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Worldwide Fiscal Crisis: Fact or Fiction?

| | |
|---|----|
| Worldwide Fiscal Crisis: Fact or Fiction? Introduction | 1 |
| John T. Harvey | |
| Taxes are for Redemption, Not Spending | 3 |
| L. Randall Wray | |
| The Debt Ratio and Sustainable Macroeconomic Policy | 12 |
| Scott T. Fullwiler | |
| Eurozone Groupthink and Denial on a Grand Scale | 43 |
| William Mitchell | |
| Austerity in Mexico: Economic Impacts and Unpleasant Choices Ahead | 56 |
| Juan Carlos Moreno-Brid, Noel Pérez-Benítez and Héctor J. Villarreal | |

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Worldwide Fiscal Crisis: Fact or Fiction?

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Pundits and policymakers throughout the world are calling for drastic reductions in government budget deficits. Their fear is that the weight of accumulating debt will lead to disaster as it drives up interest rates, causes inflation, and forces defaults. What may appear to be reasonable policy today, they caution, will bring catastrophe in the not-too-distant future. The groundswell of fear is so great that it has generated grass-roots campaigns and political movements calling for budget balancing.

These are not the only voices, however. Just as vehement are those arguing that the real danger lies not in increasing, but reducing deficits and debt levels. They say that government spending is, by definition, private sector earning and that warnings regarding national bankruptcies are based on a flawed understanding of modern fiscal budgeting and financial markets. They point to the unemployment and stagnation created by austerity programs as evidence of what reducing spending and raising taxes really accomplishes.

Who is right and who is wrong is not just an academic matter but one of practical and fundamental importance. If the budget-balancers are correct, then the unemployment rates of 25% in Greece, 23% in Spain, 13% in Portugal, and 10% in Ireland are simply the short-run price paid for a stronger future. If they are wrong, however, then not only are millions of people suffering needlessly, but the very foundation of political democracy and international cooperation is being threatened.

The arguments put forward by the scholars invited to contribute to this issue lean heavily toward the latter view. In their opinion, we are headed toward disaster. L. Randall Wray opens the discussion by taking on just one of the many flaws he sees in the austerity movement's argument, that is, the assumption that a sovereign nation with debt denominated in its own currency can be forced into bankruptcy. Not only is this patently false, he says, but there was a day not too long ago when this was common knowledge in the economics discipline. It is to our detriment that this simple wisdom has been lost. Wray offers a number of historical and contemporary examples to support his view.

Scott T. Fullwiler continues along these same lines, looking closely at what fiscal sustainability really means. Like Wray, he criticizes the mainstream view for ignoring real-world practices and institutions in their models. Fullwiler's extremely well-researched alternative not only soundly rejects their approach, but builds a counter argument with roots in the accounting and monetary operations actually employed in modern economies. There are no helicopters in his explanation of the money-supply process.

William Mitchell's paper, while entirely consistent with those of Wray and Fullwiler, looks more specifically at the European Union. Mitchell starts by reminding the reader of one of the original purposes of that economic experiment: peace on a continent that had seen centuries of warfare, including the most destructive conflict in human history. In that it has been enormously successful – but for how much longer? Mitchell argues that a fundamental revision is necessary if the EU is to survive, and that revision must be based on the idea that austerity is both economically ignorant and politically divisive.

Finally, the contribution from Juan Carlos Moreno-Brid, Noel Perez-Benitez, and Hector Juan Villarreal-Paez points out that the developed world is not the only place where government budgeting is at the center of debate. Developing states, too, must consider public sector revenue and expenditures, but under far more complex conditions. Although the positive impact on aggregate demand remains, financing is problematic when debt is denominated in someone else's currency, there is a persistent trade deficit, and the exchange rate is pegged. It is for these reasons that Mexico cannot sustain continuous budget deficits in the same manner as the United States, thereby creating a series of painful choices. Either the constraints must be removed or Mexico and other similar developing states—and some developed—will continue to find

themselves struggling to maintain a sufficient level of aggregate demand.

The bottom line is that there is no fiscal debt crisis. That so many believe there to be one is a consequence of the economics discipline's increasing irrelevance, particularly when it comes to macroeconomics and economic policy. As Wray observes, economists actually know less about government budgeting today than they did fifty years ago. This causes no direct problem for those standing in front of classrooms and publishing papers and earning tenure at universities around the world. Not so for the citizens of the affected countries, however. The world is faced with enough problems as it is without us fabricating one. It is high time that we put the myths to bed and started basing policy on fact and not fiction.

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Taxes are for Redemption, Not Spending

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Fiscal austerity has become the mantra, the solution to the world's problems. Unemployment and slow growth? More austerity. High interest rates and rising debt ratios? More austerity. Inflation? More austerity. Deflation? More austerity. Budget deficits or trade deficits? More austerity. One size fits all.

In one short article, it is impossible to deal with all of the arguments for fiscal austerity. In this piece I'm going to tackle just one justification: that government faces a budget constraint similar to that of households. Hence, even if we wanted to loosen fiscal policy, we might not be able to do so due to financial constraints. Indeed, by tightening now we create fiscal space that might be needed in the future. In the orthodox view, government's spending is constrained by the sum of its tax revenue, bond sales, and money creation. Bond sales, in turn, are limited to the nongovernment sectors' willingness to lend to government; as sales increase, the interest rate required to bring forth buyers rises – which eventually creates a vicious cycle of rising rates and bigger deficits. Running the printing presses to finance deficits raises the specter of inflation, with too much money chasing too few goods. Hence, prudence dictates relying on taxes to pay for most government spending. The belief that government needs tax revenue to pay for most (or even all) of its spending is nearly universal.

It wasn't always so. At the end of WWII it was commonly understood by economists from the right (Milton Friedman) to the left (Abba Lerner) that taxes are not needed for revenue purposes.¹ Indeed, the Chairman of the NY Fed, Beardsley Ruml, even wrote a piece entitled "Taxes for Revenue are Obsolete".² None of these economists were arguing that we should dispense with taxes – which can be used for a variety of purposes. Rather, they recognized that unlike a household or firm, government does not need income to finance its spending.

We can go even further and argue that government needs to spend before it can receive income. Indeed, while everyone looks at tax "revenue" as the government's equivalent to "income", this view actually prevents understanding. We should instead understand "revenue" as "redemption".³ As I'll show, from the time of the American colonies through the early postwar period, this is the way that many regarded taxes.

We will begin with an analogy provided by G.F. Knapp – the token.⁴

The Cloakroom Debt Token

In discussing money, G.F. Knapp (one of the developers of the State Money Approach, adopted by Keynes and today by Modern Money Theory) made a useful analogy with the cloakroom token. When you drop off your coat at the cloakroom, the attendant offers you a token, usually with an identification number. The token is evidence of the debt of the cloakroom, which owes you a coat.

Some hours later you return with the token. The attendant returns your coat. By accepting the token and meeting the obligation to return your coat, the attendant has "redeemed" herself or himself. The slate is wiped clean; the debt is destroyed. At this point the token is simply warehoused, put back on an empty coat-hanger, waiting to be reused. When the token is in the cloakroom, it is not a debt. It is a circular piece of

¹ Friedman, M. 1948. A monetary and fiscal framework for economic stability, *American Economic Review*, vol. 38 (June); Lerner, A. P. 1943. Functional finance and the federal debt, *Social Research*, vol. 10, no. 1, 38–51.

² Ruml, B. 1946. Taxes for Revenue are Obsolete, *American Affairs*, vol. 8, no. 1 (January), 35-39.

³ Our word, revenue, originally came from Latin (*revenire*, meaning return) through old French (*revenue*, meaning returned) to old English (revenue). What was returned? The state's own debts. We still use the term "tax return" from which (much of) the state's "revenue" derives.

⁴ Knapp, G.F. 1973[1924]. *The State Theory of Money*, Clifton, NY: Augustus M. Kelley.

cardboard, perhaps enclosed in a metal ring. Or maybe it is a square chunk of plastic, or a shiny brass coin. Some cloakrooms instead use paper tickets, split into stock and stub at the time a coat is deposited.⁵ On your return to the cloakroom, the stock and stub are matched, the coat is returned to the rightful owner, and the stock and stub are thrown away. It makes no difference what form the token takes – it is just evidence of a debt, a “coat debt” that is redeemed by return of the coat.

Note that you could pass the token to your spouse or even to a stranger, with instruction to fetch your coat from the cloakroom.

If coats were homogenous, the tokens would be valuable to anyone who might want a coat. They could become a sort of currency passing from hand-to-hand at the value of a coat debt, so Knapp’s analogy is not so far-fetched as it might first appear. However, coats are not uniform, and the attendant cannot simply return “a coat”, but must return “your coat” in redemption for the token.

The point here is that the token is representative of debt, with the specific obligation spelled out by custom or contract and enforced if necessary in the courts.

Money as a Token of Debt

Let us begin with the closest analogue to the cloakroom token: the tally stick. Tally sticks were commonly issued for hundreds of years in Western Europe – by Kings but also by others as records of debt.⁶ The sticks were split into stock and stub, matched at the time of redemption and then destroyed.

In the case of the King’s tallies, Redemption Day was tax day when the King’s representative (the exchequer) arrived in the village, spread cloth on the ground, and matched stock and stub. Hallelujah, the tax was paid.⁷ The tally stick had value because it could be used to “redeem” oneself on tax day. You owed the king his taxes, and he owed you the right to deliver evidence of his debt (recorded on the stick) to pay your taxes. The sticks circulated because this debt was “homogenous”, unlike the debt redeemed by the cloakroom that takes the form of your specific coat. Anyone with a debt to the King needed a tally stick (any tally stick so long as it was issued by that King) to pay taxes.

A.M. Innes explained the significance of tallies:

“For many centuries, how many we do not know, the principal instrument of commerce was neither the coin nor the private token, but the tally, (Lat. *talea*. Fr. *taille*. Ger. *Kerbholz*), a stick of squared hazel-wood, notched in a certain manner to indicate the amount of the purchase or debt. The name of the debtor and the date of the transaction were written on two opposite sides of the stick, which was then split down the middle in such a way that the notches were cut in half, and the name and date appeared on both pieces of the tally. The split was stopped by a cross-cut about an inch from the base of the stick, so that one of the pieces was shorter than the other. One piece, called the ‘stock,’ was issued to the seller or creditor, while the other, called the ‘stub’ or ‘counter-stock,’ was kept by the buyer or debtor.

Both halves were thus a complete record of the credit and debt and the debtor was protected by his stub from the fraudulent imitation of or tampering with his tally.”⁸

Now, what were coins? As Innes emphasizes, coins were never very important – in spite of all the ink spilled in writing about them. They are essentially metal tallies that can last a long time and still garner interest when discovered centuries after being lost and forgotten. Collectors love them. By contrast, tally sticks are burned or simply rot away; ditto papyrus or paper evidences of debts. But coins were typically a nearly insignificant part of the “money supply”, and most tax collections brought in far more hazelwood tally sticks than coins.

⁵ Like the tally sticks that for centuries were split into stock and stub, matched on tax day. See below and Wray, L. R. (ed.), 2004, *Credit and State Theories of Money: the contributions of A. Mitchell Innes*, Cheltenham: Edward Elgar.

⁶ The cover of Wray, 2004 (see previous footnote) shows a photo I took of tallies that were used on private estates in Agrigento, Sicily in 1905.

⁷ Many of the words associated with money and debt were borrowed from religion – reflecting the commonality of debt to both the creditor and the gods.

⁸ See A. Mitchell Innes, “What is Money?” in Wray, *Credit and State Theories of Money*, Edward Elgar, 2004 pp 32-33.

Economists focus on coins primarily because they outlasted the sovereigns that issued them and many of them contained bright shiny metal that blinds reason. If dried bovine droppings had been stamped, instead, they would have served perfectly well as coins but no one would be interested in them after the demise of the empires that issued them.

Coins were evidence of debt that solved the problem of counterfeiting not through splitting a notched stick but rather through the technology of stamping or, later, milling coins. High quality craftwork and then milling the edges made “fraudulent imitation” more difficult. In addition, the use of precious metals (which were more easily monopolized by the sovereign) made counterfeiting more difficult and more expensive.⁹ The sovereign spent coins into circulation, then accepted them alongside tallies in tax payment. Coins circulated more freely than tally stocks because the coin by itself contained all the evidence of the crown’s debt (in the case of a tally stick one needed both the stock and the stub).

In addition to promising to take back coin token debts, the sovereign issuer could also promise to exchange them for foreign currency or for precious metal on demand. This is an additional promise added to the promise to accept the coin in payment of taxes. Even without this additional promise, the tally and coin tokens would circulate because they could be used to redeem tax debts. Note also that when the King accepted these in tax payments, he was also “redeemed”. The tally sticks would be burned (wiping his own debt clean) while coins could be stored for reuse, or melted for recoinage.

Paper Money Redemption: the Case of the American Colonies

Farley Grubb – an expert on American colonial currency – recently examined colonial Virginia’s use of paper currency that demonstrates the principle of taxes for redemption.¹⁰ His exposition confirms my account, both in the details and in the terminology.

Here’s the background. The colonies were prohibited by England from issuing coin, so as to protect the King’s monopoly of coinage. The colonies obtained coin from export, but of course as a major mercantilist power, England wanted to limit colonial exports to the raw materials she needed. The colonies had to import finished goods, shipping the coins back to England. The King wanted to limit expenditures on its empire, so the colonies were largely responsible for funding their expenses, which included fighting wars with the French, the Canadians, and Native Americans. Colonial governments were chronically short of British coins, obtained through taxes such as poll taxes and taxes on exports of slaves and tobacco.

To increase fiscal capacity, the colonial governments began to issue paper money. Virginia’s colonial government passed a series of acts to authorize the issue of treasury notes. Each law would include the total value of notes (denominated in Virginia pounds) to be issued and would set a date for final “redemption” (the term used by Grubb as well as by the lawmakers). Interestingly, the law also would impose a new set of taxes at the time of the note issue:

“Every paper money act included additional new taxes, typically a land tax and a poll tax, that were operative for a number of years. The number of years over which these new additional taxes were operative was chosen so as to generate enough funds to fully redeem the notes authorized by each respective paper money act. The date in each paper money act set for the final redemption of the notes authorized by that act closely matched the end to the taxing period set by that act.... From 1755 through 1769, the taxes imposed by the paper money acts included a poll tax, a land tax, a slave import duty, and a tobacco export duty.”

⁹ I won’t go further into the history of coinage here – and all the myths about value being determined by embodied precious metal – see Wray *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*, 2012 (revised 2015) Palgrave Macmillan.

¹⁰ See Farley Grubb, “Colonial Virginia’s Paper Money Regime, 1755-1774: a Forensic Accounting Reconstruction of the Data”, Working paper 2015-11; at <http://lerner.udel.edu/sites/default/files/ECON/PDFs/RePEc/dlw/WorkingPapers/2015/UDWP2015-11.pdf>

So the Paper Money Acts that allowed the treasury to issue notes also imposed new taxes that would be of sufficient size and over a period long enough so that the notes would be redeemed – the recognized purpose of the taxes was to “redeem” the currency, by accepting that paper money in payment of taxes. In fact, colonial paper money could be “redeemed” in two ways: payment of taxes or presentation at the treasury for payment in (British) coins. In other words, the treasury would spend the newly issued paper money into the economy and those receiving the treasury notes could use it to pay taxes, or spend it, or submit it to the Treasury in exchange for coin.

What did the Treasury do with the notes it received in tax payment? Grubb reports that the “notes were removed and burned” – not spent.

“Most redemption taxes were collected in the fall, and so notes reported in the Journals of the House of Burgesses as burned were likely removed via tax payments in the prior year.”

Grubb’s careful research shows that most taxes were paid using the paper money, and most paper money was “redeemed” in tax payment:

“Were redemption taxes paid in notes or in specie? The treasury accounts provide some evidence to answer this question. The clearest statement in the treasury accounts was made on 15 June 1770: ‘It appears to your Committee, that the Balance in the Treasurer’s Hands of Cash received of the several Collectors for Taxes appropriated to the Redemption of the old Treasury Notes [those issued before 1769], amount to Ten Thousand Three Hundred and Twenty-six Pounds Eleven Shillings, of which they have burnt and destroyed Seven Thousand Eight hundred Pounds, and have left in the Treasury, on that Account, in Specie, a Balance of Two Thousand Five Hundred and Twenty-six Pounds Eleven Shillings to be exchanged for old Treasury Notes.’”

From this evidence, Grubb concludes:

“A redemption tax of 10,327£VA was collected, of which 2,527£VA was in specie that was explicitly set aside in a dedicated account to be used to redeem notes brought to the treasury. The rest of the tax payments were burnt, implying that those tax payments were made in notes. Therefore, 76 percent of this tax was paid in notes, and 24 percent was paid in specie.”

So, three-quarters of taxes were paid by “redeeming” the notes.

The specie (coins) received in tax payments could be used to “redeem” the notes that were not “redeemed” in tax payments. What about the notes that were not “redeemed” by either method? They continued to circulate. Grubb asks, “Were Virginia’s notes used as a circulating medium of exchange? The denominational structure is consistent with such usage. Virginia’s notes were issued in relatively small denominations, small enough to make paying yearly tax assessments easy with said notes, and small enough to make it an easy domestic circulating medium of exchange in terms of being able to make change with said notes.” He concludes:

“The above analysis establishes that redemption taxes generated specie sums that were to be held in the treasury until the final redemption date legislated for each paper money act, at which time holders of those notes could cash them in at face value for the specie held in the treasury for that purpose. However, at the final redemption date holders of the respective notes did not rush to the treasury to exchange them for specie. The notes continued in circulation and note holders could cash them in at the treasury at their leisure. Robert Nicholas Carter, Virginia treasurer after 1766, noted this behavior, “Most of the

Merchants as well as others, ... preferred them [Virginia's treasury notes] either to Gold or Silver, as being more convenient for transacting the internal Business of the Country" (William and Mary College Quarterly Historical Magazine 1912, p. 235).

Adam Smith had argued that if the colonies were careful to ensure they did not create too much paper money relative to taxes, it would not depreciate in value (indeed it might even circulate at a premium, he argued). Redemption of the notes in tax payment would remove them from circulation – keeping them scarce. Grubb argues that this was well-recognized by the colonial government:

"The Virginia legislature took note redemption and its effect on controlling the value of its paper money seriously. Such is illustrated in the March 1760 paper money act which stated, 'And whereas it is of the greatest importance to preserve the credit of the paper currency of this colony, and nothing can contribute more to that end than a due care to satisfy the publick that the paper bills of credit, or treasury-notes, are properly sunk, according to the true intent and meaning of the several acts of assembly passed for emitting the same; and the establishing a regular method for this purpose may prevent difficulties and confusion in settling the publick accounts,... Be it therefore enacted, by the authority aforesaid, That Peyton Randolph, esquire, Robert Carter Nicholas, Benjamin Waller, Lewis Burwell and George Wythe, gentleman, or any three of them, be, and they are hereby appointed a committee, to examine at least twice in every year (and oftener, if thereto desired by the treasurer for the time being) all such bills of credit, or treasury-notes, redeemable on the first day of March, one thousand seven hundred and sixty five, as have been or shall be paid into the treasury, in discharge of the duties and taxes imposed by any former act of assembly; and upon receipt of the said bills or notes, the said committee shall give to the treasurer for the time being a certificate of the amount thereof, which shall avail the said treasurer in the settlements of his accounts as effectually, at all intents and purposes, as if he produced the said bills or notes themselves: And the said committee are hereby required and directed, so soon as they have given such certificate, to cause all such bills or notes to be burnt and destroyed" (Hening 1969, v. 7, p. 353).

This emphasizes that removing the notes from circulation was to protect the value of the government's paper currency – not to provide "revenue" that government could spend. The problem with spending notes in excess of redemption would not be government insolvency but rather inflation.

Let us recap what we can learn from the early Colonial American experience. The government imposed taxes payable in its own paper notes (its liabilities) or "specie" coin (liabilities of the crown of England). It issued its paper notes in payments by the treasury. When it received its tax revenue in the form of its own paper notes, it burned them. When it received coin in tax payments, it held them until an announced redemption day, to exchange for paper notes.

The paper notes were thus "redeemed" in two ways: payment of taxes, or exchanged for coin. A large majority of the notes were redeemed in tax payment; a small minority were redeemed for coin. The government recognized that it spent the paper currency into existence. It recognized that the purpose of the taxes imposed (by the same Acts that authorized issuing paper notes) was to redeem as many notes as possible. The taxes were not to "raise revenue", indeed, when the paper notes were received in tax payments, they were burnt, not spent. The government also realized it needed to receive a portion of tax revenue in the form of coin. This was to ensure that it could meet its promise to redeem notes for coin.

Redemption of the tax obligations by returning paper notes to the treasury not only redeemed the colonial government, but it also redeemed the taxpayers who owed taxes. The redemption is mutual and simultaneous – both the "creditor" taxpayer and the "debtor" note-issuing treasury were redeemed. At the same time, the "debtor" taxpayer redeemed himself of his duty to pay taxes to the "creditor" treasury. The four entries on balances sheets were all simultaneously wiped clean.

Creation of the notes preceded their redemption in tax payment. Creation always comes before Redemption. Indeed, it would have been literally impossible for the colonists to pay the new taxes given the chronic shortage of coin. They needed the treasury to spend the notes first before the taxes could be paid. Nor would the governments have needed to impose the new taxes if they were not going to spend the notes! But if they were going to engage in an act of Creation, then they had to follow that with an act of Redemption.

The American Colonial experience with note issue verifies what MMT has been saying for the past quarter century. Careful study of other examples will confirm MMT's approach.

Let us turn to private paper token money. We will see that its issue follows a similar logic – a point emphasized by Innes. This is important because modern governments use their central banks and private banks to make and receive payments.

Bank Paper Money and Deposit Debts

Paper money has been around for a long time, but became common in the west only in the past few centuries. Most of it was issued by private banks, in the form of bank notes. You did not owe your bank taxes. So what debt was evidenced by the bank note?

The bank issues notes when it made loans. It holds your "note" (the IOU you signed; we still use the term to refer to the documents associated with loans) as evidence of your debt to the bank. It issues its own "note" as evidence of the debt of the bank. You can spend the note, passing it to a third party. That third party could present it to the issuing bank to pay down debts owed to that bank. But with a clearing system, you can repay your debt to Bank A by presenting for "Redemption" notes issued by Bank B. The bank notes are essentially circulating private "tallies". The system clearer returns notes to the issuers as banks clear debts with one another. Like the cloakroom tickets, the notes might be destroyed by their issuers when they are returned. Or they can be stockpiled in bank warehouses for use later (just as the cloakroom's token might be warehoused on empty coat hangers).

Eventually government central banks would do much of the clearing, originally issuing their own notes. The first central banks were explicitly created to issue notes to finance government spending, with the notes collected in tax payment. Not liking competition, governments taxed private bank notes out of existence. Banks moved to deposit-based banking (rather than note-based banking). And, eventually, we got to the present day when the payments system mostly uses keystroked entries of debits and credits. These technological advances (if we can use that term) changed the physical form but not the nature of debt and redemption. "Bank Money" is an electronic entry on the liability side of the bank's balance sheet, and an electronic entry on the asset side of the depositor's balance sheet. (Called double entry book-keeping, the "keystroking" of deposits when a bank makes a loan means there will be four entries – the "note" of the borrower is the bank's asset, and the bank's "deposit" is its liability; the deposit is the borrower's asset, and the note held by the bank is the borrower's liability.) Depositors can write checks on these deposits to pay down their own debts, including debts to banks.

"Central Bank Money" is generally comprised of two forms: paper notes and electronic reserves. The paper notes are the central bank's liability and the asset of the holder. Federal Reserve Notes (FRNotes) are mostly used outside the USA, often for illegal activities. (To increase the circulation of FRNotes, we could raise the denomination of the largest denomination notes – the almighty dollar is being replaced by larger denomination Euro notes as the preferred medium of exchange by global drug dealers, although Bitcoins are making a dent.) FRReserves are keystroke entries, representing the Fed's liability and the asset of depositors. Unless you are a bank, a foreign central bank, or some other special entity, you cannot hold these.

In theory, the government should accept its central bank notes in tax payment. In practice, US taxpayers make tax payments using their banks – either with checks or direct withdrawal. The Fed then debits the private bank's reserve deposits. So whether taxes are paid with FRNotes or FRReserves, in either case, the Fed's liabilities to the US private sector are reduced. (There is also internal accounting involving the Fed's and the Treasury's balance sheets – the Fed credits the Treasury's deposit account at the Fed.

This is rather like the husband owing the wife some dishwashing – the internal accounting has no impact on external balance sheets.)

“Treasury Money” is now mostly coins; in the past treasuries issued notes (and some still do) and while the US Treasury could issue notes, it now only issues coins. What is a coin? It is stamped evidence of the Treasury’s debt. While the US Treasury accounts for coins as “equity”, equity is of course on the liability side of the balance sheet. In theory, one should be able to pay taxes by returning the sovereign’s coins. In practice, hardly anyone does that.¹¹ In any event, most US taxes are paid as described above – with debits to the taxpayer’s bank account and debits to her bank’s reserves at the Fed. You can certainly deposit coins (and FRNotes) at your bank and write a check to the IRS – redeeming yourself in the eyes of Uncle Sam without ruining the day of IRS agents.

The modern system inserts central banks and private banks between the treasury and the recipients of treasury spending as well as those who need to pay taxes. For the most part, treasuries no longer spend their own currency (coins, notes, tallies) into existence, and taxpayers do not pay taxes with treasury’s currency. This has obscured the logic behind operational procedures to such an extent that most economists and policy makers believe that governments must first tax before they can spend. There are at least three problems with such a belief. First, there are hundreds and even thousands of years of experience with direct spending by sovereign governments. Hence, there is no logical or practical barrier to returning to such a system; current procedures are a matter of policy choice and could be changed if desired. Second, the operating procedures actually adopted do not, as a matter of fact, create constraints on government’s spending. This has been demonstrated many times by close inspection of those procedures. Indeed, if one understands clearing mechanisms and recognizes that there are literally billions of payments made every day by taxpayers and government without treasury checks bouncing, one can see why central banks, private banks, and treasuries cooperate to make sure the payments system operates smoothly. Indeed, modern procedures were developed to facilitate payments rather than to constrain government spending.

And, finally, the argument that government spends first and then taxes follows from the same Keynesian logic that investment creates saving. I will not go through the “injections and leakages” approach here, which should be obvious after principles of macroeconomics. The “government budget constraint” suffers from the same logical flaws as the “loanable funds” view that “saving finances investment”.

Implications of the Shift of Thinking

Affordability is not the problem. A sovereign government can always afford to spend more. Like the American colonies – which authorized more spending financed by paper notes – today’s government can spend more using keystroked entries into balance sheets. This spending increases government’s debts, recorded as credits to recipient accounts. Government can redeem these debts through tax payments. It can also promise to redeem the debts by exchanging them for gold or foreign currency, although a sovereign country like the USA does not do so. This preserves more policy space as the USA (as well as other sovereign currency issuers) does not need to accumulate gold or foreign currency in anticipation of such redemption.

If government keystrokes more credits to accounts of recipients than it debits through tax payments, we call that a budget deficit. Note that this is largely nondiscretionary as spending and taxing totals are separately determined – with countercyclical movement of spending and procyclical movement of taxing. In other words, government deficits are to some degree generated by the nongovernment sectors’ behavior. When the nongovernment sector reduces its own spending – perhaps in an attempt to increase its saving – the government’s deficit is likely to rise. Indeed, at least to some degree the government’s deficit rises until the nongovernment sectors’ desire to save has been satisfied.¹²

¹¹ I used to think that the IRS would not accept coins in payment of taxes, but apparently Tea Partiers are doing just that. According to a news report, one of them delivers, each year, a bag full of coins in payment of taxes, with the stated intention of wrecking the day of some IRS agent, who presumably has to spend a few hours stacking and counting (tallying?) the coins. So it is apparently still possible to push a wheelbarrow to the IRS steps to pay your taxes in coins.

¹² I am not going to address the issue of sales of treasury bonds. A reader can reasonably wonder why government sells bonds if it pays for its spending through issue of notes, tallies and coins, or if it uses keystroke credits to bank accounts. Governments that issue their own currency do not borrow their own currency to spend. Indeed, currency that is redeemed for taxes *or in receipt of bond sales* is burned, not spent. In other words, bond sales do not provide revenue to government that can be spent, any more

While affordability is not in question, inflation is a danger. To be sure, inflation can occur even at low levels of aggregate demand (witness the stagflation of the 1970s in the USA), but if government spending should drive the economy beyond full employment, then inflation will result. Government spending can also be inflationary before full employment if it is directed to sectors with a low elasticity of output (where additional demand causes prices to rise without increasing output much). One could envision additional ways in which misdirected spending and poor policy could cause inflation. The point is, however, that the danger is not affordability but rather inflation.

Currency depreciation is also a possibility for floating exchange rate systems: spending more could cause the value of the currency to fall. This might happen, for example, if it induces more imports, or if it simply scares foreign exchange markets (causing a movement out of the currency). If a country pegs, such pressures could also cause a currency crisis as holders of the currency fear that the reserve of gold or foreign currency is too small. Hence, there is some danger (although usually overstated in the case of floating exchange rate sovereign currencies) that more government spending could cause depreciation. Again, however, affordability is not the issue (except when the currency is pegged – in which case the problem is the affordability of the reserves that are needed to maintain the peg).

Hence, “more austerity” can be the right answer, but only in specific circumstances. If government is spending so much that prices are rising faster than desired, or if the currency is depreciating more than desired, then the answer *could be* to reduce spending or raise taxes. The difference here is not subtle. In these cases, it is not affordability but rather inflation or currency depreciation that is the problem. Policy makers ought to be able to see the difference: austerity is needed not because government is running out of its own currency but rather because prices are rising or currency is depreciating more rapidly than desired.

Conclusions

When the sovereign issues currency, she/he becomes a debtor. The sovereign's currency is debt. The holder of the currency is the creditor. The most fundamental promise made by any debtor is the promise to redeem, by acknowledging his/her debt and accepting it. Those who themselves have debts to the sovereign can submit the sovereign's debt in payment. Refusal by the sovereign to accept his/her own debt is a default. This will have implications for future acceptance of that sovereign's debt.

Acceptance by the sovereign of his/her own debt is redemption. Airlines also redeem their frequent flyer miles by accepting them in payment for actual flights. Redemption “wipes the slate clean”. It eliminates the debt. Keystrokes take away the frequent flyer miles from the accounts of passengers. In the old days sovereigns burned their debts on redemption.

Homeowners commonly used to have mortgage note burning parties when they redeemed themselves by paying off their homes. Probably no one lives long enough any more to do that.

I have argued that the sovereign imposes debts – tithes, fees, fines, and taxes – on the population. Those with tax debts can redeem themselves and wipe clean their tax debt by delivering back to the sovereign her/his tallies, coins, or paper notes. Today it is actually done with keystrokes – debits to private bank deposits and the bank reserves at the central bank. Note that tax payment redeems both taxpayer and sovereign. Isn't that nice? The sovereign's currency is burned, and the taxpayer can burn her tax bill. Hallelujah!

Currency must be debt and it must be redeemed to have a determinant nominal value in terms of the domestic money of account. The sovereign might make other promises when she/he issues debt. There could be a promise to pay interest over time. There could be a promise to redeem her/his debts for the debts of other sovereigns. While uncommon even in history, the sovereign could also promise to redeem for precious metal bullion. These are additional promises but are not necessary to create a demand for the sovereign's currency.

than taxes do. And, bond sales conceptually come after spending, just as taxes follow spending (and saving follows investment). For more on all this see Wray *Modern Money Theory: A Primer on Macroeconomics for Sovereign Monetary Systems*; Tymoigne, E. and Wray, L. R. 2013. *Modern Money Theory 101: a reply to critics*, Working Paper No. 778, The Levy Economics Institute of Bard College. November; and Fullwiler, S. T. 2003. *Timeliness and the Fed's daily tactics.* *Journal of Economic Issues*, vol. 37, no. 4 (December), 851–880.

Taxes remove currency from circulation; this has long been recognized as a way to prevent currency issues from causing inflation. However, it is not necessary to remove all the issued currency through taxes. Some will continue to circulate to facilitate private transactions. Some can be accumulated as net saving. And some can be “redeemed” for bonds should the treasury decide to sell them. To an uncertain but significant degree, the difference between spending and taxing over any particular period is “endogenously” determined by economic activity. By definition. The government’s deficit (its spending less its tax receipts) must equal the nongovernment sectors’ surplus (receipts from government spending less tax payments). In nominal terms, the equation is guaranteed and we can even assert that it is a position that is desired by the nongovernment sector (for otherwise, it would have spent more – reducing the government’s deficit – or less, raising the deficit). The question is whether that equality occurs without inducing inflation or currency depreciation. There is no question that the sovereign can “afford” it.

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The Debt Ratio and Sustainable Macroeconomic Policy

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Abstract

Neoclassical views on fiscal sustainability are based on several assumptions that are inconsistent with accounting and operational realities of the money system, including dangers of “bond vigilantes” in government debt markets and “printing money” is inherently inflationary. Combining these assumptions with the broader world view of monetary policy as the appropriate sole manager of the macroeconomy, neoclassicals essentially define fiscal sustainability as a policy mix in which fiscal policy “gets out of the way” of “monetary dominance”, defined as the central bank’s ability to independently pursue an “optimal” monetary policy. This paper presents an alternative view consistent with real-world accounting and monetary operations; a policy mix in which fiscal policy has an active role is shown to be a more sustainable one. Perhaps surprisingly, this turns out to also not be subject to the neoclassical fears or concerns of a policy regime of fiscal dominance.

Keywords: fiscal sustainability, interest rates, national debt, monetary dominance, fiscal dominance, sector financial balances, central bank operations, functional finance

JEL Codes: E63, E43, H63, H68

There are few issues of more theoretical, empirical, and political interest than fiscal sustainability. This is not surprising, since in addition to its own significance it is at the core of so many other fundamental debates, such as the ability to pay future entitlements, central bank independence, “printing money,” and the appropriate role of government itself in the economy. The purpose of this paper is to unravel the various components of the neoclassical understanding of fiscal sustainability within the context of the operational realities of the monetary system, basic accounting, and Minskyan financial fragility, and then to consider some principles for building a more sustainable approach to the macroeconomic policy mix that is consistent with each of these. The neoclassical view is often explained in terms of a monetary dominance versus fiscal dominance dichotomy – the goal here is to transcend this dichotomy since it is overly simplistic and in important ways not consistent with real-world accounting and monetary operations.

The paper is organized into five sections, and then a conclusion. The first section of the paper defines the national debt, fiscal sustainability, and discusses the relative importance of primary budget balances and interest rates. The second section incorporates the monetary operations, monetary policy regimes, and sovereign currency issuing governments to understand the historical behavior of interest rates and debt service. The third section critiques standard neoclassical concepts such as “printing money” and Ricardian equivalence from within the context of real-world monetary operations; it explains that the core issue in the neoclassical aversion to so-called unsustainable fiscal policy is the role of debt service, not the central bank being “forced” to “print money” if the national debt or debt service becomes too high. The fourth section critiques the neoclassical preference for monetary dominance by showing that it does not account for interdependent financial flows between the private sector and the government sector and Minskyan financial fragility. The fifth section offers building blocks for a more sustainable policy mix, arguing that this may require the central bank’s interest rate target be set below GDP growth; it also explains how a functional finance-based fiscal policy is consistent with both fiscal sustainability and traditional macroeconomic targets, as well as not necessarily interfering with central bank independence.

Preliminary Definitions and Concepts

In Table 1 are several measures of the national debt and the debt ratio as reported in the St. Louis Federal Reserve's Federal Reserve Economic Database. The measures are not mutually exclusive. Measure 1 (Total Public Debt) is the sum of measures 3 (Federal Debt Held by Private Investors), 4 (Federal Debt Held by Agencies and Trusts), and 5 (Federal Debt Held by Federal Reserve Banks); Measure 1 is alternatively the sum of Measures 2 (Federal Debt Held by the Public) and 4. Measure 6 (Federal Debt Held by International and Foreign Investors) is a subset of Measure 3, and thus also a subset of Measures 2 and 1.

Table 1 National Debt Measures as of March 2016

| Measure | \$US Trillion | Percent of GDP |
|---|---------------|----------------|
| 1. Total Public Debt | 18.922 | 104.2 |
| 2. Federal Debt Held by the Public | 13.700 | 75.4 |
| 3. Federal Debt Held by Private Investors | 11.211 | 61.7 |
| 4. Federal Debt Held by Agencies and Trusts | 5.222 | 28.8 |
| 5. Federal Debt Held by Federal Reserve Banks | 2.810 | 15.5 |
| 6. Federal Debt Held by International and Foreign Investors | 6.166 | 33.9 |

While the Total Public Debt of \$18.922 trillion and 104.2 percent of GDP is the common “headline” number for the national debt, it is misleading and not consistent with economic theory. Neoclassical economic theory of the intertemporal budget constraint is clear on which measure is the relevant one: the appropriate measure is that part of the national debt owned by the non-government sector. The rationale is to count only the debt that can have direct macroeconomic implications through default on private sector held debt or through transfers to the non-government sector as a result of debt service. This definition describes Measure 3 in Table 1, Federal Debt Held by Private Investors, at \$11.211 trillion and 61.7 percent of GDP. Aside from a few technicalities that leave them roughly but not exactly equal, Measure 3 is essentially Measure 1 less Measures 4 (Federal Debt Held by Agencies and Trusts) and 5 (Federal Debt Held by Federal Reserve Banks).

Consistent with the definition provided by economic theory, there are important reasons for not including Measures 4 and 5. First, including Federal Debt Held by Agencies and Trusts – \$5.222 trillion and 28.8 percent of GDP – in the national debt can be misleading and even internally inconsistent since this entire sum is simply owed by the national government to itself. Since the vast majority of Measure 4 includes the trust funds for entitlement programs – Social Security and Medicare – increases in Measure 4 raise the Total Public Debt but also raise the assets of the Federal Government by the same amount. This means that legally the trust funds for entitlement programs are “more solvent” the larger Measure 4 becomes. In other words, fully funding in the legal sense the entitlement programs – which the public and policy makers view as a good thing – raises the Total Public Debt, which the public and policy makers view as a bad thing. (This is not even to mention that these trust funds are also included in the national debt ceiling, further adding to the internal inconsistencies.) It clearly makes little sense to include as part of the national debt such trust funds that are a key legal source of funding for future entitlement programs and thus are important determinants of the Congressional Budget Office's (CBO) reports on the long-term fiscal position of the federal government (e.g., Congressional Budget Office, 2015). Despite significant flaws (discussed in a later section), the CBO's publications correctly omit balances held by agencies and trusts from its reported measures of the national debt.

Second, Federal Debt Held by Federal Reserve Banks – Measure 5 – is the offset of Fed open market operations to add reserve balances to the banking system. In neoclassical literature on the sustainability of government debt, this is “seigniorage,” or “printing money.” In the standard neoclassical government budget constraint models, governments have a choice of “financing” via issuing bonds or “printing money.” In the latter case, if the “money printing” is the result of the central bank's purchase of government-issued securities then these securities would not count in the appropriate measure of the

national debt since there would be no difference from the government not having issued them in the first place. As such, even though “printing money” results in a liability of the central bank in the form of the monetary base, this is not something the government can default upon and is therefore not counted as part of the appropriate measure of the national debt. At present, one could reasonably argue in favor of including Treasury securities held by the Fed beyond the quantity of currency outstanding – roughly the traditional amount purchased to offset the public’s demand for currency via open market operations – since there a rational expectation might be that the Fed will wind down its balance sheet at some point and thus reduce its holdings of Treasury securities by around \$1.5 to \$1.9 trillion. This would raise Measure 3 to around 70 percent of GDP.

Using the correct measure, the U. S. debt ratio is just below of 62 percent (or 70 percent, if one wants to include those Treasury securities held by the Fed that are greater than the currency outstanding), rather than just a bit above 100 percent as most report (including the famous “National Debt Clock” on Sixth Avenue in Manhattan). By neoclassical standards, the U. S. debt ratio is very modest, and is actually not far outside the European Monetary Union’s Maastricht Criteria. By international standards, again the U. S. national debt ratio is not large.¹ Of course, the debt ratio is projected to rise, perhaps by a lot, which is the real concern of so many. CBO (2015, p. 3) projects a rise in the Federal Debt Held by the Public (Measure 2) to 103 percent of GDP (from the current 75.4 percent in Table 1) by 2040. If one assumes that the debt held by the Fed (Measure 5) falls near its historical average range of 3 to 5 percent of GDP, this would mean debt held by the private sector (Measure 3 – the appropriate measure) would be around 100 percent of GDP. The CBO’s ten-year projections from March 2016 project a rise to 86 percent of GDP by 2026, which would likely bring debt held by the private sector over 80 percent of GDP (Congressional Budget Office, 2016, p. 15).

But why does the debt ratio matter? Or does it? Obviously, the debt ratio itself doesn’t *do* anything – debt *service* is what ultimately will bring difficulties, such as inflation if the government services unbounded growth in interest obligations (given that a government can always “afford” to do so merely by crediting bank accounts in its own fiat currency), or default as a result of the desire to avoid inflation. Both are obviously ruinous. So, importantly the sustainability of the government’s fiscal position is not about the government’s ability to spend by crediting bank accounts – though this *is* very important for understanding why a government can always “afford” policy actions that enable a full employment economy and why it can never be forced into involuntary default via an inability to pay or service its debts – as much as it is about the size of the debt service relative to the size of the economy.

In order to keep debt service from rising without bound relative to the productive capacity of the economy, mathematically one of two things need to happen. The first is that the government’s primary budget balance (that is, the budget position *before* adding debt service) can be sufficiently in surplus such that the government is not issuing new debt to pay all of its interest. How big the primary surplus must be depends on a number of things. For instance, begin with the following assumed starting points:

- End of fiscal year 2015 GDP of \$17.81 trillion, according to CBO (2016, p. 15).
- End of fiscal year 2015 debt ratio using Measure 3 of \$10.662 trillion or 60 percent of fiscal year 2015 GDP (both obtained from St. Louis Fed’s Federal Reserve Economic Database).

Then make the following additional assumptions for future years:

- Average rate of nominal GDP growth of 4 percent annually.
- Average interest rate on the national debt of 5 percent.

¹ By Measure 3, Japan’s debt ratio may not be well over 200 percent as usually reported; according to Weinstein (2015), Japan’s debt ratio is closer to 132 percent even if one still includes government securities owned by the Bank of Japan, while Wakatabe (2015) then estimates that not including these securities (consistent with Measure 3 and economic theory) results in the appropriate debt ratio for Japan falling to about 80 percent of GDP. Wakatabe then also reports analysis by Japanese economist Hidetomi Tanaka, who, using Ministry of Finance figures available only in Japanese, puts these measures at about 80 percent and about 40 percent, respectively, at the end of 2014.

Accordingly, the primary budget balance after 2015 that will be required for debt service to remain at a level of 60 percent is a continuous surplus of 0.6 percent of GDP.

This scenario is shown in the first row of numbers in Table 2 below. This enables the debt ratio to fall from the March 2016 level of 61.7 percent of GDP (in Table 1) and converge to the 60 percent level that it stood at the end of fiscal year 2015. Note that this would require the federal government to immediately contract its projected 2016 budget balance by 2.1 percent of GDP if CBO's March 2016 projections for the entire fiscal year of a 1.5 percent primary deficit are assumed to be correct.² If the primary budget balance in 2016 is below a surplus of 0.6 percent of GDP, then adjustments in the future would need to be still greater to eventually reach a debt ratio of 60 percent. As an important corollary, note that the total budget balance that is converged to is 2.3 percent of GDP annually. In other words, even from the perspective of the neoclassical model, a permanent budget deficit is sustainable. While most economists (should) understand this already, the public generally does not, so it is worth emphasizing.

On the other hand, the second row of numbers in Table 2 shows that even a modest primary deficit of 1 deficit of GDP leads to unbounded growth in the debt service, total budget deficit, and debt. In other words, a primary budget balance not at least as high as 0.6 percent of GDP on average would grow deficits, the national debt, and debt service all to the point that eventually paying the debt service would result in high and rising inflation. While this second row puts the convergence ratios at infinity for convenience, in fact at some point the increased debt service would simply pass through to inflation to raise nominal GDP in kind. Thus, CBO's regular practice of assuming a long run nominal GDP growth rates equal to the potential real GDP growth rate plus inflation at around 2 percent is inconsistent with its own projections of unbounded growth in debt service payments.

Table 2 Hypothetical Projections after 2015 Fiscal Year

| NGDP Growth Rate | Interest Rate | Post 2015 Primary Balance as % of GDP | 2016 Debt Service as % of GDP | 2016 Total Budget Balance as % of GDP | 2016 Debt Ratio | Convergence Debt Service Ratio | Convergence Total Budget Balance as % of GDP | Convergence Debt Ratio |
|------------------|---------------|---------------------------------------|-------------------------------|---------------------------------------|-----------------|--------------------------------|--|------------------------|
| 4 | 5 | 0.6 | 2.9 | -2.3 | 60 | 2.9 | -2.3 | 60 |
| 4 | 5 | -1.0 | 2.9 | -3.9 | 61 | ∞ | $-\infty$ | ∞ |

Alternatively, the interest rate on the national debt could be low enough that a permanent primary *deficit* can be consistent with debt service that does not grow without bound relative to the capacity to produce goods and services. The first row of numbers in Table 3 shows that to converge at the 2015 level, the primary budget balance can be -0.6 percent of GDP forever if the interest rate on the national debt averages 3 percent rather than 5 percent with nominal GDP growth of 4 percent – that is, the rate on the national debt is smaller than the growth rate of GDP. In this case, debt service is 1.7 percent of GDP and the primary budget balance is again 2.3 percent of GDP. More generally, given an interest rate lower than GDP growth, *any*

² Since interest rates on the national debt currently average well below 5 percent, the improvement in the primary budget balance would not need to be this large, although if interest rates were to rise (as CBO projects they will), then this sort of adjustment would become necessary. The example here simply attempts to illustrate the mathematics of fiscal sustainability from current starting points, not to project the future path of interest rates.

primary budget deficit will eventually lead to convergence of the debt ratio – so, the second row of numbers in Table 3 shows that a primary budget balance of -1 percent will converge at a debt ratio of 104 percent and debt service ratio of 3 percent.

Table 3 Hypothetical Projections after 2015 Fiscal Year Assuming Nominal GDP Growth Is Less than the Interest Rate

| NGDP Growth Rate | Interest Rate | Post 2015 Primary Balance as % of GDP | 2016 Debt Service as % of GDP | 2016 Total Budget Balance as % of GDP | 2016 Debt Ratio | Convergence Debt Service as a Percent of GDP | Convergence Total Budget Balance as % of GDP | Convergence Debt Ratio |
|------------------|---------------|---------------------------------------|-------------------------------|---------------------------------------|-----------------|--|--|------------------------|
| 4.0 | 3.0 | -0.6 | 1.7 | -2.3 | 60 | 1.7 | -2.3 | 60 |
| 4.0 | 3.0 | -1.0 | 1.7 | -2.7 | 60 | 3.0 | -4.0 | 104 |

In the scenario for the second row of Table 3, there is convergence to a debt service ratio of 3 percent of GDP in 575 years. Quite obviously, the debt ratio and debt service ratio for, say, 30 and 75 years hence are far more relevant, and it is interesting to compare a 1 percent primary deficit where the interest rate is 5 percent in Table 2 versus 3 percent in Table 3 for the 30-year and 75-year hypothetical projections, which are shown in Table 4. For the 5 percent interest rate scenario, clearly the debt ratio and debt service increase rapidly and are at what would generally be considered high levels within 30 years, and far more so in 75 years. For the 3 percent interest rate scenario, however, even as the debt ratio grows and might be considered high by some, it remains well within the range of international experience while debt service remains modest and well below the post-World War II high of 3.5 percent of GDP reached in the U. S. in the 1980s.

Table 4 Hypothetical Projections for 30-Year and 75-Year Horizons for Different Interest Rates

| NGDP Growth Rate | Interest Rate | Post 2015 Primary Balance as % of GDP | In 30 Years | | | In 75 Years | | |
|------------------|---------------|---------------------------------------|--------------------|----------------------------------|------------|--------------------|----------------------------------|------------|
| | | | Debt Service Ratio | Total Budget Balance as % of GDP | Debt Ratio | Debt Service Ratio | Total Budget Balance as % of GDP | Debt Ratio |
| 4.0 | 5.0 | -1.0 | 5.4 | -6.4 | 114 | 11 | -12 | 232 |
| 4.0 | 3.0 | -1.0 | 2.0 | -3 | 71 | 2.4 | -3.4 | 83 |

Table 5 Debt Service Ratios for Different Interest Rate and Primary Deficit Combinations Assumes Nominal GDP Growth = 4% and Starting Debt Ratio = 60%

| Interest Rate (Percent) | Primary Balance as a Percent of GDP | Debt Service as a Percent of GDP in 30 Years | Debt Service as a Percent of GDP in 75 Years | Convergence Debt Service as a Percent of GDP and Year of Convergence | Debt as a Percent of GDP at Convergence |
|-------------------------|-------------------------------------|--|--|--|---|
| 1.0 | -1.0 | 0.44 | 0.36 | 0.33, Year 278 | 35 |
| | -2.0 | 0.64 | 0.66 | 0.67, Year 130 | 69 |
| | -3.0 | 0.83 | 0.95 | 1.0, Year 152 | 105 |
| | -4.0 | 1.02 | 1.25 | 1.33, Year 155 | 138 |
| | -5.0 | 1.21 | 1.54 | 1.67, Year 222 | 173 |
| 2.0 | -1.0 | 1.11 | 1.04 | 1.0, Year 188 | 52 |
| | -2.0 | 1.54 | 1.81 | 2.0, Year 264 | 104 |
| | -3.0 | 1.97 | 2.57 | 3.0, Year 305 | 156 |
| | -4.0 | 2.40 | 3.33 | 4.0, Year 328 | 208 |
| | -5.0 | 2.83 | 4.09 | 5.0, Year 343 | 260 |
| 3.0 | -1.0 | 2.08 | 2.40 | 3.0, Year 570 | 104 |
| | -2.0 | 2.81 | 3.94 | 6.0, Year 699 | 208 |
| | -3.0 | 3.55 | 5.47 | 9.0, Year 754 | 312 |
| | -4.0 | 4.28 | 7.0 | 12.0, Year 790 | 416 |
| | -5.0 | 5.01 | 8.53 | 15.0, Year 817 | 520 |

Table 5 shows how different rates of interest – all less than the assumed growth rate of GDP – are consistent with convergence of debt service and debt ratios for various levels of primary deficits as a percent of GDP run into perpetuity, even fairly large ones relative to GDP. Of course it is not necessarily the case that every one of these levels of debt service would not be inflationary – all of them could be, or none of them, depending on the state of the economy. Regardless, in terms of convergence or unbounded growth of the debt ratio any fixed primary deficits as a percent of GDP can converge – which is the neoclassical requirement for fiscal sustainability – if the interest rate is below the growth rate.

Deficits, Interest Rates, and Monetary Policy Regimes

While much of the focus in the previous section is on the interest rate relative to the growth rate of the economy, neoclassicals focus on the size of the primary deficit. The reason is their belief that the so-called “bond vigilantes” will attack if the national government does not “get its fiscal house in order” by reducing current and projected primary deficits. While interest rates are low now, they argue, bond markets could

rebel or China could sell its Treasuries and interest rates on the debt will grow without bound. And so the belief that bond vigilantes can raise interest rates on U. S. debt means the only point of focus should be on the current and (especially) expected primary deficits, which are the only guarantees of both mathematical and actual fiscal sustainability. As Robert Rubin, Peter Orszag, and Allen Sinai explain,

“The adverse consequences of sustained large budget deficits may well be far larger and occur more suddenly than traditional analysis suggests, however. Substantial deficits projected far into the future can cause a fundamental shift in market expectations and a related loss of confidence both at home and abroad... This omission [by conventional analysis] is understandable and appropriate in the context of deficits that are small and temporary; it is increasingly untenable, however, in an environment with deficits that are large and permanent” (Rubin, Orszag, and Sinai, 2004, p. 1).

In a report that it regularly cites in subsequent reports on longer-term projections, CBO (2010) similarly notes the “greater chance of fiscal crisis” and “reduced ability to respond to domestic and international problems” as a result of potential bond market reactions to current and projected deficits as key reasons for action to reduce them. Laurence Ball and Gregory Mankiw (2005, p. 117) summarize the feelings of many policymakers and economists by arguing that “[w]e can only guess what level of debt will trigger a shift in investor confidence... If policymakers are prudent, they will not take the chance” of finding the precise tipping point that generates unbounded growth in debt service relative to the economy’s capacity.

Assuming bond vigilantes can set or have the ability to suddenly raise interest rates on U. S. debt is problematic, however. Paul Krugman provides what he calls a “simple macro model” of the open economy to explain this point. In his explanation of the model’s implications, he writes that,

“As far as I know, none of the people issuing dire warnings have actually tried to write down a model of what an attack would look like. And there is, I suspect, a reason: it’s quite hard to produce a model in which bond vigilantes have major effects on a country that retains a floating exchange rate” (Krugman, 2012, p. 1).

Much the same point has been made by many others for several years (e.g., Mosler, 1997; Bell and Henry, 2003; Mitchell and Mosler, 2005; Sardoni and Wray, 2007). The key point is that under flexible exchange rates, the central bank’s target and thus interest on the national debt becomes a policy variable not set by markets. While the central bank might *choose* to follow a Taylor’s rule or similar strategy in “normal” times, adjusting the rate to accommodate the whims of bond or currency market vigilantes would be a policy choice (and probably a particularly bad one at that).

The most common counter from those that are concerned about private markets rejecting the government’s debt is that while the Fed sets a short-term rate, it does not set the long-term rate. Because of this, they argue, and the fact that the U. S. Treasury legally must issue debt rather than receive overdrafts in its account at the Fed, the bond markets still set the interest rate on the national debt. There are three responses to this – (a) the need to issue debt in the case of a deficit is a self-imposed constraint, not a market imposed constraint, (b) the constraint is not actually an economically significant constraint, and thus not really a constraint at all, and (c) historically short-term rates driven by monetary policy are the key drivers of long-term government rates.

Regarding (a), the overarching point is to recognize who sits at the top of the hierarchy of money for a given monetary regime – is it the “markets” or the government? Since under flexible exchange rates it is the currency-issuing government, self-imposed constraints are simply that – self-imposed and not operational. It is the very fact that such self-imposed constraints can be and have been overturned or otherwise disregarded in the past when deemed desirable that demonstrates it is the government at the top of the hierarchy.

For (b), consider in the first place what it would look like in the interbank market if the Treasury were to spend via overdraft from the Fed. Figure 1 shows the interbank market (federal funds market in the U. S.)

prior to interest on reserves (IOR) being paid in October 2008. The demand for reserve balances was nearly vertical at the quantity of balances (RB^*) banks desired to hold to meet reserve requirements and settle payments at the Fed's target rate ($i_{interbank}^*$). In the case of the Treasury receiving overdrafts, shown in Figure 2, the increase in reserve balances would very quickly dwarf the very modest quantity (about \$10 billion to \$20 billion) banks typically demanded at the target rate. In order to achieve a positive interest rate target, the Fed would have to set IOR ($i_{remuneration}$) equal to the target rate (i^*) or the interbank rate would fall to zero. This is basic supply and demand analysis with a quantity supplied far in excess of a highly inelastic demand curve. In other words, it is simply not operationally possible for the Treasury or the Fed to "print money" beyond banks' demand for reserve balances without either IOR at the target rate or an interbank rate of zero. This is the origins of Bell's (2000) (and then Tymoigne's (2014b)) argument – the operational purpose of issuing securities is not government finance for a government that already issues its own currency but rather to aid in achieving the central bank's target rate since without such issuance the central bank must pay IOR to support a positive target rate (or other similar methods, such as the reverse repurchase agreements currently in place).³

Figure 1 Interbank Market without Interest on Reserves

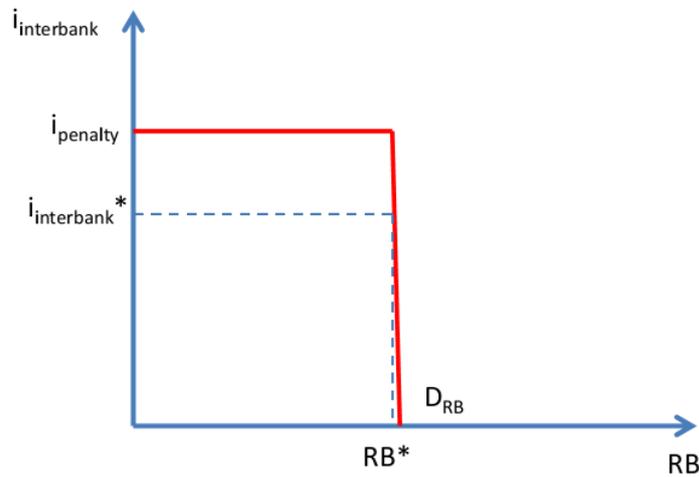
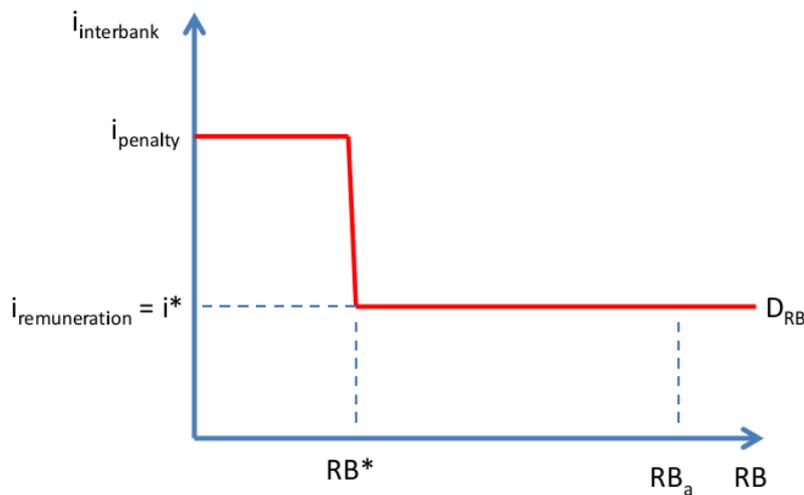


Figure 2 Interbank Market with Interest on Reserves and a Large Quantity of Excess Balances



³ Tymoigne (2014b) discusses in detail the post-World War II history of interactions between the Fed and the Treasury, including those times in which the Fed was allowed to provide overdrafts to the Treasury. Thornton (2003) discussed the interactions of the Fed and the Treasury to forecast the flows into and out of the Treasury's account on a daily basis for the purpose of aiding the Fed's daily operations.

This payment of IOR at the target rate (or a zero interest rate target) cannot be avoided by simply printing currency and putting it into circulation through spending in lieu of spending via reserve balances. In a world of banks (that is, in the *real world*), the private sector cannot be forced to hold currency since it can costlessly convert undesired excess currency balances to bank deposits, and it can still further convert unwanted demand deposits to bank time deposits. Once currency is converted to deposits, banks holding excess vault cash beyond what customers are expected to withdraw will sell the excess cash balances to the Fed in return for reserve balances earning IOR at the target rate (or zero in the case of a zero target rate). In short, the quantity of currency circulating is demand determined, not supply determined, regardless of whether the government initially runs deficits via security sales, creation of central bank reserve balances, or creation of currency.

The implications of these operational realities for (b) are crucial for understanding interest on the national debt. First, aside from endogenous increases in currency in circulation (for which there is not debt service), the lowest rate the government would reasonably expect to pay on the national debt in the case of central bank overdrafts would be the Fed's target rate. With a positive target rate, the Fed necessarily pays IOR on the reserve balances created and its profits are reduced in kind; since the Fed credits almost all of its profits to the Treasury's account, reduced profits then reduce the transfer to the Treasury and is equivalent to the Treasury's deficit increasing by the amount of IOR paid. Second, if the Treasury issues T-bills instead of receiving overdrafts from the Fed, these will arbitrage with the Fed's target rate quite closely, leaving the interest on the national debt roughly the same as in the case of overdrafts. Third, if the Treasury wishes, it can issue securities at various maturities in addition to the T-bills; these will mostly arbitrage with the Fed's current and expected target rates.

In other words, suppose one is offered a choice – issuing debt at the Fed's target rate via an overdraft directly from the Fed, or issuing debt to the private sector at roughly the Fed's target rate. Is there reason to be concerned if the former option were subsequently withdrawn? No, because there is no economically significant difference between issuing debt at the Fed's target rate and issuing debt at roughly the Fed's target rate. The “constraint” is therefore merely a self-imposed one – and thus not applicable to household, business, or state/local government debt – and even at that its ultimate effect on the Treasury's debt operations is not macroeconomically significant.

The interest rate on the national debt for a currency-issuing government under flexible exchange rates is thus a policy variable, or at worst always can be. Even in the unlikely event that markets do reject the debt of such a government, there are always additional options – the government could require its central bank to provide it with overdrafts, or the central bank could (unilaterally or as a result of government action) purchase the government's bonds to keep interest on the national debt near its desired target rate. Understanding from the operational realities of the monetary system that interest on the national debt is a policy variable correctly predicts that large deficits should not have brought higher interest rates via bond market “vigilantes” in the U. S., Japan, and other currency issuing nations operating under flexible exchange rates. Moreover, this same paradigm correctly predicts the opposite in non-currency issuing nations such as Greece, Italy, and Spain (e.g., Bell, 2003), and correctly predicts that the process can be reversed if the European Central Bank (ECB) purchases their debt.

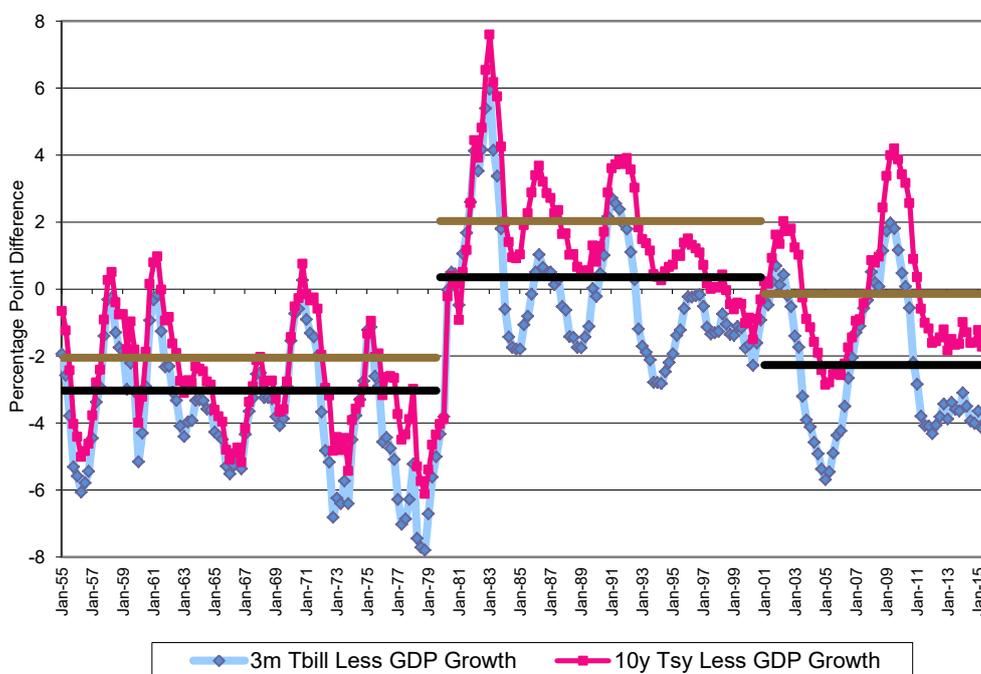
Regarding (c), if the 10-year rate follows monetary policy, or at least mostly does, then it should move largely in line with changes in the federal funds rate. The 3-month T-bill and the federal funds rate set by the Fed are statistically equivalent essentially – the 3-month rate is used here, though, because it represents a direct and significant part of the government's debt service. Figure 3 shows the 8-quarter moving average (to get rid of significant monthly and quarterly “noise”) of the 10-year and 3-month Treasury rates less nominal GDP growth. Clearly from Figure 3 the two series move together. The simple correlation of the two series is 0.93 for the 8-quarter moving averages; the correlation for the quarterly rates (not moving averages) is also 0.93. The correlation of the first difference of the 8-quarter moving averages is 0.97; the correlation of the first difference of the quarterly rates (not moving averages) is 0.64 (in other words, the “noise” of not using moving averages shows up in the first differences).

The two horizontal bars represent the averages for 3-different periods for the two series, respectively – 1953q1-1979q3, 1979q4-2000q4, and 2001q1-2015q4 – with the lighter color, higher line

being the 10-year rate less GDP growth and the lower, darker line being the 3-month rate less GDP growth. Since the average maturity of Treasury issuance is always somewhere between these two, these should usually represent the high and low bounds for the average interest rate on the national debt relative to GDP growth; in other words, the average rate of interest on the national debt relative to GDP growth should fall between the two horizontal lines.

If interest on the national debt has been a policy variable, then the path of interest rates relative to GDP growth – key to the path of debt service in Table 4 – should have been related to monetary policy rather than primary deficits. Consistent with the movements of the 10-year rates with the 3-month rates, what’s striking in Figure 3 is how the upper and lower bounds clearly shift in the three different periods. The Fed’s shift to a higher interest rate policy stance in the 1979-2000 period is obviously the driver of higher 10-year rates during that period, and the lower interest rate policies after 2000 and before 1979 are equally clear. Again, in all cases, the 10-year rate does the same. Figure 3 also shows that the average interest rate on the national debt has been quite clearly below GDP growth aside from the 1979q4-2000q4 period.

Figure 3 8-Quarter Moving Average of Nominal 10-Year and 3-Month Treasury Rates Less Nominal GDP Growth, 1953 to 2015



Source: Federal Reserve Economic Database and author’s calculations

Table 6 shows the averages for the three periods denoted by the horizontal lines in Figure 3, as well as the average for the entire 1953-2015 period. While it is true that for the entire period 10-year rates were close to GDP growth, averages within the sub-periods differed significantly from this for decades, and recall further that the average rate on the national debt would have been closer to the average of the 3-month rate and the 10-year rate, not the 10-year rate alone. The two rates less nominal GDP growth are averaged in the final column to the right in Table 6. Hence, on average during 1953-2015 the interest rate on the national debt was closer to -0.95 percent than to nominal GDP growth. The last row of Table 6 omits the date from the 4th quarter of 2008 and the 1st quarter of 2009 in calculations of averages, since nominal GDP growth was unusually negative (the lowest since 1958) while interest rates were not allowed to go below zero. This resulted in the sizable peak seen in Figure 3 in 2008-2009; one could argue that this biased the averages for this period.

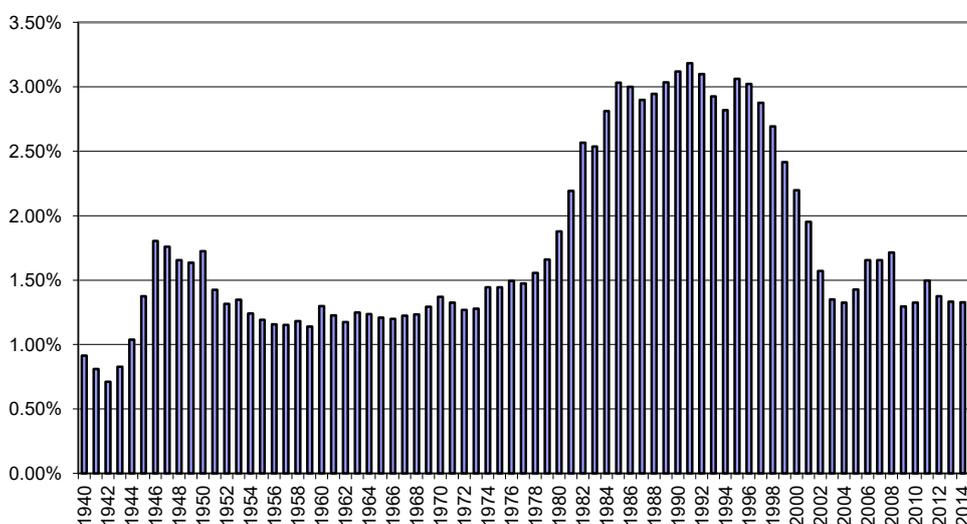
Table 6 Average GDP Growth and Interest Rates

| Dates | Average Nominal GDP Growth Rate | Average Nominal 3-Month T-Bill Rate | Average Nominal 10-Year Treasury Note Rate | | Average 3-Month Rate Less Average Nominal GDP Growth | Average 10-Year Rate Less Average Nominal GDP Growth | Average of 3-Month and 10-Year Rates Less Nominal GDP Growth |
|-------------------|---------------------------------|-------------------------------------|--|--|--|--|--|
| 1953q1 to 2015q4 | 6.19 | 4.49 | 5.99 | | -1.70 | -0.20 | -0.95 |
| 1953q1 to 1979q3 | 7.37 | 4.34 | 5.32 | | -3.03 | -2.05 | -2.54 |
| 1979q4 to 2000q4 | 6.50 | 6.85 | 8.53 | | 0.35 | 2.03 | 1.19 |
| 2001q1 to 2015q4 | 3.69 | 1.44 | 3.56 | | -2.25 | -0.13 | -1.19 |
| 2001q1 to 2015q4* | 4.03 | 1.48 | 3.58 | | -2.55 | -0.45 | -1.50 |

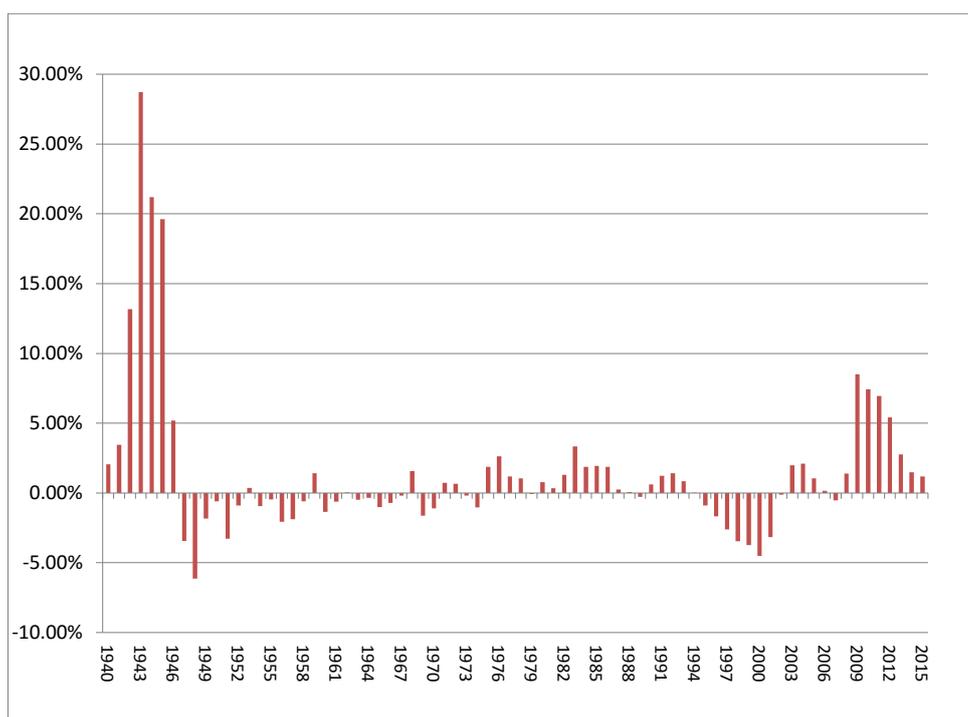
*4th quarter of 2008 and 1st quarter of 2009 have been omitted from all averages calculated in the final row.

Figure 4 shows U. S. Treasury interest outlays on the national debt as a percent of GDP during 1940-2015. The debt service ratio follows the pattern of the average interest rate on the national debt relative to GDP growth in Figure 3 and Table 6, which itself was driven by changes in monetary policy approaches in 1979 and 2001. By contrast, the debt service ratio does not follow anywhere near as closely the pattern of primary balances, which is shown in Figure 5 in reverse (that is, a primary deficit is above the origin in Figure 5, while a primary surplus is below it) so that a high correlation of primary deficits relative to interest rates and debt service would mean that Figure 5 would follow the pattern seen in Figure 4. This is confirmed by correlations between the debt service ratio with the 2-year moving average of the T-Bill rate less GDP growth of 0.58 for 1955-2015) and with the 1-year moving average of the federal funds rate less GDP growth of 0.51 for 1955-2015), while the debt service ratio's correlations with the primary deficit ratio (1955-2015) and with the debt ratio (Measure 3 from Table 1, 1970-2015) were 0.27 and 0.10, respectively. For sure, the debt service ratio would be expected to have some correlation with measures of primary deficits and debt – as it does – but consistent with the evidence in Figure 3 and Table 6 it is significantly smaller than with the stance of monetary policy relative to GDP growth.

Figure 4 Interest on the National Debt as a Percent of GDP, 1940 to 2015



Source: Federal Reserve Economic Database

Figure 5 Inverse of the Primary Balance as a Percent of GDP, 1940 to 2015

Source: Federal Reserve Economic Database

Overall, the data presented in this section confirm that

1. The interest rate on the national debt relative to GDP growth has been more important than the size of the primary budget balance in understanding the path of the debt service ratio,
2. Interest rates on the national debt follow monetary policy, and
3. Interest rates on the national debt have *on average* been less than nominal GDP growth.

These are consistent with the arguments above that the difference between interest rates and GDP growth is driven by monetary policy – not the interactions of primary budget balances and actors in private bond markets who might suddenly turn into bond “vigilantes” – which then drives the debt service ratio for a sovereign-currency issuing government that operates under flexible exchange rates and does not issue debt in a foreign currency.⁴ This is because, for such a government, the interest rate on its debt is a policy variable. Fiscal sustainability in this particular context is then really about the stance of fiscal policy relative to the stance of monetary policy and the economy’s performance, not the stance of fiscal policy relative to the views and actions of the financial markets.

Monetary Dominance vs. the Operational Realities of the Monetary System

The desire to preserve central bank “independence” underpins the neoclassical position on fiscal sustainability. Given a worldview that inflation is controlled by the central bank, and in which management of the short-term interest rate and expectations of private sector actors with regard to output, inflation, and their trust in the central bank’s commitment to a low inflation strategy drive the economy even in the short run, too much government debt undermines the central bank’s ability to commit to its desired strategy or “rule” for adjusting its target rate and credibly managing private sector expectations. A macroeconomic policy mix

⁴ Sharpe (2013) confirms these conclusions in an econometric study assessing whether deficits affect interest rates by separating currency-issuing governments under flexible exchange rates from non-currency issuing governments. Econometric analysis by Akram and Li (2016) likewise concludes that the Fed’s interest rate target is the key driver of interest rates on long-term U. S. Treasuries. Akram and Das (2014, 2015) come to essentially the same conclusions for Japan and India, respectively – the interest rate target of the respective central banks has been the driver of interest rates on government debt issued in each country.

where the central bank has “independence” is characterized by “monetary dominance”. Peter Praet from the ECB’s Executive Board explains the relationship between the two in the following way:

“[T]he independence that has been given to the ECB... is precisely to ensure that the central bank has full control over its balance sheet – that it cannot be forced by governments into monetising deficits or inflating away debts – and hence that monetary dominance is preserved” (Praet, 2015).

“Being forced” to abandon monetary dominance obviously can be a result of government decree, but – as above – it can also simply be because the primary budget balance is not sufficient such that the central bank’s desired target rate would result in the opposite effect as intended: higher rates intended to slow down the economy would raise government spending on debt service and thus private sector incomes. Or, from the neoclassical perspective, markets anticipating large future primary deficits might reject the government’s debt, again resulting in the abandonment of monetary dominance as it becomes necessary for the central bank to enter bond markets to avoid such a fate. This is referred to as a policy mix of “fiscal dominance”.⁵

A strong preference for monetary dominance is not in and of itself countered by demonstrating that currency-issuing governments cannot be forced into default, interest rates are more significant than the debt ratio, or that interest rates on the national debt are policy variables. While those warning of dangers of high government debt ratios often reference largely erroneously the reactions of bond markets or forced default, such errors do not on their own undermine preference for monetary dominance. But the critique in this and following sections of such concerns in the neoclassical literature and policy circles over the debt ratio, bond vigilantes, and so forth, is quite different in that the argument relies on operations and accounting to illustrate that monetary vs. fiscal dominance is in fact not the appropriate dichotomy in the first place.

Praet’s argument – representative of neoclassicals in general – is in fact inconsistent with the basic operational realities of the monetary system. The view that deficits run via “money printing” are more inflationary and thus greater threats to central bank independence and monetary dominance in managing the economy than traditional government deficits in which bonds are sold is incorrect. From Figures 1 and 2 in the previous section, it is not operationally possible to “monetize deficits” or otherwise spend via direct creation of central bank reserve balances without pushing the quantity of reserve balances well beyond the demand for reserve balances. In that case, the interbank rate falls to zero (which becomes the central bank’s de facto target rate) or the central bank pays IOR at its target rate (or issues its own time deposits or securities) to achieve a target rate above zero. Any IOR payments by the central bank reduce the government’s budget balance by the same amount, and so there is no meaningful macroeconomic difference from if the government had issued securities or they had not been subsequently monetized. Instead of “being forced” to monetize deficits, what in fact occurs is the central bank replaces a government liability earning (roughly) the central bank’s target rate for a liability of the central bank (which in most cases is an agency of the government at any rate) also earning the target rate.

Further, because there is no such thing as forcing the private sector to hold “cash” – as the previous section explained – there is therefore no such thing as a central bank being forced to “print” cash, either. It is not possible to monetize deficits or otherwise spend via physical money such that the private sector would not be able to convert any cash balances beyond those they desired to hold into bank liabilities.⁶ As banks would in turn convert any excess vault cash into central bank reserve balances, only desired currency holdings would remain just as with direct creation of reserve balances or deficit finance via securities sales, while the rest would remain as reserve balances earning IOR at the central bank’s target rate or the interbank rate would fall to zero.

Neoclassicals roundly agree that these two outcomes from spending or “monetization” of previous deficits via direct creation of reserve balances or “cash” – interest rates at the zero bound or the central bank

⁵ The terms “monetary dominance” and “fiscal dominance” are usually attributed to Leeper (1991). For a Post Keynesian view of these in regard to literatures on fiscal sustainability and the fiscal theory of the price level, see Tcherneva (2009).

⁶ Government securities exist and settle electronically on central bank payments systems at any rate – there is no such thing as central banks purchasing government securities with “cash”.

paying interest on the excess balances – mean that the method of financing the deficit becomes irrelevant. For instance, regarding the zero bound, Olivier Blanchard (quoted in Evans-Pritchard (2016)) recently confirmed the neoclassical view that “[i]t makes little difference whether spending is paid for with money or bonds when interest rates are zero.” New York Fed economists Todd Keister and James McAndrews (2009) likewise confirm the often repeated view that an excess of reserve balances earning IOR at the target rate is not inflationary since “banks never face an opportunity cost for holding reserves and the money multiplier does not come into play” (p. 1).⁷ Former Minneapolis Fed President Narayana Kocherlakota (2016) is one of the very few to recognize that both types of financing (“cash” and reserve balances earning IOR) are the only other possibilities besides traditional security sales, thereby agreeing that “money and bonds are equivalent forms of finance in a world in which banks perceive themselves to be flush with liquidity for any time horizon of interest.”⁸

This is an extremely important point. If using the monetary base (whether reserve balances or currency) to finance government deficits is no different from issuing securities, then one of the key concerns of defenders of monetary dominance relative to fiscal sustainability is in fact irrelevant. Fiscal sustainability still matters, since there is still the possibility of a perverse effect of manipulating the central bank’s target rate on government debt service, but it is this effect, not excessive “money printing” to create seigniorage income, that is at issue. Indeed, seigniorage income cannot be created by “money printing” because the quantity of currency left circulating will always be endogenously determined by the private sector’s own portfolio preferences, not by whether or not deficits are created or later monetized by “printing money.”⁹

There are two additional arguments from neoclassicals making the same point – that deficits financed via “monetization” are more stimulative than if financed by security sales – from the opposite angle of the supposedly less stimulative nature of security sales: Ricardian equivalence and crowding out. The Ricardian equivalence position is that “monetization” leads to a permanent increase in “money” but not bonds, which do not need to be repaid, while a deficit via security sales ultimately requires repayment and thus is necessarily temporary. Because the private sector will recognize the temporary nature of a deficit run via security sales, it will save the additional income resulting from the deficit rather than spending it in anticipation of higher taxes or less spending later. From the basic mathematics of fiscal sustainability, it is true that to maintain or return to the current debt ratio any worsening in the current primary balance must be offset by improvements in future primary budget balances that are equal in present value. However, this does not mean that current deficits are ever repaid – a future improvement in the primary balance does not negate the possibility of permanent deficits for the total budget (as shown in Table 2), and without a surplus on the total budget there is no debt repayment. Further, if the future debt ratio target is higher than the current one, then future improvements in the primary budget balance need not be equal in present value terms to the current worsening in the primary balance. For instance, starting from the current debt ratio of approximately 62 percent and using the same assumptions as in Table 2, a primary deficit of 1 percent of GDP will not require future adjustments to primary surpluses if the debt ratio is allowed to increase to approximately 64 percent of GDP. For higher allowable debt ratios, there would actually need to be still more future primary deficits to reach the targeted ratio. If interest rates on the national debt are less than the growth rate of GDP (as they have been in the post-World War II era for the U. S.), then (as shown in Table 3) future primary balances can be permanently negative even without raising the debt ratio in the future.

⁷ Fullwiler (2013b) and Lavoie (2010) explain from an endogenous money perspective that IOR is not relevant to understanding why large quantities of excess reserve balances did not stimulate bank lending. Nonetheless, the point in the text is that neoclassicals believe it does, and the Keister and McAndrews publication is representative of the neoclassical perspective that a deficit financed with more reserve balances is not inflationary.

⁸ Fullwiler (2010, 2013a, 2013c) and Fullwiler and Kelton (2013) detailed this same argument.

⁹ What *does* occur if the central bank “monetizes deficits” is that its outlays on interest rise as a result of the IOR payments, which could eventually reduce the central bank’s equity below zero. Though this is not an operational problem – a central bank that creates reserve balances when it spends is in no danger of being forced by “markets” into default – it can be a political problem if monetary policy makers were to face more scrutiny from legislative and/or executive branches. Political pressure on central banks to not have low or negative equity would be extraordinary hypocritical – the only reason central bank equity could fall to that level in the first place is because it sends nearly all of its profits to the government. The Fed would be the best capitalized institution in the world if it had been allowed to retain its profits.

Regarding the operational realities of the monetary system, the Ricardian equivalence argument is again inconsistent with how debt financing actually works. Even in the most stringent case of returning to the current debt ratio and the interest rate on the national debt being higher than GDP growth, “monetization” again simply exchanges reserve balances earning IOR at the central bank’s target rate for government securities earning roughly the central bank’s target rate. As such, “monetization” brings the same debt service as security sales, and will thus also require improvements in future primary budget balances equal to the present value of current “monetized” deficits for mathematical conditions of fiscal sustainability to be met. Yet again, there is no such thing as “monetization” that is different in relation to the concepts of fiscal sustainability and monetary dominance from deficits run via security sales.

Crowding out also argues that issuing bonds is less stimulative than “money-financed” deficits by arguing, contrary to Ricardian equivalence, that deficits *reduce* private saving available to finance private spending and thereby raise interest rates, as well. The crowding out argument fails on many levels. From basic operations and historical data discussed in the previous section, interest rates on the national debt are a policy variable, not set in a loanable funds market directly affected by government security issuance. But the crowding out view is also inconsistent with basic accounting and monetary operations. Figure 6 shows t-accounts for a government deficit with a bond sale. The bond sale is the first transaction, with a dealer – the marginal purchaser of government debt – whose account at the bank is debited while the T-bill is ultimately settled via debiting the reserve balances of the dealer’s bank and the Treasury’s account is credited. For this transaction, there has been no reduction in “saving”. Saving – which is a flow relative to income – in the economy has remained unchanged. The dealer has simply converted its deposit into a security. While it is commonly argued that the deficit will comprise nothing more than a transfer of the deposit to another once the deficit occurs, this misses that neither primary dealers nor banks need the deposits (or reserve balances, either, in the case of banks) as financing in the first place. Neither has seen any reduction in its abilities to expand its respective balance sheet – the dealer can use the security to borrow in the repurchase agreement market to add to its securities portfolio, while the bank can still create loans and deposits simultaneously and borrow in the federal funds market to meet reserve requirements or settle customer withdrawals. Funding for both types of institutions at the margin is assured by the Fed’s support of the payments system via its interest rate target in the federal funds market that it defends through operations in the repurchase agreement market.¹⁰

The deficit is the second transaction in Figure 6. The recipient’s net worth has increased as a result of the additional income from the government’s spending. Because there was no reduction in private saving when the government issued the security – nor, more importantly, the ability of the financial system to finance private spending – the combination of the security sale and the deficit in fact *increases* private saving. Further, this outcome is *exactly the same* as if instead the deficit had been incurred by “printing money,” which would be the second transaction in Figure 6 alone (except for the addition of an overdraft in the Treasury’s account at the Fed instead of the Treasury selling a security, which also means that the reserve balances will not be drained). The financial system’s ability to finance productive capacity is not enhanced by “money-financed” deficits, nor is it reduced by deficits financed by security sales, while, yet again, with a “money-financed” deficit the reserve balances created earn IOR, which is roughly the same as the Treasury would pay if issuing securities (particularly T-Bills).

¹⁰ This is a version of the endogenous money view of Post Keynesians, though the history of the Fed’s role in backstopping banks and dealers is explained in Mehrling (2011). One could add that the Fed also supports the payments system through provision of substantial intraday credit for banks, though this has diminished significantly since 2008 with the increase in reserve balances resulting from the various rounds of quantitative easing. See, for instance, Bech, Martin, and McAndrews (2012).

Figure 6 T-Accounts for Government Bond Sale and Deficit Spending

| CB | | Government | | Bank | | Dealer | | Spending Recipient | |
|--------|--------------------|-----------------|-------------|--------------------|-----------------------|-------------------|-------------|--------------------|-------------|
| Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity |
| | Reserve Balances - | Account at CB + | T-Bill + | Reserve Balances - | Dealer's Account - | T-Bill + | | | |
| | Treasury Account + | | | | | Account at Bank - | | | |
| | Reserve Balances + | Account at CB - | Net Worth - | Reserve Balances + | Recipient's Account + | | | Account at Bank + | Net Worth + |
| | Treasury Account - | | | | | | | | |

In every instance and angle considered the financing of deficits via “monetization” has no macroeconomically significant difference from deficits financed with security sales, while in both cases the central bank retains full control over its interest rate target (including setting it at zero if it so desires). Therefore, the significance of fiscal sustainability for monetary dominance is whether the government’s deficit position – whether as a result of debt service or otherwise – is too large for the capacity of the economy and thereby potentially inflationary relative to the stance of monetary policy. The neoclassical view that the macroeconomy in the short run and inflation in the long run are driven by the central bank’s adjustment of its target rate leads naturally to the view that fiscal policy’s role is largely to “stay out of the way” of monetary policy. The alternative view developed below is that monetary vs. fiscal dominance is a false dichotomy, and is based upon consideration of actual real-world accounting and operations to better understand how fiscal and monetary policies interact within an modern monetary economy.

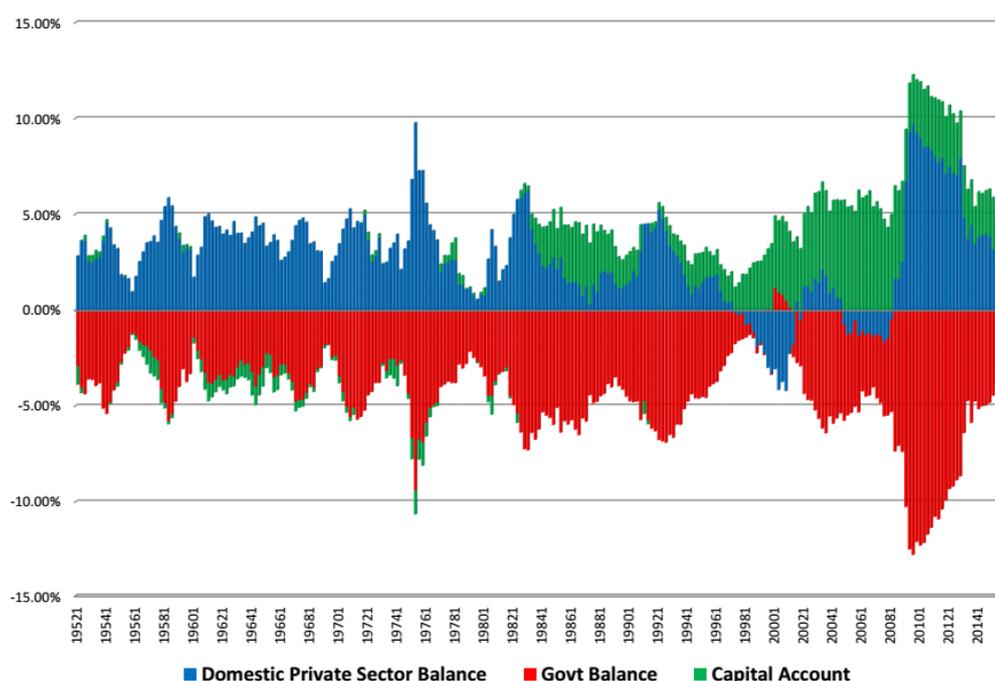
Debt Interdependence, Minsky, and Macroeconomic Policy

A more generally applicable approach than the monetary versus fiscal dominance dichotomy not only recognizes the role that government debt and debt service have on the effectiveness of monetary policy, but also the interactions of both fiscal and monetary policies with the debt of the private sector. Consider the sector financial balances popularized by Wynne Godley (e.g., Godley, 1999). From basic flow of funds accounting, the net of all flows among all sectors must add to zero. A common approach is to divide the economy into three sectors – private sector (household, non-financial business, financial), government sector, and capital account (since it is the rest of the world’s current account balance with the country under consideration) – the sum of which must be zero. Written as an accounting identity,

$$0 \equiv \text{Private Sector Balance} + \text{Government Sector Balance} + \text{Capital Account.}$$

Accounting on its own is not economic theory, but it does set the parameters for how to maintain records of transactions and for which transactions are possible. For example, just as not all countries can run trade surpluses simultaneously, it is from basic accounting necessarily the case that if one sector of the economy has a positive balance at least one other sector must have a negative balance.

The U. S. sector financial balances during 1952-2015 are in Figure 7, presented as a percent of GDP. Clearly the norm has been for the government sector to be in a negative balance position and for the private sector to have a positive balance; since the late 1970s, the capital account has been in surplus as well, and so equivalently the current account has been in deficit. Significant for a nation like the U. S. that tends to run current account deficits (capital account surpluses), then, is that by accounting identity either the government sector or the private sector (or both) will necessarily have a negative balance. In more general terms, given that by accounting definition not every country can run a current account surplus, those nations with current account deficits will have one or both of the private and government sectors with a negative balance.

Figure 7 Sector Financial Balances as a Percent of GDP, 1952 to 2015

Source: Flow of Funds Accounts and author's calculations

Unlike a currency-issuing government, the private sector is not a currency issuer and *can* be forced into default. It is not surprising, then, that the private sector regularly runs a positive sector financial balance, in the U. S. averaging 2.74 percent since 1952. Since 1976 when current account deficits became essentially permanent, the private sector balance has averaged 2.14 percent of GDP. Given an average current account deficit of 2.3 percent of GDP during this period, the government balance consequently averaged well below -4 percent of GDP.

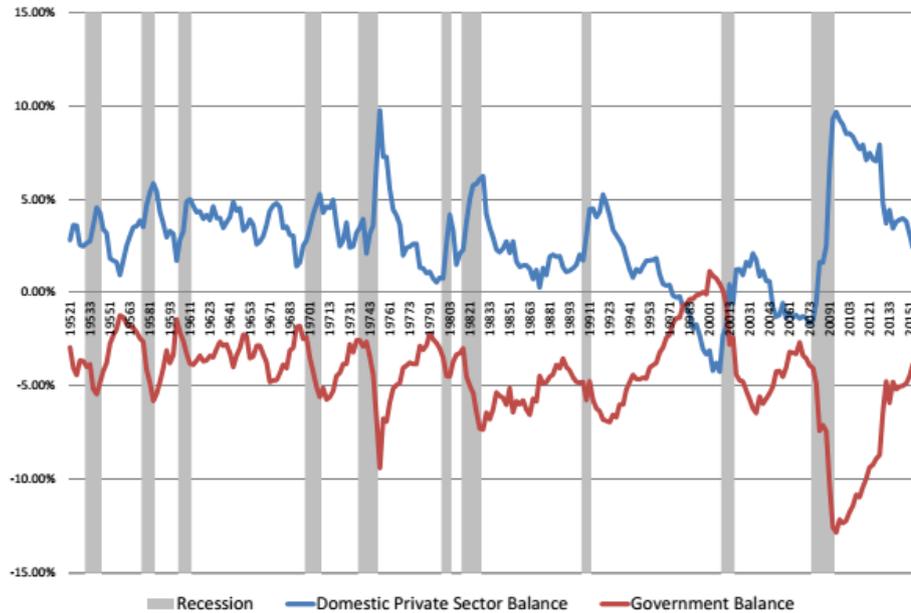
From a Minskyan perspective (e.g., Minsky, 1982), the private sector's financial balance should directly affect financial fragility. In Minsky's well-known taxonomy of financial positions – hedge, speculative, and Ponzi – a higher concentration of hedge finance (able to meet principle and interest payments out of expected cash flows) means there is greater capacity to take on debt and remain at a low level of private sector financial fragility. The opposite is true when financial positions are more heavily weighted toward speculative (expected cash flows are able to meet required payments for interest and some principle, but refinance of some principle will be required) or Ponzi (will require refinance of all principle and at least some interest) positions. Minsky's taxonomy suggests that a significant decline or an outright negative financial balance for the private sector is related to a move toward greater concentrations of speculative and Ponzi financial positions.

Minsky's taxonomy of financial positions applies to moves from less to more financially fragile states in the economy both within cycles and across them. Figure 8 illustrates this by showing only the government and private sector balances, but also including recessions. The near mirror image of the two sector balances is again clear, but of additional significance is their cyclical pattern. The private sector balance declines during expansions and rises during recessions – in essence, the improvement during the recession *is* the recession, as households and firms scale back on spending relative to incomes, and its decline *is* the expansion. The government balance counters the procyclicality of the private sector balance with its own countercyclicality, often largely via automatic stabilizers.

In addition, though, there is a secular pattern, particularly in the 1990s and 2000s, as the private sector's balance still exhibited the cyclical patterns mentioned but also trended lower, with the cyclical highs and lows being lower than previous periods. By the end of the 1990s expansion, and again during the 2000s expansion, the private sector balance turned negative, the only times this occurred in the post-World War II

era. The two periods obviously correspond to the 1990s stock market bubble and the 2000s housing bubble, both historically large, and from a Minskyan perspective represent cyclical fragility in the private sector ultimately compounded by a secular trend toward fragility.¹¹ Likewise, the large spike in the private sector's balance during 2008-2009 and its sluggish decline thereafter was to be expected, as the private sector would need to significantly reduce spending relative to income to correct both cyclical and secular trends.¹²

Figure 8 Business Cycles and Financial Sector Balances, 1952-2015



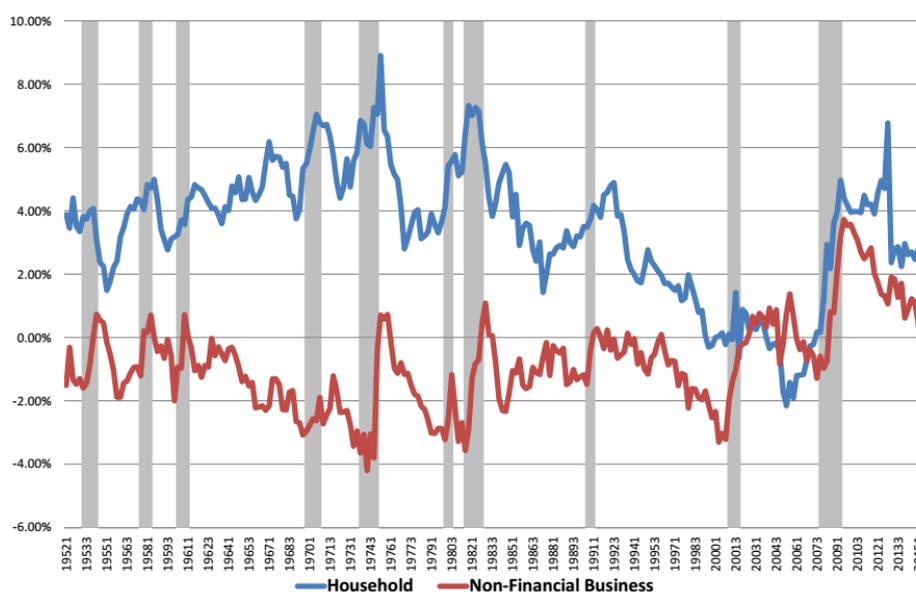
Source: Flow of Funds Accounts and author's calculations

Figure 9 shows the financial balances of the household and non-financial business sectors, which together with the financial sector's balance comprise the private sector balance. Interpreting the figure, the household sector appears to be the hedge sector on average, with its balance prior to the late 1990s being consistently positive even as there were cyclical trends like those in the broader private sector balance. During 1980-2008, households trended away from hedge finance, particularly during the early 1990s to 2008. The non-financial business sector has more regularly moved from hedge to speculative/Ponzi within business cycles with its cyclical routine of positive balances during recessions that move negative as the expansion continues, and then reversing again. Interestingly, the post-2001 non-financial business sector balance has shifted to a higher percent of GDP than previously on average even as the cyclical pattern largely continued, falling to levels merely slightly below zero percent of GDP only at the end of the 2000s expansion and again in late 2015; this suggests at least in general terms reduced Minskyan fragility in the sector as a whole following the stock market bubble's collapse at the end of the 1990s.¹³

¹¹ Warnings of high degrees of financial fragility in the private sector from a blended Minskyan/sector balances perspective were common during both periods. See, for instance, Godley (1999); Godley and Wray (1999); Wray (2000); Papadimitriou, Chilcote, and Zezza (2006); Parenteau (2006); and Tymoigne (2007).

¹² This is similar to Richard Koo's (2008) "balance sheet recession" explanation of the slow recovery from both the U. S.'s and Japan's recessions following asset price bubbles, as the private sector repaired its collective balance sheet rather than spending.

¹³ It must be stressed that the sector financial balances are simply one of many possible indicators for financial fragility, and is a quite general, "big picture" one at that. More precise diagnosis would likely want to have corroboration from more indicators (e.g., Tymoigne 2014a). At the same time, the logic of falling and particularly negative sector balances being consistent with Minsky's model of financial fragility is clear (see the literature cited in note 11 for examples).

Figure 9 Household and Non-Financial Business Sector Balances as a Percent of GDP, 1952-2015

Source: Flow of Funds Accounts and author's calculations

Understanding the sector financial balances suggests that a paradigm expecting or requiring permanently small government deficits or (especially) surpluses – such as the European Monetary Union's Maastricht Criteria of deficits below 3 percent of GDP – is overly simplistic if the private sector balance is to be on average positive (if not significantly so). If manageable levels of private sector financial fragility require on average permanent and non-trivial private sector surpluses, then from basic flow of funds accounting of the inter-relationship of government and private sector balances the desired fiscal stance of the government cannot be considered in isolation. Fiscal surpluses, even on average over time, may be quite possible where current account surpluses are significant on average over time as well. There are historical examples – such as Canada in the mid-1990s – where improvements in the current account balance enabled fiscal surpluses while the private sector balance remained in surplus. But from basic accounting identities such circumstances cannot apply universally, and thus cannot be a legitimate basis for a one-size-fits-all approach to fiscal sustainability. Certainly, given the U. S.'s reserve currency status, its de facto role as so-called importer of last resort, and the current sluggish state of the world economy, expecting fiscal surpluses in the U. S. from basic accounting requires a significant decline in the private sector balance – essentially a return to the greater financial fragility and instability seen in the late 1990s and in the 2000s.

An additional and related consideration is the crucial, largely unrecognized, distinction between monetary and fiscal policies. Both are generally seen in neoclassical economics to directly affect aggregate demand, monetary policy through the “money” supply and fiscal policy through deficits. Recall from the t-accounts in Figure 6 that the government deficit has created equity or net worth for spending recipients while reducing its own. This t-account representation of fiscal policy is equivalent to the sector balances explanation of government deficits raising the private sector financial balance; as noted in the earlier discussion of Figure 6, in contrast to the incorrect crowding out view, government deficits directly raise private sector's saving, and thereby also raise the private sector balance. This means that fiscal policy “works” by raising directly the incomes of the private sector, which may then itself spend more out of the increased income.

Monetary policy does not “work” this way. While, for the sake of argument, monetary policy may operate through the “money” supply, this is a commonly misunderstood term. “Money” is not income, it is an asset. There are two ways that monetary policy can increase the quantity of “money” – first by lowering interest rates, and the second through open market operations as in quantitative easing. It is obvious how monetary policy “works” in the first case – lower interest rates stimulate more loan and deposit creation to finance private spending. Note, though, that this is the opposite effect of fiscal policy: instead of encouraging

the private sector to spend out of *more* income, stimulating loan creation requires more spending out of *existing* income to “work”. Open market operations work similarly, as the t-accounts in Figure 10 show. There is no increase in the private sector’s equity unlike with fiscal policy. The seller of the security – in this case a bond dealer, as it would actually occur since central banks do not purchase bonds from households, for instance – now has more deposits. But if the dealer or—again, for the sake of argument – a household that has just sold bonds to the Fed chooses to spend, it will likewise be spending more out of its *existing* income (though it will not incur debt as it would if it instead borrowed, obviously) since the bond sale was not an increase in income but an asset swap (highlighted in Figure 10 by the red circle).

The sector balance effects of monetary policy are a bit more complicated to work through, but the net effect is a decline. Borrowing or spending “money” balances that were previously bonds reduces the sector balance of households. While the businesses that are the recipients of increased household spending will contribute to a rise in the business sector’s financial balance, the change for the two sectors then nets to zero. Ultimately, though, the increased spending and incomes will be taxed and social safety net spending will fall, both of which will contribute to a net reduction in the private sector’s balance.¹⁴

Figure 10 Central Bank Open Market Purchase of Securities

| CB | | Government | | Bank | | Dealer | | Non-Financial Pvt Sect | |
|--------------|--------------------|------------|-------------|--------------------|--------------------|-------------------|-------------|------------------------|-------------|
| Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity | Assets | Liab/Equity |
| Treasuries + | Reserve Balances + | | | Reserve Balances + | Dealer's Account + | Treasuries - | | | |
| | | | | | | Account at Bank + | | | |

While the private sector financial balance will generally decline during economic expansion and rise in a recession, the effects of monetary and fiscal policies in mitigating the recession have entirely opposite effects on the private sector’s financial position – fiscal policy will raise the private sector balance further, while monetary policy will reduce it. For instance, a financially fragile private sector may not desire to spend more out of existing income, and in that case monetary policy could be the wrong tool. Instead of fiscal policy’s role being to run primary surpluses and essentially “get out of the way” in order to preserve monetary policy’s dominance and independence, both monetary and fiscal policies must be understood to operate within a more complex, interdependent system of public and private debt. If government deficits improve the private sector’s financial balance, monetary stimulus worsens the private sector’s finance balance, and a falling or negative private sector financial balance is normally consistent with rising private sector financial fragility, then the appropriate role of fiscal policy is more complex than simply “get out of the way.”

Some Principles for Building a Sustainable Macroeconomic Policy Mix

The “no Ponzi” condition for the government’s budget deficit in neoclassical models – that is, the government maintains a stable debt and debt service ratio – is internally consistent within the context of a preference for monetary dominance and the government’s debt service not interfering with monetary policy makers carrying out their desired strategy.¹⁵ However, these same models curiously ignore the possibility of private debt problems associated with rising financial fragility. Faust and Leeper (2015, p. 8) acknowledge that the household debt ratio “played no important role in standard models” while “there was never a clear case stated for why this was irrelevant for understanding business cycle dynamics.” This frankly understates the

¹⁴ In the case of private sector borrowing, this will also raise the fee and net interest income of the financial sector, which will also be taxed.

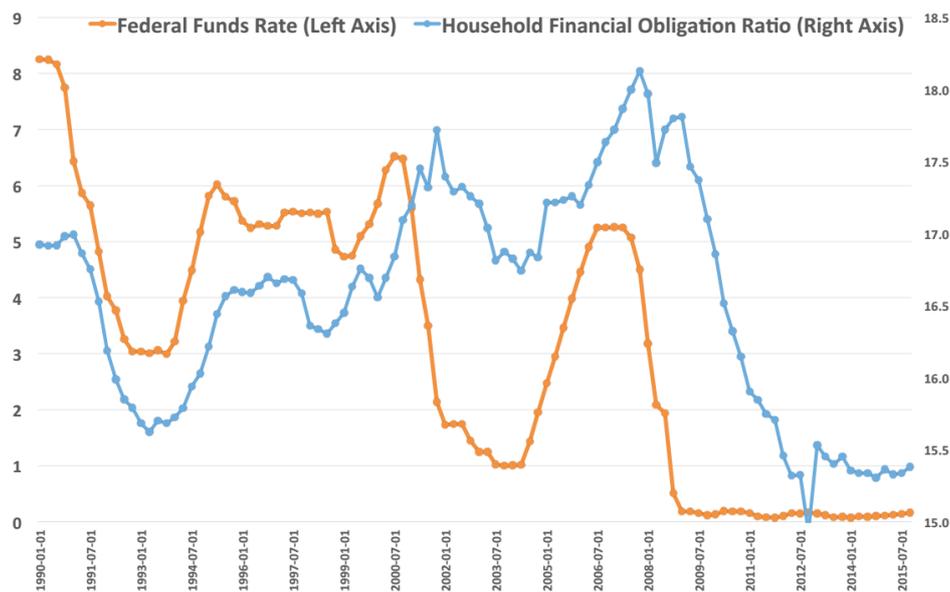
¹⁵ This interpretation of the “no Ponzi” condition for the government’s intertemporal budget constraint is in fact too generous, but made for the sake of argument. The actual “no Ponzi” condition in these models is intended to prevent the government from repaying its debt via seigniorage or “printing money.” From an earlier section, this is inconsistent with actual operations – “money” financing is not different from security financing. The more generous interpretation granted here is that avoiding “money” financing via the “no Ponzi” condition is consistent with avoiding unbounded growth in debt service.

role of private sector debt in neoclassical models. In Jordi Gali’s popular graduate monetary economics textbook, the standard New Keynesian model built to begin the book states that “it is assumed that the household is subject to a solvency constraint that prevents it from engaging in Ponzi schemes” (2008, p. 16). Again, even this significantly understates, since the “constraint” is the assumption that household debt is always repaid and there is never default. But if there is never default, then there is no reason to be concerned with private debt or the private sector balance in the first place, and no reason to worry about the differing effects of monetary and fiscal policy on them, either. From there it is relatively straightforward to construct a policy framework in which monetary policy dominates and fiscal policy “gets out of the way”.

Instead of the monetary dominance vs. fiscal dominance dichotomy, the more real-world based framework recognizes government deficits exist within the context of financial flows to and from other sectors in the economy. Constraining the government’s budget position in the belief that this is necessary for it to not interfere with monetary policy can in fact be what is *unsustainable* in a world in which private sector financial positions can become increasingly fragile. Excluding the private sector’s financial position – or worse, excluding it due to the assumption that its financial position is never fragile in any macroeconomically significant way – and its interaction with government sector in core models (both theoretical and empirical) used regularly to inform policy makers about the macroeconomy and effects of policy likely promotes an inherently unstable policy mix.

It is obvious, or should be, that the rate of interest set by the central bank affects directly the debt and debt service of the private sector, and thus also the sector’s financial position. Indeed, Figure 11 shows that the the Fed’s measure of household financial obligations has moved fairly much in line with the Fed’s target rate since the 1990s. No account of this interaction is made in standard approaches to interest rate target rules such as Taylor’s Rule, even though it is understood that an important channel of transmission for the interest rate target is through incentives to borrow and lend.¹⁶ It is more than a bit odd that the core neoclassical model warns perhaps even excessively about the potentially deleterious interactions of government debt and debt service on monetary policy, but then essentially ignores the potential interactions of monetary policy and private sector debt and debt service.

Figure 11 Federal Funds Rate and the Fed’s Household Financial Obligation Ratio



Source – Federal Reserve Economic Database

¹⁶ This is a bit unfair in that some of the “credit view” literature regarding monetary policy transmission does explicitly concern itself with fragile balance sheets in the private sector. This literature is not widely integrated into standard models, however.

In Minsky's framework, on the other hand, interest rates are directly linked to the financial positions of the private sector. A given level or change in interest rates has a different effect on borrowing, spending, and financial fragility depending on how private financial positions are concentrated across hedge, speculative, or Ponzi categories. A higher concentration of hedge finance means there is greater capacity to take on more debt and service it out of current cash flows. Lower interest rates should be more effective and their effects on private sector leverage less concerning when hedge finance dominates. The opposite is more likely to be true when speculative and Ponzi positions dominate, where the best possible outcome might be to use the lower rates to refinance debts (if possible) and thereby reduce debt service instead of new borrowing. Higher interest rates may reduce borrowing when hedge finance dominates much like in a simple neoclassical macroeconomic model. But when speculative and Ponzi finance dominate higher rates are not likely to offset the accelerated pace of anticipated cash flows, speculative profits, or financial innovations that can decouple debt service from interest rate policy at least temporarily (such as with the 2/28 mortgages that had no interest for the first two years with a steep rise thereafter). Rising interest rates raise refinance costs for business working capital (thus possibly *raising* inflation, at least temporarily), while the path to slowing an economy tilted toward speculative/Ponzi financial positions can instead occur via increased defaults (from the inability to refinance debts at rates that are consistent with current cash flows, or the inability to refinance them at all) and possibly even debt deflation (e.g., Wray, 1993). Surely the latter is more consistent with the events of 2007-2009.

Both the interactions of government and private sector debt and the effects of interest rates on debt and debt service of both sectors provide some rationale for the central bank's interest rate target remaining on average below the growth rate of GDP. If one of either the government's balance or the private sector balance will always be in a deficit position – which will be, by accounting definition, true if there is a current account deficit, and probably true if there is not a sizeable current account surplus. The relationship of the interest rate target to growth is even more important for the private sector, which will borrow at interest rates that require a premium relative to the rates on the national debt. Indeed setting interest rates above the economy's growth rate might be another unsustainable monetary policy strategy.

Even in the standard neoclassical models, if the private sector desires to save more at all levels of GDP, the interest rate should be lower to bring spending into balance with potential output. What is missing, though, is recognition that the lower rate may or may not be intended for stimulating private sector borrowing or (at the least) a reduced propensity to save, which is more appropriately determined within the context of an assessment of private sector financial positions. Indeed, if the private sector wants to have a significantly positive financial balance *on average*, the lower interest rate consistent with this should be intended to stabilize government debt service as it accommodates the private sector via a reduced primary budget balance, not necessarily to encourage a smaller private sector balance. This is actually consistent with the mathematics of fiscal sustainability – a lower interest rate means smaller future primary surpluses are required to sustain the same debt service ratio. This also parallels the earlier critique of Ricardian equivalence – a reduction in today's primary surplus need not require identical-sized offsetting increases in future primary surpluses to keep the debt service ratio from rising if interest rates on the national debt are also reduced.

While interest rates on the national debt have on average been below GDP growth in the post-World War II era, neoclassicals generally believe the opposite is the "normal" case. As Blanchard, et al., (1990, p. 15) put it, "there is general agreement that the condition of an excess of the interest rate over the growth rate probably holds, if not always, at least in the medium and long run." The projections of both CBO and the Trustees of Social Security and Medicare take this same view, assuming interest rates on the national debt will be greater than growth in the future. CBO's forecasts are presented in Table 7. The top portion of the table shows forecasts from CBO's 10-year projections made annually during 2000 to 2016; the forecasts are for the latter five years of the 10-year projections, since those are unrelated to the state of the business cycle at the time of publication. For all of the forecasts, the 10-year rate is projected to be higher than the growth rate except for the most recent forecast in January 2016 in which the two are equal. The 3-month rate is higher or equal to GDP growth in 9 of the 17 years, and not more than 0.5 percent lower than GDP growth except for forecasts made in 2012, 2015, and 2016. Compared to Table 6 above, CBO's

World Economic Review

projections made during 2000-2010 for interest rates relative to GDP growth were consistently wrong by a wide margin. Only CBO's projections in 2012, 2015, and 2016 (shaded) have average interest rates on the national debt below GDP growth. The last several rows of Table 7 show CBO's longer-term projections published since 2009 (again starting with CBO's projections five years ahead). Here again, CBO continues to project interest rates on the national debt (for these forecasts, there is only one interest rate reported that is the average rate on the debt) higher than GDP growth rate for the next 65-plus years even as the opposite was the case for the last 65-plus years.

Table 7 CBO's Forecasts for GDP Growth and Interest Rates on the National Debt

| From 10-Year Projections Publications | | | | | |
|---|-------------------|------------|--|---------------------|--------------------------------------|
| Date of Forecast | Forecasted Period | GDP Growth | 3-Month T-Bill Rate | 10-Year T-Note Rate | Average of 3-Month and 10-Year Rates |
| January 2000 | 2006 to 2010 | 4.5 | 4.8 | 5.7 | 5.25 |
| January 2001 | 2007 to 2011 | 5.0 | 4.9 | 5.8 | 5.35 |
| January 2002 | 2008 to 2011 | 5.2 | 4.9 | 5.8 | 5.35 |
| January 2003 | 2009 to 2013 | 5.0 | 4.9 | 5.8 | 5.35 |
| January 2004 | 2010 to 2014 | 4.5 | 4.6 | 5.5 | 5.05 |
| January 2005 | 2011 to 2015 | 4.5 | 4.6 | 5.5 | 5.05 |
| January 2006 | 2012 to 2016 | 4.4 | 4.4 | 5.2 | 4.8 |
| January 2007 | 2013 to 2017 | 4.3 | 4.4 | 5.2 | 4.8 |
| January 2008 | 2014 to 2018 | 4.4 | 4.7 | 5.2 | 4.95 |
| January 2009 | 2015 to 2019 | 4.3 | 4.7 | 5.4 | 5.05 |
| January 2010 | 2016 to 2020 | 4.1 | 4.6 | 5.7 | 5.15 |
| January 2011 | 2017 to 2021 | 4.4 | 4.4 | 5.4 | 4.9 |
| January 2012 | 2018 to 2022 | 4.5 | 3.7 | 5.0 | 4.35 |
| February 2013 | 2019 to 2023 | 4.3 | 4.0 | 5.2 | 4.6 |
| February 2014 | 2020 to 2024 | 4.2 | 3.7 | 5.0 | 4.35 |
| January 2015 | 2021 to 2025 | 4.2 | 3.4 | 4.6 | 4.0 |
| January 2016 | 2022 to 2026 | 4.1 | 3.2 | 4.1 | 3.65 |
| From Long-Term Projections Publications | | | | | |
| Date of Forecast | Forecasted Period | GDP Growth | Average Interest Rate on National Debt | | |
| June 2009 | 2014 to 2083 | 4.2 | 5.1 | | |
| June 2010 | 2015 to 2084 | 4.5 | 5.2 | | |
| June 2011 | 2016 to 2085 | 4.7 | 5.2 | | |
| June 2012 | 2017 to 2086 | 4.5 | 5.2 | | |
| September 2013 | 2018 to 2087 | 4.4 | 5.2 | | |
| July 2014 | 2019 to 2088 | 4.4 | 4.7 | | |
| June 2015 | 2020 to 2090 | 4.3 | 4.4 | | |

Source: Congressional Budget Office

CBO's forecasts are anything but benign in their political impacts. The projections along with those of the Boards of Trustees of the Social Security and Medicare Trust Funds strongly influence debates among policy makers and in the media regarding whether fiscal policy is on a sustainable path. Similar to CBO's regular practice, the forecasts of the Boards of Trustees of Social Security (2015) and Medicare (2015) assumed nominal GDP growth during 2015 to 2089 of 4.5 percent and average nominal interest rates on the national debt of 5.2 percent. The projected imbalance over 75 years discounted back to the end of 2014 was \$15.8 trillion or 92 percent of GDP in 2014.¹⁷ Neither CBO nor either of the Boards of Trustees regularly reports a

¹⁷ Rarely noted in the media or by policy makers is the fact that the Trustees make three separate projections – high cost, intermediate, and low cost. The low cost scenario has routinely shown that the programs remain “solvent” well beyond any forecasted horizon, and the assumptions made in the low cost scenario have been more historically accurate, with intermediate forecasts in subsequent years often inching closer to those of previous low cost scenarios. Also, probably more importantly, Rabn-Havt (2015) reports that CBO is bound by the 1985 Balanced Budget and Deficit Control Act to assume Social Security and Medicare will be fully funded even when trust funds run out (indeed, CBO (2016, note 4 on p.16) acknowledges this fact), which

forecast for the current account position in these publications. This suggests that they are unaware of basic sector balance accounting identities and reveals they have not considered the accounting consistency of their projections. Unless there is a significant current account balance assumed, what they all project is in fact an unsustainable fiscal and monetary policy mix. Either fiscal policy deficits will be so large that the blend of them plus high interest rates will create unbounded growth in government debt service; or, if significant primary surpluses are run to avoid this outcome, the private sector balance will quickly turn negative while interest rates higher than GDP growth will push private sector debt service to the point of unmanageable financial fragility. It is assured, then, that all of these long-term projections will be wrong and are not useful for advising policy makers.

It is interesting to compare these projections to what a projection might have looked like, say, at the beginning of 1940 or 1953 and then forecasting through to the present assuming perfect foresight. The 1940-1953 period obviously skews the results for 1940-2015 given the large deficits run during World War II, so Table 8 presents results for both 1940-2015 as well as 1953-2015. There were 33 years of primary surpluses during 1940-2015 and 27 during 1953-2015, but the average primary deficit was negative throughout: -1.44 percent of GDP and -0.51 percent of GDP, for the respective periods. In both periods GDP growth (7.30 percent and 6.47 percent, respectively) was greater than the average interest rate on the national debt (using the average of the 10-year and 3-month rates as a proxy – 4.64 percent and 5.26 percent, respectively). The final row of Table 8 is the sum of the present value of all primary balances discounted by the average interest rate on the national debt back to the starting period (beginning of 1953 and beginning of 1940, respectively) and then divided by GDP (for 1952 and 1939, respectively). Note that the entry in the final row for 1953-2015 is not that much lower than the Social Security and Medicare Boards of Trustees' recent 75-year projections. But because interest rates were below GDP growth, debt service was modest and averaged below 2 percent of GDP throughout. Were one to instead assume the counterfactual of interest rates greater than nominal GDP growth, unbounded growth in debt service and the debt ratio would be the outcome.

Table 8 Deficit and Debt Service Projections Assuming Perfect Foresight

| | 1940-2015 | 1953-2015 |
|--|-----------|-----------|
| Number of Years with Primary Deficits > 0 | 33 | 27 |
| Number of Years with Total Deficits > 0 | 12 | 8 |
| Average Primary Balance as a Percent of GDP | -1.44 | -0.51 |
| Average Debt Service as a Percent of GDP | 1.74 | 1.83 |
| Average Total Budget Balance as a Percent of GDP | -3.18 | -2.34 |
| Average Nominal Interest Rate on National Debt | 4.64 | 5.26 |
| Average Nominal GDP Growth Rate | 7.30 | 6.47 |
| Sum of Present Value of Future Primary Deficits as a Percent of Starting GDP | 343.9 | 70.2 |

A standard counter is that setting interest rates below growth inhibits or even threatens central bank independence and its pursuit of price stability in particular. Again, the point here is to transcend the monetary/fiscal dominance paradigm – primary budget balances *were* negative on average; the private sector *was* in significant surplus aside from two periods of historically large asset price bubbles; and throughout, aside from a few years in the early 1980s, interest rates on average were less than nominal GDP growth.¹⁸ Few would complain that any of these significantly threatened central bank independence, while

leads to the projected deficits and public outcry. Were CBO allowed to project the programs' spending according to current laws, the projections would instead show a rapidly declining debt ratio through the rest of the century, as data provided to Rahn-Havt by the Social Security Administration's chief actuary shows. Of course, discussion of program "solvency" at any rate is the wrong focus – the appropriate focus is the path of deficits themselves relative to the state of the economy since no government program can be less solvent than the government itself (e.g., Wray, 2004).

¹⁸ Table 6 and Figure 3 show that 3-month Tbilis and 10-year Tnotes were higher than nominal GDP growth during 1979-2000. A different angle is to consider at what point after the Fed's switch to a substantially higher interest rate policy in October of 1979 does the federal funds rate on average become lower than nominal GDP growth on average through 2015. As it turns out, the average for the entire period is already -0.24 percent. By 1983, the average difference for 1983 through 2015 is -0.89 percent. The average difference continues to decline thereafter.

inflation was modest on average.¹⁹ To accommodate the private sector's balance while interest rates were on average below GDP growth, fiscal policy makers in developed, currency-issuing nations have acted countercyclically, often mostly through automatic stabilizers. By and large they have not set primary balances exogenously, independent of the state of the economy, and have not forced central banks to accommodate their policy stances.

If the accounting and operations behind the arguments above are correct, the neoclassical framework for understanding the roles of monetary and fiscal policies has contributed – perhaps a lot – to a macroeconomic policy mix that has been less effective than it could or even should have been. There is little doubt that it contributes to fiscal policy's relegation to the background in favor of monetary policy and a modeling framework that mostly ignores private debt. Even since 2008, with a zero interest rate policy (ZIRP) and as great a case as there probably has been for significant fiscal stimulus in more than 60 years, the vast majority of primary deficits incurred in the U. S. (\$5.12 trillion) dwarfs actual stimulus (the Obama stimulus was near \$800 billion), not to mention successive rounds of current and future deficit reduction in debt ceiling negotiations. In other words, active fiscal policy was 16 percent of primary deficits incurred, and 12 percent of total deficits incurred. The public discourse is still dominated by consideration of additional potential options for central banks to encourage a previously over-leveraged private sector (or at least household sector) to spend more out of existing income, as it is generally accepted that active fiscal policy is politically unpalatable.

Central banks in many countries are now experimenting with a negative interest rate policy (NIRP). If successful, though, NIRP will be so via a significant reduction in the private sector balance. And if private sector financial positions have not yet fully recovered from their over-leveraged financial states of the late 2000s, monetary stimulus now via NIRP – particularly if central banks shortly thereafter begin raising rates and thus private sector debt service in the face of economic expansion – might require an even “NIRPIER” monetary stimulus later.²⁰ From the analysis in this paper, the quicker, more sustainable path should be via fiscal stimulus, which can directly raise private cash flows for servicing debts and is a source of cash flows and confidence for increased spending, rather than monetary policy that works through refinancing debts and waiting for increased confidence in future cash flows before spending more relative to existing income.

The appropriate alternative to the “sound finance” view implied by the neoclassical model of intertemporal government budget constraints is Abba Lerner's *functional finance* (1943), which argues that the appropriate appraisal of a government deficit is of its effects on the economy, not its size per se. What should replace a budget constraint, then, is an inflation constraint – the limits of a fiscal action by a currency-issuing government are not financial but rather the economy's capacity to produce goods and services. Lerner referred to this as the “first law of functional finance”. The projections of CBO and the Medicare and Social Security Boards of Trustees are particularly disappointing in this regard – what matters is not whether spending will outpace revenues, but whether the deficits will lead to higher inflation. Will inflation be 2 percent as a result of their projections? 5 percent? 10 percent? Higher still? CBO instead assumes inflation will be around 2 percent, while unemployment and GDP will be near the economy's potential, which if true would mean CBO is forecasting that future deficits will not be a problem even with its assumption that interest rates will be higher than GDP growth. CBO's method is backward – instead of assuming an economy at its potential with stable inflation, it should be forecasting the macroeconomic effects of its projections about spending, taxes, interest rates, and so forth.

If implemented as Lerner envisioned, a functional finance “rule” accommodates the private sector's financial balance on average and across secular and cyclical paths, while being simultaneously consistent with an inflation constraint. In an economy pushing real capacity limits or even experiencing demand-pull inflation before that point (for instance, if some important markets experience supply bottlenecks), the rule calls for smaller deficits. It requires that the government's budget not fall below the point that it causes

¹⁹ The annual compounded growth rate of the PCE Price Index in the U. S. during 1959-2015 was 3.3 percent. For the CPI, it was 3.5 percent during 1947-2015. These fairly modest inflation rates are significantly affected by the relatively high inflation rates of the 1970s (annual compounded growth for the PCE Price Index was 6.7 percent; for the CPI it was 7.4 percent) that were aided by several supply shocks.

²⁰ This applies to negative interest rates on currency (essentially taxes on currency), as well, which would likewise “work” by encouraging more spending out of existing income and thereby reduce private sector financial balances.

inflation, while at the same time not being constrained to any particular size except that which is consistent with full capacity utilization at any given point in time. Such a fiscal position might be referred to as “neutral” (Fullwiler and Kelton, 2007) – since it would neither push nor pull too hard – or “responsible” (Kregel, 2010), since it is consistent with policy makers’ mandate to create full employment.

Functional finance does not violate the mathematics of fiscal sustainability precisely because it is concerned with the effects of deficits. Accelerating government debt service at full employment is simply one example of the fiscal position threatening the inflation constraint. As with all inflationary threats in a functional finance regime, it requires higher taxes or cuts in non-interest spending to raise the primary balance until the total deficit is again “neutral” or “responsible.” This is the case regardless of the level of interest rates relative to GDP growth – higher interest rates that bring more debt service simply mean reducing the primary budget balance in kind, though this is due to the inflation constraint, not any sort of concerns about fiscal sustainability.²¹ Consequently, functional finance is not necessarily inconsistent with monetary dominance – the central bank still has the freedom to set its target based on its preferred strategy. What functional finance adds, however, is the opportunity to think beyond the traditional monetary/fiscal dominance dichotomy and recognize that it is possible to have a fiscal policy framework consistent with accounting and operations that also does not necessarily threaten central bank independence.

Lastly, functional finance is consistent with the operational realities of the monetary system. Explaining his “second law of functional finance,” Lerner argued that the government should issue interest-bearing liabilities only when the private sector did not want to hold its “money.” This is in fact what already happens, since the private sector cannot be forced to hold physical currency and banks similarly cannot be forced to hold more reserve balances than the banking system desires at the target rate unless the central bank pays IOR at its target rate. Any national debt beyond that which the private sector wants to hold at zero interest will be interest bearing out of operational necessity – whether as reserve balances earning IOR or securities issued – unless the central bank desires an interest rate target of zero. Lerner (p. 41) put it, “[T]he almost instinctive revulsion that we have to the idea of printing money, and the tendency to identify it with inflation, can be overcome if we note that this printing does not affect the amount of money *spent*. That is regulated by the first law of Functional Finance, which refers especially to inflation and unemployment.”

The shortcoming is that there is not a precisely defined “rule” for functional finance, or even a clear framework for designing automatic stabilizers and then under what specific conditions to go beyond automatic stabilizers and employ active fiscal stimulus or tightening. Part of this is due to the neoclassical worldview that monetary policy should dominate, which provides little reason for the thousands of monetary economists to investigate anything other than optimal monetary policy and the limits on fiscal policy consistent with it. And yet the lack of precision is not much different from that of the favored rules for “optimal” monetary policy, usually modeled by Taylor-type rules, which say little more than “raise/lower rates when inflation is too high/low or real GDP is too high/low”. Indeed, since 2008 it should be clear that the standard Taylor-type interest rate rules were not of much use as central banks worked through successive stages of QE, ZIRP, and NIRP, not to mention their interventions in money and capital markets during 2008-2009. Even within the neoclassical paradigm, it is well understood that the “base” or “natural” rate of interest that the central bank would set if the economy were at potential output and its inflation target is not precisely knowable (not unlike the “natural rate of unemployment”), and so various advanced econometric methods are used to try and “find” it. Even then, the Taylor approach only refers to the overnight rate; in graduate textbooks and recent seminal works in monetary theory there are no other interest rates in the models.

The very concept of a “natural rate” of interest consistent with potential GDP and the central bank’s inflation target is overly simplistic. Is it an overnight rate? Is it a 10-year rate? A 5-year rate? There are publications and models assuming a short-term rate, and others attempting to empirically “uncover” a long-term rate. Is the natural rate of interest a risk-free rate? Why is it not a mortgage rate, a corporate bond rate, a commercial loan rate, or perhaps some other rate at which households and businesses actually borrow? The transmission of the central bank’s target to other rates is imprecise and variable, first through longer-term Treasuries that typically lead the central bank’s target (and thus can work against the central bank,

²¹ Godley and Lavoie (2007) illustrate this within a simple stock-flow consistent model with a functional finance-based fiscal policy. Martin (2007) discusses further the implications through a more detailed version.

falling as the central bank is tightening in anticipation of the economy slowing, and vice versa) while default risk spreads are often procyclical (which is the opposite pattern of the central bank's target, or at least of a pattern that would reinforce the central bank's interest rate rule). In short, how can there be "a" natural rate at which the central bank can directly set its own target rate that is "the" rate consistent with potential output and price stability in a world of multiple interest rates, variable spreads over the central bank's target, evolving financial sector positions interacting with the government's fiscal position, and evolving distributions in general of borrowers and savers?

The question ultimately is this: given that the operational realities of the monetary system, interactions of sector financial balances, private sector financial fragility, and the differing effects on private sector leverage of fiscal and monetary policies are all inherent to the real-world macroeconomic policy environment, what is the appropriate mix of monetary and fiscal policies in different circumstances that would be consistent with full employment, price stability, and private sector financial sustainability?²² Conclusions reached from a serious consideration of this question applicable to the real world should go well beyond monetary dominance where fiscal policy "gets out of the way," which cannot be a general framework since it is a macroeconomic policy mix that could only possibly apply to narrowly defined, special cases.

Conclusion

With the winding down of successive rounds of quantitative easing now concluded, the discussion in monetary policy circles is of a "normalization" back to higher interest rates and an "optimal" strategy based on Taylor-type interest rate policy rules. As St. Louis Fed President James Bullard put it even back in 2015, "[T]he particular [Taylor-type] rule that's... been around policy circles for the last decade or more... suggests that we should have already lifted off" (Bullard, 2015, p. 19). It is interesting to recall Willem Buiter's lamentation of the "uselessness of 'state of the art' academic monetary economics" that "not only did not allow questions about solvency and illiquidity to be *answered*. They did not allow such questions to be *asked*" (Buiter, 2009; emphasis in original). In other words, the models that now say interest rate policy should return to a Taylor-type framework are the same ones that did not incorporate private sector insolvency or illiquidity. But unless there was a "normal," pre-crisis world where economists and monetary policy makers should have been able to ignore private sector debt and insolvency, then such a "normalization" seems unwarranted. It is reminiscent of Keynes's famous criticism that "[E]conomists set themselves too easy, too useless a task if in tempestuous seasons they can only tell us is that when the storm is past the ocean is flat again" (Keynes, 1921, p. 80). Returning to the pre-crisis models and policy frameworks is not unlike believing that "the ocean is flat again" now or will be in the very near future.

This paper has argued that a sustainable mix of fiscal policy and monetary policies must be understood and designed consistent with the following "principles": (a) fiscal sustainability is about interest on the national debt more than primary budget balances or the national debt themselves; (b) for currency-issuing governments under flexible exchange rates, interest rates on the national debt are a policy variable, (c) central bank independence can be threatened by the size of a government's deficit relative to the economy, but not by "being forced into printing money," (d) government debt has important interactions with private sector debt, (e) the private sector *can* become dominated by speculative/Ponzi financial positions and this evolution might even be accelerated by tightening monetary policy, and (f) policy rates and interest on the national debt have historically been below GDP growth, and may need to be without large current account surpluses or a fiscal policy approach based on functional finance. These all follow from basic operations and accounting related to government and central bank operations, while at the same time none of them are integrated into the neoclassical approach to modeling monetary economies and designing policy in "normal" times or otherwise.

²² Still more could and should be added, such as the role of an appropriately designed financial regulatory regime or consideration of possible monetary policy tools beyond standard open market operations, QE, or the overnight interest rate target.

References

- Akram, Tanweer, and Anupam Das. 2014. "The Determinants of Long-Term Japanese Government Bonds Low Yields." Jerome Levy Economics Institute Working Paper No. 818 (October).
- Akram, Tanweer, and Anupam Das. 2015. "A Keynesian Explanation of Indian Government Bond Yields." *Journal of Post Keynesian Economics*, vol. 38, no. 4 (July): 565-587.
- Akram, Tanweer, and Huiqing Li. 2016. "The Empirics of U. S. Long-Term Interest Rates." Jerome Levy Economics Institute Working Paper No. 863 (March).
- Ball, Laurence, and N. Gregory Mankiw. 2005. "What Do Budget Deficits Do?" In *Budget Deficits and Debt – Issues and Options*, Federal Reserve Bank of Kansas City, p. 95-119.
- Bech, Morten L., Antoine Martin, and James McAndrews. 2012. "Settlement Liquidity and Monetary Policy Implementation – Lessons from the Financial Crisis." Federal Reserve Bank of New York *Economic Policy Review*, vol. 18, no. 1 (March): 1-25.
- Bell (Kelton), Stephanie A. 2000. "Do Taxes and Bonds Finance Government Spending?" *Journal of Economic Issues*, vol. 34, no. 3 (September): 603-620.
- Bell (Kelton), Stephanie A. 2003. "Convergence Going In, Divergence Coming Out – Default-Risk Premiums and the Prospects for Stabilization in the Eurozone." Center for Full Employment and Price Stability Working Paper No. 24 (April).
- Bell (Kelton), Stephanie A., and John F. Henry. 2003. "When Exports Are A Cost and Imports Are A Benefit – The Conditions Under Which Free Trade Is Beneficial." Center for Full Employment and Price Stability Working Paper No. 26 (July).
- Blanchard, Olivier, Jean-Claude Chouraqui, Robert P. Hagemann, and Nicola Sartor. 1990. "The Sustainability of Fiscal Policy: New Answers to an Old Question." *OECD Economic Studies* 15 (Autumn): 7-36.
- Board of Trustees, Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds. 2015. *The 2015 Annual Report of the Board of Trustees of the Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds*. Accessed on April 21, 2016 from <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/ReportsTrustFunds/Downloads/TR2015.pdf>
- Board of Trustees, Federal Old-Age and Survivors Insurance and Federal Disability Trust Funds. 2015. *The 2015 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Federal Disability Trust Funds*. House Document 114-51 from the 114th Congress, 1st Session (July 22). Washington, D. C.: US Government Publishing Office.
- Buiter, Willem. 2009. "The Unfortunate Uselessness of Most 'State of the Art' Academic Monetary Economics." *Willem Buiter's Maverecon* blog published by *The Financial Times* (March 3). Accessed April 20, 2016 from <http://blogs.ft.com/maverecon/2009/03/the-unfortunate-uselessness-of-most-state-of-the-art-academic-monetary-economics/#axzz48BwLPNAI>
- Bullard, James. 2015. "Some Considerations for U. S. Monetary Policy Normalization." Speech given at the 25th Annual Hyman P. Minsky Conference on the State of the U.S. and World Economies, Washington, D.C. (April 15).
- Congressional Budget Office. 2010. "Federal Debt and the Risk of a Fiscal Crisis." *Economic and Budget Issue Brief* (July 27).
- Congressional Budget Office. 2015. *The 2015 Long-Term Budget Outlook*. June.
- Congressional Budget Office. 2016. *Updated Budget Projections – 2016-2026*. March 2016.
- Evans-Pritchard, Ambrose. 2016. "Olivier Blanchard Eyes Ugly 'End Game' for Japan." *The Telegraph* (April 11). Accessed on April 25 from <http://www.telegraph.co.uk/business/2016/04/11/olivier-blanchard-eyes-ugly-end-game-for-japan-on-debt-spiral/>

- Faust, Jon, and Eric M. Leeper. 2015. "The Myth of Normal – The Bumpy Story of Inflation and Monetary Policy." Paper presented at the Federal Reserve Bank of Kansas City's Jackson Hole Symposium, Jackson Hole, WY (August). Accessed on May 1, 2016 from <https://www.kansascityfed.org/~media/files/publicat/sympos/2015/econsymposium-faust-leeper-paper.pdf?la=en>
- Fullwiler, Scott. 2010. "Helicopter Drops Are Fiscal Operations." *New Economic Perspectives* (January 7). Accessed on April 15, 2016 from <http://neweconomicperspectives.org/2010/01/helicopter-drops-are-fiscal-operations.html>
- Fullwiler, Scott. 2013a. "Understanding the Permanent Floor – An Important Inconsistency in Neoclassical Monetary Economics." *New Economic Perspective* (January 16). Accessed on April 15, 2016 from <http://neweconomicperspectives.org/2013/01/understanding-the-permanent-floor-an-important-inconsistency-in-neoclassical-monetary-economics.html>
- Fullwiler, Scott. 2013b. "An Endogenous Money Perspective on the Post Crisis Monetary Policy Debate." *Review of Keynesian Economics*, vol. 1, no. 2 (Summer): 171-194.
- Fullwiler, Scott. 2013c. "Drop It – You Can Call for Helicopter Money, but Drop the Call for 'Coordination.'" *New Economic Perspectives* (July 1). Accessed on April 15, 2016 from <http://neweconomicperspectives.org/2013/07/drop-it-you-can-call-for-helicopter-money-but-drop-the-call-for-coordination.html>
- Fullwiler, Scott, and Stephanie Kelton. 2007. "The Underpinnings of Functional Finance – A Complete Monetary Theory." Presented at the Annual Meetings of the Eastern Economics Association, New York, NY (February).
- Fullwiler, Scott, and Stephanie Kelton. 2013. "Krugman, Helicopters, and Consolidation." *New Economic Perspectives* (December 11). Accessed on April 15, 2016 from <http://neweconomicperspectives.org/2013/12/krugman-helicopters-consolidation.html>
- Gali, Jordi. 2008. *Monetary Policy, Inflation, and the Business Cycle – An Introduction to the New Keynesian Framework*. Princeton, NJ: Princeton University Press.
- Godley, Wynne. 1999. *Seven Unsustainable Processes – Medium-Term Prospects and Policies for the United States and the World*. Jerome Levy Economics Institute Special Report. Accessed on April 25 from <http://www.levyinstitute.org/pubs/sevenproc.pdf>
- Godley, Wynne, and Marc Lavoie. 2007. "Fiscal Policy in a Stock-Flow Consistent Model." *Journal of Post Keynesian Economics*, vol. 30, no. 1 (Fall): 79-100.
- Godley, Wynne, and L. Randall Wray. 1999. "Can Goldilocks Survive?" Jerome Levy Economist Institute Working Paper No. 1999/4 (April).
- Keister, Todd, and James J. McAndrews. 2009. "Why Are Bank Holding So Many Excess Reserves?" Federal Reserve Bank of New York *Current Issues in Economics and Finance*, vol. 15, no. 8 (December).
- Keynes, John Maynard. 1923. *A Tract on Monetary Reform*. London, UK: MacMillan and Company.
- Koo, Richard C. 2008. *The Holy Grail of Macroeconomics – Lessons from Japan's Great Recession*. Hoboken, NJ: John Wiley and Sons, Inc.
- Kotcherlakota, Narayana. 2016. "Clarification of 'Helicopter Money' Column." March 25. Accessed on April 24, 2016 from <https://sites.google.com/site/kocherlakota009/home/policy/thoughts-on-policy/3-25-16>
- Kregel, Jan. 2010. "Fiscal Responsibility – What Does It Mean?" Jerome Levy Economics Institute Working Paper No. 602 (June).
- Krugman, Paul. 2012. "The Simple Analytics of Bond Market Vigilantes." Mimeo (November). Accessed on April 25, 2016 from <https://webspace.princeton.edu/users/pkrugman/The%20Simple%20Analytics%20of%20Invisible%20Bond%20Vigilantes.pdf>

- Lavoie, Marc. 2010. "Changes in Central Bank Procedures during the Subprime Crisis and Their Repercussions for Monetary Theory." *International Journal of Political Economy*, vol. 39, no. 3 (December): 3–23.
- Leeper, Eric M. 1991. "Equilibria Under 'Active' and 'Passive' Monetary and Fiscal Policies." *Journal of Monetary Economics*, vol. 27, no. 1, p. 129-147.
- Lerner, Abba. 1943. "Functional Finance and the Federal Debt." *Social Research*, vol. 10, no. 1 (February): 38-51.
- Martin, Bill. 2008. "Fiscal Policy in a Stock-Flow Consistent Model – A Comment." *Journal of Post Keynesian Economics*, vol. 30, no. 4 (Summer): 659-668.
- Mehrling, Perry. 2011. *The New Lombard Street – How the Fed Became the Dealer of Last Resort*. Princeton, NJ: Princeton University Press.
- Minsky, Hyman P. 1982. *Can "It" Happen Again? Essays on Instability in Finance*. Armonk, NY: M. E. Sharpe, Inc.
- Mitchell, William, and Warren Mosler. 2005. "Essential Elements of a Modern Monetary Economy with Applications to Social Security Privatisation and the Intergenerational Debate." Center of Full Employment and Equity Working Paper No. 05-01 (February). Accessed on April 20, 2016 from <http://e1.newcastle.edu.au/coffee/pubs/wp/2005/05-01.pdf>
- Mosler, Warren. 1997. "Exchange Rate Policy and Full Employment." Paper presented at the 4th National Conference on Unemployment, University of Newcastle, Newcastle, Australia (December).
- Papadimitriou, Dimitri B., Edward Chilcote, and Gennaro Zezza. 2006. "Are Housing Prices, Household Debt, and Growth Sustainable?" Jerome Levy Economics Institute *Strategic Analysis* (January).
- Parenteau, Robert. 2006. "U. S. Household Deficit Spending – A Rendezvous with Reality." Jerome Levy Economics Institute Public Policy Brief No. 88 (November).
- Praet, Peter. 2015. "Pubic Sector Security Purchases and Monetary Dominance in a Monetary Union without a Fiscal Union." Speech given at "The ECB and Its Watcher XVI," Frankfurt Am Main, Germany (March 11). Accessed on April 28, 2016 from https://www.ecb.europa.eu/press/key/date/2015/html/sp150311_1.en.html
- Rabin-Havt, Ari. 2015. "Why Is the CBO Concocting a Phony Debt Crisis?" *The Nation* (October 15). Accessed on April 20, 2016 from <http://www.thenation.com/article/why-is-the-cbo-concocting-a-phony-debt-crisis/>
- Rubin, Robert E., Peter R. Orszag, and Allen Sinai. 2004. "Sustained Budget Deficits – Longer-Run U. S. Economic Performance and the Risk of Financial and Fiscal Disarray." Paper presented at the AEA-NAEFA Joint Session, Allied Social Science Associations Annual Meetings, The Andrew Brimmer Policy Forum, "National Economic and Financial Policies for Growth and Stability," San Diego, CA (January 4). Accessed April 20, 2016 from <http://www.brookings.edu/views/papers/orszag/20040105.pdf>
- Sardoni, Claudio, and L. Randall Wray. 2007. "Fixed and Flexible Exchange Rates and Currency Sovereignty." Jerome Levy Economics Institute Working Paper No. 489 (January).
- Sharpe, Timothy P. 2013. "A Modern Money Perspective on Financial Crowding Out." *Review of Political Economy*, vol. 25, no. 4, p. 586-600.
- Tcherneva, Pavlina. 2009. "Fiscal Policy on Shaky Foundations – Post Keynesian and Chartalist Insights for New Consensus Economists." In Eckhard Hein, Torsten Niechoj, and Englebert Stockhammer (eds.), *Macroeconomic Policies on Shaky Foundations – Whither Mainstream Economics?* Marburg, France: Metropolis-Verlag, p. 209-233.
- Thornton, Daniel L. 2003. "Forecasting the Treasury's Balance at the Fed." Federal Reserve Bank of St. Louis Working Paper No. 2001-004D (May).
- Tymoigne, Eric. 2007. "A Hard-Nosed Look at Worsening U. S. Household Finance." *Challenge*, vol. 50, no. 4 (July/August): 88-111.

Tymoigne, Eric. 2014a. "Measuring Macroprudential Risk through Financial Fragility – A Minskian Approach." *Journal of Post Keynesian Economics*, vol. 36, no. 4 (July): 719-744.

Tymoigne, Eric. 2014b. "Modern Money Theory, and Interrelations Between the Treasury and Central Bank: The Case of the United States." *Journal of Economic Issues*, vol. 48, no. 3 (September): 641-662.

Wakatabe, Masazumi. 2015. "Japan's Fiscal Situation Is Not As Bad As Many Assume." *Forbes* (January 18). Accessed on April 18, 2016 from <http://www.forbes.com/sites/mwakatabe/2015/01/18/japans-fiscal-situation-is-not-as-bad-as-many-assume/#8bb922076614>

Weinstein, David. 2015. "Weak Yen Is Japan's Best Bet for Growth." *Nikkei Asian Review* (January 5). Accessed on April 18, 2016 from <http://asia.nikkei.com/Japan-Update/Weak-yen-is-Japan-s-best-bet-for-growth?page=1>

Wray, L. Randall. 1993. "Money, Interest Rates, and Monetarist Policy – Some More Unpleasant Monetarist Arithmetic?" *Journal of Post Keynesian Economics*, vol. 15, no. 4 (Summer): 541-569.

Wray, L. Randall. 1998. *Understanding Modern Money – The Key to Full Employment and Price Stability*. Cheltenham, UK: Edward Elgar.

Wray, L. Randall. 2000. "Can the Expansion Be Sustained – A Minskian View." Jerome Levy Economics Institute Policy Note No. 2000/5 (May).

Wray, L. Randall. 2004. "Social Security – Truth or Useful Fictions?" Center for Full Employment and Price Stability *Policy Note 02-04* (December).

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Eurozone Groupthink and Denial on a Grand Scale

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1. Introduction

Thrall ... slavery, bondage ... a state of servitude or submission (Merriam Webster online dictionary).

Groupthink ... a pattern of thought characterized by self deception, forced manufacture of consent, and conformity to group values and ethic (Merriam Webster online dictionary).

This paper is drawn from Mitchell (2015), which traced the origins of the Eurozone back to the desire in the immediate post-World War II period to end the destructive Franco-German rivalry that had caused several major military conflicts, which culminated in German aggression in 1939. Against this background, Mitchell (2015) also examines the way in which the discussions of European economic integration, which had initially begun with the general context of a Keynesian approach to economic policymaking, were transformed by the emergence of Monetarism in the 1970s. The flawed design of the Economic and Monetary Union (EMU) that was finally agreed on and formulated in the Maastricht Treaty in 1991 reflected both these elements. The dysfunctional response to the Global Financial Crisis (GFC) is a direct result of the mistakes made in the lead up to Maastricht and reflect the dominance of what we might call neo-liberal Groupthink over sound macroeconomic management.

The paper is laid out as follows: section 2 considers the path that the European Member States took on the way to establishing the EMU. It also documents examines the impact of the GFC and the policy response taken by the key institutions (European Commission (EC), the European Central Bank (ECB) and the International Monetary Fund (IMF), which are collectively known as the 'Troika', given their role in the disastrous Greek bailout. Section 3 considers the options that are available to the Member States of the Eurozone and explains why an orderly dismantling of the entire (failed) experiment is in the best interests of all. Short of that happening, it is argued that unilateral exit and the restoration of currency sovereignty is the best option of any single Member State. Concluding remarks follow.

2. The European Project – Overextended and in the Thralls of Neo-Liberal Groupthink

The great European visionaries in the immediate post-World War II period did not desire to put the European economies into a straitjacket of austerity and hardship. Rather they aimed to achieve peacetime prosperity. Europe's political leaders devised the "European Project" as an ambitious plan for European integration to ensure that there would be no more large-scale military conflicts fought on continental European soil. The Project began at a time when the advanced nations had embraced a broad Keynesian economic policy consensus with governments committed to sustaining full employment and advancing the general prosperity for all citizens. Recognising that the performance of the capitalist system could be derailed by destructive class conflict between labour and capital, national governments took on the role as a mediator, with policies designed to improve the conditions and rewards of work, in addition, to providing security for profit realisation.

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The Keynesian era emerged out of the Great Depression, which taught politicians that without major government intervention, capitalism is inherently unstable and prone to delivering lengthy periods of unemployment. Full employment came only with the onset of World War II, as governments used deficit spending to prosecute the war effort. The Keynesian era of macroeconomic policy that followed was thus marked by government deficits supplementing private spending to ensure that all workers who wanted to work could find jobs (Mitchell and Muysken, 2008).

The broad political and economic consensus that emerged after the war brought very low levels of unemployment in most Western nations, which persisted until the mid-1970s, although some European nations had bouts of sustained higher unemployment as a consequence of having to defend their weaker currencies with the context of the Bretton Woods fixed exchange rate system.

Within this broad policy consensus, the discussions about integration were conditioned by the long-standing Franco-German rivalry. France was determined to create institutional structures that would stop Germany from ever invading it again. It saw an integrated Europe as a way of consolidating a dominant role in European affairs but was determined to cede as little national sovereignty as possible to achieve these aims. France was also resentful of the influence that the US was exerting in Europe, particularly through the Marshall Plan, which intrinsically tied West Germany to the US. It was also highly suspicious of the IMF, which it considered to be a vehicle for American imperialism within Europe (Bird, 2014). France considered that, with the German reputation in tatters, it could assume the dominant political role in any pan-national structure. It also wanted the administrative arm of a “European” institution to be inter-governmental in nature (that is, agreements between national governments would determine policy) rather than a separate decision-making structure (such as what has become the European Commission).

The Germans, suffering a deep shame for past militarism and associated deeds, had only their economic success including the technical capacity of its industry and the “discipline” of the Bundesbank to generate national pride. As well as a need to expand its export markets for its increasingly dominant manufacturing sector, Germany wanted to be part of the “European Project” to demonstrate a rejection of its ugly history. But an obsessive fear of inflation meant that this participation had to be on German terms, which meant that the new Europe had to eventually accept the Bundesbank culture. This became a grinding process.

Within the German “stability” environment, it was seemingly overlooked that Germany, in fact, relied on robust import growth from other European nations for its prosperity. The fact that not all nations in a Bundesbank centric “stability environment” could have balance of trade surpluses was ignored (see Bibow, 2012).

After World War II, the advanced nations also agreed to fix their exchange rates relative to the US dollar, which in turn was linked to the price of gold, because they believed this would bring economic stability. But the so-called Bretton Woods system, established in July 1944, to provide international financial stability was under pressure from the start.

The use of the US dollar as a reserve currency was a basic source of instability for the Bretton Woods system. The system required the US to run balance of payments deficits so that other nations, who used the US dollar as the dominant currency in international transactions, were able to acquire them. In the 1950s, there had been an international shortage of US dollars available as nations recovered from the war and trade expanded. But in the 1960s, the situation changed. Nations started to worry about the value of their growing US dollar reserve holdings and whether the US would continue to maintain gold convertibility. These fears led nations to increasingly exercise their right to convert their US dollar holdings into gold, which significantly reduced the stock of US held gold reserves. The so-called Triffin paradox was that the expansion of US dollars into world markets, also undermined confidence in the dollar’s value and led to increased demands for convertibility back into gold. The loss of US gold reserves further reinforced the view that the US dollar was overvalued and, eventually, the system would come unstuck (Triffin, 1960).

The way out of the dilemma was for the US to raise its interest rates and attract the dollars back into investments in US denominated financial assets. But this would push the US economy into recession, which was politically unpalatable. It was also increasingly inconsistent with other domestic developments (the War on Poverty) and the US foreign policy obsession with fighting communism, which was exemplified

by the build up of NATO installations in Western Europe and the prosecution of the Vietnam War. The US spending associated with the Vietnam War had overheated the domestic US economy and expanded US dollar liquidity in the world markets further. The resulting inflation was then transmitted through the fixed exchange system to Europe and beyond because the increased trade deficits in the US became stimulatory trade surpluses in other nations. These other nations could not run an independent monetary policy because their central banks had to maintain the exchange parities under the Bretton Woods agreement.

The other major problem was that countries with trade deficits always faced downward pressure on their currencies and in order to maintain their exchange rates they had to: buy their own currencies in the foreign exchange markets using their foreign currency reserves; push up domestic interest rates to attract capital inflow; and constrict government spending to restrain imports. These nations thus often faced recessed growth rates, higher unemployment, and depleted foreign reserves, and this created political instability. The effective operation of the system required the nations to have more or less similar trade strength, which was of course an impossibility and ultimately proved to be its undoing.

The Franco-German rivalry structured a series of less than effective compromises on the way to monetary union. The 1957 Treaty of Rome was heavily biased in favour of the occupied France at the expense of the aggressors Germany and Italy. But Germany's growing industrial and export strength became an increasingly significant threat to the French economy. German industrial ambition eventually required France to compromise on its own fierce resistance to ceding any national sovereignty to a European level entity.

The early experience with the Common Agricultural Policy (CAP), introduced in 1962 as the first major initiative of the newly formed EEC, should have taught the European nations that entering a currency union would be a fraught exercise. France wanted to protect French farmers and Germany wanted to expand its industrial export market. To achieve their goals, the Germans agreed to provide subsidies through the CAP to French farmers: a gnawing tension that remains today. But the administrative viability of the CAP required a very stable exchange rate environment because a multitude of agricultural prices had to be supported across the Community.

Quite apart from their obligations under the Bretton Woods system, once the Member States locked in the CAP they were also trapped into pursuing the impossible task of maintaining fixed exchange rates. The German mark became the strongest currency in the 1960s as Germany's export strength grew, which put France and Italy under constant pressure of devaluation and domestic stagnation and undermined the CAP.

The various agreements to maintain fixed parities between the European currencies (before the demise of the Bretton Woods system and after) all largely failed because of the different export strengths of the Member States. Effectively, these currency arrangements became 'mark zones', reflecting the dominant position of Germany and the supplicant positions of the rest of the participating nations. But instead of taking the sensible option and abandoning the desire for fixed exchange rates, the European political leaders accelerated the move to a common currency when the Bretton Woods system collapsed in 1971. The lessons from the Bretton Woods fiasco were not learned and the dysfunctional design of the EMU, in part, reflects this inability to learn from history.

By the end of the 1960s, after a decade of currency turmoil, the European Project was floundering. There was growing tension between the French and other Member States of the European Community, as well as the US. Charles De Gaulle made the famous statement in 1962 that, "Europe represents the first opportunity France has to regain what she lost at Waterloo: world dominance" (Soutou, 1996: 131). The situation changed a little when Georges Pompidou replaced De Gaulle in April 1969. The former was more receptive to Community enlargement (specifically, the entry of Britain) and deeper economic integration between the Member States. The Heads of State or Government of the Member States convened at The Hague on December 2, 1969 to discuss these issues. The idea of an economic and monetary union (common currency) was seriously advanced for the first time at the Hague summit conference and it was proclaimed to be "a turning point in history ... [and the] ...irreversible nature of the work ... [towards a] ... united Europe" (European Council, 1970).

The 1970 *Werner Report*, commissioned by The Hague summit, studied a number of functioning

federal systems (including Australia, Canada and the USA) and outlined a comprehensive timetable for the creation of a full economic and monetary union by the end of the decade. The Committee made it clear that monetary and fiscal policy would have to be centralised with the “centre of decision of economic policy ... [to] ... be politically responsible to a European Parliament” (European Commission, 1970: 13).

A later study by the MacDougall Committee in 1975 also emphasised that an effective economic and monetary union would require a strong fiscal presence at the federal level which could use the currency-issuing capacity of the “federal” authority (government) to redress asymmetric shocks across the regional space of the “federation”. They assessed that: “It is most unlikely that the Community will be anything like so fully integrated in the field of public finance for many years to come as the existing economic unions we have studied” (European Commission, 1977: 11).

There are many competing explanations as to why Werner’s plan failed to materialise, but the basic reason is that, in an era of growing currency instability, the French fear of German dominance and their unwillingness to cede power to supranational institutions, combined with the German inflation obsession, stood in the way. The two nations could clearly find ways to cooperate on a political level but trying to form an economic and monetary union was difficult (Maes, 2002).

In 1972, the Governor of the Danish Central Bank said, “I will begin to believe in European economic and monetary union when someone explains how you control nine horses that are all running at different speeds within the same harness” (McAllister, 2009: 58).

What eventually allowed the ‘nine horses’ to be harnessed together was not a diminution in Franco-German national and cultural rivalry but rather a growing homogenisation of the economic debate. The surge in Monetarist thought within macroeconomics in the 1970s, first within the academy, then in policy making and central banking domains, quickly morphed into an insular Groupthink, which trapped policy makers in the thrall of the self-regulating, free market myth – which we now refer to as *neo-liberalism*.

At that point, the “European Project” entered its denial phase and started to overextend itself and pursued monetary integration in defiance of the insights provided in the previous reports (Werner and MacDougall).

The introduction of the Monetarist inspired Barre Plan in 1976 showed how far the French had shifted from their Gaullist “Keynesian” days. Across Europe, unemployment became a policy tool aimed at maintaining price stability rather than a policy target, as it had been during the Keynesian era up until the mid-1970s. Unemployment rose sharply as national governments, infested with Monetarist thought, began their long-lived love affair with austerity. It is in this environment that the on-going discussions about European integration began to be framed.

The Delors Report (European Commission, 1989), which informed the Maastricht conference, disregarded the conclusions of the Werner and MacDougall Reports about the need for a strong federal fiscal function because they represented “old fashioned” Keynesian thinking, which was no longer tolerable within the Monetarist Groupthink that had taken over European debate.

The new breed of financial elites, who stood to gain massively from the deregulation that they demanded, promoted the re-emergence of the free market ideology that had been discredited during the Great Depression. The shift from a Keynesian collective vision of full employment and equity to this new individualistic mob rule was driven by ideological bullying and narrow sectional interests rather than insights arising from a superior appeal to evidential authority and a concern for societal prosperity.

The Monetarist (neo-liberal) disdain for government intervention meant that the proposed *Economic and Monetary Union* constructed counter stabilisation policy purely in terms of central banks adjusting interest rates to maintain price stability irrespective of the impact on economic growth and unemployment. It also suppressed the capacity of fiscal policy and no amount of argument or evidence, which indicated that such a choice would lead to crisis, would distract Delors and his team from that aim.

Delors knew that he could appease the French political need to avoid handing over policy discretion to Brussels by shrouding that aim in the retention of national responsibility for economic policy making. He also knew that the harsh fiscal rules he proposed that restricted the latitude of the national governments would satisfy the Germans. Monetarism had bridged the two camps.

While refusing to create a “federal” fiscal authority to ensure there was an institution aligned with

the currency-issuing central bank and which could respond to asymmetric spending declines across the Member States, the planners then set about ensuring that the Member States, themselves, would be incapable of responding effectively in an economic crisis.

They imposed arbitrary fiscal rules – the so-called *Stability and Growth Pact* (SGP) – that ensured neither growth or stability would evolve. The rules were plucked out of the air as another of many French-German compromises. They were not justified by any appeal to evidence nor economic theory (Eichengreen, 1997; Mitchell *et al.*, 2006; Le Parisien, 2012a, b). The neo-liberal Groupthink that had consumed the whole process of integration erected a wall of denial and the European politicians successfully convinced people that by maintaining price discipline, economic growth would be maximised.

The reality was that these rules ensured that most Member States would be in breach if a significant non-government spending collapse occurred. The GFC demonstrated the madness of the straitjacket that the Member States signed up for. Once in breach, the Excessive Deficit Mechanism built into the monitoring and compliance process of the rules, then ensured that these States would be forced to impose austerity (pro-cyclical fiscal shifts) at the very time economic theory would advise in favour of discretionary expansion of public spending and/or tax cuts (counter-cyclical fiscal shifts). The whole process had a surrealistic air about it at the time.

The GFC exposed how ridiculous the Groupthink mantra was. But those who dared question the Monetarist supremacy at the time, and instead, advocated Keynesian remedies to reduce the entrenched European unemployment, were met with derision from the Commission economists and the likes of the IMF who had embraced the new economic theory and its policy implications.

By insisting on economic and monetary union under these terms, and then imposing self-defeating austerity onto the nations enduring the worst of that dysfunctional design, the European political elites have undermined the long-standing European Project. Germany had successfully reinvented itself as a good European citizen, after its disastrous and criminal behaviour during World War II. But as the perceived “enforcer” of austerity, Germany is now vilified again: the “ugly German” has returned. The unelected economic mandarins in Brussels and Frankfurt, aided and abetted by the unaccountable officials from the IMF, now have influence on who remains in political office in some nations (for example, the appointment of Lucas Papademos in Greece).

The Eurozone is now enduring its eighth year of crisis, locked down in a straitjacket of economic austerity and driven by an economic ideology that is blind to the evidence of its own failure.

The neo-liberal policies of deregulation and the demonisation of the use of discretionary fiscal deficits (government spending greater than tax revenue) created the crisis in the first place, and now the same sorts of policies are prolonging it. The current policy approach has institutionalised economic stagnation, widespread retrenchment, and the deterioration of working conditions and retirement pensions. A recent IMF report concluded that the neo-liberal agenda which involved “increased competition” and a “smaller role for the state” has “not delivered as expected” and has not “increased growth”, has “increased inequality” with costly consequences and that “(a)usterity policies not only generate substantial welfare costs ... but also ... worsen employment and unemployment” (Ostry *et al.*, 2016: 38-40). Further, “the benefits of some policies that are an important part of the neoliberal agenda appear to have been somewhat overplayed” (Ostry *et al.*, 2016: 40).

Millions of European workers remain unemployed, youth jobless rates are still around 50 per cent in some advanced nations, inequality and poverty rates are rising, and massive daily losses of national income are being endured. The dramatically high youth unemployment rates will ensure that the damage will span generations and undermine future prosperity as a cohort of jobless youth enter adulthood with no work experience and a growing sense of dislocation from mainstream societal norms.

The Eurozone political elites claim that there is no alternative (TINA) but to impose more austerity by cutting fiscal deficits and enforcing widespread cutbacks to social welfare systems. This is couched in the language of “structural” adjustment, which proposes that workers have been receiving excessive pay relative to their productivity and states have been lavishing excessive generosity on their citizens in the form of income support and other benefits, while punishing the business sector with pernicious regulative environments.

The major political parties in most nations, whether in government or opposition, have unquestionably accepted the dominance of this neo-liberal ideology, which has not only homogenised the political debate but also obscured the only credible routes to recovery.

The citizens were initially bullied into accepting the euro and all that went with it by their political leaders and now the same leaders are seen to go cap in hand to the Troika to preserve their hegemony, while imposing untold social and economic hardship on their citizens. Open expressions of racism are proliferating (for example, the “lazy Greek” narratives). The media and politicians now regularly engage in the language of retribution, with cooperation giving way to hostility, resentment, and a breakdown in the social order (for example, Bild, 2010; *The Economist*, 2011).

The 2014 European Parliament elections demonstrated that anti-austerity parties at the extremes of the political spectrum enjoyed stunning success in several countries. The 2015 election of Syriza in Greece invoked hope that the people were finally expressing their anti-austerity voice. But its brutal crushing by the Troika has shown that the “European Project” has now become an anti-democracy exercise, where the preferences of the “people” come a poor second to the desires of the elites to maintain their hegemony with the support of financial capital. These instabilities will only deepen as the “European Project” disintegrates. The right-wing parties promote anti-immigration policies, which are becoming increasingly popular.

Economic austerity has morphed into a very nasty confection. And now, the migration disaster has arrived and paralysed the increasingly dysfunctional European Union. It is time for a major rethink of the whole exercise and, in the next section, we argue that the process has to start with dismantling the unworkable monetary union.

3. The Options for the Eurozone

A correct assessment of the current state indicates that fiscal deficits have to increase. Austerity is exactly the opposite of the policy response that is required. A sustained recovery in the Eurozone and elsewhere requires a categorical rejection of mainstream macroeconomic theory and practice and a reorganisation of the institutional structures to allow deficits to increase. We argue that this can only be done if the EMU is dismantled and full currency sovereignty is restored to the individual Member States.

The TINA mantra has been a powerful organising framework for conservatives to promote the myth that fiscal discipline and widespread deregulation will allow a free market to maximise wealth for all. The neo-liberal economic framework promoted vigorously by many economists, the multinational agencies such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD), and conservative politicians including the Eurozone establishment in Brussels and Frankfurt, blinds the public eyes to realistic alternatives by confining the boundaries of the public debate through the use of selective priorities, wrongful causalities, and scandalous misrepresentations of reality.

The European policy making elites – the politicians, the supporting bureaucracies, the central bankers and expert consultants – remain trapped in neo-liberal Groupthink that created the euro monster in the first place. It is a group dynamic that resists change and explains the arrant disregard of viable alternative policy paths that could restore growth.

It was obvious that the Eurozone was doomed from the start and now the same neo-liberal ideology masquerades as the solution. It is characteristic of group behaviour that is patterned by Groupthink to suppress alternative thinking and evidence that is contrary to the dominant viewpoint.

Eventually, the European economies will stabilise and start growing again, but the residual damage from the austerity will be massive and span generations. Millions will be poorer and without reasonable opportunities as a result. The neo-liberal political leaders will rejoice and claim success but they won't advertise the low base from which the growth has resumed.

The EMU is a flawed system and has to change. The question is: What changes are necessary to overcome the flawed design that now works against prosperity? There are three broad approaches to this question.

The Dominant “Reform” Narrative

The dominant narrative within Europe is to debate some changes, for example, the creation of a European-level unemployment insurance scheme, within the overall confines of the current system that emphasises internal devaluation (given Member States cannot vary their exchange rate) and sustained fiscal rectitude.

Popular among these proposals are those that seek to add cyclical responsiveness (increasing the “automatic stabilisers”) to the policy mix, and hence, provide European level support to regions in crisis, and proposals that seek to reorganise and reclassify government debt to reduce the vulnerability of the EMU to private bond markets. They are all what might be called “austerity” proposals in that they offer palliative care solutions (“band aids”) to stop the breach. In that sense, they fail to address the cause of the breach itself, the lack of a fully functioning fiscal authority and the bias towards pro-cyclical fiscal policy as a result of the SGP rules.

In its current configuration, the design of the EMU deliberately reduces the potency of the automatic stabilisers embedded in the structure of fiscal policy to provide spending support in times of crisis. Müller (2013) notes, “the EU budget is too small and its transfer mechanisms (such as the structural and regional funds) are too rigid to enable a short-term adjustment of different cyclical development”.

Enderlein *et al.* (2012) proposed boosting the automatic “cyclical response” capacity in Europe through the creation of a “a cyclical adjustment insurance fund” (p.30), which would be managed by Eurozone finance ministers and build its kitty from contributions from nations experiencing above the average Eurozone growth rates and pay out to nations in crisis, to “reduce pressure on public finances” (p.31). The scheme would thus force nations to reduce their domestic spending in times of buoyant economic growth and provide some relief in bad times. Significantly, the authors stress the “the system cannot become a hidden instrument for permanent transfers” (p. 31) and nations might only be permitted to “take out what they once paid in” (p. 32).

The presumption is that the “federal” redistribution would be neutral across the economic cycle and across space, a proposition for which there is no rationale other than fiscal conservatism. Their reasoning is symptomatic of the Groupthink among European economists that led to the problem in the first place. Many of the authors of this report were involved in various studies that gave rise to the design of the EMU. Now, as the system they lauded has failed, their approach is to patch it up with various *ad hoc* measures, all of which are ring-fenced by the austerity mentality. They (p.7) propose a simple rule for the limits of democracy, “sovereignty ends when solvency ends”. The application of this rule inevitably leads to a violation of democracy because the risk of insolvency is intrinsic to the flawed design of the monetary system. Member States are forced to issue debt in a currency they have no control over and the ECB is formally precluded from giving any guarantees (although of course it has violated that prohibition via programs such as the SMP). Default risk and insolvency are always lurking, waiting for the next major economic downturn to arrive. Thus as soon as a nation falls into crisis, its citizens lose the capacity to influence their own destiny and are, instead, at the behest of unelected officials in the European Commission, the ECB and the IMF. That doesn't appear to be a road map for a sustainable and prosperous Europe. Pisani-Ferry *et al.* (2012) propose a similar type of transfer system.

The so-called debt-mutualisation proposals (for example, Delpla and von Weizsäcker, 2010; Varoufakis *et al.*, 2013), which place harsh restrictions on the democratic autonomy of the Member States and fiscal flexibility, just continue the irrationality and dysfunction of the SGP. Further, Germany's dominant position in policy development will always see it veto any moves to establish European-level debt that is shared among the nations.

The Creation of a European Level Fiscal Capacity

The current design of the Eurozone determines that the Member State governments are not “sovereign” in the sense that they are forced to use a foreign currency and must issue debt to private bond markets in that foreign currency to fund any fiscal deficits. Their fiscal positions must then take the full brunt of any economic downturn because there is no “federal” counter stabilisation function. The EMU is a federation without the

most important component.

The Member State governments thus can run out of money and become insolvent if the bond markets decline to purchase their debt. Among other things, this means the elected governments cannot guarantee the solvency of the banks that operate within their borders.

An obvious economic solution for the Eurozone, then, is to bring the fiscal policy responsibilities (spending and taxation) in line with the monetary issuing capacity and allow the federal fiscal authority to run deficits commensurate with the non-government spending gap. This would ensure that total spending in the Eurozone would be sufficient to generate enough jobs to satisfy the desire of the workers across the regional span of the common currency. This is the option outlined long ago by the Werner and MacDougall Committees.

Establishing a Federal Fiscal Authority (FFA) within a reformed European Parliamentary system, would thus directly redress the stagnant spending conditions across the Eurozone, align fiscal capacity with the need to create a full banking union, and maintain a democratic accountability of fiscal policy. There would never be a question of solvency, which means the private bond markets could never determine the policy decisions made by the FFA and Member States would avoid the devastation of pro-cyclical fiscal interventions.

A more coherent change within this context would be for the ECB to fund deficits of the FFA (the Overt Monetary Financing option we consider later) and thus consolidate the fiscal policy responsibilities and operations of the FFA with the monetary policy obligations and related liquidity management functions of the ECB.

The problem is that the FFA option is not politically or culturally tenable as the MacDougall Study Group clearly understood. An essential requirement for an effective monetary system with multiple tiers of government is that the citizens have to be tolerant of intra-regional transfers of government spending and not insist on proportional participation in that spending. The other side of this coin is that a particular region might enjoy less of the income it produces so that other regions can enjoy more income than they produce. To achieve that tolerance there has to be a shared history, which leads to a common culture and identity. Language is an aspect of this, but not necessarily intrinsic.

Citizens within an effective federal system have to share a common sense of purpose and togetherness to ensure that the monetary system works for all states/regions rather than those that have powerful economies. That capacity and required tolerance is largely non-existent in the Eurozone, which is why talk of a fiscal union will be largely inconsequential (Soros, 2013).

An example of this political and cultural shortfall in Europe is the fact that politicians think it is appropriate to refer to large economies such as Spain and Italy as “peripheral” nations. The “core-periphery” nomenclature came out of development economics, and the periphery referred to nations or regions which were underdeveloped or less developed, without basic infrastructure or human capital. Referring to rich civilisations such as Italy and Spain in this way indicates a deep malaise (Soros, 2013).

Moreover, it is not just the historical and cultural differences that are at odds with the idea of a fully integrated economic and political union. For the FFA to provide effective fiscal support for growth and prosperity in the Eurozone, a major paradigm shift in economic thinking is required. When the old hatreds and suspicions in Europe combined with the emergence of neo-liberal economic thinking, the outcome was the Delors Report and the subsequent unworkable design of the Maastricht Treaty. That mindset biases the Eurozone towards stagnation.

A new way of economic thinking, which recognises the opportunities that a truly sovereign federal government has if it utilises its currency appropriately, is required. That sort of paradigm change is unlikely to happen at the Eurozone level such is the differences between the Member States. In that context, the next section argues that break up and the restoration of national currency sovereignty is the only way forward for the Member States, either in an orderly manner together or as a unilateral individual choice.

The Exit Option

There is nothing irrevocable about the euro or the Eurozone. While there are no formal exit mechanisms established in the relevant Treaties, short of military occupation, the Member States can do what they like. In this section we make the case that the exit option is the only viable way for the Member States of the Eurozone to regain their sovereignty and rebalance their economies. It would be ideal if the Eurozone nations agreed to an orderly dismantling of the common currency and a restoration of the individual currency sovereignty for each nation. In lieu of such an unlikely turn of events, exit remains the superior unilateral option for an individual nation.

European politics and policy making is caught in two very powerful and destructive vices at present. The first is the age-old Franco-German rivalry. A corollary to this rivalry is a disdain for the “Latinos” who by geographic proximity cannot be ignored, much to the angst of those further north.

The second is the domination of “free-market” economics, the neo-liberal Groupthink, which though empirically deficient and riddled with internal theoretical inconsistencies, still rules the academy and through its graduates, the policy making sphere. The GFC exposed the deep flaws in mainstream economics and its shortcomings as a basis for policy decision-making.

As we argued in Section 1, the rise of Monetarism, which originated out of the academy in the US, created a “post national” tension among the politicians, which cut across the old state based rivalry between the nations in Europe. Whereas the early discussions about monetary union placed the national state at the forefront, by the time Delors and his Committee met, the global capture of economic policy by the financial elites was already well entrenched and the promotion of Monetarist economic ideology aided their agenda (Bhagwati, 1998). The old national rivalries have persisted but their expression has become increasingly channelled by the neo-liberal narrative, which created the EMU monster. Neither of these vices will release their destructive grip on European affairs easily.

The cultural and historical aspects of the Franco-German rivalry are permanent constraints on European progress. These differences suggest that both of the large European nations would be better off pursuing their own economic destinies. But they can only do that if they also free themselves from the vice-like grip of neo-liberal economics.

The dominance of free market thinking has so perverted the European Project, that the failure of the economic plan is now endangering the beneficial political and legal aspects that have accompanied the formation of the European Union.

The resistance to root-and-branch reform of the Eurozone by the Troika is symptomatic of the hold that the neo-liberal Groupthink has on the decision-making elites. When “exit” is mentioned, the mainstream economists all produce catastrophe predictions in the form of massive and ongoing currency depreciations leading to an uncontrollable surge in inflation, and a terminal debasement of the new currencies. They predict the collapse of national banking systems following massive capital outflows. They predict that there would be massive outflows of skilled labour, which would undermine the future productivity of any exiting nation. They predict that the exiting nations would have to default on their debt obligations, which would not only force the nation into a costly, drawn out legal morass, but would also see it being shunned by international capital markets. As a consequence, they claim that the exiting governments would not be able to fund themselves and would run out of money. Further, they predict that credit would also become unavailable to the private sector businesses and housing markets would collapse.

The catastrophe scenario (for example, Goodhart and Tsomocos, 2010) sees the nation mired in depression, poverty and isolation. Civil anarchy would erupt and give way to totalitarian regimes with vicious secret police departments enforcing order through torture and death squads. This future would surely be many times worse than a future within the Eurozone.

Conversely, building on an understanding of Modern Monetary Theory (MMT), which demonstrates the capacity enjoyed by a national government that issues its own floating currency to pursuing domestic policy objectives, one realises that the catastrophe scenario is just an ideological scare campaign to maintain the neo-liberal hegemony and suppress democracy (Mitchell, 2015).

Mitchell (2015) provided a detailed framework for a nation seeking to exit the Eurozone (see also Policy

Exchange, 2012, among others). Any exit scheme has to address the same issues:

1. How to handle the euro denominated public and private debt that is outstanding.
2. How to handle bank deposits denominated in euros within the exiting nation.
3. How to ensure financial stability is maintained.
4. How to deal with on-going current account deficits? Trade controls?
5. How to introduce the new currency (for example, unilaterally or as an interim dual currency).
6. How to manage the inevitable large currency depreciation and to minimise the resulting inflation risk and protect real living standards.
7. How to reduce speculative capital flows (for example, using capital controls).
8. How to deal with any changes to the legal framework governing cross-border trade if the nation also is expelled from the EU, among other issues.

Refer to Policy Exchange (2012) and Mitchell (2015) for a complete discussion of these issues. It should be made clear that no one really knows for sure what would happen. It would be hard to project the costs of the exit. But we can deduce several things based on historical experience. It is highly likely that the benefits of exit would outweigh the costs, if the exit decision is, simultaneously, accompanied by a decision to reject the flawed neo-liberal, austerity approach in favour of a fiscally active policy stance that seeks to maximise wellbeing of the citizenry. If the exiting nation continues its idolatry of financial markets and considers it can “do” austerity in a more gradual manner, then the exit will likely be even more costly than provided for by the current outlook.

Abandoning the culture of austerity and restoring currency sovereignty would provide the exiting government with numerous opportunities to bring idle resources, including the unemployed, back into productive use.

- Real economic growth would be immediate and the massive daily income losses associated with austerity terminated.
- The bond markets would become supplicant when faced with a currency issuing nation because the central bank could control interest rates and force investors out of the market whenever it chose. Whether investors chose to buy any new public bonds issued in the new currency would become irrelevant (Mitchell and Muysken, 2008).
- The newly empowered state would still be able to spend and purchase anything that was available for sale in its own currency, including all idle labour. It would be able to introduce a Job Guarantee and eliminate mass unemployment (Mitchell, 1998).
- The new state would be able to protect the capital of its banking system and guarantee deposits in the local currency. It could also introduce capital controls to head off speculative attacks on its currency a position now advocated by the IMF (Ostry *et al.* 2011).

It is often argued that the exiting country would face hyperinflation. Most of the commentary surrounding the risk of hyperinflation following an exit concentrates on scenarios where the government is unable to access private debt markets as a result of a depreciating currency (and other stability concerns), and instead enters the ‘taboo’ world of the central bank directly funding government spending.

In fact, it has been proposed to end the practice of issuing public debt to the non-government altogether, an artefact of the Bretton Woods system, which effectively ended in August 1971, and, instead engage in what has been called Overt Monetary Financing (OMF) (Bossone, 2013a, 2013b; Bossone and Wood, 2013; McCulley and Pozsar, 2013; Turner, 2013; Wood, 2013a, b).

There are several variants of OMF proposed but effectively it would require the ECB to use its currency issuing capacity to underwrite the fiscal deficits of the Member States in order that they create growth and employment in their domestic economies without encountering the restrictions that private bond markets place on their spending. OMF, erroneously called the “printing money” option, is universally considered to be taboo among neo-liberals because they wrongly claim it will lead to inflation, and perhaps

hyperinflation. However, an understanding of MMT shows that it can be a very effective way for governments to responsibly manage economic growth without having to issue public debt. OMF is a strategy that could render the EMU workable even within the confines of the current Treaty as long as the harsh fiscal rules were abandoned. But, moreover, it represents a desirable operational option should the euro be abandoned by one or more nations, in which case the OMF would be facilitated by the newly empowered central banks in the exiting countries. McCulley and Pozsar (2013: 17) argue that OMF would ensure monetary policy works to, “support the fiscal authority in raising nominal demand, not to stimulate private borrowing *per se*”.

There are two arcane textbook notions that render OMF taboo for neo-liberals. One is just plain wrong while the other has limited applicability during a recession. The first notion is the “money multiplier”, which links so-called central bank money or the “monetary base” to the total stock of money in the economy (called the money supply). The second notion, the Quantity Theory of Money (QTM), then links the growth in that stock of money to the inflation rate. The combined causality then allows the mainstream economists to assert that if the central bank expands the money supply it will cause inflation, which is their *prima facie* case against OMF.

There are two major flaws in the concept of the money multiplier. First, the empirical evidence clearly shows that empirical estimates of the money multiplier are not constant and so can hardly be used to make predictions. Second, the stylised textbook model of the banking system isn't remotely descriptive of the real world (for a summary of the shortcomings, see FRBNY, 2008; Bank of England, 2014).

The QTM a classical thesis is similarly flawed. The problem with the theory is that neither of the required assumptions holds in the real world. First, there are many studies that have shown that velocity of circulation varies over time quite dramatically. Second, and more importantly, capitalist economies are rarely operating at full employment. The Classical theory essentially denied the possibility of unemployment. The fact that economies typically operate with spare productive capacity and often with persistently high rates of unemployment, means that it is hard to maintain the view that there is no scope for firms to expand the supply of real goods and services when there is an increase in total spending growth. If a firm has poor sales and lots of spare productive capacity, why would it hike prices when sales improved?

Thus, if there was an increase in availability of credit and borrowers used the deposits that were created by the loans to purchase goods and services, it is likely that firms with excess capacity will respond by increasing the supply of goods and services to maintain or increase market share rather than push up prices. In other words, an evaluation of the inflationary consequences of OMF should be made with reference to the state of the economy. Any increase in spending, whether it is private or public, carries a risk of inflation if it pushes the economy beyond its capacity to respond by increasing the production and sales of goods and services.

For nations mired in recession with large quantities of idle resources, it is highly unlikely that increased deficits will invoke a major inflationary spiral. That situation certainly describes the state of many European nations in the aftermath of the GFC and the imposed austerity.

The main source of inflation would be the rising prices of imported goods and services in terms of the local currency as a result of any currency depreciation, once the government floated it. History tells us that such depreciations are short and sharp. Argentina is an example. However, more recent “European” experience is also available to guide our thinking. When Iceland's financial system collapsed in 2008, the government refused to bail out the private banks and instead restructured domestic bank deposits within newly nationalised banks, pushing all foreign exposure into the bankruptcy process. International markets started to get the jitters in early 2008 and capital inflow to Iceland dried up, which led to a weakening of the króna, and inflation began to accelerate due to the rising price of imports including petrol. The bank collapse exacerbated the currency crisis and the króna depreciated by 50 per cent over 2008 in terms of the euro. But the decline was finite. In the first half of 2010, the króna had appreciated by nearly 10 per cent and by October 2010, the inflation rate, which had peaked at 21.9 per cent in January 2009, was back down to the central bank's threshold bank of 4 per cent.

4. Conclusion

Many Eurozone Member States now face a future of stagnation and elevated levels of unemployment and rising poverty if they remain in the Eurozone. Restoring currency sovereignty and targeting domestic expansion with a strong commitment to full employment is the best path forward for any or all Member States.

The constraining forces of the neo-liberal Groupthink, however, make such a move very difficult to achieve. Eventually, social instability will put a “wrecking ball” through the failed European Project and the nations will have to seek their own paths.

References

- Bibow, J. (2012) “At the Crossroads: The Euro and Its Central Bank Guardian (and Savior?)”, *Working Paper No. 738*, Levy Economics Institute of Bard College, November.
- Bild (2010) “Verkauft doch eure Inseln, ihr Pleite-Griechen”, 27 October.
- Bird, G. (2014) *The IMF and the Future*, London, Routledge.
- Bhagwati, J. (1998) “The Capital Myth”, *Foreign Affairs*, 77(3), 7-12.
- Bossone, B. (2013a) “Time for the Eurozone to Shift Gear: Issuing Euros to Finance New Spending”, *VoxEu*, 8 April.
- Bossone, B. (2013b) “Italy, Europe: Please Do Something!”, *EconoMonitor*, 19 April.
- Bossone, B. and Wood, R. (2013) “Overt Money Financing of Fiscal Deficits: Navigating Article 123 of the Lisbon Treaty”, *EconoMonitor*, 22 July.
- Delpla, J. and von Weizsäcker, J. (2010) “The Blue Bond Proposal”, *Bruegel Policy Brief*, Issue 2010/03, 6 May.
- Eichengreen, B.J. (1997) “Saving Europe’s Automatic Stabilisers”, *National Institute Economic Review*, 159(1), 92–98.
- Enderlein, H., Bofinger, P., Boone, L., de Grauwe, P., Piris, J.-C., Pisani-Ferry, J., Rodrigues, M.J., Sapir, A. and Vitorino, A. (2012) “Completing the Euro. A Road Map towards Fiscal Union in Europe”, *Notre Europe*, Jacques Delors Institute, June.
- European Commission (1970) *Report to the Council and the Commission on the Realization by Stages of Economic and Monetary Union in the Community*, Luxembourg, 8 October, also known as the ‘Werner Report’.
- European Commission (1977) *Report of the Study Group on the Role of Public Finance in European Integration, Volume 1: General Report*, Brussels, April, also known as the “MacDougall Report”.
- European Commission (1989) *Collection of Papers Submitted to the Committee for the Study of Economic and Monetary Union*, 17 April, also known as the “Delors Report” Appendix.
- European Commission (2016) *Country Report Finland 2016*, Commission Staff Working Document, February 26, 2016, Brussels.
- European Council (1970) “Final Communiqué of the Conference of Heads of State or Government on 1 and 2 December 1969 at the Hague”, *Bulletin of the European Communities*, Supplement 7/1970, 18–19.
- Goodhart, C. and Tsomocos, D. (2010) “The Californian Solution for the Club Med”, *The Financial Times*, 24 January.
- Le Parisien* (2012a) “L’incroyable histoire de la naissance des 3% de déficit”, 28 September.
- Le Parisien* (2012b) “3% de déficit: ‘Le chiffre est né sur un coin de table’”, 28 September.
- Maes, I. (2002) “On the Origins of the Franco-German EMU Controversies”, Working Paper No. 34, National Bank of Belgium, Working Paper Research Series.

- McAllister, R. (2009) *European Union: An Historical and Political Survey*, New York, Taylor & Francis.
- McCulley, P. and Pozsar, Z. (2013) "Helicopter Money: Or How I Stopped Worrying and Love Fiscal-Monetary Cooperation", *Global Society of Fellows*, 7 January.
- Mitchell, W.F. (1998), "The Buffer Stock Employment Model – Full Employment without a NAIRU", *Journal of Economic Issues*, **32**(2), 547–55.
- Mitchell, W.F. (2015) *Eurozone Dystopia: Groupthink and Denial on a Grand Scale*, Cheltenham, Edward Elgar.
- Mitchell, W.F., Muysken, J. and Van Veen, T. (eds) (2006) *Growth and Cohesion in the European Union*, Cheltenham, Edward Elgar.
- Mitchell, W.F. and Muysken, J. (2008) *Full Employment Abandoned: Shifting Sands and Policy Failures*, Cheltenham, Edward Elgar.
- Müller, M. (2013) "EU Unemployment Insurance: Getting the Eurozone Back on Track", www.thenewfederalist.eu, 5 July.
- Ostry, J.D., Ghosh, A.R., Chamon, M., and Qureshi, M.S. (2011) "Capital Controls: When and Why?", *IMF Economic Review*, 59, 562-580.
- Ostry, J.D., Loungani, P. and Furceri, D. (2016) "Neoliberalism: Oversold?", *Finance & Development*, 53(2), June, 38-41.
- Pisani-Ferry, J., Vihriälä, E. and Wolff, G. (2012) "Options for a Euro-Area Fiscal Capacity", *Bruegel Policy Contribution*, Issue 2013/01, January.
- Policy Exchange (2012) "Wolfson Economics Prize 2012", available at: <http://www.policyexchange.org.uk/component/zoo/item/wolfson-economics-prize-2012>, accessed 26 December 2014.
- Soros, G. (2013) "How to Save the EU from the Euro Crisis", *The Guardian*, 10 April.
- Soutou, G. (1996) *L'alliance incertaine, Les rapports politico-stratégiques franco-allemands, 1954–1996*, Paris, Fayard.
- The Economist* (2011a) "Sell, Sell, Sell", 16 May.
- Triffin, R. (1960) *Gold and the Dollar Crisis: The Future of Convertibility*, London, Oxford University Press.
- Turner, A. (2013) "Debt, Money and Mephistopheles: How Do We Get Out of This Mess?", speech to Cass Business School, London, 6 February.
- Varoufakis, Y., Holland, S. and Galbraith, J.K. (2013) "A Modest Proposal for Resolving the Eurozone Crisis, Version 4.0", July.
- Wood, R. (2013a) "Conventional and Unconventional Fiscal and Monetary Policy Options", *EconoMonitor*, 20 June.
- Wood, R. (2013b) "Overt Money Financing and Public Debt", *EconoMonitor*, 3 September.

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Austerity in Mexico: Economic Impacts and Unpleasant Choices Ahead

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1. Introduction

Mexico has a long history of dealing with austerity as a tool to achieve fiscal consolidation. During the last 40 years, the country has repeatedly implemented programs for austerity and consolidation aimed at reducing fiscal imbalances, derived, in part, from acute macroeconomic crises. Since the late eighties, it has followed a more prudent approach to managing public finances and has avoided large deficits. However, the current outlook on Mexico's fiscal performance is complicated. Mounting pressures to raise expenditure, along with major changes in its composition, and structural fragilities in fiscal revenues, have resulted in eight years of public deficits and increasing debt. Further complicating this situation, in recent years, public finances have been significantly affected by adverse external shocks in the oil market. Not surprisingly, questions are emerging about the extent to which austerity will mark the current efforts to consolidate the fiscal accounts and whether it will lead them to a sustainable trajectory.

This article starts with a brief discussion around the definition of austerity and fiscal consolidation. It then puts forward a historical analysis of the fiscal austerity episodes that Mexico has experienced during the last four decades. Subsequently it identifies the effects that public spending cuts have had on investment and economic growth in Mexico. Next, it analyses the evolution of Mexico's public finances, and how the successful attempt to implement a countercyclical policy in 2008-09 was short lived as fiscal policy soon became expansionary. Finally, it explores the expenditure pressures and the unpleasant choices on fiscal matters that Mexico will very soon have to make, as resources will most likely be insufficient to meet urgent investment requirements and pressing social spending needs.

2. Defining Austerity and Fiscal Consolidation

The term austerity is used in public finance in reference to a drastic fiscal consolidation program aimed at the reduction of fiscal deficits. Since deficits are the outcome of government's expenditure over and above its revenues, austerity is the result of a strategy to sharply reduce such a gap, either by increasing revenues, by cutting expenditures or by a combination of both measures. In this perspective, the term austerity could potentially refer to income enhancing measures or spending cuts, or a policy mix of them.

Anderson and Minneman (2014) point out the main ways in which the term austerity has been associated with different economic measures, noting that, after the 2008 financial crisis, it has mostly been related to deficit reduction actions. As they stress, the use of alternative definitions of austerity may lead to different conclusions on its economic impact and, thus, to policy recommendations. They identify three alternative definitions of austerity. The first one, put forward by Alesina and Ardagna (2010), defines austerity as "discretionary fiscal consolidations without regard to intent". A second perspective is that of Leigh et al (2010) who understand austerity as "discretionary fiscal consolidations with intent of reducing deficits". A third, and somewhat related, approach is that of Guajardo et al (2011) who see austerity as "discretionary

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fiscal consolidation with intent of correcting past conditions”.

Alesina and Ardagna conclude that fiscal consolidations executed by expenditure reductions are associated with better growth and lower debt ratios. Leigh et al, however, stress that deficit reductions through tax increases or spending cuts are correlated with gross domestic product (GDP) contractions and an increase in unemployment over the following two years. Guajardo et al. find that tax increases or spending cuts responding to past conditions decrease private domestic demand and GDP.

The analysis can also be carried out with more attention to the historical perspective, as austerity is associated with measures focused at reducing current fiscal deficits that result from past decisions, conditions or shocks. Certainly, this does not preclude visualizing austerity with reference to forward looking strategies aimed at strengthening present fiscal conditions, or targeted to better face future challenges. Austerity may aim in the short term to slash the deficit, or even to create a surplus as a means to achieve further goals, such as to reduce public debt, generate savings or create a sort of stabilization fund to face future fiscal challenges, like being able to implement countercyclical policy.

Additionally, austerity could be the result of unexpected changes or shocks in fiscal revenues, expenditures or in the government's net wealth. For example, a sudden drop in oil revenues – derived from the collapse of its price in international markets – may force the decision of the Ministry of Finance to reduce public expenditure. Another possible cause of austerity might be a change in financing conditions like the sudden lack of access to international debt markets, which could force a country to slash its deficit.

Analysing austerity from a historical perspective paves the way to additionally consider the cyclical stance of fiscal policy, which opens further research questions, including the possible causal relation between austerity and economic cycles and trends. On the one hand, it may be argued that austerity could lead to an economic slowdown or even a slump, assuming that tax increases or spending cuts directly affect demand and output. This would also depend on how and when these fiscal measures get executed. A deficit-based policy may stimulate the growth and a subsequent economic expansion could generate fiscal consolidation measures and reduce the initial deficit. For the purpose of this article, we will analyse recent episodes of austerity in Mexico through the evolution of its fiscal and primary balances. The primary balance is the result of excluding the cost of debt servicing from the fiscal balance.

3. The Never Ending Story, Austerity and Fiscal Consolidation in Mexico²

The origin of fiscal austerity in Mexico can be traced back to the decade of the 1970s, when it abandoned its state-led industrialization cum trade protection development strategy. During this transition, at key moments the country failed to implement certain macroeconomic measures that would allow it to better face external shocks and to strengthen its fiscal position by significantly increasing public revenues. Additionally, Mexico experienced a number of stop-go growth spurts in the 1970s and early 1980s that ended in dramatic fiscal and balance of payments crises, linked to unsustainable patterns of external debt accumulation.

The policy shift towards fiscal austerity was further boosted by reforms implemented in the mid-1980s which set low inflation and balanced budgets as macroeconomic guidelines, and pushed for a retrenchment of the public sector from the economic sphere and a commitment to trade and financial liberalization. These changes failed to insert the Mexican economy onto a path of high and sustained expansion. Although there is debate on the causes of Mexico's economic slowdown in the last three decades, an important element behind it is the weak performance of investment, especially of public investment (see inter alia Moreno-Brid and Ros (2009), Moreno-Brid et al (2016), Ros (2015), Foncerrada (2016)). The retrenchment of public investment was a by-product of the government's systematic push since the early 1980s to slash the fiscal deficit by cutting expenditures and to implement market reforms aimed at reducing the size of the public sector in order to give more space to market mechanisms in the allocation of resources. The reduction of public investment was further accentuated by recurrent macroeconomic stabilization programs that targeted cuts in capital expenditures as the preferred tool to slash fiscal deficits when facing adverse external shocks by contractionary policies.

² The historical analysis in this section, up to 2006, is based on Moreno-Brid and Ros (2009).

The first push towards fiscal austerity in Mexico's post-World War II economic history occurred in the 1970s. During the first half of the decade, the country enjoyed high economic growth, with GDP expanding at an average annual rate of 6%. But this ended in 1976, busted by macroeconomic disequilibria associated with severe external shocks. Fiscal imbalances progressively appeared due to the expansion of public spending of more than 10 percentage points of GDP, which were far from complemented by strengthening tax revenues. The primary fiscal deficit climbed from 0.5% to 6.4% of GDP between 1971 and 1975, and the financial deficit of the consolidated public sector soared from 2.5% to 10% of GDP. Foreign debt jumped nearly fourfold, domestic inflation accelerated, the real exchange rate appreciated, and the current account deficit in the balance of payments increased sharply as the first OPEC shock surprised Mexico as a net importer of oil.

In August 1976, with a fully blown fiscal and a balance of payments crisis, Mexico depreciated its nominal exchange rate against the dollar, thus ending its fixed exchange regime that had prevailed for more than two decades. Also, for the first time in many years, Mexico formally asked for financial support from the International Monetary Fund (IMF). A conventional stabilization program was put in place with public expenditures drastically cut, slashing investment. Although economic growth slowed down and inflation went up, the crisis was short lived. Less than a year later, Mexico's economic outlook radically improved with the announcement of the discovery of a supergiant oil field (Cantarell). Proven oil reserves, an asset for the public sector, increased from 6.3 billion barrels in November 1976 to 16 billion by the end of 1977 to 40 billion a year later.³ The term profile of foreign debt was restructured and an ambitious industrialization plan was launched on the assumption of a sustained long-term increase in the price of oil. The exploitation of the newly discovered oil resources, along with the debt rescheduling, brought a swift and strong economic recovery. Between 1978 and 1981, GDP expanded on an annual average rate of close to 9%, pushed by an extraordinary investment boom, particularly by the public sector.

During this period, a tax reform was implemented with the purpose of correcting Mexico's fiscal fragility. The personal income tax was adjusted for inflation, and a value-added tax along with a new corporate income tax were established. The tax base broadened as loopholes were closed, and the whole administrative and compliance process was simplified. However, public revenues became increasingly dependent on oil revenues.

Prior to 1981, oil revenues doubled as a share of GDP, allowing for the primary fiscal deficit to remain controlled while public spending experienced a major expansion; in particular, public investment increased at double digit figures in 1976-80. Mexico's oil export boom, however, was accompanied by an even larger increase in imports. The trade balance shifted from a surplus of US \$0.1 billion in 1977, to a deficit of US \$2.6 billion in 1980, with a continuous appreciation of the real exchange rate. As these imbalances were increasingly financed through public external debt, the current account deficit soared progressively, reflecting the impact of rising interest payments. In 1981-82, external shocks coupled with a domestic macroeconomic context of inflation, fiscal and balance of payments imbalances and unsustainable foreign debt accumulation pushed Mexico to another major economic crisis.

Indeed, although interest rates had begun to rise in the US and its economy was in a recession and the international oil market was weakening, Mexico kept up fiscal expansion in 1981 and its reliance on foreign financing and the real exchange appreciation of the peso continued. The fiscal deficit practically doubled in 1981 to 14% of GDP, and the trade deficit reached a record level of US \$12.5 billion. External debt sharply rose, boosted by soaring short-term foreign public debt that accounted for more than half of Mexico's net external indebtedness by the end of the year. Moreover, the economy began to suffer a massive speculative attack on the peso, with capital flight amounting to more than 50% of the increase in Mexico's total external debt (net of international reserves) in 1981-82.

Speculative attacks on the peso, soaring inflation, weakening of the international oil market and a recession in the US with rising interest rates, the obligation to repay nearly 50% of external debt, dwindling foreign reserves and acute fiscal and trade disequilibria pushed Mexico into a dramatic crisis. In February 1982, the government launched a stabilization package of fiscal contraction and currency devaluation.

³ Its production peaked at 2.1 million barrels per day (bpd) in 2003, and it is currently less than 400 thousand bpd.

Inflation accelerated and real GDP fell. In August, Mexico's access to financial markets was shut down, which led to further sharp devaluations as well as budget cuts and finally, the suspension of payments on its foreign debt.

A new government arrived in December 1982. With fiscal austerity officially adopted as a key but elusive objective, stabilization programs were implemented to reduce trade and fiscal deficits and bring down inflation. In part due to a massive cut of public investment of nearly 6 percentage points of GDP, the operational balance of the public sector drastically shifted from a deficit of 10% of GDP in 1981 to a surplus in 1984. The devaluations boosted Mexico's oil related foreign exchange revenues, which comfortably exceeded interest payments on public foreign debt.

As a key lesson from this oil bust, all administrations in Mexico have been committed to control fiscal deficits and keep inflation down. Fiscal consolidation continued through the first half of the 1990s; this time, without recourse to austerity. Between 1991 and 1996, revenues exceeded expenditures, allowing for a positive fiscal balance even during the 1995 economic crisis. During 1997-2005, expenditures once again surpassed revenues, generating deficits that averaged 0.7% of GDP. This notable stabilization achievement, however, had some drawbacks. As the Mexican novelist Carlos Fuentes once said. "Behind what you see, there lies what you do not see".

First of all, fiscal adjustment was induced by reducing public expenditures as a percentage of GDP, mainly in gross fixed capital formation, rather than by the strengthening fiscal revenues. Moreover, with the oil bonanza, tax reform was somehow neglected and public revenues became critically dependent on crude exports and the behaviour of the price of oil in the international markets.

Second, successive attempts of fiscal reform failed, being at best timid and at worst aborted. In addition, all governments in office since then have avoided relying on foreign indebtedness as a significant source of finance to the public sector. Thus, given Mexico's rather low tax revenues, the expansion of public expenditure was constrained. Fiscal austerity became the guiding norm, to a certain extent less by choice than by necessity. However, this changed between 2003 and 2014, when the government decided to use oil revenues – once again – to fund a major expansion of the federal budget; only, this time, not strengthening public investment as in 1977-81, but boosting current expenditure!

Third, as cutting public investment projects is politically more viable than firing public employees or cutting their salaries, the composition of public expenditure has steadily shifted away from fixed capital formation in favour of current spending. Mexico's commitment to fiscal discipline and fiscal austerity, to the extent that it has been honoured since the mid-1980s, has in practice translated into an acute reduction of public investment, rather than in public consumption. This has impaired infrastructure development and weakened the long-term growth trend of potential output of the Mexican economy, thus endangering the employment and overall welfare perspectives of its population.

Furthermore, in the aftermath of the end of the commodity boom in 2009, Mexico's fiscal and macroeconomic stability as well as its growth prospects are being severely questioned. In 2016 for the sixth year in a row, public investment will decline in real terms. As a proportion of GDP, it now stands below 4%,⁴ its lowest level since the 1930s. Such low levels of public investment impair Mexico's growth prospects as the (quantitative and qualitative) deficit in infrastructure widens and potential synergies with the private sector on investment projects remain unexploited. No wonder then that Mexico's economic slowdown has continued for 22 years; with an annual average rate of expansion of real GDP close to 2.6%, two fifths of its rate in 1960-1981, and vastly insufficient to create enough jobs and to reduce poverty.

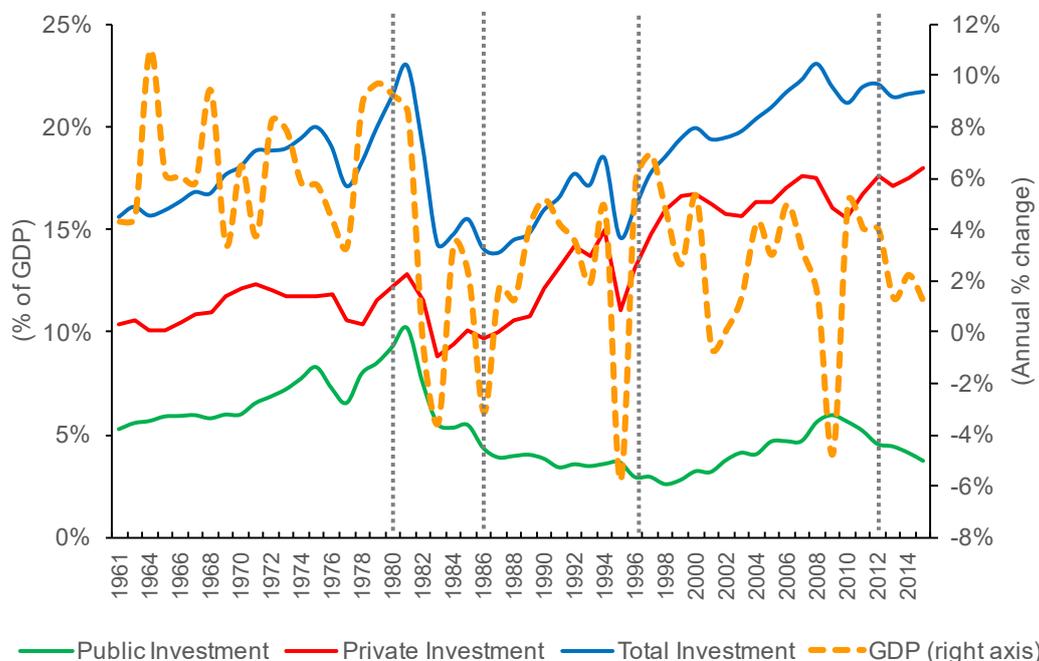
4. Austerity, Economic Growth and Public and Private Investment

As Graph 1 shows, there is a strong link between the rate of growth of GDP and the evolution and composition of investment. Indeed, the evolution of the investment ratio and of the pace of economic expansion in 1960-2015 follow three, perhaps four, phases. From 1960 to 1981, the Mexican economy expanded rapidly (averaging an annual rate of growth of 6.6%) while the investment ratio climbed from

⁴ This includes investments by state-owned companies.

15.6% of GDP to 23%. Its surge was the product mainly of the dynamism of public investment, which jumped 5 points to reach 10.2% of GDP, as private investment rose merely two percentage points up to a level equivalent to 12.8% of GDP. By then 44% of total investment was carried out by the public sector, boosted in the last years of this period by the oil bonanza and the state-led industrialization strategy.

Graph 1: Economic growth, private and public investment ratios, 1960-2015
(In percent of GDP and annual percent change)



Source: Moreno-Brid, et al. (2016).

In 1982-87, the oil bust, the decline of economic activity and the macroeconomic stabilization programs implemented were associated with a contraction of the investment ratio (in 9.1 percentage points of GDP). Its public component shrank six percentage points of GDP, and its private one three points.

A third phase, of recovery, began in 1988 and ran up to 2008. In these 20 years the Mexican economy finally left behind the years of stagnation. It managed to expand but at an annual average of 2.5%; much more slowly than in the 1960s or 1970s. The investment ratio increased nine points, and rose to 23.1% of GDP. This figure was similar to that of 1981, but the composition was drastically different: 24% public and 76% private, as the public investment ratio barely expanded by 1.7 percentage points of GDP.

The international financial crisis of 2008 apparently opened a new phase of economic slowdown and contraction in the investment ratio due to the reduction of public investment in real terms in each of the last five years. Today, the public investment ratio is 3.7% of GDP; one of the lowest registered in many years. As it will be argued later in the paper, it will not be easy to observe a recovery.

A simple approach to assess the impact of the weakening dynamism of public as well as of private investment on Mexico's economic slowdown since the mid-1980s is through an analysis of the income multiplier. For this purpose, we start from the national accounts identity of GDP (Y) as the sum of consumption (C), investment – public (Ig) and private (Ip) – exports (X) minus imports (M):

$$Y = C + Ig + Ip + X - M \tag{1}$$

To simplify, consumption and imports are defined as a linear function of GDP and the marginal propensities to consume (c) and to import (m).

$$C = C_0 + c(Y) \tag{2}$$

$$M = M_0 + m(Y) \tag{3}$$

Thus, the rate of growth of GDP can be expressed as:

$$(Y_t - Y_{t-1})/Y_{t-1} = \alpha[(\Delta I g_t / I g_{t-1})(I g_{t-1} / Y_{t-1}) + (\Delta I p_t / I p_{t-1})(I p_{t-1} / Y_{t-1}) + (\Delta X_t / X_{t-1})(X_{t-1} / Y_{t-1})] \tag{4}$$

Where the multiplier is defined in terms of the propensities to save and to import.

$$\alpha = 1 / (m + s) \tag{5}$$

The parenthesis on the left hand side of expression (4) corresponds to the rate of growth of real GDP in period “t”. The three terms inside the parenthesis on the right hand side of the expression correspond to the relative contributions of i) public investment, ii) private investment and iii) exports, to the growth of GDP in a given period. By construction, each of these contributions is derived as the product of the rate of growth of the variable in question multiplied by its share of GDP in the initial year of the period of comparison. The symbol alfa (α) stands for the income multiplier defined, as shown in (5) as the inverse of the sum of the saving ratio (s) and the propensity to import (m).

Table 1 shows the results of the application of this simple model to the two most recent and long periods of expansion of the Mexican economy: 1960-81 and 2008-2015. The first point to be noticed is the sharp decline in the annual average rate of expansion of GDP, from 6.35% in the first period to 2.55% in the second. This slowdown is evidenced even more drastically in the evolution of public investment (9.87% vs 2.42%), and also, though to a lesser extent, of private investment (7.48 vs 4.68%) and of exports (9.14% vs 5.64%). Note, too, the collapse of the income multiplier from 2.75 in the first period to 1.21 in the most recent one.

Table 1: Income multiplier of exports and investment, public or private

| Period | GDP | Public investment | | | Private investment | | | Exports | | Multiplier | |
|----------------------------|-----------------------------|------------------------------------|---------------------------|-----------------|--------------------------------------|----------------------------|-----------------|------------------------|---------------------|-----------------|-----------------|
| | $(Y_t - Y_{t-1}) / Y_{t-1}$ | $\Delta I_{Pub_t} / I_{Pub_{t-1}}$ | $I_{Pub_{t-1}} / Y_{t-1}$ | (D)= (B)*(C) | $\Delta I_{Priv_t} / I_{Priv_{t-1}}$ | $I_{Priv_{t-1}} / Y_{t-1}$ | (G)= (E)*(F) | $\Delta X_t / X_{t-1}$ | X_{t-1} / Y_{t-1} | (J)= (H)*(I) | $(A) / (D+G+J)$ |
| | (A) | (B) | (C) | (B)*(C) | (E) | (F) | (E)*(F) | (H) | (I) | (H)*(I) | (A)/(D+G+J) |
| 1961-1981 | 2.87 | 6.93 | 0.05 | 0.34 | 3.89 | 0.10 | 0.40 | 5.85 | 0.05 | 0.30 | 2.75 |
| Avg annual growth rate (%) | 6.35 | 9.87 | | | 7.48 | | | 9.14 | | | |
| 1988-2015 | 1.09 | 1.00 | 0.04 | 0.04 | 2.76 | 0.10 | 0.28 | 3.90 | 0.15 | 0.58 | 1.21 |
| Avg annual growth rate (%) | 2.57 | 2.42 | | | 4.68 | | | 5.64 | | | |

Source: Moreno-Brid, et al. (2016).

The results in Table 1 indicate that the decline in public investment – by itself and ignoring its impact on private investment through crowding-in effects – has had a major and most adverse impact on the rate of growth of GDP in Mexico. Indeed, during 1960-81 the public sector was responsible of 45% of the total impulse of investment to the expansion of GDP. In contrast, in 1988-2015, it contributed less than 10% of it. If it had grown at least at the same pace as private investment, Mexico’s average annual rate of expansion this recent period would have been at least 2 points higher. This figure actually understates its overall effect, given that the acute loss of momentum of public investment led to a deterioration of infrastructure, thus undermining Mexico’s international competitiveness and creating and a not-so-favourable business climate. All these factors could have a negative impact on private investment too. Moreover, such a weak performance of investment, particularly public investment, goes a long way in explaining the rise of the import penetration coefficient and the subsequent reduction of the income multiplier. It is a sad paradox, how Mexico’s attempt to achieve fiscal consolidation, by having relied on cuts on public investment – instead of on a fiscal reform to increase revenues and reduce its oil dependence – has not boosted its economic growth

prospects. On the contrary, the retrenchment of public investment and its actual collapse in real terms in the last six years have actually reduced the economy's growth potential. As actual literature has shown, public investment plays a fundamental role in modern economies' growth potential through its key effects directly on infrastructure and indirectly through its crowding-in impact on private investment.

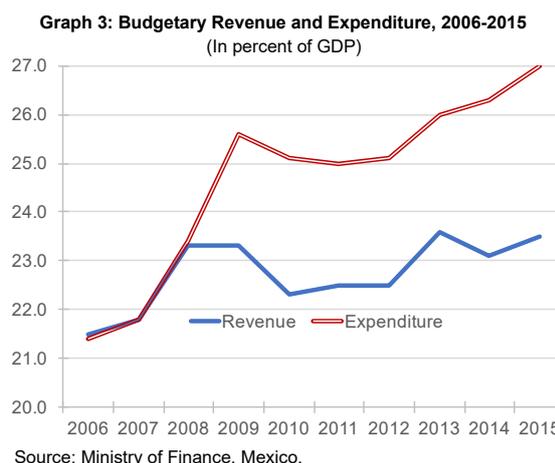
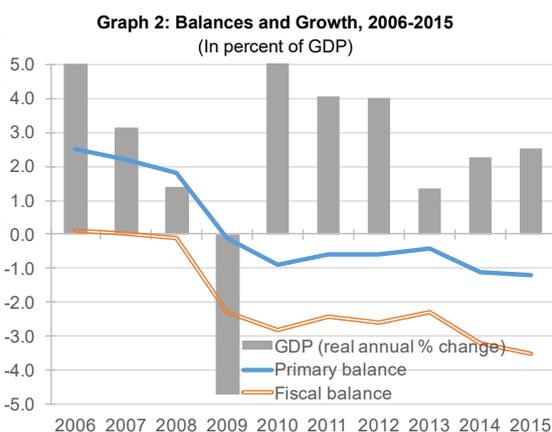
5. Fiscal Consolidation after the 2008 Financial Crisis

The 2008 financial crisis delivered a strong hit to Mexico's economic activity. With growth already slowing down from 3.1% in 2007 to 1.4% in 2008, GDP fell by 4.7% in 2009. However, Mexico faced this external shock with a relatively strong fiscal position. High oil prices and the containment of spending in previous years had resulted in a slight surplus in the fiscal balance in 2006 and a balanced budget in 2007. This allowed the government to react with a fiscal impulse financed by a small deficit. But, as Graph 2 shows, since 2009, deficits have been recurrent, reaching a maximum of 3.5% of GDP in 2015.

However, the data require a more detailed analysis since the definition of the fiscal deficit has changed twice during this period. In 2008, it was modified to accommodate – or in Mexico's official parlance to “recognize” – Pemex's (Mexico's National Oil Company) investment spending, amounting approximately 2% of GDP, as off-budget for fiscal stabilization policy considerations. Thus, the fiscal deficit started being reported at an aggregate level and excluding Pemex's investment. In 2015, this definition was further modified to give the same accounting treatment as Pemex's investment to the capital expenditure of CFE (Mexico's National Electricity Company), and also to so-called high impact investment projects of the Federal Government. Aggregating these two categories of investment expenditure amounts to an additional half a percentage point of GDP, in addition to the already mentioned two points due to Pemex's investments.

The fiscal deficits incurred between 2009 and 2015 have been vastly driven by increases in spending, not by reductions in revenues. Graph 3 shows two large expansions in public spending. A first countercyclical impulse in 2008-09 translated into additional expenditures of the order of 2.2 percentage points of GDP. In 2010, public expenditure fell by half a point of GDP and remained relatively constant during the following two years. The second large increase occurred between 2013 and 2015, with a spending hike of nearly two points of GDP, which made 2015 the year with the highest expenditure level recorded since 1990, at 27% of GDP.

The evolution of the primary balance confirms this story. Graph 2 shows that between 2006 and 2008, the primary balance was positive, but with a declining trend, as revenues surpassed expenditures excluding the financial cost of debt. However, since 2009 Mexico has incurred primary deficits. In other words, in the last seven years, fiscal revenues have been insufficient to cover operational expenses, i.e. public spending on consumption and on capital formation. During the last two years in particular, the primary deficit deteriorated, jumping from 0.4% of GDP in 2013 to 1.1% of GDP in 2014 and to 1.2% of GDP in 2015. After years of an alleged commitment to fiscal consolidation, the fragility of public revenues – with a small base, weak tax contributions and a critical dependence on oil exports – in the wake of climbing social needs, has ultimately led to a deterioration in Mexico's fiscal position, reflected as a rising trend in government debt to compensate for the insufficiency of public revenues to meet current expenditure needs and investment, despite sharp declines in the latter.



The countercyclical fiscal response to the 2008 financial crisis was meant to be temporary. The Budget and Fiscal Responsibility Federal Law required the government to define the number of years during which it would incur a deficit as well as the actions required to return to a balanced budget. However, even with the strong economic rebound between 2010 and 2012, Mexico kept financing its expenditure with a deficit. The result of these persistent deficits is that the aggregate public sector debt has increased by approximately 13 percentage points of GDP between 2008 and 2015.

Today, in 2016, Mexico is in a weaker position to face the fiscal challenges ahead or a shock from abroad. On the revenue side, low hydrocarbon prices and the fall in the crude oil production platform have translated into a contraction of oil related revenues. In addition, tax revenues have already absorbed the positive effects of the 2013 fiscal reform. On the expenditure side, climbing social spending pressures – especially related to pensions – are likely to materialize in the near future. Moreover, it is impossible to conceive that public investment will keep declining in real terms and still hope for the Mexican economy to remain internationally competitive and to expand at a fast and sustained rate. Mexican authorities will face difficult choices in order to meet these needs, reduce deficits and stabilize public debt at acceptable levels.

These circumstances have raised questions about the consolidation process that Mexico’s public finances have followed and the challenges they will face. A key question is the extent to which they will or will not lead to austerity. In 2015, fiscal authorities started an “expenditure control effort” in order to compensate and absorb the acute fall in hydrocarbon revenues. These measures included an expenditure tightening of 0.7% of GDP and the use of the Central Bank’s foreign reserve capital gains to reduce debt and to increase the stabilization fund. In early 2016, an additional spending cut of 0.7% of GDP was implemented. For 2017, the Ministry of Finance is considering a slightly larger budget reduction. However, from our perspective, additional fiscal measures will be required in order to face increased pension and social spending pressures, along with infrastructure requirements. A key challenge in this regard is the promise made last year by the Minister of Finance to the leading representatives of the private sector that no more fiscal reforms or tax increases would be implemented during this Administration (2012-18).

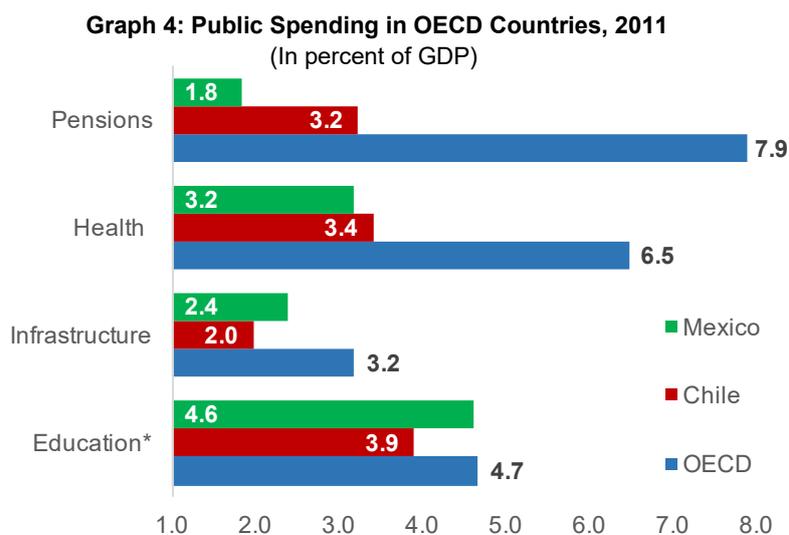
6. Long-term Budgetary Pressures on Mexican Public Finances

We believe that any long-term strategy of public expenditure implies complex decisions on how to allocate resources between three key components: education, social security (pensions and public health systems) and public infrastructure. There is also the financial programming counterpart of how these expenditures are to be soundly funded, be it debt or tax related. If these decisions are important when revenues are abundant or at least not tightly constrained, they become critical in technical and in political terms when conditions of scarcity of revenues and stringent budgets prevail.

The above mentioned three components are directly linked to the justification usually put forward for government actions in the economic sphere: market failures – both public goods and externalities – and redistribution considerations. The allocation of public money has deep effects on redistribution and welfare

for particular population groups and cohorts. Risking an oversimplification, we can argue that education is usually targeted to the young, social security to the old, and public infrastructure to promote economic growth.

Graph 4 shows some elements in the composition of fiscal expenditure of Mexico and Chile (the Latin American country whose public finances' management have been highly praised) in relation to the OECD average. In the Mexican figures, infrastructure does not include investments by the two energy state owned enterprises (PEMEX and CFE), for which almost two more points of should be added. It is interesting to note that while Mexico has public expenditure in education as a share of GDP very similar to the average of the OECD, it is below average in infrastructure and even more acutely so in pensions and in public health (the main elements of the social security systems).⁵



Source: OECD.

A main obstacle for Mexico's economic development is that its fiscal outlook and forecasts paint a far from optimistic picture. Total federal incomes, excluding public firms' revenues that are utilized in the firms' own operations and debt borrowing, barely reach 17% of GDP. This is more than 5 percentage points of GDP below the average OECD expenditures on pensions, health, infrastructure and education. And this does not consider operating costs and other expenditures the government may carry out, for example in agriculture and social programs, etc. Certainly a fiscal reform to strengthen government revenues is urgently needed. However, even had it not been ruled out by the current administration, it is unclear that given Mexico's experience in this matter any feasible reform would raise sufficient revenues to meet current short and long term needs.

The Latin American experience shows that the very successful fiscal reforms have been able to raise additional public sector revenues up to an amount equivalent to between three and four percentage points of GDP. These reforms have forced governments to take difficult decisions in terms of the groups of population that are to be more heavily taxed, as well which segments, and even regions, will benefit to a larger extent. Nonetheless, this will take time and its implementation would demand a transition period. Meanwhile, several questions arise. Who will bear the cost and who will benefit? Will capital formation continue to be sacrificed, thus undermining Mexico's long term economic and employment growth potential? Will the opposite be the case such that current expenditure will be cut down in favour of a reallocation to fixed capital formation projects? These are important and painful decisions, even more so to the extent that they imply choosing to favour the future generations as opposed to relative to the present one, or vice versa. Below we provide some points to sketch the main characteristics of some of the dilemmas faced by fiscal

⁵ If investment by PEMEX and CFE were included, the share of public expenditure in infrastructure is below 6%; the figure recommended by CEPAL as a minimum for GDP to grow at 5% per year (see CEPAL 2015).

policy, with possible difficult decisions in reallocations.

i. Education. In terms of public expenditure, several metrics help to understand the role of government in the provision of education. It is not only the proportion of GDP and of the total budget that matters; the composition of expenditures is also very important. In Mexico, the budget allocated to basic education is twice as high as the one on high school, vocational, college and graduate training (CIEP 2015). In this regard, it is worth noting that target populations, defined as those in the age groups expected to attend specific school grades, are very similar in size for basic education compared to all other levels. Nonetheless, the effective coverage is very different; while it is firmly above 80% for basic education, it is slightly above 50% for high school (or equivalent) and below 30% for college education (or equivalent). Moreover, non-attendance is highly correlated with low income households. Hence, while increasing public expenditures in the higher grades can be sensible and expected, it would very likely be regressive in terms of fiscal incidence. One of the implications is the need to design public policies, some of them with fiscal implications (e.g. scholarships) aimed for poor people to attend educational levels in the higher grades. Some related aspects, clearly beyond the scope of this paper, are: the role of the private sector, charging tuitions for public education among high income families, the role of local governments in providing education, and alternative ways to finance research, particularly in public universities. That is, alternatives for an expansion in public education without pressing federal public finances.

ii. Social security. As argued by, among others, Angus Deaton (2013), social security constitutes the core of our modern governments' social and actually economic policy agenda. Social security is a potent resource to attempt to equalize outcomes and to guarantee rights among the less privileged members of our societies. Its public health systems component is directly responsible for the expansion of life expectancy almost all over the world. In developed economies, pensions have been a key element to elevate the welfare of the elderly to previously unexpected and unprecedented levels. International organizations have urged middle-income countries to expand their social security systems as a major requisite to try to build a floor of rights of "universal" coverage. While the rationale behind these arguments has gained wide acceptance, the implementation is usually questioned – particularly in developing countries – on fiscal feasibility grounds. In the context of weak and fragile tax revenues, the public policy dilemma becomes: a small state (in terms of public expenditures) versus social development with a universal rights agenda, both imply fiscal discipline at least in the long run.

Unfair pensions. While the issue opens possible discussions on ethical grounds, we refer to a more specific "justice" issue: pension schemes that are not backed by sufficient accumulated financial reserves for the payments they provide. This is a common problem worldwide. In the Mexican case, it becomes very troublesome because contributed pensions may be a fact of life only in the formal labour market, and are highly correlated with higher income groups. To the extent that the Mexican government is backing up the payments, which were not properly funded, such public expenditures in pensions tend to be very regressive.

A universal minimum pension. The idea is simple and direct: any person reaching a certain age should be guaranteed a pension. Nonetheless, the problems that arise are many and obvious: the problem of incentives for low-income workers to participate in the formal labour markets, and the concern that even minimal, but non negligible, levels imply considerable fiscal resources that may not be available. Given the increasing life expectancy and population transition in Mexico (and most Latin American countries) any proposal must come with projections and ideas on funding schemes about how public expenditures would evolve.

Chronic diseases. As is well known, demographic transitions with increasing elders imply also an epidemiological transition. While a very young population with a huge proportion of children is prone to infectious diseases, this switches to chronic diseases as the population gets older. Without underestimating the importance of contagious diseases, which are devastating for poor countries, their fiscal implications are very different from those of chronic diseases. The latter are much more expensive to treat, both because of cost and length of treatments.

Effective coverage. Theoretically, everyone in Mexico has the right to some public health service. However, as shown by Urquieta and Villarreal (2015) in practice many people do not have effective health coverage. Moreover, access to effective health coverage is correlated with high income. Hence, there is a

considerable challenge to provide true public health coverage to all, as four fifths of the population are officially classified as economically vulnerable.

Two tier system. Mexico is a strange case in the sense that although classified as a middle-income country, once oil revenues are excluded, fiscal revenues plus social security contributions barely account for 14% of GDP. This is a very low figure, comparable to that of some poor countries in Central America. A non-trivial question is what to do with the contributions of the formal sector -social security - that goes to the public health systems as they amount to approximately 1.5% of GDP. Assuming a universal public health system, should contributors have access to differentiated benefits? If the answer is yes, then, de facto, a two tier system would exist. If the answer is no, then why should they contribute? The problem is that the Mexican government cannot afford to lose the revenues generated by the social security contributions.

Contingent liabilities. Though typically forgotten and even buried - not to say hidden - in usual official statistics, contingent liabilities represent an enormous risk for social security systems. They are usually not explicitly recognized as debt, but many governments are legally bound to explicit commitments both in pensions and health services. Three specific problems surround the issue: i) political economy issues: the obligations tend to be signed many years before their manifestation, thereby tempting political actors to be irresponsible; ii) the difficulty of making cost projections because of changing parameters, *inter alia* in life expectancy and cost changes due to technological changes; and iii) lack of financial provisions made by the direct beneficiaries.

iii. Infrastructure. There is consensus in the academic literature that public investment in infrastructure may play a critical role in economic growth. When well executed, its positive and important effects on welfare are not disputed, as argued in Bom and Lighthart (2013, 2014) and Ganelli and Tervala (2016). However, its financing presents major challenges. One of them is the lack of sufficient fiscal revenues to close the infrastructure gap (See CEPAL, 2016). The other is a complex incidence problem with important intergenerational implications, i.e. the cohorts that finance infrastructure investments are not necessarily the ones to benefit from the "sacrifice" (Lee and Mason 2011). A major risk is that given that its beneficiaries are not as clear as in the education and social security matters, there are strong incentives to underinvest or to cut infrastructure expenditures for the sake of fiscal consolidation. This hinders economic growth, which in turn may create future fiscal pressures.

We present two considerations with reference to this discussion. First, planning and clear objectives are important. If investments are to be restricted or curtailed - which is not our preferred option - it becomes critical to employ the available resources in the best possible way. Thus choosing projects that maximize social welfare should be a guideline. A far from trivial problem is which time horizon to choose: short term or long term? And, given the acute inequality that prevails in Mexico's society and economy, which groups' social welfare? Second, the identification and selection of alternative options to finance fixed capital formation by the public sector. Assuming the main benefits would be for younger cohorts, public debt can be a natural source of financial resources. But compensating older generations that were heavily taxed is also a sensible policy. A natural bridge for engaging different cohorts in social security. Thus spending in infrastructure can be seen as social investment whose returns are translated into a more generous social security system.

7. Conclusions

Mexico has a long "tradition" of dealing with fiscal consolidation and austerity policies. Several macroeconomic crises during a twenty-year period, in the late part of the previous century, profoundly shaped the economic policies of the country. Fiscal responsibility and controlled deficits were the norm during two decades, producing very stable economic settings. Although, the Mexican economy has been trapped in a platform of slow growth for decades, with vast incidence of poverty and acute inequality.

The 2008 international financial crisis changed the game. The country's fiscal policy switched to deficits that, although mild compared to other countries, have generated an additional public debt of about 13 percentage points of GDP. The fiscal reform implemented by the current administration, as well as changes in policies towards subsidies/taxes on fuels, provided extra resources, nonetheless with interesting incidence

results (CIEP 2015b). But plummeting international oil prices and a decline in national oil production, have more than off-set these revenue gains.

The current fiscal situation appears complicated. The authorities' reflexes have been to engage once again in fiscal consolidation policies. Maybe this was sensible, controlling public expenditures is a precondition for a necessary and long waited deep fiscal reform. The worrying part is that in the short and medium term, it is difficult for the Mexican government to increase revenues enough to satisfy the needs in education, social security and public investment in infrastructure. Actually the Finance Minister, as mentioned above, promised to not raise taxes during the rest of this Administration.

Austerity may come again, but this time in a more voracious and enduring way. The problem is two-fold: restricting possible public investments with considerable effects on economic growth, while limiting public expenditures in education and social security, hampering welfare for both young and old members of society. The adverse environment is completed by two restrictions: an exhausted fiscal space – given the political reluctance for a fiscal reform, with little chances for using public debt – and an accelerated demographic transition.

If the Mexican fiscal system enters a vicious circle where fiscal fragility forces austerity policies, which, in turn, could generate further fiscal fragility, the possibilities of public policies to promote social and economic development could be greatly endangered for a long period of time. There is an urgent need to discuss fiscal alternatives, with clear incidence effects over all population groups, including future generations, from technical and political perspectives. After all, austerity is an option, hopefully, of last resort, since the government will always have the choice of implementing a deep fiscal reform to strengthen government revenues. Let's not forget that "taxes are what we pay for civilized society".⁶

References

- Alesina, A. and S. Ardagna (2010), "Large Changes in Fiscal Policy: Taxes versus Spending", *Tax Policy and the Economy, National Bureau of Economic Research Working Paper*, No. 15438, October 2009, MIT Press, Cambridge, www.nber.org/papers/w15438.
- Anderson, B. and E. Minneman (2014), "The abuse and misuse of the term "Austerity" Implications for OECD countries", *OECD Journal on Budgeting*, Vol. 14/1. DOI: <http://dx.doi.org/10.1787/budget-14-5jxrmdxc6sq1>.
- Bom, P.R.D. and J.E. Ligthart (2013), "What have we learned from three decades of research on the productivity of public capital", *Journal of Economic Surveys*, 28: 889–916. DOI: [10.1111/joes.12037](https://doi.org/10.1111/joes.12037)
- Bom, P.R.D. and J.E. Ligthart (2014), "Public infrastructure investment, output dynamics, and balanced budget fiscal rules", *Journal of Economic Dynamics & Control*, Vol. 40, March 2014, Pages 334–354. DOI: <http://dx.doi.org/10.1016/j.jedc.2014.01.018>
- CIEP, Centro de Investigación Económica y Presupuestaria (2015), "Gasto en Educación 2015", <http://ciep.mx/gasto-en-educacion-2015/>.
- CIEP, Centro de Investigación Económica y Presupuestaria (2015b), "Reforma hacendaria: a un año de su implementación", <http://ciep.mx/reforma-hacendaria-a-un-ano-de-su-implementacion/>
- Deaton, A. (2013). *The Great Escape: Health, Wealth, and the Origins of Inequality*. Princeton: Princeton University Press.
- Foncerrada, L. (2016). "El 2016 inicia con el peor gasto en inversión desde 1991", *El Economista*, May, 8.
- Ganelli, G. and J. Tervala (2016), "The Welfare Multiplier of Public Infrastructure Investment", *International Monetary Fund Working Papers*, 2016: 40, IMF, Washington, <http://www.imf.org/external/pubs/ft/wp/2016/wp1640.pdf>.
- Guajardo, J., D. Leigh and A. Pescatori (2011), "Expansionary Austerity: New International Evidence", *International Monetary Fund Working Papers*, 2011: 58, IMF, Washington, www.imf.org/external/pubs/ft/wp/2011/wp1158.pdf.

⁶ Quote credited by the U.S. Internal Revenue Service to the U.S. Supreme Court Justice Oliver Wendell Holmes, Jr.

Lee, R. and A. Mason (2011), "Population Aging and the Generational Economy: A Global Perspective", Edward Elger.

Leigh, D. et al. (2010), "Will it Hurt? Macroeconomic Effects of Fiscal Consolidation", *World Economic Outlook: Recovery, Risk, and Rebalancing*, October 2010, International Monetary Fund, Washington, www.imf.org/external/pubs/ft/weo/2010/02/pdf/c3.pdf.

Moreno-Brid, J.C. and J.Ros (2009), *Development and Growth in the Mexican economy: a historical perspective*. Oxford: Oxford University Press.

Moreno-Brid, J.C., K.J. Sandoval and I. Valverde (2016), "Tendencias y ciclos de formación de capital fijo y crecimiento económico en México: 1960-2015", *Serie temática No. 171*, Comisión Económica para América Latina y el Caribe, Ciudad de México.

Ros, J. (2015), *¿Cómo salir de la trampa del lento crecimiento y alta desigualdad?*. México: Colegio de México.

Urquieta-Salomón, J.E. and H.J. Villarreal (2015), "Evolution of health coverage in Mexico: evidence of progress and challenges in the Mexican health system", *Health Policy and Planning*. DOI: 10.1093/heapol/czv015

Ministry of Finance of Mexico (2015), "Criterios Generales de Política Económica 2016", http://finanzaspublicas.hacienda.gob.mx/work/models/Finanzas_Publicas/docs/paquete_economico/cgpe/cgpe_2016.pdf

Ministry of Finance of Mexico (2016), "Pre-Criterios Generales de Política Económica 2017", http://finanzaspublicas.hacienda.gob.mx/work/models/Finanzas_Publicas/docs/paquete_economico/precgpe/precgpe_2017.pdf

Legislation

Budget and Fiscal Responsibility Law (Ley Federal de Presupuesto y Responsabilidad Hacendaria) http://www.diputados.gob.mx/LeyesBiblio/pdf/LFPRH_301215.pdf

Data sources

Ministry of Finance of Mexico, http://finanzaspublicas.hacienda.gob.mx/es/Finanzas_Publicas/Estadisticas_Oportunas_de_Finanzas_Publicas

National Institute of Statistics and Geography, <http://www.inegi.org.mx/sistemas/bie/>

Organisation for Economic Co-operation and Development, <http://stats.oecd.org/>

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