HOW THE CRISIS HAS CHANGED THE ECONOMIC POLICY PARADIGM

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In the midst of the worst economic crisis since the Great Depression, policymakers in the U.S. and in other nations have reduced interest rates, expanded central bank balance sheets, increased deficits to levels generally not seen since World War II and begun seriously rethinking financial regulation. This may come as no surprise to any student of macroeconomics prior to, say, the 1980s. However, the current crisis follows a period during which the vast majority of economists had come to a consensus (referred to by economists and hereafter in this paper as the "New Consensus") regarding macroeconomic and regulatory policy, while the policy initiatives undertaken since the crisis began are almost entirely, and often violently, at odds with most of the New Consensus. This has led at the very least to the return of some previously spirited debates that most might have thought had been settled. For now, at least, it appears that most economists fall into two different camps: the first group considers the current crisis to be a one-time "shock" after which policy can return to "normal"; the second group, on the other hand, is highly critical of the first group and of policymakers for deviating from the New Consensus. However, there are others, some of them high-ranking members of the "consensus" view, who suggest that nearly everything needs to be rethought. The purpose of this paper is to describe some of these reopened debates being driven by the current crisis and then also to present the foundations of an alternative macroeconomic paradigm backed by some economists and economic research institutes that coherently incorporates the current crisis as well as the impact of current and proposed policy responses, which the previous consensus does not.

I. The New Consensus Model and the Macroeconomic Policy Paradigm

In September, 2007, then Federal Reserve (Fed) Governor Frederic Mishkin delivered a speech entitled "Will Monetary Policy Become More of a Science?" To a student of monetary economics during the past, say, 30 years, the speech may have been significant for its clear and comprehensive survey of "the state of knowledge" of the field as it had come to be and its outlining of the New Consensus view. Mishkin there laid out nine core principles that the field had come to recognize as "truths," which he (and the vast majority of economists like him) considered to be significant "scientific" achievements. He likewise articulated how these principles had come to be implemented by central bankers and furthermore provided a framework used by monetary policymakers even in real-world policy contexts in which considerable uncertainty was inescapable. Thus, none of the points raised in Mishkin's speech would be a surprise to the current generation of monetary economists, even as he is more capable than most at organizing and articulating them; the entire content was standard for economists, while conclusions and the literature Mishkin referred to were similarly typical fare for graduate syllabi. The New Consensus paradigm had become nearly ubiquitous for monetary, fiscal and financial regulatory policies, and seemingly unchallenged. This section briefly describes each of these policy areas in turn within the context of the New Consensus view.

For monetary policy, Mishkin's nine principles lay out the foundations of the New Consensus view:

1. *Inflation is a monetary phenomenon*: Adherents of the New Consensus unanimously agree that persistent inflation is the result of monetary policy, not fiscal policy, and not aggregate demand or supply shocks. This leaves central bankers alone responsible for maintaining low and stable inflation.

2. *The benefits of price stability*: New Consensus adherents have become convinced that the aggregate costs of even moderate inflation are substantial, while the benefits of a stable, very low-inflation environment are likewise substantial in terms of macroeconomic outcomes such as real GDP per capita.

3. *No long-run tradeoff between unemployment and inflation*: As a result of the widespread acceptance among New Consensus adherents that the long-run Phillips curve is vertical at the natural rate of unemployment or the output gap, economists thereby also agree that there is little to no cost in terms of unemployment or real output in the long run of attempting to stabilize inflation at low levels. This gives a "green light" for monetary policymakers to worry more about the inflationary effects of their actions and less about the short-term effects in terms of unemployment or the output gap. Indeed, due to the previous principle, maintaining low, stable inflation is in fact the policy most consistent with full employment in the long run.

4. *The crucial role of expectations*: New Consensus literature has argued strongly for the past three decades that low inflation expectations of private sector agents are the most important variable in determining whether monetary policy can be effective in keeping inflation low. Further, it is argued that shocks to the economy such as rising oil prices will be far less deleterious if the central bank is credible in its pursuit of low, stable inflation.

5. *The Taylor principle*: John Taylor's "rule" (1993) provides central bankers with a framework for responding to various macroeconomic events. The framework is important for two reasons. First, it showed that such a framework was possible for interest-rate targets, whereas many previously believed such a strategy would fail absent targets for monetary aggregates. Second, it is a systematic policy feedback rule for interest-rate targets that is transparent, thereby enhancing credibility. Numerous central banks have been shown to follow a Taylor-like approach to setting interest rates over the past few decades.

6. *The time inconsistency problem*: New Consensus literature argued forcefully that central bankers should be bound to an approach such as that prescribed by the Taylor principle. Otherwise, the argument goes, central bankers attempting to maximize macroeconomic performance in the short run only (say, by reducing the unemployment rate below its natural rate) would be disastrous in the longer run once credibility was damaged, even if such a short-run policy might be time consistent (that is, it might be the optimal choice to make for the current period).

7. *Central bank independence*: Because of the need for policymakers to be mostly concerned about the long-run inflation rate, New Consensus adherents argue for an independent central bank that, once shielded from the inherent short-time horizons of politicians, would be free to do this.

8. *Commitment to a nominal anchor*: Milton Friedman often argued for money supply growth targets to "anchor" inflation. With real-world central banks setting interest-rate targets, these targets needed to be "anchored" by a strategy such as the Taylor principle wherein nominal interest rates would be changed in a manner consistent with low, stable inflation.

9. *Financial frictions and the business cycle*: Disruptions in financial markets could have significant effects upon the short-term performance of the macroeconomy that central bankers would have to be aware of. This is discussed in a bit more detail below.

Overall, the New Consensus argues that the central bank's primary concern must be low inflation and that it must establish confidence and credibility in the eyes of private economic agents regarding current and future policy actions in order to achieve the central bank's inflation goal. Economists and central bankers have concluded that a rule or at least a transparent, systematic framework for monetary policy strategy consistent with the Taylor principle with maximum possible independence is necessary to generate such confidence and stabilize expectations.

For the New Consensus, monetary policy is the dominant arm of macroeconomic policy and is considered sufficient to carry out this role via the nine principles above, provided that a central bank follows a

time-inconsistent policy strategy along the lines of the Taylor principle. As such, the role of fiscal policy in the New Consensus is nearly nonexistent. There are three reasons for this. First, as mentioned, fiscal policy is unnecessary given an appropriately run monetary policy. Using fiscal policy to reduce unemployment, for instance, would simply complicate a central bank's attempts to achieve low inflation, which according to the New Consensus is the best way to promote sustainable full employment in the long run at any rate. Second, the overwhelming majority of New Consensus adherents agrees that deficits "crowd out" private capital in the long run. This is the traditional "loanable funds" view in which saving finances investment spending and thus government deficits reduce the pool of saving available and raise interest rates; the overall effect is to reduce private capital accumulation and future living standards. Third, the government's budget must be sustainable in the long run, which here refers to the belief that rising government debt raises interest rates that can then bring exponential growth in government interest payments. The outcome of such a situation is government default (and the accompanying large macroeconomic costs) or "monetization" of the national debt (which brings inflation and the accompanying macroeconomic costs). To avoid these, the government must either now or in the future run primary surpluses to stabilize its debt service obligations. In short, New Consensus adherents strongly favor so-called "sound" fiscal policy in order to provide the policy space for independent central bankers to achieve low inflation while minimizing disruptions to capital accumulation and the achievement of maximum long-run improvement in living standards. Finally, regarding financial markets and regulatory policy, the New Consensus adherents supported almost continuous deregulation and unyielding encouragement of financial innovation. The regulatory structure put in place following the Great Depression was overturned; instead, the distinctions between banks and other financial institutions were increasingly blurred. Rather than concern with failures in risky-asset markets spilling from investment banking divisions into the banking divisions of a large financial institution, the new view was that financial institutions actually needed the ability to diversify into many lines of business in order better to weather the sort of financial disruptions and innovations seen in the 1960s and 1970s. The development of derivatives, securitization and other structured financial products was encouraged and in certain important cases (e.g., credit default swaps) completely deregulated. Here again, the consensus was that the ability to separate the risks of particular financial assets (such as the anticipated, albeit risky payment stream associated with a mortgage) and then sell these various parts to individual investors willing and able to take on these specific risks would be most efficient and reduce overall risk. In general, there was much faith in the ability of "market discipline" (for instance, in terms of setting risk-appropriate spreads for borrowing) to ensure systemic stability; in the Basel II agreement, there was a similar focus on "market discipline"; furthermore, very large financial institutions were entrusted with designing their own risk-management models and given the ability to reduce capital requirements when holding more or less risky financial assets (according to ratings agencies). Lastly, regarding monetary policy and financial markets, there was a rather strong consensus that central banks should avoid targeting financial asset prices or otherwise attempting to "prick" an unusual rise in asset prices; instead, most agreed that central banks would find it nearly impossible to identify such a "price bubble" in real time and that policymakers would do better to simply reduce the fallout after the fact.

Mishkin and most other adherents to the New Consensus characterized the period beginning in the 1990s and lasting through the early 2000s as the "Great Moderation." During these years, many articles were published documenting the reduced volatility in macroeconomic variables such as real GDP growth and inflation and the lower overall rates of inflation as evidence of such a moderation. Likewise, nearly all adherents considered the "Great Moderation" to be the outcome of the implementation of the New Consensus policy advice, which primarily involved the above-described characteristics of independent central banks pursuing low inflation according to the Taylor principle, "sound" fiscal policy and a deregulated financial system.

II. From New Consensus to NO Consensus in the Macroeconomic Policy Paradigm

There is another reason Mishkin's speech is of interest, however: at the sunrise of the current financial crisis (which had begun in earnest about a month earlier), Mishkin therein summarized a policy paradigm more than 30 years in the making that has been arguably irrelevant to policymakers in confronting the most significant financial crisis and potentially the greatest economic downturn in over 70 years. Perhaps prophetically, Mishkin granted in the speech that New Consensus macroeconomic models "ignore financial market imperfections." Willem Buiter, himself a monetary economist of substantial repute and also a former policymaker with the Bank of England, went significantly further than Mishkin, arguing that the fact that central bankers were trained in the New Consensus paradigm "turned out to be a significant handicap when the central bank had to switch gears from being an inflation-targeting central bank under conditions of orderly financial markets to a financial-stability-oriented central bank under conditions of widespread market illiquidity and funding illiquidity" (Buiter, 2009, 1). In short, Buiter continues, "the economics profession was caught unprepared when the crisis struck"(1). This section describes areas related to the current crisis and the policy responses for which there might have previously been a New Consensus but for which now the situation is better described as one of "NO Consensus."

For monetary policy, consider the fact that the central banks for the world's two largest national economies—the U.S. and Japan—have set their interest-rate targets effectively at zero (Japan since 1998, the U.S. since December, 2008) and have indicated that this will continue for some time. The Taylor principle and a zero-interest-rate target are not necessarily antithetical, but in this case according to the New Consensus model the central bank must raise inflation expectations to further reduce the real interest rate and thereby stimulate aggregate demand. However, it is completely unclear how to carry this out in practice. In the late 1990s, given Japan's zero-rate policy, there was a good deal of research regarding monetary policy strategies at the zero bound for nominal interest rates, but, beyond the conclusion that policymakers should respond more quickly to financial instability and deflationary conditions in general than Japan's policymakers had before situations become very bad, there has been little to no consensus regarding what to do if the zero bound has been reached. And thus, while U.S. policymakers *did* respond more quickly in the sense that the interest-rate target was at zero around 16 months into the crisis, there remains significant disagreement regarding how much this matters and what else can or should be done.

In Japan, after three years with a zero-interest-rate target, the Bank of Japan (BOJ) moved to a strategy it dubbed "quantitative easing," in which it expanded the quantity of excess reserves to encourage bank lending and money creation, as in the traditional money multiplier analysis. However, growth in the economy did not return to "normal" and, while quantitative easing was abandoned in 2005, the BOJ's target rate since has still remained below one percent and is now again effectively zero. Overall, there is much disagreement among economists regarding the effectiveness of Japan's experiment with quantitative easing in stimulating aggregate demand, even as there is general agreement that a nominal interest-rate target of zero by itself is insufficient.

The Fed's approach since August, 2007, has been to design new standing facilities to help provide short-term finance to the banking system and money market participants, since money market spreads rose to historical highs above the federal funds rate and short-term funding overall ultimately ground nearly to a halt (particularly in fall, 2008). This approach is different from quantitative easing in Japan; Fed Chair Bernanke (2009) calls the strategy "credit easing" and argues that the increase in the Fed's balance sheet is the only similarity to the BOJ's strategy. Similarly, San Francisco Fed President Yellen explains that "we are focused on pursuing carefully tailored programs to remedy specific financial market dysfunctions," whereas "the BOJ targeted an extraordinarily high level of excess reserves in the banking system, in the hope that a flood of such reserves might stimulate additional bank lending" (Yellen, 2009a, 3-4).

An additional complication emerged in fall, 2008. Prior to Lehman's bankruptcy in September, 2008, reserves added via standing facilities were necessarily sterilized (that is, the created reserves were drained) immediately via open market operations in order to achieve the Fed's target for the federal funds rate. After Lehman's bankruptcy, the Fed's standing facilities were expanded while new ones were added; however, the Fed's balance sheet no longer had sufficient securities to sell as an offset for sterilization purposes. Reserves in circulation thus soared to more than $800 billion from the previous level of under $20 billion while the federal funds rate fell to around zero (given the large excess reserves left circulating). Furthermore, even with the additional Fed actions, interest rate spreads in financial markets remained at historically high levels above risk-free rates, reflecting the enormous strains in the short-term financial markets. Lastly, because lending to the nonfinancial private sector essentially collapsed, particularly with regard to housing or any other loans that would normally have to be securitized (e.g., credit cards), the Fed announced in late 2008 and again in March, 2009, that it would expand its "credit easing" approach and purchase $300 billion in Treasuries and create another standing facility to purchase $1 trillion in asset-backed securities.

For purposes here, it is important to realize that there is little or no consensus regarding the ultimate effectiveness of the Fed's actions. While one rarely heard concerns that quantitative easing in Japan would lead to uncontrollable inflation, many economists and financial journalists conclude that the Fed's actions are likely to be inflation-inducing. This is interesting, since even though the Fed's balance sheet has grown by more than $1 trillion and reserves have risen by over $700 billion, the U.S. monetary base has risen to only around 10 percent of GDP (from a starting value of about 5 percent), which is well below the level reached earlier in Japan (25 percent of GDP at the peak of quantitative easing) and which clearly did not result in a significant rise in inflation (to the contrary, Japan's economy continued to be characterized by low inflation or even deflation). Nevertheless, John Taylor (2009), like many others, recently argued that "there is no question [the increase in reserve balances] will lead to inflation unless it is reversed" and then questioned whether the Fed would be able to "change course in time." Many others have echoed Taylor's concerns regarding the rise in the monetary base and/or the Fed's balance sheet. On the other hand, the recent substantial increase in the planned sizes of purchases of both Treasuries and asset-backed securities demonstrates the Fed's own belief that efforts to this point have actually been insufficient and are not inflationary. Yellen (2009a, 4) further noted that she was "sanguine that the Fed's new programs will be helpful in restoring credit flows." She even acknowledged that "many of the new approaches are experimental, and there is a great deal of uncertainty concerning their likely effects." She added in a subsequent speech that "few, if any, models are prepared to tell us what macro effects [the Fed's actions] might have" (Yellen, 2009b, 9). Thus, Yellen effectively confirms that current central bank actions for dealing with the financial crisis have no basis in the New Consensus research program, as Buiter lamented. In other words, as Mishkin alluded, those at the highest levels of the profession—including those at the most prestigious research universities, who also happen to be the academics most likely to be appointed to positions of influence on policy—had essentially bypassed the study of the causes and potential policy remedies for financial instability. Most significantly, one sees here key architects of the New Consensus such as Taylor, Yellen, Bernanke and Buiter holding essentially irreconcilable positions on the appropriate policy response to the crisis. Particularly noteworthy is that Taylor's most damning criticism of the Fed was to point out that it had abandoned the New Consensus framework for monetary policy strategy that then-Fed Governor Mishkin had so clearly summarized only 18 months earlier. As Taylor put it, "the success of monetary policy during the great moderation period of long expansions and mild recessions was not due to large discretionary interventions, but to following predictable policies and guidelines that worked" (2009, 1).

Regarding fiscal policy, again consider the recent deficits of the world's two largest economies, as shown in Figure 1. Deficits in the U.S. from 2000-2009 are presented alongside those for Japan from 1990-1999 since this is the decade that follows collapses in equity and real estate values in the respective countries.

The U.S. deficit is estimated to be 10 percent of GDP in 2009 (which, according to CBO figures, ignores the TARP funds, since these were essentially asset swaps and thus more akin to monetary policy operations). As with monetary policy, clearly both countries have been following fiscal policies substantially counter to the New Consensus view, which strongly prefers so-called "fiscal soundness." In stumping for his fiscal stimulus package in early 2009, President Obama declared that virtually every mainstream economist recognized the need to use fiscal stimulus in times such as these. However, this is not true at all. In fact, while some New Consensus adherents agree with this statement, many others do not. In her recent speech, Yellen highlighted some of these disagreements, and her disagreement with Taylor in particular with regard to the effectiveness and usefulness of discretionary fiscal stimulus:

> In his paper for this session, John [Taylor] asserts that the BOJ's quantitative easing strategy worked well, while fiscal policy was ineffective. My interpretation of the evidence is exactly the opposite… [The BOJ's] expansion of excess reserves to extraordinary levels appears, on its own, to have had very little impact… For all these reasons, I support Marty's [Martin Feldstein's] conclusion that there is an exceptionally strong case for substantial fiscal stimulus over the next few years. (Yellen, 2009a, 3-4)

It is interesting that Yellen (a New Consensus adherent on the political left) and Feldstein (on the political right) agree on the need for stimulus, as the consensus on fiscal policy has fractured mostly along traditional political lines as in earlier debates on the merits of Keynesian fiscal policies. In much the same way he criticized the Fed's current inconsistencies with the New Consensus, Taylor (an economist on the political right) now also criticizes current fiscal stimulus sympathizers for their lack of adherence to previously agreed-upon research:

> After years of study and debate . . . many economists [concluded] that discretionary fiscal policy actions, such as temporary rebates, are not a good policy tool. . . . Indeed, this was the conclusion of my research . . . and that of many others. As Eichenbaum (1997) put it, "there is now widespread agreement that countercyclical discretionary fiscal policy is neither desirable nor politically feasible," or, according to Feldstein (2002), "There is now widespread agreement in the economics profession that deliberate 'countercyclical' discretionary policy has not contributed to economic stability and may have actually been destabilizing in the past." . . . To be sure, that consensus apparently broke down during the debates about fiscal stimulus [in 2008] when a number of economists testified to the effectiveness of such a temporary stimulus program. (Taylor, 2008, 4)

Again, Taylor is far from alone, which an article in the *National Post* confirms:

> John Cochrane of the University of Chicago recently noted that the idea of fiscal stimulus is "taught only for its fallacies" in university courses these days. Thomas Sargent of New York University noted that "the calculations that I have seen supporting the stimulus package are back-of-the-envelope ones that ignore what we have learned in the last 60 years of macroeconomic research." (Brannon and Edwards, 2009)

Overall, much as in the current debate over monetary policy, one sees a rather clear break from the previous consensus in which a substantial number of economists support at least a temporary break due to "extraordinary circumstances," while others admonish the first group for not remaining faithful to the previous consensus in which discretionary fiscal policy is unnecessary and even counterproductive to macroeconomic stability.

In fairness, however, the heart of the New Consensus view on fiscal policy described above, namely that governments must adhere to intertemporal budget constraints, remains mostly intact; indeed, Obama's head of the Office of Management and the Budget, Peter Orszag, has been a leading researcher in this area and has published widely on the dangers of persistent deficits. The current proponents of fiscal stimulus have by and large argued that the government should return to supporting balanced budgets if not substantial offsetting surpluses once the crisis is over. Thus, the debate about fiscal policy is almost exclusively about the efficacy of short-term fiscal policy, whereas consensus remains regarding fiscal policy over the longer run. It will, though, be interesting to see if yet another instance of NO Consensus will emerge if economic conditions do not improve significantly in the next few years, since in that case the current temporary fiscal stimulus will be on the verge of becoming much more than that.

Regarding financial regulation, perhaps the best indication of the move away from the New Consensus is Alan Greenspan's *mea culpa* in October, 2009, in which he admitted that relying on "market discipline" for assessing risks and limiting excesses in the financial system had turned out to be a "flawed" strategy. A number of other pillars of the New Consensus view on financial regulation have been questioned in the current crisis, as well, including the view that ratings agencies can be relied upon to enhance market discipline; the view that spreading financial risks to individual investors willing to hold them via securitization was more efficient and reduced systemic risk; and the view that the policymakers should not attempt to diagnose and stabilize an asset-price bubble in real time. Furthermore, there is now acceptance that the previous regulatory regime—Basel II included—did not sufficiently address systemic risk and did not in particular address nonbank financial institutions, as calls for a "systemic risk regulator" grow in policy circles. Space constraints limit a further detailing of the significant and complex debates in this area, but overall, much as with monetary and fiscal policies, two things are clear: first, the New Consensus paradigm has provided virtually no guidance for the policy responses of the past 18 months (Bernanke in particular noted that a significant problem had been that there was essentially no policy in place for resolving bankruptcies of large nonbank financial institutions like Bear Stearns, Lehman and Merrill Lynch), and second, there is no current consensus among economists or policymakers on the appropriate path for financial regulation in the future.

III. Wanted: An Alternative Policy Paradigm

As the crisis has appeared to reopen policy debates that previously seemed to have been settled—such as the transmission mechanism of monetary policy, the efficacy of fiscal stimulus and the appropriate balance between regulation and innovation—policymakers are left without a coherent framework that is relevant for a modern capitalist economy with advanced financial markets. As Buiter put it:

"I believe that the Bank [of England] has by now shed the conventional wisdom of the typical macroeconomics training of the past few decades. In its place is an intellectual potpourri of factoids, partial theories, empirical regularities without firm theoretical foundations, hunches, intuitions and half-developed insights." (Buiter, 2009)

But while Buiter and others search for a new paradigm, a number of researchers associated with think tanks such as the Center for Full Employment and Price Stability, Centre of Full Employment and Equity, and the Jerome Levy Economics Institute have been at work on this same problem for many years already. This paradigm is largely embedded within the post-Keynesian "school" of economics and stands on the shoulders of previous economists such as Thorstein Veblen, John Maynard Keynes, Joseph Schumpeter, Hyman Minsky, Paul Davidson and many others. This section presents seven core principles of the macroeconomic policy paradigm developed by these economists and the implications of each principle for the current NO Consensus period in which policymakers find themselves. Again, space constraints prevent a more thorough description of the paradigm (see research at the above-mentioned institutes for that), but the principles here relate directly to the areas of policy concern in the current crisis and resulting NO Consensus.

1. *Central bank reserves do not fund or otherwise restrict bank lending except under a gold standard or currency board regime.*

The version of banking learned by virtually every student of economics at every level is the money multiplier. In the money multiplier model, central banks change the quantity of reserves in bank reserve accounts via open market operations or direct lending; banks then are presumed to have additional capacity to lend until reserve requirements rise as a result of the deposits created by the bank loans to equal the quantity of reserves initially created by the central bank's actions. However, this model is irrelevant to modern monetary systems not operating on a gold standard or a currency board. In the real world, a bank loan creates its own deposit, while banks obtain additional reserves in money markets or from the central bank at the latter's stated lending rate if necessary to meet reserve requirements. That is, the creation of a loan and (concurrently) a deposit by a bank are in no way constrained by the quantity of reserves. Instead, the terms set by the central bank for acquiring reserves (which then also affects the rates banks borrow at in money markets) affect a bank's profit margin on a newly created loan. Thus, expanding its balance sheet can create a potential short position in reserves, and thus the profitability of newly created loans, *not* the bank's *ability* to create the loan.

Overall, the acts of extending credit and creating bank liabilities (i.e., "money") are completely unrelated to the quantity of reserves circulating unless a gold standard or currency board is in place (in which case bank lending is constrained by the quantity of reserves banks can obtain). For the current NO Consensus paradigm, this implies that "quantitative easing" by the Bank of Japan had no effect on banks' abilities to create new loans. Similarly, U.S. banks' abilities to create loans are unaffected by the recent rise in the Fed's balance sheet or the large increase in reserves held by banks. Furthermore, it is nonsensical to suggest that banks "are not lending out their reserves" or they "are not lending out government-invested funds" (such as the TARP). Rather, banks create loans when a credit-worthy borrower desires additional funds for his/her business or household.

2. *Central bank operations are about interest rates, not quantity of reserves or money.*

Because the quantity of reserves has nothing to do with banks' abilities to lend, the only direct operating target for the central bank is an interest-rate target. For banks, reserves can only settle payments or meet reserve requirements, and thus their demand for reserves is very interest inelastic. Further, in the aggregate, banks cannot create or destroy reserves; they can only shift the existing quantity from bank to bank. Only changes in the central bank's balance sheet change the aggregate quantity of reserves. Therefore, if the central bank creates more reserves than banks desire, the interbank interest rate falls to the remuneration rate set by the central bank on bank reserve holdings. Likewise, if the central bank creates fewer reserves than banks desire, the rate rises to the central bank's stated lending rate at which point more reserves are created via direct central bank lending to banks. In other words, attempting to directly manipulate the quantity of reserves is in fact *de facto* interest-rate targeting. Thus, as the monopoly supplier of net reserves to the banking system, the central bank has complete ability to set an interest-rate target wherever it desires; the base rate in the economy is *not* set by private financial markets (this assumes flexible exchange rates; with fixed exchange rates, the central bank may need to adjust its interest-rate target according to market traders' preferences in order to maintain parity). Furthermore, the central bank can similarly set risk-free rates across the entire term structure of interest rates, since it can set a bid and an ask in any of these markets (as the monopoly supplier of reserves) or (equivalently) set remuneration and lending rates at any maturity it desires. When the central bank chooses not to set rates across the term structure, risk-free rates are primarily set by expectations of the central bank's short-term target.

Regarding the current NO Consensus, this implies that the Fed could have much more simply and directly brought down longer-term interest rates as well as spreads between risk-free rates and riskier lending rates.

Already in August, 2007, Warren Mosler proposed that the Fed announce lending rates to member banks for maturities up to six months. When the Fed did not do this, spreads rose significantly for bank borrowing at these maturities. In December, 2007, the Fed did begin the TAF facility, but here again did not announce rates but instead fixed quantities of its lending and allowed rates to be auctioned to the highest bidders, which then left spreads elevated. After Lehman's failure, the Fed's inability to provide liquidity at shorter maturities contributed significantly to counterparty risk that crippled financial markets. The Fed again eventually stepped in to provide liquidity in commercial paper markets, and this time did in fact set a fixed spread above its target rate, which ultimately was one of the larger successes of the Fed's overall response to the crisis. In other important cases such as the Fed's announced purchases of Treasuries and asset-backed securities, it has again returned to announcing quantities of intended purchases rather than desired rates or spreads, and these actions have had to date (June, 2009) little effect on market functioning.

3. *Currency-issuing governments spend by simultaneously crediting bank reserve and recipient deposit accounts.*

There is no operational constraint on the spending of a currency-issuing government not operating under a gold standard or a currency board. These national governments spend by simply crediting the deposit accounts of the recipients and the reserve accounts of the recipients' banks, which involves merely increasing numbers on a spreadsheet. Government spending is thus not constrained by taxation or bond sales, as these similarly involve simply debiting numbers in an accounting spreadsheet. Solvency is *never* at issue in these cases; default on debt or interest payments is a policy *choice*. While it is certainly the case that excessive government spending can be inflationary, *this* is the only operational constraint upon government, not the government's ability to obtain its own money via taxes or bond sales (which, again, actually *destroy* the government's money as these result in debits to bank accounts). As such, large deficits in the U.S. and Japan, for instance, which have been incurred in recent crises in no way threaten the solvency of national governments.

4. *Government deficits create net saving for the nongovernment sectors.*

The New Consensus view that government deficits "crowd out" savings available to finance private sector borrowing for capital investment is only relevant in a gold standard or currency board regime in which funds available to lend are actually constrained; otherwise, as above, whatever amount of debt the government issues has no bearing on the funds that can be created by banks to lend to others in the private sector. In the non-gold standard case, the appropriate way to consider the deficit is to recognize that the government and nongovernment sectors have offsetting financial positions necessarily. That is, if the government is in deficit, then the nongovernment sector must be in surplus, and vice versa; net financial flows overall necessarily net to zero. This is represented visually in Figure 2, which shows flows between the government and nongovernment sectors, where the nongovernment sector is broken into the domestic private sector (households and businesses) and the international sector (current account balance). From the figure, a government deficit necessarily corresponds to an increase in foreign saving (reduction of the current account balance) or an increase in domestic private sector net saving, or some combination of the two.

The relationship can be demonstrated still more precisely using balance sheets, as well, for the bond purchaser and the recipient of government spending, as in Table 1. From this, the private sector's net financial position has unambiguously improved, as the bond investor's net worth (or net saving of financial assets) has not changed, while the recipient of the spending has seen an increase in net worth. The net effects are similar if the deficit is incurred via tax cuts, as in this case the taxpayer's net worth is greater than without the tax cut, while the bond investor's net worth is unchanged.

The implications of this relationship for the current NO Consensus is that the historically large government deficits being incurred in response to the crisis have—as predicted—coincided with an increase

in household net saving, just as they have in previous years and as shown in Figure 3. In other words, the rising government deficits in the U.S. have improved the private sector's net financial position to the point that private sector net saving is in fact greater than at any time since the early 1990s.

5. *Bond sales by a nonconvertible currency-issuing government are for interest-rate maintenance, not financing.*

If a currency-issuing government does not need its own money to spend, why does it issue debt? The answer is found by considering again central bank operations. To begin, a government deficit raises the quantity of central bank reserves in circulation, absent a government bond sale. This increase in undesired excess balances in reserve accounts will cause the interbank rate to fall below the central bank's target, since banks cannot by themselves change the aggregate quantity of reserves circulating. To offset the increase and return the interbank rate to the target, there must be a bond sale by either the central bank or by the government. For this reason, a number of economists argue that government bond sales are interest-rate maintenance operations, not financing operations, since government spending is not limited operationally by taxes or bond sales. In short, the government and/or the central bank necessarily offer an interest-bearing alternative to holding reserves in order to achieve a positive interest-rate target for the central bank.

The implication for the current NO Consensus is primarily that this explains why large government deficits in Japan and now in the U.S. have not led to rising interest rates on outstanding government bonds. In Japan, long-term government bond rates have remained below 1.5 percent, often significantly lower, even when the Bank of Japan was not purchasing government bonds in pursuing its quantitative easing strategy. Similarly, in the U.S. long-term government bond rates have been at historical lows, only recently rising as reports of an improving economy and expectations of an increase in the Fed's target have become prominent in the late spring and early summer of 2009. Again, one sees that the crowding out argument of the New Consensus is not relevant and can again only be applicable under a gold standard or currency board; in the absence of these, the government is not actually "borrowing," and its deficits *increase* nongovernment net saving, thus leaving interest rates on risk-free government bonds mostly to follow current or expected monetary policy.

6. *The legacy of Hyman Minsky: The banking and financial sector should support economic expansion and not unnecessarily contribute to systemic risk.*

Hyman Minsky's contributions to economics centered on the inherent instability of the modern capitalist financial system. Space constraints limit discussion here of Minsky's analysis (see Minsky [1986] in particular, as well as numerous recent pieces published by former colleagues of Minsky on the financial crisis by the Jerome Levy Economics Institute); however, some principles of financial regulation from a Minskyan perspective can be laid out, the overarching approach for which is to support, not lead, the economic system. Most importantly, given the necessarily procyclical nature of the financial system and banks, Minsky was never in favor of relying on "market discipline" and ratings agencies that characterized the New Consensus view and Basel II. Minsky's approach emphasizes that rising leverage and securitization imply greater systemic risk, even where risks are being distributed to various willing investors in an effort to "diversify" and reduce overall risk, since in every case what is left is essentially a financial system with a leveraged long position in a particular asset class or (more broadly) in the economy itself. Regarding bank regulation, because bank liabilities are government-insured for the most part (and are then functionally liabilities of the federal government), the preferred approach is for the central bank to provide unlimited lending to banks at stated rates as far out along the term structure as desired (again, instead of "market discipline"). On the asset side, banks would be limited to holding regulator-approved assets (home loans, corporate bonds and so forth), lending on their own credit analysis (as opposed to the "originate-and-distribute model" which encourages increasingly complex forms of securitization) and marking to approved regulator credit models of expected cash flows (instead of capital gains of assets or

collateral, as is usually the case during buildup of asset-price bubbles). From the Minskyan perspective, "too big to fail" means "too big to exist"; that is, an institution that becomes so large that its failure has significant systemic consequences should not be allowed to become so large in the first place. Overall, regulations and supervision would be designed to limit the systemic disruptions (such as via pre-approving proposed financial innovations [Tymoigne, 2009] or prompt resolution of failed financial institutions), while at the same time Minsky always realized that this was not entirely possible or even completely desirable, since procyclical innovation and leverage are an inherent characteristic of an evolving capitalist system.

7. *The legacy of John Maynard Keynes: Active, discretionary fiscal policy is appropriate and necessary given the procyclical nature of the banking and financial sector.*

The current approach of the Obama administration is that the financial system must lead the real economy in recovery; this is also widely accepted by most outside of the administration. Thus, one simultaneously hears that the banks are doing all right (particularly following the stress test results, but overall as an effort to instill "confidence" in the financial system), while at the same time plans are made (as above) for a $2 trillion bailout of so-called toxic financial assets. Both of these cannot be true, but the overarching concern by the administration with "confidence" in the financial system necessitates such an inconsistent approach.

The most important shortcoming is that the approach fails to recognize the necessarily procyclical nature of the financial system. That is, banks and others in the financial system extend credit when borrowers are creditworthy and have profitable projects to invest in; but the latter are most creditworthy and have the best projects to finance when the economy is doing well. The opposite is true when the economy is doing poorly, and it is true now; hence, waiting for the financial system to lead the recovery is the wrong strategy. Furthermore, instead of desiring to take on more leverage to spend and invest in more business projects, the real private sector is most interested in deleveraging at this time after years of excessive leveraging. Thus, one reads that the household sector is now deleveraging at a pace not seen in 40 years (Zezza, 2009), while household debt service ratios as reported by the Fed have fallen the most since the early 1980s. This is the classic paradox of thrift Keynes explained.

But from Figure 2, the only way that the domestic private sector can increase its aggregate saving is via either an increase in government deficit or an improvement in the current account balance. There are obvious limits at this time to raising domestic saving via an improvement in the trade balance, as the rest of the world is mired in a similarly deep recession and has little desire to raise imports from the U.S. This leaves the government sector to raise private saving, which can be done the "easy" way, via direct fiscal stimulus to raise private sector incomes and saving as the latter attempts to deleverage, or the "hard" way, via traditional automatic stabilizers that raise government deficits as household and business spending and then incomes all fall. Automatic stabilizers merely put a floor on how far aggregate incomes will fall by reducing tax burdens and providing subsistence income to the unemployed, whereas fiscal stimulus can raise incomes and spending, particularly if the chosen stimulus has higher multipliers (that is, all forms of stimulus are not equal). As Figure 3 shows, the increased government deficits have accommodated the private sector's desired net saving, as both have increased in tandem; again, from Figure 2, this occurs *by definition*. But, unfortunately, to this point most of the increase in the government's deficit has been via automatic stabilizers while aggregate spending and income have fallen (albeit modestly in nominal terms). Even the Obama stimulus package appears to be less targeted toward spending and tax cuts that would provide larger multiplier effects upon aggregate demand once it finally is fully set in motion, even as it is certainly better than nothing.

As for the current NO Consensus, there are three points to make. First, as Warren Mosler often puts it, the crisis is in nominal terms; it is not a real crisis. In other words, while people are unemployed, actual

productive capacity remains in place, but idle. Second, the solution, particularly when the private sector is desiring to deleverage at a historic pace, is for the government sector to add significant debt, which it is currently doing, though not anywhere near the levels necessary to sustain full employment. Third, this fiscal option is not available to a government under a gold standard or currency board, or for the nations of the European Monetary System due to the Maastricht Treaty constraints; rather, it is the existence of a currency-issuing government operating under flexible exchange rates that provides the policy space to run large, accommodative fiscal deficits to offset private sector deleveraging without incurring the risks of government default or rising interest rates on the national debt.

IV. Concluding Remarks

Just a short time after Mishkin gave his presentation on the state of professional thinking on monetary policy, the New Consensus paradigm was of little use to policymakers dealing with the greatest financial crisis since the Great Depression. Today, more than 18 months later, what was a New Consensus has become NO Consensus, with many older, hard-fought debates that had been thought previously settled—the transmission of monetary policy, the efficacy of fiscal stimulus, the balance of regulation and market discipline—now returning *en force*. On the other hand, a number of economists have been developing over the past several years an alternative paradigm which is relevant to a modern capitalist economy and which can coherently incorporate recent events and policy actions. Indeed, there has been some movement toward this paradigm—though largely accidentally and unrecognized—for example in the moves by the Fed to set interest rates low and (eventually) provide credit via standing facilities in the historically large fiscal stimulus and in the recent debates regarding rethinking financial regulation along the lines of systemic stabilization. However, at present at least, it appears that most in the profession view current events as not yet warranting a complete rethinking of previous paradigms (with some, like Taylor, viewing even the current temporary deviation from the New Consensus as the *real* problem), even as some powerful voices in the profession have been calling for this.

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Figure 1. Fiscal Deficits for Japan (1990-2009) and the U.S. (2000-2009)

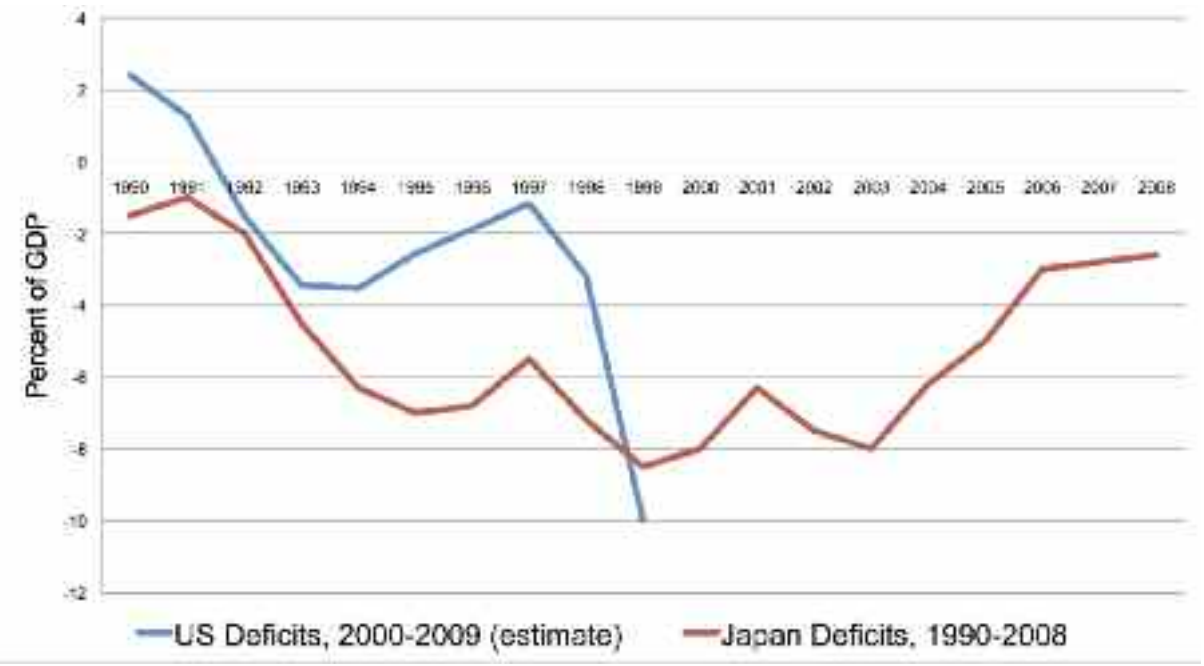

Figure 2. Financial Flows between Sectors of the Economy

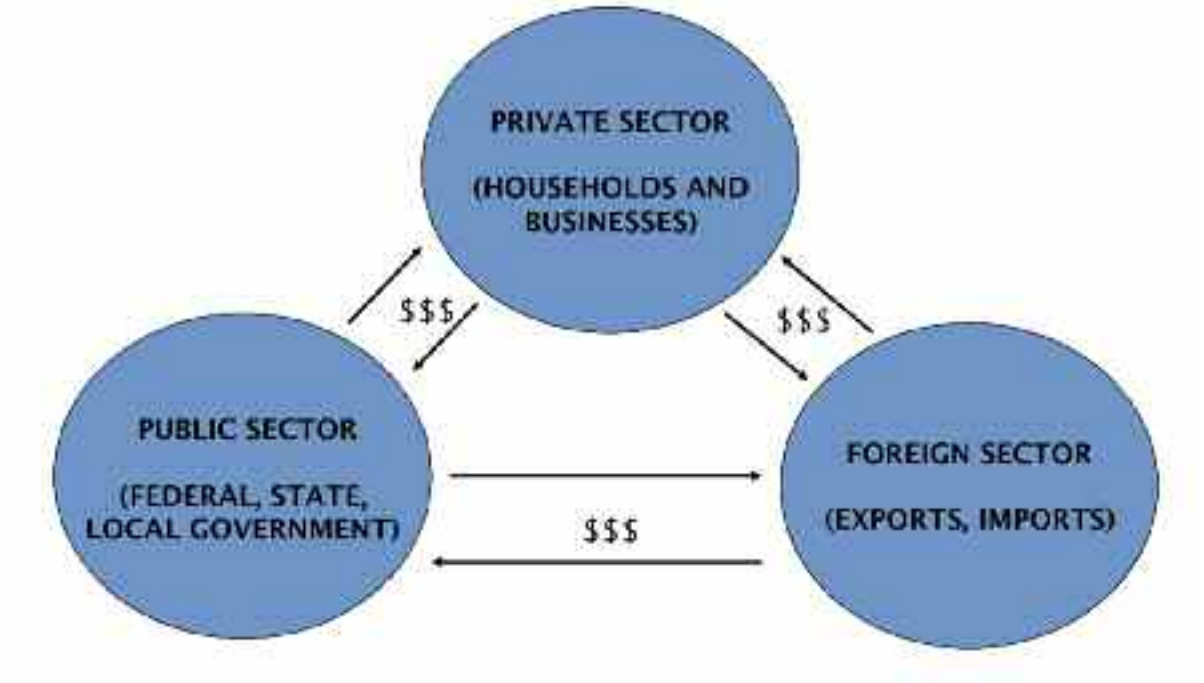

Figure 3. U.S. Government Deficits and Private Sector Net Saving

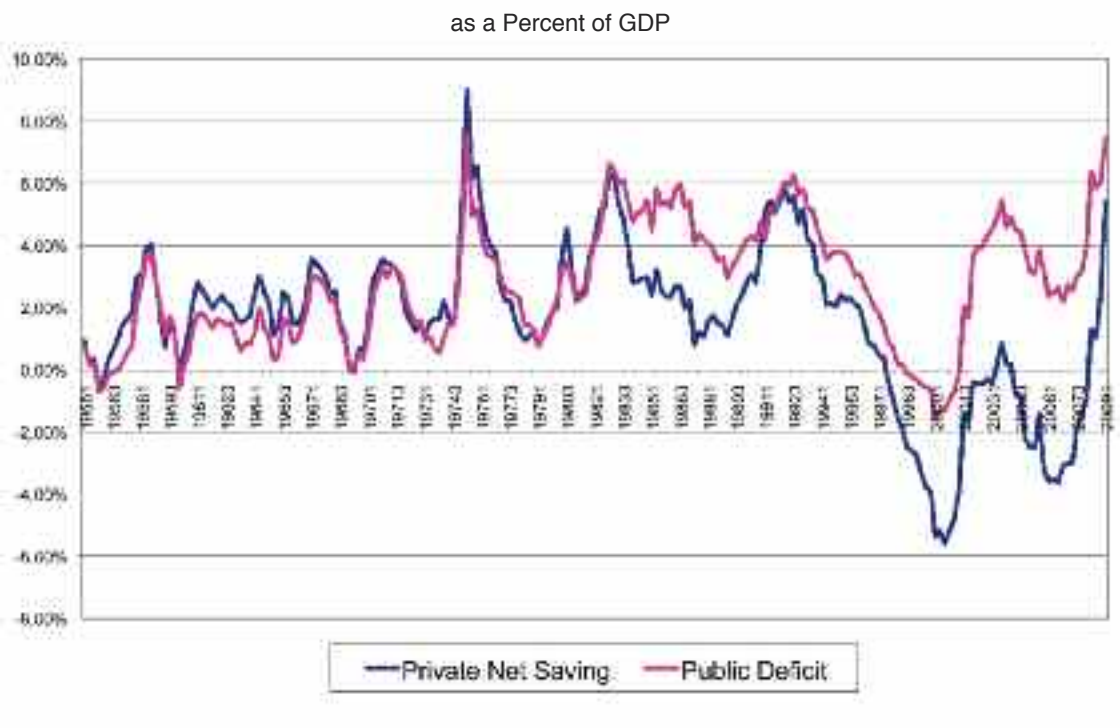

Table 1. Private Sector Balance Sheet Effects of Government Deficits

Govt. Spending Recipient

Assets	Liabilities / Equity
+ Deposits	+ New Worth

Bond Investor

Assets	Liabilities / Equity
- Deposits + Bond	No Change