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Working Paper No. 539

The Return of Fiscal Policy: Can the New Developments in the New Economic Consensus Be Reconciled with the Post-Keynesian View?

by

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ABSTRACT

The monetarist counterrevolution and the stagflation period of the 1970s were among the theoretical and practical developments that led to the rejection of fiscal policy as a useful tool for macroeconomic stabilization and full employment determination. Recent mainstream contributions, however, have begun to reassess fiscal policy and have called for its restitution in certain cases. The goal of this paper is to delimit the role of and place for fiscal policy in the New Economic Consensus (NEC) and to compare it to that of Post-Keynesian theory, the latter arguably the most faithful approach to the original Keynesian message. The paper proposes that, while a consensus may exist on many macroeconomic issues within the mainstream, fiscal policy is not one of them. The designation of fiscal policy within the NEC is explored and contrasted with the Post-Keynesian calls for fiscal policy via Abba Lerner's "functional finance" approach. The paper distinguishes between two approaches to functional finance – one that aims to boost aggregate demand and close the GDP gap, and one that secures full employment via direct job creation. It is argued that the mainstream has severed the Keynesian link between fiscal policy and full employment – a link that the Post-Keynesian approach promises to restore.

Keywords: Fiscal Policy; New Economic Consensus; Fiscal Theory of the Price Level; Functional Finance; Full Employment

JEL Classifications: E62, E12, E24, E31

INTRODUCTION

It took no more than four decades after the publication of the *General Theory*, which offered a revolutionary view of employment and output determination and motivated the need for fiscal policy to secure and maintain full employment, for the virtual abandonment of fiscal policy by mainstream economists. Post Keynesians, by contrast, have been among the few faithful advocates of the original Keynesian contributions and have continually called for reinstating fiscal policy as a main tool for macroeconomic coordination, with full employment as its overriding objective. In recent years, however, the orthodox camp too has renewed its interest in fiscal policy (e.g. Allsopp and Vines 2005; Bernanke 2002 and 2003b; Blinder 2004; Krugman 2005; Solow 2005; Wren-Lewis 2000). What is this new role and how does it fit within mainstream theory? Does this new role make it possible to reinstate the original link between fiscal policy and full employment? How do the mainstream contributions compare to those from the Post-Keynesian school?

Some have argued that the macroeconomic debates of the mid to late 1990s have subsided, and that mainstream economics has entered an era of New Neoclassical synthesis also known as the New Economic Consensus (NEC) (Snowdon and Vane 2005; Goodfriend 2004). The position taken here is that, while many issues may have been resolved, the role of fiscal policy is not one of them. The purpose of this paper is to clarify the potential opening for fiscal policy effectiveness within the New Economic Consensus and review the main debates surrounding this issue. It also compares the NEC designation for fiscal policy with that of Post-Keynesian theory.

Recently, post Keynesians have advocated restitution of fiscal policy via Abba Lerner's functional finance approach (e.g. Arestis and Sawyer 2003; Bell 1999; Forstater 1999). I argue that there are two *distinct* approaches to functional finance and offer a synopsis of each. One is an approach that aims to increase aggregate demand and close the GDP gap; the other aims to secure full employment through direct job creation. The paper compares these two approaches with fiscal policy in the NEC.

1. FISCAL POLICY IN THE NEW ECONOMIC CONSENSUS: THEORY

The New Consensus is an amalgamation of the developments in macroeconomics from the Neoclassical Synthesis to the present day. It is an approach whose defining characteristic is the claim that choice-theoretic micro-foundations determine macroeconomic outcomes. It is now settled in the mainstream that to explain aggregate employment and output results, all macroeconomic models must adequately incorporate individual intertemporal decision-making based on rational expectations. In this framework, deviations from natural output equilibrium are possible (unlike in the New Classical and Real Business Cycle theory), but they are due to the behavior of rational individuals within the confines of a myriad of rigidities in the labor and capital markets. Natural output is no longer the same thing as Keynes's full employment output equilibrium; rather it is the level of output that would occur under perfectly flexible prices and wages (Leith and Wren-Lewis 2005). In the short run, it is also the level of *unemployment* that does not accelerate inflation.¹ Therefore, the inflation-unemployment tradeoff encapsulated in the expectations-augmented Phillips curve is another hallmark of the NEC, where unemployment is usually captured in the NEC models by the output gap. Finally, if individual constrained optimization takes place in imperfect or incomplete markets, there is an important role for short-term corrective policy. The shape and form of these remedial measures is another major feature of the NEC. Specifically, it is argued that important stabilization effects can be delivered via monetary policy.

Perhaps the most significant consensus has occurred around the role and functions of monetary policy. In contrast to the monetarist counterrevolution, the New Consensus now holds that Central Banks cannot exogenously alter the stock of money. Instead, they can only set exogenously the short-term interest rate, leaving the money supply to be determined endogenously by the credit needs of the economy. In the NEC, Friedman's

¹ Paradoxically also referred to as the "full employment rate of unemployment."

monetarist view that Central Banks control monetary aggregates² has been replaced by the Real Business Cycle claim that money is endogenous.³

The monetarist idea that the Central Bank is nonetheless responsible for controlling inflation remains a central tenet, but now the main tool for inflation control is the interest rate, not the money supply. This notion, coupled with the old ISLM idea that changes in interest rates affect investment and output, have produced a consensus that monetary policy can affect both output and inflation through adjustments in the rate of interest. The combination of the interest-investment relationship and the interest rate control mechanism in the NEC indicates that monetary policy *can* perform aggregate demand management functions, should output deviate from its natural level. Because discretionary changes are discouraged due to policy time inconsistency considerations (Sargent and Wallace 1973), the type of monetary policy that is advocated by NEC is one based on a reaction function *a la* Taylor rule (see Taylor 1993). In fact, because the latter specifies both an output gap and an inflationary gap, it is believed to be the best policy tool to tackle the dual challenge of inflation and unemployment.

The above are considered to be the core propositions of the NEC, abridged in the following three-equation model (after Woodford 2003):

(i) The IS equation:

$$y_t = g_t + E_t (y_{t+1} - g_{t+1}) - \sigma (\dot{i}_t - E_t \pi_{t+1}) \quad (1)$$

where current output y_t is a function of some composite exogenous disturbance g_t and a given real interest rate (\dot{i}_t is the nominal target and $E_t \pi_{t+1}$ are current expectations of future inflation rates).

² Even Milton Friedman has recanted the notion that the money supply is exogenous (Friedman 2003).

³ There is a crucial distinction between the endogenous approach to money in the NEC and that in the Post-Keynesian approach. In the former, money is only endogenous, because the velocity of money is somehow unstable. But money in and of itself is still neutral with respect to production and output and only affects nominal values. In other words, money is what *greases* the economic wheel by eliminating transaction costs and by giving us nominal equivalences. In the post-Keynesian approach, money is never neutral. In a monetary production economy, money is a real input of production and is the vehicle that *sets* the economic wheels in motion. Money contracts are essential in reducing the fundamental uncertainty economic agents face and any setback to expectations has a real effect on money contracts and thereby on output (Davidson 2002).

(ii) The New Keynesian Phillips curve:

$$\pi_t = k (y_t - y_{pt}) + \beta E_t \pi_{t+1} \quad (2)$$

where the rate of inflation π_t is a function of the output gap (or the difference between real and potential output $y_t - y_{pt}$) and current expectations of future inflation rates. It is an expectations-augmented Phillips curve.

(iii) The Taylor rule:

$$\dot{i}_t = \dot{i}_n + \varphi_\pi (\pi_t - \pi_{t*}) + \varphi_y (y_t - y_{pt}) \quad (3)$$

where the current operating target (the funds rate \dot{i}_t), adjusts to an implicit desired funds rate (which is the Wicksellian “natural” rate of interest \dot{i}_n) and to changes in output and inflation rates from their targets.

To be effective, short-term demand management via monetary policy must be 1) automatic, 2) transparent and 3) credible.⁴ So what is the designated place and role for fiscal policy in this approach?

Recent calls for the restitution of fiscal policy in the NEC generally emerge from concerns with the zero-interest rate bound to monetary policy (e.g. Bernanke, Reinhart and Sack 2004; Krugman 2005). Since the short-term rate is the main policy lever under Central Bank control, once it reaches zero, no further economic stimulus from monetary policy is possible. It is in this context that fiscal policy is being called to the rescue. This is effectively a reformulation of the old liquidity trap problem. The ISLM Keynesians argued that when an increase in the exogenous money stock produced no fall in the rate of interest, monetary policy was ineffective as all new money/cash balances were being absorbed, instead of being directed toward new investment. In the NEC the short-term rate is the exogenous variable under Central Bank control, and as long as it keeps falling, *some* increase in investment will occur. When it reaches its nominal bound of zero, however, we observe a modern day liquidity trap *a la* Japan. In Japan monetary policy

⁴ Many have argued that monetary policy independence is also a major prerequisite for monetary policy effectiveness but, as I argue later in this section, new development in the New Consensus on the interactions between fiscal and monetary may necessitate abandoning policy independence as an objective.

was considered to be largely ineffective while zero interest rates prevailed for 5 years without a noticeable recovery in sight. Eventual recovery occurred only after heavy government spending, triggering renewed interest in fiscal policy as a tool for macroeconomic stabilization.

In the NEC literature, however, the dominant view is still that fiscal policy is distortionary, inflationary and therefore useful mostly in extreme deflationary periods (see for example Krugman 2005). Blinder also opposes the “the case against discretionary fiscal policy,” but he explicitly does *not* advocate the “case for” fiscal policy. In fact, in *normal* times, Blinder supports “the now-standard view that the central bank *should* and *does* have a dominant role in stabilization policy” (2004, p. 2, original emphasis). Bernanke has also argued that, in the short run, fiscal authorities may have important reasons to deviate from a balanced budget stance, especially when faced with national emergencies or deep recessions. In the long run, however, to preserve the public’s confidence, fiscal discipline must be exercised and the national debt must remain at stable and moderate levels (Bernanke 2003a).

What has changed in the Neoclassical Consensus is that fiscal policy is no longer considered ineffective as it was once viewed by the New Classical and Real Business Cycle theories. Instead, its distortionary and inflationary effects can be exploited in difficult times to complement stabilization via monetary policy. This new role for fiscal policy must be studied in the context of endogenous money. Furthermore, it must be recognized that if fiscal policy affects output and inflation, then it necessarily affects monetary policy as well. Similarly, an inflation targeting monetary policy can influence those fiscal effects (Woodford 1998). For these reasons, far from being independent from each other, some NEC economists are beginning to recognize that monetary and fiscal policies must be closely coordinated (Bernanke 2002; Woodford 1998; Wren-Lewis 2000).

The impact of fiscal policy on demand within the NEC is based on wealth effects from deficit spending that were previously rejected by the Ricardian equivalence hypothesis. There have been many challenges to the latter, but the most influential (and still controversial) one comes from Woodford’s 1995 Fiscal Theory of the Price Level (FTPL). Although, as the name suggests, this is a theory of price determination, it is this

approach that gives us the renewed role for fiscal policy effectiveness. To understand this new role, it is important to examine the following issues: 1) the effect of government spending and debt on the behavior and expectations of rational consumers, 2) the method of financing government spending and whether or not there is a binding budget constraint, and 3) the impact of fiscal policy on the banking system and Central Bank policy.

1.1 Ricardian Equivalence and the Effect of Government Spending and Debt on Rational Individuals.

As already noted, subscription to the Ricardian equivalence hypothesis as in Barro (1974) invalidated fiscal policy effectiveness. The only role for fiscal policy under this scenario is when it affects margins or *incentives* (Sargent 1986). The supply side effects of fiscal policy are readily embraced by the NEC.

Ricardian equivalence has been challenged on several grounds. First, it is quite possible that individuals may face liquidity constraints which prevent them from maintaining constant patterns of spending. Under Ricardian equivalence, if taxes increase, individuals are not expected to adjust their spending downward, because they know that a tax cut is coming, that will offset these temporary changes to incomes. But if individuals face borrowing/liquidity constraints (due to imperfect or incomplete financial markets, for example) they *will* reduce their demand and fiscal policy will have an effect. In a similar vein, Campbell and Mankiw (1990) have argued that this consumption smoothing effect is not empirically supported. This is not because the permanent income hypothesis is false, but because there are rigidities, which prevent the proper adjustments.

Another challenge to Ricardian equivalence critiques Barro's assumption of an infinite household lifespan. Individuals are mortal and if they believe that the current budget deficit will be offset *far* into the future (meaning that future generations will pay for today's deficit), they may in fact feel better off and increase their expenditures (Myles 2000). Solow (2005), for example, has recently observed that during the Japanese recession government deficit spending was not saved, as suggested by Ricardian equivalence, but was instead spent and had proven to be very effective in reviving the

Japanese economy. Households, it seems, adjust their spending due to a windfall from deficits.

The final and more important challenge to the Ricardian view of fiscal policy comes from the above-mentioned Fiscal Theory of the Price Level (FTPL) (Woodford, 1998). In this theory, Woodford claims that Ricardian equivalence is one special case among many. In fact *non-Ricardian* fiscal policy regimes are the norm. Under those regimes fiscal policy is effective. Woodford argues that according to Ricardian equivalence the following condition must always be satisfied.

$$B_t/P_t = \text{Present value of primary fiscal surpluses as of time } t, t = 0, 1, \dots \quad (4)$$

where B_t is the nominal value of government liabilities at the beginning of period t and P_t is the price level (see Bassetto, forthcoming).

This relationship states that the real value of government debt today must always equal the net present value of future surpluses. In a sense, real primary surpluses “finance” real government debt. So today’s deficits (which increase government debt) must necessarily be offset by future primary surpluses.

But there may be fiscal regimes that do not behave in this way. In other words, there may be no commitment by the fiscal authority to increase future taxes in order to offset the current rise in nominal government liabilities and balance the above budget constraint. In such cases, prices must *necessarily* adjust. The instances when governments promise no future offsets to today’s spending are called non-Ricardian fiscal regimes (this is Woodford’s terminology, but these regimes are also quite similar to Leeper’s (1991) “passive” monetary and “active” fiscal policy regimes). It is under such regimes that fiscal policies will have sizeable demand-side effects on both inflation and output and they are manifested via a wealth effect mechanism.

Suppose that we are in a non-Ricardian fiscal regime, where the government has made no commitment to abide by the above intertemporal budget constraint. Suppose also that a sudden increase in government spending is financed, as Woodford (1995) argues, by issuing bonds. The new injection of bonds will be interpreted by rational individuals (the bondholders) as a permanent windfall to their wealth, realizing that no

future tax increases will offset today's government spending. From this wealth effect, households will "demand goods and services in excess of those the economy can supply except insofar as prices rise" (Woodford 2000, p. 19).

The resulting boon to demand is only temporary, however, as the accompanying price increase will eventually erode the real value of the new financial assets. This in turn will induce households to either cut demand or increase supply. A new equilibrium condition is established. Debt has risen, spending has increased and so have prices to balance the intertemporal budget constraint above. This is the *bond drop* theory of inflation (Woodford 1995, p. 22n24; Allsopp and Vines 2005, p. 489): government bond finance produces a wealth effect and induces price increases.

1.2 Government Finance and Budget Constraints

Some economists have questioned the implications of non-Ricardian fiscal regimes under the FTPL. Just because there are such regimes, they argue, is it not still the case that government bonds would need to be repaid sooner or later? Doesn't the government face a budget constraint after all? If governments keep issuing nominal liabilities, wouldn't this lead to an unsustainable explosion in the government debt? The answer to all of these questions by Woodford is "no," but before we explain why, we need to discuss the traditional view of government finance and budget constraints—a view that is prevalent in the New Economic Consensus, save for the few voices like Woodford's (see also Bernanke 2002 and Allsopp and Vines 2005).

1.2.1 The Traditional vs. the New Consensus View of Government Finance

The traditional view of government finance is well known. Governments are generally considered to be no different than individuals and firms, whose optimizing behavior is subject to budget constraints. Because of the distortionary supply side effects of government spending, it is commonly believed that "good housekeeping" in the form of "sound finance" must be generally practiced (Allsopp and Vines 2005, p. 486).

Governments must abide by their intertemporal budget constraints and offset today's spending by current or future taxes. Ideally, these offsets should not occur too far into the future, in order to guarantee intergenerational equity (i.e., future generations should not

finance present generations' well-being). Furthermore, large deviations from these constraints are believed to undermine the sustainability of the government budget. Sustainability, therefore, is a major common concern for mainstream economists, but there is a growing disagreement about what exactly it means. In most analyses, it means that the government will simply be unable to borrow from the private sector, making deficit spending unsustainable. But others have argued that sustainability should mean *solvency*, since the government, unlike the private sector, could always borrow from its Central Bank.

Allsopp and Vines summarize the main two criteria for sustainability—one concerns the solvency of the state and the other refers to “tight and binding constraints to budget deficits and debt, intending to limit the freedom of the fiscal authorities” (2005, p. 486). The two authors argue in favor of the former definition, as in reality the interaction between the monetary and fiscal authority under an interest rate peg, permits sizeable fluctuations in the debt stock – a position that originates in Woodford’s FTPL (see also Woodford 1998) and is also adopted by Kirsanova, Jari Stehn, and Vines (2005) (more below).

Solvency for Allsop and Vines is not in question (2005). According to this criteria then, one could argue that government spending is forever sustainable. The implication of this definition is that one need not worry about budget sustainability, but about the real effects of deficit spending on the economy. This is reminiscent of the calls by early Keynesians such as Abba Lerner for functional finance, arguing that government policy should not be judged by the size of the deficit but by the impact it has on the economy (Lerner 1943). However, this is hardly a proposition embraced by the New Economic Consensus. In fact, the “sound finance” perspective dominates, suggesting that debt-to-GDP caps are necessary in order to avoid the distortionary and inflationary effects of government spending. Furthermore, as mentioned above, a main goal for policy is to avoid an intolerable tax burden on future generations:

When it comes to the aggregate stance of fiscal policy, the focus of interest for government today is in issues of sustainability and intertemporal equity rather than short-run stabilization. (Wren-Lewis 2000, p. 92)

For these reasons, as Allsopp and Vines argue, the general assignment of fiscal policy in the NEC is the “control and sustainability of the public finances as well as on the resource allocation and distributional effects of budgetary policy” (2005, p. 486).

Both Wren-Lewis (2000) and Allsopp and Vines (2005) reject this assignment of fiscal policy and instead advocate its important demand side effects. Leith and Wren-Lewis also observe that traditional concerns with budget constraints suggest that, if governments should play any stabilization role at all, it should generally be confined to stabilizing the debt stock through fiscal instruments (2005, p. 592). In this context, discretionary fiscal policy is particularly problematic as compared to automatic stabilizers, because it is more likely to lead to ever increasing deficits and debts. Furthermore, discretionary and temporary changes to government spending are believed to cause higher than normal deficits as suggested by the tax smoothing literature (Henning 2005, p. 28). The intertemporal budget constraint is an important underlying condition for understanding the role of fiscal policy in mainstream theory.

These are some of the deeply entrenched mainstream views on government finance, save for a handful of dissenting voices like Woodford’s. How does he answer the above three questions (reproduced again here): 1) Isn’t it the case that government bonds need to be repaid sooner or later? 2) Doesn’t the government face a budget constraint after all? and 3) If governments keep issuing nominal liabilities, wouldn’t they cause an unsustainable explosion in the government debt?

The answer to the first question is that the government can always issue more liabilities and roll over its debt indefinitely. As an example, Woodford suggests that “it is possible for a government to finance transfers to an initial old generation by issuing debt that it then ‘rolls over’ forever, without ever raising taxes” (2000, p. 30)⁵. But what if the private sector simply refuses to buy these government liabilities. Isn’t this the effective budget constraint?

It is easy to interpret the rejection of the public to buy government debt as a refusal to finance deficit spending. This could lead one to believe that the public’s preference for other assets would be a barrier to government financing. But such an

⁵ One could interpret his argument to support the view that Social Security faces no funding constraints, ever.

interpretation, Woodford argues, would be a mistake. There are two ways to circumvent this problem. First, if the government makes it clear that this is a permanent increase in nominal debt, people will buy it because it represents an increase in net wealth. Secondly, Woodford does not think that it is reasonable to assume that people will ever refuse to buy government bonds (if the government wants to sell bonds someone will buy them), but if they do, the Central Bank will step in.

In an interest rate peg regime (which Woodford calls “bond price-support regime”), it is the responsibility of the Central Bank to maintain the price of the short-term bond, i.e., the interest rate (2000, p. 8). Should the government decide to exogenously increase spending by debt finance, the Central Bank will serve as the residual buyer of bonds. Thus, even though households end up holding government bonds, it is still not the case that the private sector imposes limits on government spending. For Woodford, the proper interpretation of government debt owned by the public is the following:

...[it] is a consequence of optimal wealth accumulation by households, not of any constraint upon government borrowing programs other than the requirement that in equilibrium someone has to choose to *hold* the debt that the government issues.” (Woodford 2000, p. 30, original emphasis)

In other words, the private sector’s liquidity preference determines the amount of debt held by the public in equilibrium. Finally, the answer to the third question is that an explosion of debt is possible but not necessarily *technically* unsustainable (as we shall see later, there is a greater danger that an overly *tight* monetary policy stance would cause such an explosion). Although Woodford does not belabor this point, he is in fact arguing that there are no technical constraints to government spending, as is traditionally believed. The government is a very different agent from the private sector. Woodford summarizes these points:

A subtler question is whether it makes sense to suppose that actual market institutions do not actually impose a constraint of this kind upon governments (whether logically necessary or not), given that we believe that they impose such borrowing limits upon households and firms. The best answer to this question, I believe, is to note that a government that issues debt denominated in its own

currency is in a different situation than from that of private borrowers, in that its debt is a promise only to deliver *more of its own liabilities*. (A Treasury bond is simply a promise to pay dollars at various future dates, but these dollars are simply additional government liabilities, that happen to be non-interest-earning.) There is thus no possible doubt about the government's technical ability to deliver what it has promised; this is not an implausible reason for financial markets to treat government debt issues in a different way than the issuance of private debt obligations. (Woodford 2000, p. 32, original emphasis)

The unique nature of government liabilities is being recognized by the New Consensus, in support of the view that fiscal policy does not face traditional budget constraints. Allsopp and Vines also adopt the Woodford position to argue that, when exploring the stabilizing potential of fiscal policy, it is much more useful to talk about solvency than sustainability subject to some tight and binding constraints. Now that we have examined government finance, let us revisit the FTPL transmission mechanism of government spending and its wealth effect.

1.2.2 *The Wealth Effect and the Bond Drop*

Woodford's bond drop creates a wealth effect when these bonds are sold to private agents. In his initial statement of the FTPL (in Woodford 1995), he literally assumes a "helicopter bond drop" (much like Friedman's helicopter drop of money). But in a modern economy, how such a bond drop is financed needs to be explained. This is important because the wealth effect occurs *only* when the total private holdings of *net* government liabilities have increased. In other words "the relevant measure of nominal government liabilities for [the] discussion of the 'wealth effect' is the *sum* of government debt in the hands of the public and the monetary base" (private correspondence, April 7 2008, original emphasis). This would mean that if private agents use reserves to buy bonds, there would be no wealth effect, since they would be exchanging one government liability for another. Note that using "near monies," such as private checking accounts to buy government bonds will not do the job, because clearing such payments with the Fed in fact destroys an equivalent amount of reserves.

There are many reasons why in flexible exchange rate systems with government provided money, to view the private sector as "financing" government spending by purchasing its debt makes no sense. The main reason is that in sovereign currency

nations, governments always spend by electronically crediting bank accounts, i.e. by creating reserves (see Wray 2003). Once these reserves have been created, the private sector could choose to purchase government bonds, but this would hardly constitute financing government spending via a bond drop. Rather government spending is financed by a “reserve drop” first, i.e., by creating new reserves which could later be used to buy bonds. Woodford does not acknowledge this fact, even as he recognizes that a bond drop, which occurs from Federal Reserve Open Market Operations (OMOs), does not create net new government liabilities, and therefore produces no wealth effect (private correspondence, April 7, 2008). While he does not provide an explicit statement of how private purchases of bonds are financed, he does state that if the private sector refuses to buy government bonds, the Fed will do the job as a residual buyer (thereby removing any private sector financing constraint on the government). In his analysis the bond drop aims to explain how an increase in total government liabilities in the hands of the public can produce a wealth effect that will induce changes in prices. When the private sector increases its holdings of net nominal government liabilities, and the amount of which is greater than the present value of exogenously determined future surpluses, the private sector will understand that taxes will not be raised to offset the bond drop. Expecting greater overall lifetime consumption, households increase their spending, push prices up, and thus erode the value of these government liabilities, until the budget constraint in (4) above is in equilibrium. In fact for Woodford, the condition in (4) is just that—it is an equilibrium condition, not an actual constraint on the government imposed on it by private agents.

1.2.3 The Wealth Effect and Inflation

These results are radically different from most mainstream analyses. First, inflation is *not* a monetary phenomenon. In fact, the implication of Woodford’s approach is that inflation is *purely* a fiscal phenomenon. This is the source of much controversy in the mainstream with regard to the effects of fiscal policy, as it suggests that the quantity theory of money is irrelevant. Money is endogenously determined, velocity is unstable, and now prices are determined by the relationship of government deficit spending relative to the real value of future primary surpluses. This also means that there may be many different price levels

that will be consistent with the quantity equation relationship, and they will all depend on the level of nominal debt issued by the government. A bond drop via OMOs conducted by the monetary authority is not inflationary. Neither is a bond purchase (which is the same thing as the monetarist helicopter drop of money), since the total level of nominal government liabilities remains unchanged. A money drop, however, from a money-financed government spending (often called by the mainstream the monetization of debt), creates a wealth effect and *is* believed to be inflationary. Note also, that it was previously believed that the monetization of debt was forced on the Central Bank by the fiscal authority, in order to allow the government to extract seigniorage revenue. This is *not* a core proposition of the NEC. In fact, it is generally agreed that seigniorage is so small, as to be irrelevant to the understanding of the monetization of debt (e.g. Sims 1994; Woodford 2000). The FTPL turns neoclassical monetarist propositions on their head and opens up the door for a more realistic view of government finance in a world of endogenous money. As I have already suggested and will argue later, this view still suffers from some serious limitations, but it nonetheless adds a layer of realism absent from mainstream theory up to now. What is paradoxical, however, is that the inflationary impact of government spending has served to reinforce belief in the *need* to impose budget constraints, even if they do not naturally exist to the detriment of useful stabilization or full employment policies. Sound finance remains unchallenged.

1.3 The Impact of Fiscal Policy on the Banking System and on Central Bank Policy

The final issue to consider is the interaction between the monetary and fiscal authorities under this “passive monetary active fiscal regime” (Leeper 1991). Allsop and Vines argue that fiscal policy ineffectiveness within the NEC carries a very specific meaning. There is a possibility, the authors suggest, that “the behavior of the fiscal authorities will be taken into account by the monetary authorities, leaving the overall macroeconomic behavior of the system little changed” (2005, p. 494). In other words, the central bank can “internalize” fiscal behavior. Monetary policy still sits at the steering wheel and only “allows” fiscal policy to be effective.

One could argue that an inflation-fighting Central Bank could increase interest rates in order to offset the inflationary impact of government. But the ability of the monetary authority to neutralize the fiscal inflationary effect is also debated.

Remember the budget constraint from above:

$$B_t/P_t = \text{Present value of primary fiscal surpluses as of time } t, t = 0, 1, \dots \quad (4)$$

If the Central Bank fights inflation, and prices do not adjust upward to eliminate the wealth effect and equilibrate the intertemporal budget constraint above, real government debt will forever be larger than the net present value of the primary surplus. This may lead to a situation where demand is forever greater than supply (because rational agents know that this disequilibrium will persist due to the inflation-targeting monetary stance) and the wealth effect could turn out to be so large as to be hyperinflationary. Woodford makes a similar argument, suggesting that a reaction function like the one proposed by Taylor 1993 may actually *accelerate* the inflationary effect of government spending (Woodford 1998). A fiscal policy disturbance may become more serious in an inflation-fighting monetary policy regime, than in the traditional ISLM framework, where the shift in the IS curve can be neutralized by MP (ibid., p. 21).

Taylor has proposed an aggressive monetary rule (Christiano and Fitzgerald 2000), but if the initial value of nominal public debt is very large, such a policy Woodford argues will backfire. As Christiano and Fitzgerald explain, a higher nominal interest rate intended to fight the inflationary effects of high government debt, would lead to a more rapid increase in the nominal debt. Since the expected future primary surplus does not change, prices must adjust, leading to an increase in inflation. An inflation targeting monetary authority, which uses a more aggressive Taylor rule, will automatically increase the nominal interest rate, further exasperating nominal debt and therefore inflation. An inflationary spiral results (ibid., p. 32). This according to Loyo

(1999) was the case in Brazil during the 1990s, which he describes as the “tight monetary paradox”^{6,7}.

The foregoing analysis seems to undermine the traditional view of Central Bank independence. Woodford for example says that he supports the definition of independence in the sense of pursuing “*autonomous* monetary policy, ... a rule for setting its instrument (in practice, a nominal interest rate) that is *independent of fiscal variables*” (2000, p. 4, original emphasis). But he makes it clear that, if this nominal rate rule is too aggressive, it may turn out to be destabilizing and inflationary, if the fiscal stance is consistent with large nominal debt (he therefore suggests alternative rules to circumvent this problem). It is unclear how fiscal policy can be separated from monetary policy. Both have an impact on output and inflation according to this interpretation. We have entered a new age of policy effectiveness, where the optimal policy mix is in dispute. Some have argued that it is fiscal policy that is responsible for this policy mix and that once it has been established, it could have significant stabilizing effects (Allsopp and Vines 2005).

Although NEC authors have called for the coordination between monetary and fiscal policy, it is still the choice-theoretic assumptions that drive the analysis of the effects of monetary *or* fiscal policy. If fiscal policy is clearly articulated to the public as Ricardian (i.e., deficits are always exactly offset by surpluses), fiscal policy will be ineffective; but if it is non-Ricardian, then fiscal policy, monetary policy, *and* their interaction must be clear and transparent to the public, so that rational agents can make optimal decisions.

Because there is a widespread agreement that fiscal policy is inherently inflationary, it is believed to be useful mainly in deflationary conditions. In normal times, monetary policy must dominate and fiscal policy should remain passive, with its only aim

⁶ Others have argued that we can eliminate the inflationary effect of government by imposing spending constraints, debt-to-GDP limits (e.g. Maastricht criteria in the EU), but Woodford shows that spending bounds do not change his conclusions. In fact imposing a ceiling on government spending could make self-fulfilling deflation possible (Woodford 1998, p. 3). Thus monetary and fiscal policy must be very carefully coordinated.

⁷ This happens not because the Fed monetizes the government’s debt. In fact for Woodford the monetization analogy is not useful. The only thing that matters is that large deficit spending may create expectations of even bigger future deficits, which through their excessive wealth effect produce hyperinflation (1998).

to anchor expectations adequately. If fiscal policy is needed, it needs to be automatic, transparent, and credible and must abide by rules.

2. FISCAL POLICY IN THE NEW ECONOMIC CONSENSUS: POLICY

The application of the New Consensus view to policy is perhaps best illustrated by the writings and policy actions of new Federal Reserve chairman Ben Bernanke. Bernanke embraces the core concepts of the NEC (the IS curve, the Phillips curve, and the Taylor rule) and unlike his predecessor Greenspan, avidly supports inflation-targeting policies (2003a). He believes Taylor rules to be very effective in meeting the dual challenge of inflation and unemployment (Seidman 2006, p. 20)⁸.

Also unlike Greenspan, he has advocated the need for fiscal policy as a stabilization tool in times of crises.⁹ To be effective, however, fiscal policy must be closely coordinated with monetary policy. This coordination, as mentioned above, puts into question traditional Central Bank independence. For Bernanke, the role of a Central Bank is different in inflationary and deflationary environments. In the latter, there may need to be a “more cooperative stance on the part of the Central Bank” (Bernanke 2003b). He suggests that fiscal policy may need to take the reigns during severe downturns and monetary policy must facilitate it. Unlike monetarists, he is suggesting that fiscal policy should be allowed to dominate. How might this be accomplished and what type of coordination does Bernanke suggest?

For Bernanke, as for other NEC economists, fiscal policy has an important role to play in a Japanese-style deflationary drag, when monetary policy reaches its zero interest rate bound. However, unlike Woodford, the fiscal effect comes *only* from a wealth effect

⁸ Seidman reports that Bernanke personally adheres to the Humphrey Hawkins dual mandate unreservedly and that inflation targeting does not sacrifice employment for price stability.

⁹ Laurence Seidman has argued that Bernanke’s writings and speeches are much more lucid than Alan Greenspan and that “after Bernanke has established his anti-inflationary credentials, he will adopt a policy that balances concerns over unemployment and inflation” (Seidman 2006, p. 19). It is interesting to note that Bernanke’s first major challenge two years after his appointment as Federal Reserve Chairman is to fight a severe financial meltdown and probable recession, *a la* Japan. There are increasing indications that inflationary pressures lurk in the background, but Bernanke has chosen to aggressively cut interest rates and orchestrate various financial bailouts, rather than fight rising prices at the present time.

via a money drop (not via a bond drop); such a helicopter drop of money can occur when the Fed facilitates a money financed government tax cut.

2.1 Quantitative Easing

Before we look at this effect, it is worth keeping in mind that the objective here is quantitative easing, which could be carried out by the Central Bank in several different ways. For Bernanke, as for traditional monetarists, the money supply will increase as a result of Open Market Operations, when the Central Bank buys short-term debt from the private sector and supplies reserves. Bernanke suggests however, that in a Japanese style recession, alternative quantitative easing may be necessary via non-traditional OMOs when the Fed buys long-term government debt and brings long-term interest rates to zero (Bernanke 2003b).¹⁰ But this is still in the realm of monetary policy and, as already discussed, the NEC believes that the Fed does not have exogenous control over the money supply.

Central Bank quantitative easing via purchases of various short- or long-term assets may not work since the Central Bank has “no unilateral authority to rain money on the population” (Bernanke 1999, p. 22). But a quantitative easing via a money-financed tax cut can be undertaken via fiscal channels (Bernanke, Reinhart, and Sack 2004, p. 20). Think George W. Bush’s tax rebate checks.

Bernanke argues that the Fed can accomplish such a quantitative easing through a fiscal money drop, i.e. via money-financed government stimuli, among which he prefers tax cuts. Resorting to fiscal policy is necessary because even with the alternative monetary policy, even if the Fed is able to buy short or long term assets from the banking system, there is no guarantee that the extra reserves it supplies will find productive uses, i.e. that this new cash will be redirected into the hands of consumers and investors. This may happen either because banks are still unwilling to lend or because individuals are still unwilling to borrow. A bank loan even at a 0 % rate of interest still needs to be repaid, while a tax rebate puts cash in the hands of households, with no strings attached.

¹⁰ Note that this is exactly what Bernanke has been doing in early 2008 to rescue the economy. He is implementing non-traditional OMOs and is allowing banks to use bad mortgage assets as collateral for borrowing from the Fed. In addition, he seems to be extending Lender of Last Resort assistance not only to commercial banks but to investment banks as well.

For such a quantitative easing to occur, some intra-governmental cooperation is required (Bernanke 2003b, p. 23). So how do we accomplish such a “money financed tax cut”?

Bernanke answers:

Under a fiat (that is, paper) money system, a government (in practice, the central bank in cooperation with other agencies) should always be able to generate increased nominal spending and inflation, even when the short-term nominal interest rate is at zero. . . . The U.S. government has a technology, called a printing press (or, today, its electronic equivalent) that allows it to produce as many U.S. dollars as it wishes at essentially no cost. (Bernanke 2002)

In other words the Central Bank will finance the government policy by creating electronic credits to tax payer accounts and by providing the requisite reserves. Bernanke further argues that these tax cuts will be spent and not saved (which is similar to Woodford’s wealth effect in non-Ricardian regimes). Bernanke continues:

In practice, the effectiveness of anti-deflation policy could be significantly enhanced by cooperation between the monetary and fiscal authorities. A broad-based tax cut, for example, accommodated by a program of open-market purchases to alleviate any tendency for interest rates to increase, would almost certainly be an effective stimulant to consumption and hence to prices. . . . A money-financed tax cut is essentially equivalent to Milton Friedman’s famous “helicopter drop” of money. (ibid.)

Thus Friedman’s helicopter drop is reincarnated in the New Consensus via fiscal policy. From Bernanke’s analysis, cash in the hands of people creates the wealth effect (not bonds, as in Woodford). One could argue, therefore, that there is no particular reason why fiscal policy should involve tax cuts; spending too could theoretically do the job. But the strong supply side bent in the NEC continues to favor tax cuts and there are few who argue for government spending as a stabilizing tool (e.g. Leith and Wren-Lewis 2005 and Krugman 2005).

2.2 Wealth Effect and Expectations

For Bernanke the wealth effect occurs not from persuading the public to buy government bonds but from literally raining money on them via a money-financed tax cut (such as Bush's tax rebate checks).

If we compare Bernanke's version of fiscal policy effectiveness with Woodford's, we find them to be very similar, although Bernanke clearly argues for a fiscal money drop, while Woodford believes that both a money and bond drop have an effect. Both policies are effective because they increase net nominal wealth. Bernanke also prefers the money financed tax cut, because this policy does not increase total government debt. He explains this effect in the context of Japan's latest recession:

Consider, for example, a tax cut for households and businesses that is explicitly coupled with incremental Bank of Japan purchases of government debt—that the tax cut is in effect financed by money creation. Moreover, assume that the Bank of Japan has made a commitment, by announcing a price level target, to reflate the economy, so that much or all of the increase in the money stock is viewed as permanent. . . . Under this plan . . . the government's concerns about its outstanding stock of debt are mitigated because increases in its debt are purchased by the BOJ [Bank of Japan] rather than sold to the private sector. Moreover, consumers and businesses should be willing to spend rather than save the bulk of their tax cut: They have extra cash on hand, but—because the BOJ purchased government debt in the amount of the tax cut—no current or future debt service burden has been created to imply increased future taxes. Essentially, monetary and fiscal policies together have increased the nominal wealth of the household sector, which will increase nominal spending and hence prices. The health of the banking sector is irrelevant to this means of transmitting the expansionary effect of monetary policy. (Bernanke 2003b, quoted in Seidman 2006)¹¹

The important choice theoretic point of agreement between Woodford and Bernake, however, is that the wealth effect depends on *expectations*. Bernanke is quick to point out that this policy will work so long as taxpayers perceive the tax cut to be a permanent windfall, which will not be offset by future tax increases. In fact, precisely because the Central Bank is purchasing the government debt, there is no need to raise taxes to repay it at a later date. So rational agents understand this to be a permanent

¹¹ Note that Bernanke adds another important reason why fiscal policy is potent. The financial system may be in disarray and monetary policy through the usual transmission mechanisms will not work, not only because of the zero interest rate bound, but also due to the poor health of the financial system. However, with a money-financed tax cut, fiscal policy sidesteps the financial difficulties and offers a direct stimulus.

increase in their incomes. The job of policy is not only to be non-Ricardian but also to communicate this regime to the public. If fiscal policy is transparent it too can anchor expectations appropriately.

2.3 Inflation and Expectations

The role of expectations in fact delineates the difference between the money drop under Monetarism, where it produces a money illusion and the money drop in the New Economic Consensus. The New Consensus mechanism is reminiscent of the early “money illusion” adjustment, except that now it is couched in rational expectations terms. Previously, an exogenous increase in the money supply was perceived by agents to be an actual boon to nominal incomes. Suffering from adaptive expectations and not realizing that this increase in the money supply is only inflationary, agents increase their spending, which pushes prices up and neutralizes the effect of the increased demand. Full employment is reestablished but with higher prices. In Monetarism we have past-binding expectations, which generate money illusion that causes consumers to spend more. In the NEC rational and forward looking agents face, not an exogenous increase in the money supply, but an exogenous increase in government spending. Instead of a *monetary* helicopter money drop, we now have a *fiscal* helicopter bond *or* money drop. Rational agents are not “fooled,” instead they understand that the bond drop will not be offset in the future. They boost spending until the wealth effect dissipates as prices rise. Long-term equilibrium is restored.

The difference between the old monetarist transmission mechanism and the one in the NEC is that inflation is due to forward-looking expectations, which alter the consumption behavior of optimizing agents. The size of the bond drop will determine the inflationary impact of deficit spending, so long as fiscal policy is transparent and expectations are well anchored, i.e. so long as households understand what the size of the deficit is and whether it will be offset or not. The reason why demand increases relative to supply (and produces the inflationary effect) is because we face labor market (or other) rigidities, which prevent the system from equilibrating immediately to full employment. Fiscal policy has an effect on output and inflation.

According to Bernanke, the NEC view coheres with the old monetarist interpretation in that inflation is seen as the result of “overissuance of nominal government liabilities” (Bernanke 2003c, p. 211). It seems Bernanke is not ready to give up the old quantity equation relationship, which leads to similar conclusions. In the NEC it does not matter whether government finances spending by bonds or by printing money, excessive amounts of each will be inflationary.

Both Woodford and Bernanke are still unable to escape their sound finance background. They are both making the case for fiscal policy only in extraordinary circumstances. Otherwise, they advocate sound fiscal discipline. Bernanke believes that fiscal policy must be sound to anchor expectations in the short run which would make it more potent during recessions (Seidman 2006, p. 27). The inflationary impact of fiscal policy in Woodford also motivates fiscal discipline and commitment to certain debt limits (2000, p. 71).

The choice-theoretic foundations in Bernanke, Woodford and other NEC economists are clear: fiscal policy would operate as a supply-side or demand-side tool depending on how it impacts incentives and expectations. Fiscal policy through Woodford’s bond drop or Bernanke’s fiscal money drop works as a policy of *managing expectations*. All of the above-mentioned effects will be nullified if rational agents do not find fiscal policy credible and expect a reversal in the stimulus. Fiscal policy manages inflation by anchoring expectations appropriately.

It is not enough for fiscal and monetary policy to select the right policy stance; they must also make rational agents *believe* that these are the proper policies. Credibility and transparency are crucial not only for monetary policy but for fiscal policy as well. This is why fiscal policy rules have been suggested in place of discretion. While fiscal and monetary rules are preferred, Bernanke argues that in a deflationary environment, fiscal policy should dominate and *discretionary* tax cuts can be of great help. These cuts need to be immediate, temporary, with long lead lags, and should not cause major changes in the federal government’s structural budget deficit (Bernanke 2008).

To conclude, issues of government finance in the NEC are crucial. It is slowly being understood that in the context of endogenous money/interest rate maintenance regime, governments do not face technical/operational constraints to spending. Yet,

notions of sound finance and intertemporal budget constraints pervade New Consensus thinking to the detriment of genuine understanding of the stabilizing potential of fiscal policy in an endogenous money context.

3. FISCAL POLICY AND FULL EMPLOYMENT IN THE NEW ECONOMIC CONSENSUS

The final point to consider is what, if any, is the connection between fiscal policy and full employment. According to Seidman (2006), Bernanke claims to adhere strictly to the Humphrey-Hawkins mandate. In general, however, even those calls in favor of fiscal policy as a stabilization tool, do not explicitly link it to the goal of securing full employment. There are two reasons for this enduring split between fiscal policy and employment concerns. One is theoretical and the other is methodological. In the New Consensus, the choice theoretic micro-foundations of macro-outcomes authenticate employment determination solely as a function of the optimizing behavior of hyper-rational individuals. Policy may be able to affect employment outcomes as long as it is able to influence individual behavior.

When Keynes made the connection between fiscal policy and full employment, he was concerned with how to eliminate involuntary unemployment. In the NEC, the dynamic general equilibrium model (originally developed by Real Business Cycle theorists and later embraced by New Keynesians) does not permit the study of involuntary unemployment. In fact, because of methodological necessity, the type of unemployment that NEC framework is able to model is frictional, i.e. purely voluntary (Zouache 2004). Zouache explains how in the NEC, the search framework of analyzing employment issues, necessarily means that unemployment is voluntary:

[T]he convergence of New Keynesian Economics and Real Business Cycle theory has a consequence on the conception of unemployment in macroeconomics, particularly with regard to dynamic general equilibrium models amended with a matching function. The unemployed are then defined as workers without jobs and looking for new jobs (and the vacancy as unemployed jobs looking for workers). Unemployment is temporary in dynamic matching models since «most unemployed individuals have been employed at some point in the past» (Rogerson 1997, 78). Unemployment is temporary because the worker will have a

job in the future. “With the exception of a few ‘discouraged’ workers, unemployed workers are always between jobs, or between some other state and a job” (Pissarides 2000, xv). This quotation confirms that unemployment is temporary and will last only a given period of time. (ibid., pp. 111-112)

Zouache argues that unemployment appears to be “voluntary in dynamic models with a matching function because separations between firms and workers are desired by both” (ibid., p.112). In other words, there is no way of telling whether the individual left the workplace voluntarily or is involuntarily unemployed. If a worker leaves a firm, he could take back his position at a wage that would facilitate the matching between him (the now unemployed) and his firm (the now vacant job), but he has voluntarily left his job. If at some point in the future, he decides that he is all too happy to exchange his situation (of voluntary unemployment) with someone who is employed, it would appear as though he is involuntarily unemployed since he now wants that job. In short, we cannot tell the difference between voluntary and involuntary unemployment (ibid.).

Zouache also points out that the NEC adopts the long standing Lucas belief (echoed by Blanchard 2000) that involuntary unemployment has no place in the macroeconomic research program (Zouache 2004, p. 113). Zouache concludes:

New NeoClassical Synthesis could be interpreted as the final step of the process that will lead to the end of the concept of involuntary unemployment in macroeconomic research... Now a methodology is not neutral since it is based upon a set of theoretical and quantitative tools more or less suited to the analysis of certain issues. And the emerging methodological consensus in macroeconomics will necessarily lead to the study of certain conceptual issues and to the neglect of others. In particular, it seems that the New NeoClassical Synthesis will definitely exclude the concept of involuntary unemployment from the research agenda of future macroeconomics. (ibid., pp. 113-114)

This is a very grim view of the limited possibilities the NEC leaves us with respect to policy to deal with unemployment. It should be noted that not everyone subscribes to the Lucas view that involuntary unemployment is irrelevant (e.g., as early as 1989 Mankiw has argued that it exists and economists must study it). But if the NEC is not capable methodologically to deal with this concept, then the only goal for fiscal *or* monetary policy is to correct short-term fluctuations around full employment. Once

again, the transmission mechanism for their effect is through the expectations and behavior of rational individuals.

Involuntary unemployment was *raison d'être* for Keynes's revolutionary theory. The NEC fiscal policy has little to do with Keynes's theoretical contributions and nothing in common with his policy recommendations.

4. THE POST-KEYNESIAN APPROACH TO FISCAL POLICY: FUNCTIONAL FINANCE

From the discussion so far it is clear that there is a role for fiscal policy in the NEC although it is not aimed at solving involuntary unemployment. Furthermore, it is also clear that NEC is an inherently monetary regime. Fiscal policy is expected to take a back seat to monetary policy and exercise fiscal discipline in normal circumstances. This view is reinforced by the Fiscal Theory of the Price Level where fiscal effects are especially destabilizing in inflation-fighting regimes. Although the role of fiscal policy in the NEC is far from established, the Post-Keynesian School of Thought has long believed that it is by far the more potent tool for macroeconomic coordination and stabilization.

The shape and form of fiscal policy in the Post-Keynesian literature however is not entirely clear either, although there is more consensus here than in the mainstream. Most recent Post-Keynesian calls for fiscal policy resurrect Abba Lerner's functional finance approach (Lerner 1943). For Lerner fiscal policy was to be judged not by ex-post budgetary results, but by its real effects on the economy. He also explained how governments faced no limits to spending and argued that it was the role of the fiscal authority to spend as much as it was necessary to bring the economy to full employment.

In recent Post-Keynesian contributions, however, we can broadly distinguish between two specific types of functional finance. One argues that the primary objective of fiscal policy is to secure full employment and the best way to do this is via a universal job guarantee. The other supports injecting as much aggregate demand as necessary to close the output gap but without an explicit guarantee to provide jobs for all. We shall call them functional finance via job creation and functional finance via aggregate demand. This section summarizes these two approaches and considers how they compare

with the New Consensus fiscal view. We begin with functional finance via aggregate demand, since deficient aggregate demand has been a long-standing Post-Keynesian concern.

4.1 Functional Finance via Aggregate Demand (FFAD)

This is by far the most common approach to fiscal policy within the Post-Keynesian camp. Recent contributions include that of Robert Eisner (2003), who had often argued that flawed notions about the federal deficit leave aggregate demand in a too restrictive stance (Eisner 1986). Colander and Matthews (2006) also claim that budgets are only accounting phenomena and taxing and spending must be adjusted in an anti-cyclical manner with a focus on their economic impacts.¹² Arestis and Sawyer have perhaps most explicitly made the case for fiscal policy via functional finance, where the task of government policy specifically is to secure high levels of aggregate demand, when private demand is deficient (2003).

One of the distinctive features of the FFAD approach is that the objective of fiscal policy is to close the demand gap. To this end, Arestis and Sawyer are two advocates of functional finance who believe that this approach is not necessarily inconsistent with the New Economic Consensus (2004). Fontana (2008) for example argues that the NEC model can be easily amended by replacing the output gap equation (the IS equation) with one that specifies the output gap as a function of real government expenditures. Others, too, have attempted to model fiscal policy within NEC by adding new equations to the mix or modifying them. Setterfield (2007), for example, offers a pseudo-Taylor rule as a function of the public sector borrowing requirement. Arestis and Sawyer (2004) have also made amendments to the NEC model in a similar vein.

For most Post-Keynesians, filling the demand gap is the goal, but that gap—the difference between actual and potential output—is not the same thing as the one in the New Consensus. For the latter, potential output is that which is achieved under perfectly

¹² Although they recommend sound finance in expansions and functional finance in contractions.

flexible prices and wages. For the former, it is a measure of full employment, where the Keynesian type of involuntary unemployment has been eliminated¹³.

Arestis and Sawyer are the main advocates of the functional finance approach via aggregate demand management. In Arestis and Sawyer 2004, the authors critique a series of NEC assumptions that undermine fiscal policy effectiveness. In particular, they reject the crowding out effect and add to the critiques of the Ricardian equivalence hypothesis. One of the main reasons why crowding out does not occur is because the interest rate (in an endogenous money system) is under the direct control of the monetary authority.

Ricardian equivalence is also untenable. The two authors argue that the main problem with Ricardian equivalence is that it *assumes* full employment. If however the economy operates below that level, savings will exceed investment and budget deficits could be used to “mop up” these savings and close the demand gap. Thus, it is deficit spending that can bring the economy to full employment, and because it is accomplished by mopping up savings, it appears as though the windfall from deficits was saved by households. In other words, the excess saving/deficit spending relationship is simply an *ex post* accounting identity. If crowding out and Ricardian equivalence are irrelevant, the authors argue, there is room for fiscal policy. The type of fiscal policy that they advocate is one that encourages investment and growth.

Fiscal Policy of the ‘functional finance’ type boosts aggregate demand, and thereby has a stimulating impact on investment, which raises the future productive capacity of the economy. Further, some advocates of ‘functional finance’ have viewed public sector investment as a form of expenditure, which can be varied according to the state of private demand, and to the extent to which the budget deficit permits additional public investment there can also be a boost to future productive capacity (this, of course, will depend on the nature of the investment, for example investment in roads or in defense equipment and the productivity of that investment. The growth rate may thereby be favorably enhanced by fiscal policy. (Arestis and Sawyer 2004, p. 139)

The essential feature of this functional finance approach is that it rests on 1) increasing aggregate demand, 2) stimulating investment, 3) increasing productive capacity, and thereby favoring growth. This is a pro-investment pro-growth policy, which

¹³ Recall that in the Keynesian tradition, flexible wages and prices do not guarantee full employment but may actually *increase* unemployment.

aims to offset or reduce the demand gap. This policy is not wedded to particular types of public spending or public investment. These could range from defense spending to building roads, and the type of fiscal stimulus would depend on the state of and shortfall in private demand as well as on the productivity of existing investment.

For Arestis and Sawyer, the main virtue of functional finance is that it always raises demand (unlike in the NEC, where fiscal policy has demand side effects only in non-Ricardian regimes). Functional finance raises “the level of aggregate demand, where it would otherwise be too low, while leaving open what level of economic activity is regarded as optimum or desirable” (ibid., p. 132).

The case for fiscal policy is made when there is deficiency in aggregate demand, “below that required for the target level of economic activity.” Although the authors argue that functional finance can be used to secure full employment, this is by no means a pre-condition to exercise functional finance. Deficit spending will always raise economic activity, but nothing binds the fiscal authority to pursue full employment, although Arestis and Sawyer argue strongly in favor of functional finance for full employment. It is aggregate demand that determines the level of investment and it is investment that determines the level of employment. Therefore the authors argue: “in terms of policy implications, appropriate demand policies are required to stimulate investment and underpin full employment” (ibid., p. 97). But complications arise when the economy runs into its inflation barrier, which is (by the authors’ admission) somewhat similar to the NAIRU, although it can fluctuate for many different reasons (tied to supply or demand side constraints). Inflation for Post-Keynesians is not the same thing as inflation in the NEC. Arestis and Sawyer offer a structuralist view of inflation, which is rooted in the Post-Keynesian administered price framework and depends on a series of factors such as capacity utilization and the evolution of capital stock.

The implication of this analysis is that, in an economy with a changing inflation barrier, full employment would be given by the level of employment when aggregate demand runs into this inflation barrier. So there may be many different levels of full employment, depending on the level of aggregate demand and on the location of the inflation barrier. By implication the condition where all who want jobs are gainfully employed is but one level of full employment among many. For the two authors the

appropriate definition of full employment seems to be the non-inflationary level of output. Although, by their own admission, this is somewhat similar to the NEC definition of the NAIRU, they are critical of the latter concept and its fixed supply assumption. For Arestis and Sawyer output and inflation are determined by different Post-Keynesian forces, but the end result is quite similar—at a certain point we run into an inflation barrier where any further reduction in unemployment is inflationary. The functional finance approach via aggregate demand management has a floating definition of full employment, depending on the underlying economic conditions and the composition of aggregate demand relative to the choice of technique and capacity utilization.

Arestis and Sawyer recognize that in some cases the non-inflationary full employment level will still involve a large number of involuntarily unemployed individuals. In this case the aggregate demand approach will not help. Thus, they argue that aggregate demand is only a necessary although not a sufficient condition to achieve low levels of involuntary unemployment. To reduce this kind of unemployment, the authors believe that some collective wage determination and price setting is needed, as well as expansion of productive capacity and heavy investment in areas with large unemployment. This is an approach that is driven by growth, investment and demand or supply side expansions to achieve full employment. But there is no explicit commitment to secure jobs for all; in fact such a policy is explicitly rejected by Sawyer (2003).

With respect to the NEC model, Arestis and Sawyer reject the crowding out effect, Ricardian equivalence, and the fixed supply assumptions in making their case for fiscal policy. A final word must be said about government finance. The two authors argue that the NEC treats the growth rate as given, but in a dynamic Post-Keynesian approach growth rates would change, and thus fiscal policy need not run against traditional budget constraints. Also they recognize Lerner's claim that government debt and deficits are forever sustainable because "the interest can be paid by borrowing still more" (Lerner 1943, p. 356). However the authors favor a different kind of definition for sustainability. Government budgets are sustainable so long as the rate of economic growth exceeds the post-tax rate of interest on debt (Arestis and Sawyer 2004, p. 151). They also argue that such sustainability is empirically validated. Similar to the NEC, they believe that an overly tight monetary policy can undermine sustainability but posit a

different transmission mechanism. For Woodford, tight monetary policy increases total nominal debt in a non-Ricardian regime, making it even more inflationary, and possibly hyperinflationary. For Arestis and Sawyer, tight monetary policy has an indirect effect on investment and output, which undermines growth (relative to the interest on debt) and thus the sustainability of the primary budget deficit (ibid.).

These are some of the main features of the functional finance approach via aggregate demand management. The core proposition is to boost aggregate demand, investment and growth to underpin full employment. This is by no means a novel view and there is a long tradition in Post-Keynesian economics that supports it. One of the main virtues of this approach is that it has explicitly contrasted the Post-Keynesian view of fiscal policy effectiveness with the NEC view of relative fiscal policy ineffectiveness. We now turn to the approach to functional finance via direct job creation

4.2 Functional Finance via Direct Job Creation (FFJC)

Fiscal policy through direct job creation is also not new. Keynes's public works for example are just such a policy. Many of Keynes's contemporaries had called for the government to guarantee full employment (see for example Pierson 1941 and Beveridge 1945). This could be done, some argued, if the government acted as an employer of last resort (ELR). The ELR proposal as it is discussed in the modern literature comes to us from the work of Hyman Minsky (1986). A similar proposal has also been developed in Mitchell (1998) and Wray (1998). What is new in this approach is that it makes an explicit link between guaranteeing employment and government finance (see Mosler 1997-98). The latter is largely informed by Knapp's *State Theory of Money* (1924) and Lerner's view of money as a creature of the state (1947). It is argued that Lerner's functional finance approach must take the form of not just any type of spending, but of guaranteeing employment (Forstater 1999). In fact it is explicitly rejected that full employment depends on increasing aggregate demand, rather it depends on an open-ended guarantee of an employment opportunity (Mitchell and Wray 2004).

This approach, unlike the one above, does not have a floating (non inflationary definition) of full employment. Full employment here is the condition where *all* who are

ready, willing, and able to work are gainfully employed at a given base wage.¹⁴ The supporters of this approach generally come from the Post-Keynesian camp known as Neo-Chartalism¹⁵, which emphasizes two key points with respect to fiscal policy: 1) there are no *inherent* borrowing or taxing constraints to government finance in sovereign currency nations, and 2) the link between fiscal policy and full employment must be made explicit.

This approach embraces Lerner's proposition that government budgets should be judged by their effects and not by their size (Lerner 1943). Furthermore, they argue that because deficits and the debt are always ex-post accounting results, fiscal policy that aims to hit a particular deficit/debt target is wholly misguided (Tcherneva 2006a). Instead, fiscal policy should aim to achieve full employment by ensuring that all who want jobs are gainfully employed. They also believe that delivering true full employment via stimulating aggregate demand maybe a very difficult, if not impossible, thing to do. Thus, to ensure that fiscal policy is always consistent with full employment, the latter must be explicitly guaranteed.

4.2.1 *Government Finance*

For advocates of functional finance via direct job creation, misconceptions of government finance is the single most important obstacle to achieving important social objectives such as full employment.¹⁶ Under no circumstances does a federal government in a sovereign currency regime with flexible exchange rates face spending constraints, unless such constraints are self-imposed (legislatively or otherwise). And even in those cases as, for example, illustrated in the case of the U.S., these legal deficit/debt limits are often adjusted when the government desires to finance initiatives, such as the War in Iraq.

This approach stresses that our understanding of monetary and fiscal policy, as well as the interaction between the two, in an endogenous money system is incomplete without also understanding that money is what Lerner (1947) called "a creature of the

¹⁴ Some have argued that this base wage should be a living wage (Tcherneva and Wray 2005).

¹⁵ Neo-Chartalists resurrect a historically grounded approach to money, emphasizing the historical fact that money has always been delimited by proclamation. It comes from the word "charta." This approach comes from Knapp (1924), which was endorsed by Keynes (1930).

¹⁶ Some have used the functional finance approach to show that other socially desirable goals such as universal social security or medicare can be achieved once we understand the role of government finance (Bell and Wray 2000; Niggle 2003).

state.” As Bernanke so presciently put it, the government has at its disposal a tool of finance that is not available to any private agent—that is the printing press or its modern electronic equivalent. And as Woodford has also recognized there are no technical limits to government spending when that spending is denominated in the government’s own liabilities.

Any point of agreement between Neo-Chartalists and NEC rests on this particular notion of government finance and the unique nature of government liabilities (the implications of which, to emphasize, are still vigorously debated within the NEC). One aspect of Neo-Chartalism that has not been recognized by the NEC is that the purpose of taxes is not to finance spending but to create demand for government provided money (it is also unclear whether supporters of functional finance via aggregate demand make use of this important mechanism, as it has not been discussed much in their work). As the father of the modern U.S. paper currency Ben Franklin had argued, paper money derives its value from the *future* taxes that the government collects (Grubb 2006).¹⁷ In other words, in a world where government liabilities are used for private sector transactions, the provision of these liabilities to the public via government spending comes *first* and taxation follows *later*. Furthermore, in modern economies with sovereign control over its fiat currency, the purpose of bond sales is not to finance government spending, but to drain unneeded reserves from the banking system and offer an interest-bearing alternative. Bond sales are the interest maintenance vehicle of an interest-targeting monetary authority (see Fullwiler 2006 for technical analysis).

Note here that Woodford’s treatment of money could be made consistent with the Neo-Chartalist view:

[N]o one would doubt the ability of a government to issue an arbitrary amount of currency, without any commitment to retiring it from circulation (*e.g.*, by running

¹⁷ There is a large body of literature on the history of money, that studies societies as far back as Ancient Egypt and Mesopotamia to the monetization of Africa or modern currencies (*e.g.* Hudson 2003, Henry 2004, Forstater 2005). This literature has demonstrated that money predates markets and was always established as a unit of account first, and means of payment and medium of exchange second, which in turn was only possible with the intervention of some central/public authority. Understanding of history is important because it elucidates that taxes create demand for a particular currency and never “finance” government spending. The government can choose anything to serve as money by simply declaring that it will serve to extinguish debt to the government such as taxes. Taxes do not finance spending; they only create demand for what is seemingly useless paper. (See Wray 1998 for the theoretical development of the “taxes-drive-money” approach and Tcherneva 2006a for a succinct summary.)

budget surpluses) at some later date. Market participants do not consider whether newly issued government liabilities of this kind exceed some bound on what it is considered prudent for the government to issue before deciding whether to accept them as payment for real goods and services; instead, each agent makes an individual decision about the terms on which to accept such government paper, that depend upon the expected rate of return on the asset in equilibrium. (Woodford 2000, pp. 32-33)

The difference here is that for Neo-Chartalists the return on this asset must also include *at the margin* the tax liability that a private agent can extinguish by delivering this government liability to the government. Government provided money is the means of settling the non-reciprocal obligation the population faces (i.e. the tax) and also represents a source of net saving for the private sector, the desire for which can be a bottomless sink. Hoarding of net financial assets, in the Post-Keynesian tradition produces unemployment, thus Neo-Chartalist argue, there is no inherent need for the government to restrict the supply of its own liabilities; rather it can supply them in a manner consistent with full employment (e.g. via a direct job guarantee). But there *is* an inherent need for the government to set the terms of exchange on which it will provide its own currency to the private sector. In other words, by contrast with Woodford, Neo-Chartalists would argue that is not the private sector that should make the decision about “the terms on which to accept such government paper,” but rather it is the monopoly issuer that must stipulate how its liabilities will be provided in order to ensure that government spending or lending is not inflationary (more below).

It is worth emphasizing that, although “printing money” is decried by many economists, in reality, this is *the only* way in which modern governments (as in the U.S.) spend. They spend by electronically crediting bank accounts or by mailing checks, which the Central Bank then clears. This results in a net injection of reserves, which will be leveraged depending on the private sector spending/investment needs. Whatever reserves remain idle and in excess in the banking system will be drained by Federal Reserve open market sales to maintain the nominal rate of interest.¹⁸ As Woodford has pointed out, in equilibrium, someone will always end up holding the debt. This does not mean that the private sector has financed government spending; rather, the private sector’s liquidity

¹⁸ The destabilizing effect of government spending and taxation on the level of reserves has been illustrated by Bell and Wray (2003).

preference has resulted in a certain distribution of the net new financial assets between bonds and base money. The level of government debt is endogenously determined. More importantly, however, government spending always results in a *crowding in* effect, since the net injection of high powered money, *ceteris paribus*, causes the interest rate to fall.¹⁹ It is *monetary* policy that does the crowding out, not *fiscal deficits*. There are various institutional structures, such as tax and loan accounts in the U.S., that exist to minimize the effect of government spending on reserves (see Bell 2000 for details). They do not change the fact that government spending always results in net credits to the private sector.

So while Bernanke and Woodford recognize that the government faces no spending constraints, they do not make full use of this knowledge when discussing fiscal policy. The only need to crank up the printing press for Bernanke is in extreme deflationary circumstances as in Japan, not acknowledging that government always spends by creating electronic credits to the banking system. The functional finance via direct job creation supporters contend that there is no operational government budget constraint in sovereign currency nations and that this condition should constitute the benchmark for any subsequent analysis of the effects of fiscal policy.

Once this condition has been recognized, debates about government budget sustainability make little sense. The only sense in which it is important is when it means solvency (similar to what Allsopp and Vines 2005 argued above). For FFJC advocates, a government budget will be unsustainable if it has voluntarily given up its sovereign control over its currency (via dollarization, monetary unions, currency boards, or other fixed exchange rate regimes), which puts into question its solvency at the limit.

Finally, with respect to Ricardian equivalence, similar to the Aresits and Sawyer approach above, we can only speak of some accounting identity specifying the relationship of stocks and flows in the system. Here the Godley-Lavoie (2007) stock-flow consistent approach is key in underscoring the fact that government saving is always offset by non-government dis-saving. Put differently, government deficit spending always results in private sector savings. This is slightly different from the FFAD

¹⁹ See Benjamin Friedman (1978) as one of the earliest arguments on the crowding in effect of government spending.

approach in interpretation. Both approaches adopt Kalecki's profits relationship and Godley's sector balances approach, but in the FFAD analysis, savings somehow run ahead of investment (or investment falls short of savings) and government deficits are there to "mop them up" and fill in the demand gap. Although these are all ex-post relationships, this presentation obscures the fact that government deficit spending (even in conditions of full employment) will always *create* savings, rather than "mop them" up. Households then, as Keynes had argued, will decide how they wish to hold these savings. If they decide that they do not wish to hold cash but prefer an interest-bearing alternative, government debt is issued to absorb these cash balances and offer this alternative. This is a more useful way of viewing any sort of "mopping up" that may occur – only in the sense of interest rate maintenance. And then it would be the *debt*, and not the *deficit*, that does the "mopping up." Both FFAG and FFJC adopt the three sector balances identity, but the difference is in the interpretation of government spending and causality. For both approaches, Ricardian equivalence only illustrates some ex-post accounting relationship. It says nothing about the impact of government deficits on private activity.

All approaches (Woodford's version of NEC, functional finance via aggregate demand, and functional finance via job creation) agree on one thing: the amount of debt in existence is an equilibrium condition, as in equilibrium someone has to hold the debt. But unlike the NEC, the existence of debt for Post-Keynesians says little about how consumers have been affected by government deficit spending. Post-Keynesians would argue for example, that Bernanke's money-tax cut would produce a windfall to incomes, which may or may not increase spending (e.g. it may go to the repayment of private sector debt). With respect to Woodford's net bond injection, Post-Keynesians would argue that it need not produce a wealth effect *a la* New Economic Consensus. In fact a rush to bonds usually occurs when returns from investments in productive projects do not materialize, i.e. when private spending falls. Some Neo-Chartalists think that the immediate effect of a very tight monetary policy may be stimulative, if it is associated with large levels of publicly held debt (Bell-Kelton and Ballinger 2005). This is the case since government interest payments on this debt are a net injection of money (financial assets) in the economy which may produce some wealth effect similar to the one in the New Consensus. One could argue that, at some point (probably sooner rather than later),

high interest rates will erode private financial commitments and undermine investment and consumption to a greater degree than could be offset by any boost to incomes from interest on debt (see also Fullwiler 2005).

The above analysis is also important with regard to the assumed inflationary effect of government spending. If a wealth effect does not materialize or is quickly reversed there need not be any inflation. But government spending need not be inflationary also for purely Post-Keynesian reasons. Another way of seeing this effect is to argue that the private sector's desire to net save is such that it absorbs all new financial assets without producing an increase its expenditures. Furthermore, we have a system of administered prices and idle capacity, where a boost to demand may not increase the *overall* price level.

Inflation is not an inherent feature of fiscal policy. For Neo-Chartalists, inflation is affected (although not determined) by the total injections of credits (government spending) into the economy relative to the total withdrawals (government taxation). This simple relationship between government spending and taxation does not imply that deficits are necessarily inflationary and that surpluses are deflationary. Although certain types of fiscal policies can impart a strong inflationary bias on the economy, such as basic income guarantees (for more details see Tcherneva 2006b), inflation is by no means a sure result from all government policies. Inflation will also depend on the underlying economic conditions, the level of private spending and the type of production and employment. In general, for Neo-Chartalists, the value of the currency is affected by what one must do to obtain it, and if one need not do anything to get money (need not work, produce, deliver goods and services, or provide collateral), then money loses its value. This on the face of it should be rather obvious. What is harder to see is that, at the margin, if there is no tax liability, the government's issue of liabilities will have no future backing. Taxes create demand for otherwise worthless government pieces of paper. Although this point about taxes is not understood by NEC authors, Neo-Chartalists will arrive at a conclusion similar to Bernanke's, namely that excessive issue of government liabilities is inflationary, *only when* government spending relative to taxation has not been associated with a change in private sector activity.

Now that we have explained why crowding out, Ricardian equivalence, or budget constraints are irrelevant to understanding the nature of government finance, we can move on to discuss the explicit link between fiscal policy and full employment

4.2.2 Full Employment

Once they have dispensed with false notions of government finance, advocates of this Functional finance approach want to ensure full employment via direct job creation. There are a number of proposals that can do the job, such as the employer of last resort (ELR) (Minsky 1986; Wray 1998), public service employment (Harvey 1989), and the buffer stock employment program (Mitchell 1998). These proposals have been advocated because of their macroeconomic merits and because of their human rights considerations. All proponents of this approach stand behind universal job guarantees because they view employment as a basic human right. Some advocates have also argued that the macroeconomic merits of the job guarantee surpass those of alternative universal guarantees, such as the basic income proposals (Harvey 2005; Mitchell and Watts 2004; Tcherneva 2006b). ELR advocates outline the following core advantages of this program. ELR can serve as a counter-cyclical stabilizer, which alleviates business cycle fluctuations without sacrificing full employment. It can serve as a buffer stock program that stabilizes the price (i.e. the wage) of the buffer stock (i.e. labor). To the extent that wages are an input to all production—private or public—it will also serve as the base wage for all industry and a stable anchor for all wages in the economy. Because of this mechanism, ELR itself is believed to be a non-inflationary full employment program. It is this buffer stock mechanism that also ensures that deficit spending fluctuates counter-cyclically and is always at the “right” level. Guaranteeing full employment does not depend on ever-increasing deficits.

To the extent that the job guarantee is universal, it will not only secure this most basic human right but will also anchor the value of the (fiat) currency by setting its terms of exchange at the margin, i.e. by establishing how many dollars would exchange for an hour of ELR work. The main macroeconomic problem of modern capitalist economies—namely unemployment—is solved outright, by guaranteeing a job to all who want to work at the base wage. But policy makers are responsible for designing public sector jobs

and activities that deliver optimal socio-economic results. Through the ELR it is then easy to assess Lerner's functional finance results; in other words, fiscal policy is to be judged by its economic impact and not by its budget stance. If for example, fiscal policy aims to address environmental degradation, then ELR should be designed with this goal in mind, e.g. by creating green jobs (see Forstater 2004 for details). If green results have not been delivered, then fiscal policy has failed. The impact of policy is assessed without sacrificing full employment.

There are three important differences between these two approaches to functional finance. For advocates of direct job creation, increasing aggregate demand is not a necessary condition for full employment.²⁰ Additionally, they believe that given the endogenous evolution of demand and supply conditions, getting to full employment by closing the demand gap will likely fail. Finally, while pro-investment and pro-growth fiscal policies may be desirable on other grounds, they do not *guarantee* full employment in the short or long run, even if they can temporarily achieve it (Tcherneva 2008). To sum up, in the FFAG approach, full employment is an objective that must be underpinned by the level of investment via an increase in aggregate demand; it is therefore an *indirect* approach to full employment. In the Neo-Chartalist version of functional finance, fiscal policy eliminates unemployment outright and full employment is guaranteed by design; it is a *direct* approach to full employment. Both approaches however aim to reestablish the original Keynesian link between fiscal policy and full employment.

5. CONCLUSION

Fiscal policy has had a checkered past. Keynes's revolutionary theoretical approach erected an important place for fiscal policy—a place which was later dismantled by mainstream theory. And while the mainstream is trying to salvage some role for fiscal policy from the ashes, Post-Keynesians have long championed *bona fide* Keynesian ideas. In the final analysis, the New Economic Consensus places monetary policy at the helm of the economic steering wheel. For Post-Keynesians, in the true spirit of Lerner

²⁰ Wray and Mitchell (2005) argue that in fact full employment via ELR can be accompanied by a fall in aggregate demand.

and Keynes, this role is attributed to fiscal policy. To the extent that the NEC restores some role for fiscal policy, it is neither a dominant role, nor is it clear what exactly that role should be. It only reaffirms that fiscal policy is inherently inflationary. While the NEC has opened the possibility to escape false logic of government finance and to argue that there is nothing inherently unsustainable about government deficits, this inflationary impact, coupled with early supply side notions of the distortionary impact of fiscal policy, reasserts the need for “sound finance” as the norm. Post-Keynesians have long advocated fiscal policy as a policy for macro-coordination and full employment, suggesting that in a world of administered prices and money contracts where fundamental uncertainty, involuntary unemployment, and capacity underutilization are the norm, there is nothing *inherently* inflationary about fiscal policy. In fact, it can serve as an important stabilization tool that reestablishes the link between fiscal policy and full employments. Recent contributions from the Post-Keynesian camp have resurrected the Lerner’s functional finance approach via two distinct methods – one is an indirect approach to full employment via aggregate demand management and the other is a direct approach to full employment via a job guarantee. The next task for Post-Keynesian economists is to evaluate the relative macroeconomic merits of each.

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