and cannot adequately conduct activities without a significant risk premium for changes in fiscal policy. A permanent policy that is then changed next year creates a high level of uncertainty for decision makers and therefore creates a negative effect on long-run economic growth.

Implications of Not Addressing Long-Run Fiscal Imbalances

While the OLG model itself does not provide predictions about the negative economic effects of not addressing the long-run fiscal imbalance, there are lessons from empirical work that show the adverse effects of growth related to high and rising debt to GDP ratios. The work by Rogoff and Reinhart demonstrated this inverse relationship between debt and economic growth and further refined studies found the same relationship although the magnitude of the debt/growth link remains an active field of research.⁶ The key message in all of these works is that government spending choices in the current fiscal environment are choices between growth today and growth tomorrow. This trade-off over time is key. These models do not provide solid evidence to support one policy approach or another, but policymakers must choose which path to take. Most public policymakers remain focused on pointing to their accomplishments during their current term, bringing home the bacon, and as a result tend to focus on short-run growth as opposed to longer-term prosperity. This can clearly be seen in the number of times fundamental entitlement program reform has been avoided over the years despite the long-run financial unsustainable state of such programs. The fixation on the short-term benefits at the expense of the long-term negative effects is another example of the time inconsistency problem for decision makers.⁷

Failure to address long-term federal spending and the accumulation of debt, according to the OLG framework we are discussing here, would have the effect of rising interest rates, reducing private sector investment and as a result slow economic growth over time, witness again the Euro area and Japanese experience. This crowding-out effect would continue to become magnified the longer public policy makers wait to address needed fiscal policy reforms. The benefit of recognizing the unsustainable path of current federal spending and taking action today ensures that the United States can maintain its flexibility to adapt to future needs, while avoiding economic harm to private-sector growth by higher future taxes or significantly higher borrowing costs. While the short-term benefits of kicking the can on tough fiscal decisions are politically appealing today, delay only serves to limit the nation's long-term growth potential tomorrow.

Policy makers today are faced with challenging demographics.

⁶ Reinhart, C.M. and Rogoff, K.S. (2011). A Decade of Debt. NBER Worker Paper Series, 16827. National Bureau of Economic Research.

Herndon, T., Ash, M. and Pollin, R. (2013). Does High Public Debt Consistently Stifle Economic Growth? A Critique of Reinhart and Rogoff.

⁷ Kydland, F.E.; Prescott, E.C. (1977). "Rules Rather than Discretion: The Inconsistency of Optimal Plans," *Journal of Political Economy* 85 (3): 473-492 and John E. Silvia, *Dynamic Economic Decision Making*, Wiley, 2011, pp. 16-17.

Implications of Addressing Long-Term Federal Spending: Positive for Growth and Jobs

How changes in government spending or taxes will alter economic growth in either direction depends on the assumptions in the underlying economic model. In recent years, the real world result has been that fiscal stimulus has had a muted effect and, measured by employment and GDP growth. Of course, one could argue the counterfactual that we could be much worse off without the recent stimulus, but that would be difficult to prove. In part, the promise of economic results, that failed to appear, reflected an overconfidence bias on the part of policymakers. This bias also surfaced in 1968 with the income surtax and reflects the idea that policymakers typically assume a positive self-assessment of their ability to manage the economy.⁸

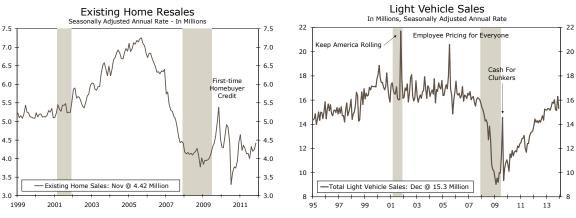
How changes in government spending will alter the path of economic growth depends on many factors, thereby making it difficult for policies to always achieve their full desired effect. These factors include the nature of the policy; businesses' and households' perception of the policy; the economic resources involved in the change; the availability of credit to finance the plan; the effects of the policy on international trade competitiveness; and the reaction of the monetary authority. While in the short run fiscal restraint may create a drag on growth, under certain conditions a sustainable, credible reduction in federal spending may help facilitate growth through a number of channels over a longer time horizon.⁹

The Character of Fiscal Stimulus and Restraint: Time Inconsistency

The effects of fiscal stimulus, or restraint, on economic growth will depend on the characteristics of the fiscal policy. First, what is the duration of the policy? In recent years, fiscal stimulus applied through programs such as the first-time homebuyers' tax credit and cash for clunkers, was temporary and, therefore, did not lead to long-term changes in behavior or economic activity. Instead of turning the housing and auto markets around, these temporary policies merely changed the timing of purchases and may have actually had a negative effect on consumer and business confidence when these programs failed to deliver the intended results (Figures 3 and 4). These temporary programs follow the mold of the 2008 tax rebate, which had little success in boosting economic activity in a meaningful way as the increase in income was a temporary, one-time event. To have a long-lasting effect on consumer and business' behavior, changes in policy must be perceived as permanent.¹⁰

Figure 3





Source: National Association of Realtors, U.S. Department of Commerce and Wells Fargo Securities, LLC

How changes in government spending will alter the path of economic growth depends on many factors.

⁸ For further information, see the discussion of the confirmation bias in John E. Silvia, Dynamic Economic Decision Making, Wiley, 2011, pp.111-112.

^{Alesina, A. and Ardagna, S. (1998) Tales of Fiscal Adjustment.} *Economic Policy*, Vol. 13 (27), 487-545.
Giavazzi, F. and Pagano, M. (1996) Non-Keynesian Effects of Fiscal Policy Changes: International Evidence and the Swedish Experience. *Swedish Economic Policy Review*, Vol. 3 (1) 67-103.
¹⁰ Hellwig, M. and Neumann, M. (1987). Economic Policy in Germany: Was There a Turnaround? *Economic Policy* 5 (October): 105-40.

Moreover, households and businesses must judge whether any advocated long-term fiscal policies are believed to have staying power. Is the pace and allocation of federal spending sustainable over time? For fiscal policy to make a difference, the pace and allocation of federal spending increases or decreases must be viable over time. This was certainly true in the case of Canada's fiscal tightening in the 1994–1995 period. As a counterpoint, the increased public spending in Europe amid anemic economic growth has led to outsized fiscal deficits that were not sustainable and, therefore, did not generate expectations of a sustained fiscal policy going forward. The same might be said of the U.S. government spending in the wake of the 2007 recession. Political time horizons of two or four years are inconsistent with effective long-run decision making and send confusing signals to private decision makers.

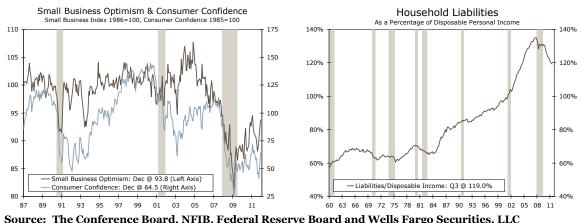
Sustainability is not simply a political story but also a financial story. For any country, will increasing spending generate a rise in debt finance, and thereby interest rates, to a level in excess of nominal GDP growth—the ability of the economy to pay that debt? This balancing act between nominal GDP growth and interest rates reflects the principle that federal spending growth, and the debt that is associated with it, is sustainable as long as the growth of the economy is strong enough to pay the interest expense on the outstanding debt.¹¹

Underlying all estimates of the effect of fiscal policy is the assumption that aggregate demand will increase through a positive multiplier process. The assumption of a positive multiplier is based on the belief that consumers and businesses are willing to spend income as it is received, thereby generating income for others going forward. Similarly, it assumes businesses are willing to spend tax breaks on investment and new jobs in the United States. This assumption holds whether policy is channeled through tax breaks or through direct government spending.

Yet, in recent years, the multiplier appears to have fallen short of expectations as the goals for output and employment have been more difficult to achieve. For the consumer, two changing behaviors were clearly in the way of fulfilling the multiplier process. First, confidence in the economy and the job market (Figure 5) has been extremely low since the past recession began, and therefore when consumers received income, they were less likely to spend along the lines of prior recoveries, reducing the multiplier effects of an increase in income. Indeed, the saving rate in the 12 months following the end of the past recession averaged 4.8 percent compared to 3.5 percent following the 2001 recession. Optimism about the economy after the onset of the past recession was also extremely low for businesses, making them less likely to purchase new equipment or hire more workers (Figure 5). Second, when consumers received income, instead of spending that income as they had in prior recoveries, they had a strong desire to pay down debt. This reduced the amount of income being recycled back into the spending stream, as evidenced by the sharp drop in household debt relative to income in Figure 6, and also reduced the multiplier.

Figure 5

Figure 6

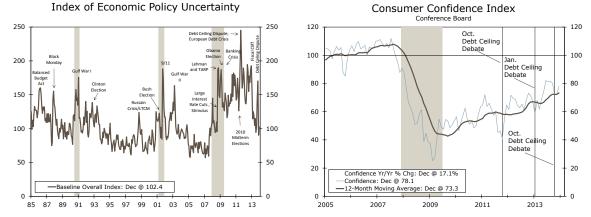


¹¹ Thomas Sargent and Neil Wallace, *Some Unpleasant Monetarist Arithmetic*, Federal Reserve Bank Quarterly Review, (Fall 1981).

Households and businesses must judge whether any advocated long-term fiscal policies are believed to have staying power. Moreover, for the overall economy, the level of policy uncertainty remains high in recent years as illustrated in Figure 7.¹² While the actual economic consequences of this uncertainty will vary depending on the nature of the fiscal policy debates, the resulting erosion in confidence, especially among consumers, is clear as evidenced by the drop in the Conference Board's consumer confidence measure during the debt ceiling debates in recent years (Figure 8).

Figure 7

Figure 8



Source: http://www.PolicyUncertainty.com, U.S. Department of Commerce and Wells Fargo Securities, LLC

Resources of Production in the Public or Private Sector

Another aspect of federal spending is that a large government sector may exert a claim on too many productive resources such that the marginal productivity of those resources falls below the optimal level. This productivity difference reflects the market-driven efficiency incentives that are often absent in the government sector. If public-sector productivity is below private-sector productivity for certain resources and federal spending were cut, the transfer of those resources to the private sector would actually increase output in the economy. Yet, in an environment of fiscal austerity, will private sector spending rise and take advantage of newly available resources, thereby sustaining growth in the short run?

In the early post-WWII era in the United States, decreased government production and opened up resources, such as rubber and steel for autos and lumber and copper for housing construction. As a result, reductions in federal spending were met with increases in private production. Cutbacks in public production opened up opportunities for private companies to develop in the aircraft, aluminum and steel industries, for example.¹³ Would fiscal restraint today, when the government is more geared toward providing services, lead to an increase in private production as quickly or significantly as it did in the post-WWII era?

How the Federal Government Pays the Bills: Role of Credibility

Three options are available for paying the bills: taxes, bonds and printing money to directly finance government deficits by the central bank. Taxes alter the expected rate of return on work, saving and investment and, as such, alter the pattern of production and resource allocation in a society. Issuing bonds alters the supply of debt and, thereby, alters market interest rates. If debt issuance is perceived as excessive, this could lead to a rapid rise in interest rates with little buyer interest and a failed auction. Finally, the federal government, through its central bank, could always print money in the grand tradition of Louis XIV or, more recently, Zimbabwe.¹⁴

The level of policy uncertainty remains high in recent years.

¹² Baker, Scott R., Nicholas Bloom, and Steven Davis, *Measuring Economic Policy Uncertainty*, May 19, 2013.

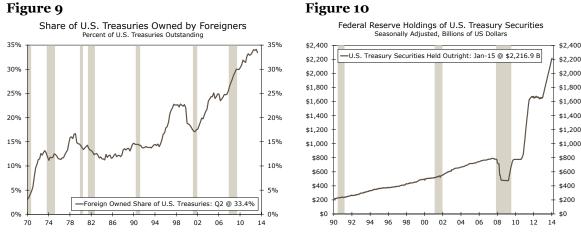
¹³ Fels, G. and Froelich, H. (1986). Germany and the World Economy: A German View. *Economic Policy* 4 (April) 178-195.

¹⁴ In the case of Zimbabwe, the printing of money resulted in rampant inflation. While official records were not maintained, at its peak, some have estimated that the rate of inflation topped out around 231,000,000 percent in 2008.

Increasing federal spending has been shown to provide less stimulus to the overall economy than a reduction in taxes, according to some of the literature on fiscal policy.¹⁵ However, what about the possibility of reduced spending and reduced future taxes? The tax reduction offers at least a partial offset to the fiscal drag in the short run as consumers and businesses now have more money to spend, assuming they spend it at the anticipated rate. In the long run, the expected reduction of future taxes must be credible, and the cuts in spending must be persistent.¹⁶ In a like manner, reduced bond issuance would lower market interest rates, while a reduction in money growth would reduce inflation fears and, therefore, lower interest rates over the long run. As a result, how the federal government would finance a reduction in spending could offer at least a partial offset to any fiscal drag in the short run and could be expansionary in the long run if fiscal restraint is viewed as credible and long-term rates fall significantly over time. However, in today's environment, how much lower can interest rates fall or instead stay low if federal spending is reduced?

The Credit Linkage: A Contrast to Early Post-WWII America

The state of the credit market and the market's perception of fiscal policy will greatly influence the effectiveness of any change in fiscal policy. This linkage is possibly one of the most significant changes in the U.S. economy since WWII. In the early post-WWII period, the build-up of low interest savings in the United States from the war period afforded fiscal policymakers a cheap source to finance deficits. Credit was plentiful and its price very low.



Source: U.S. Department of the Treasury, Federal Reserve Board and Wells Fargo Securities, LLC

Today, the availability of credit to finance spending increases is more limited. In Japan, large fiscal deficits have been financed internally. In contrast, large U.S. federal deficits have been financed by a significant amount of foreign buying, the incentives for which are different than that assumed in a classical loanable funds model (Figure 9). Three large buyers of U.S. debt today—the Federal Reserve, the central bank of China and the Bank of Japan—are not motivated by a goal of maximizing returns for a given risk; these are not mark-to-market buyers. Instead, the Fed is aimed at flattening the yield curve and foreign central banks are in the game of stabilizing their exchange rate relative to the U.S. dollar. Finally, the increase in the Federal Reserve's balance sheet raises the risk of rising inflation sometime in the future.

How might credit markets respond to a policy of more fiscal restraint? The response of the financial markets depends on the credibility of the deficit reduction itself. A long-term, credible program may have two significant outcomes and could stimulate spending in the economy in two major ways. In the first possible outcome, deficit reduction reduces the demand for credit in the

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¹⁵ See, for example, Alesina, A. and Ardagna, S. (2009) Large Changes in Fiscal Policy: Taxes Versus Spending. Working Paper 15438.

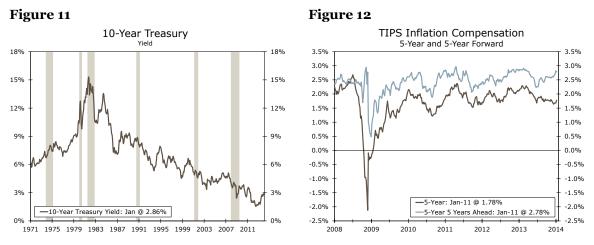
¹⁶ Barro, R. (1979). On the Determination of Public Debt. Journal of Political Economy 87 (5) 940-71.

Feldstein, M. (1982) Government Deficits and Aggregate Demand. *Journal of Monetary Economics* 9 (1) 1-20.

marketplace and, thereby, raises private investment spending through a decline in long-term real interest rates. In addition, long-term interest rates may adjust downward in expectation of lower future inflation that may reflect fears of debt monetization in the future.

For the second potential outcome, credit markets are forward looking and, therefore, could respond quickly to a serious program of deficit reduction, and that could accelerate the decline in real interest rates, bringing forward the investment dividend associated with balancing the deficit. The initial response to the Italian fiscal program announced in early December 2011 was encouraging, although market uncertainty over a more immediate solution to the European sovereign debt crisis then pushed Italian government bond yields higher. This again shows that any reduced federal spending program must be credible. Today, euro bond interest rates are lower reflecting expectations of a better fiscal balance ahead.

A shrinking federal deficit directly lowers real interest rates through a portfolio channel; reduced government borrowing lowers the supply of government bonds relative to other assets and, thereby, would put a downward spin on interest rates as we witnessed in the United States in the 1990s. That said, with yields on today's U.S. Treasury securities near historic lows and longer-term inflation expectations in check, a reduction in debt issuance may have little effect on interest rates and investment in the near term, although rates may be lowered from what they would have been otherwise (Figures 11 and 12).



Source: Federal Reserve Board, Bloomberg LP and Wells Fargo Securities, LLC

As mentioned previously, any fiscal policy plan's effectiveness would depend on its credibility, and given that a large source of credit comes from foreign investors, the reaction to the policy would play a major role. Over the past two years, the comfort threshold of federal spending has taken a sharp turn toward the downside as European sovereign debt issues and the expected entitlement burdens in the United States intimate at financing strains. There is a significant oversupply of public debt today and more on the way down the road. Even a king as powerful as Louis XIV paid the highest interest rates in Europe due to his extravagant spending.

Today, the perception is that financing U.S. federal debt is simply not sustainable over time. If so, then further fiscal stimulus is unlikely to be effective and, therefore, we are left with only one option: fiscal restraint. Would a policy of fiscal restraint tend to increase real economic growth, over the long run, in contrast to the fears of economic weakness that dominate the conventional view? The answer would again depend, in part, on the size of the interest rate response in the marketplace to fiscal restraint. If interest rates fall and households and private investors increase their spending, then at least there will be some positive pickup in the economy due to a credible program of fiscal restraint.

Even under a credible plan, fiscal restraint is likely to be painful in the short run. In the United Kingdom, fiscal austerity has helped to bring the spread between U.K. 10-Year Gilts and German 10-Year Bunds lower by approximately 90 bps, and our outlook for U.K. real growth is now

Today, the perception is that financing U.S. federal debt is simply not sustainable over time. 2.3 percent for 2014.¹⁷ In addition to slower growth in government consumption, part of the immediate slowdown in GDP growth after the immediate move to austerity stemmed from shocks over the past year, including severe weather and unrest in the Middle East that pushed commodity prices higher; additional headwinds have stemmed from economic weakness and turmoil in financial markets due to the sovereign debt crisis. Moreover, government consumption was expected to be a drag on GDP growth over the next five years.¹⁸ As the government's austerity plan moved forward, it left little room for the economy to absorb any potential shocks in the short run but over time the wisdom of undertaking fiscal restraint has been reinforced by stronger economic growth relative to the gains in Europe at large.

Would Fiscal Restraint Boost Growth in the United States?

The underwhelming effect of recent stimulus measures and the growing debt levels of many developed countries have highlighted the question of whether fiscal restraint, as opposed to fiscal stimulus, may be better able to spur economic growth in the long run, the classic trade-off decision over-time as expressed in the OLG model. In the short run, fiscal restraint would likely lead to a reduction in aggregate demand. Monetary policy easing may help to limit the initial decline in growth, as might a favorable investor reaction to the plan which would also lower interest rates. However, as seen in the United Kingdom today, fiscal austerity can yield tepid, and potentially negative, growth in the short run.

Over a longer period, in contrast, there are channels that could at least partially offset the drag of a reduction in government spending, making fiscal restraint less severe than what is often thought.¹⁹ Given a credible and sustainable plan, fiscal restraint would likely reduce the costs of borrowing, thereby lowering long-term interest rates and raising the amount of private sector investment. Policy restraint will also help improve trade competiveness as lower interest rates would likely lead to an increase in capital outflows and a depreciation of the dollar, providing a boost to net exports. In addition, a reduction in federal spending would free up resources in the economy that may be more efficiently used in the private sector. Finally, monetary policy may have less of a need to undertake tightening measures in the future in order to reign in an economy over-fueled by credit borrowing.

Conclusion

Over the course of this report series, we explored the long-term challenges facing the nation's policy makers. We highlighted that all aspects of federal fiscal policy under current law are, in the words of the CBO, "unsustainable." Tax policy under current law is unsustainable due to the fact that the current tax code fails to account for inflation resulting in larger numbers of individuals being subjected to higher tax rates over time (bracket creep). Federal outlays continue to be on an unsustainable path as record gaps emerge between federal spending and revenues and the pace of growth in entitlements exceed the pace of economic growth to fund those entitlements. In addition, the nation's debt continues to grow, with the debt-to-GDP ratio expected to reach 100 percent of GDP by 2038. Finally, we explored the economic implications of these unsustainable policies and how making short-term fiscal policy reforms will dramatically change the potential for economic growth in the long run.

In sum, the reality is that our very short-term progress in reducing the federal deficit does nothing to address the continued rise in the nation's debt to GDP ratio nor does it address the key spending drivers of this debt, entitlement programs. Policy makers have been wrangling with how to reform entitlement programs since the Reagan administration without success. The continual delay in providing these much needed reforms continues to undermine the nation's future fiscal and economic stability. It remains to be seen if the importance of these reforms will be recognized in order to ensure a more fiscally sound and more economically robust economy in the future.

Tales of Two Small European Countries. NBER Macroeconomics Annual 1990.

Our very shortterm progress in reducing the federal deficit does nothing to address the continued rise in the nation's debt to GDP ratio.

¹⁷ January Monthly Outlook, Wells Fargo Economics Group January 15, 2014.

¹⁸ Office for Budget Responsibility "Economic and Fiscal Outlook," November 2011.

¹⁹ Giavazzi, F. and Pagano, M. (1990) Can Severe Fiscal Contractions Be Expansionary?

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