

THE POST KEYNESIAN CASE FOR THE CYCLICAL CO-ORDINATION OF MONETARY AND FISCAL POLICY

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1. INTRODUCTION

Post Keynesian economists stress the paramount importance of Aggregate Demand (AD) in determining the level of output and employment (GDP) in developed economies. Most developed economies are characteristically seriously demand-constrained. In the US, capacity utilization rates average between 60 and 75 %.

Only very infrequently, during wars, are developed economies observed to operate on their production possibility curves, so their GDP is directly physically supply-constrained. Post Keynesians believe the reason is in the absence of an “Incomes Policy” to control inflation, that central banks (CB’s), that central banks (CB’s) are typically forced to set interest rates at much “too high” to attain perpetually full employment levels of output.¹

Due to the pervasive presence of uncertainty about future states of the economy, and the pro-cyclical behavior of AD, most firms in the retail and wholesale sectors are typically price-setters and quantity-takers. CB’s are forced to maintain persistently a degree of excess capacity over the cycle so as to be able to meet unexpected future increases in demand, and so generate higher future profits. In consequence over the short run the Aggregate Supply (AS) relation is broadly horizontal in inflation-output space, hence the central importance of AD in determining the level of output.

The current world crisis in many ways is a repeat of the Great Recession of the nineteen thirties, with its unprecedented huge fall in AD and output. The most important differences stem from the strong positive response to the crisis taken by the world’s important Central Banks, thanks largely to their understanding and acceptance of Keynesian expansionary monetary policy. In the current financial crisis most developed economy CB’s very rapidly reduced the level of short run interest rates towards zero. In this sense SA monetary policy, with its primary focus on using high interest rates to restrict inflation, has been a striking exception.

¹This may be because, as members of the financial community CB’s are predisposed to believe that their control instrument, the level of interest rates (the price of time), which critically affects the rate of change in AD, is more directly related to, and so can better control the inflation rate than the unemployment rate. It may also be due to the fact that most non-Asian economies do not operate under an “incomes policy,” so rising inflation rates appear the natural outcome of the institutional wage-price bargaining process.

Note that China and many other Asian economies operate under similar types of incomes policies, so that current wage increases are based on the rate of labor productivity growth in the previous year. Such economies have experienced more rapid growth, lower interest rates and lower inflation. In consequence they have been much less demand-constrained by restrictive monetary and fiscal policy.

Unlike monetary policy, in both the US and Euroland expansionary counter-cyclical fiscal policies have been restrained, and in practice almost prohibited. Initially, as the recession commenced, as in all other developed economies US and Euro fiscal policy became highly expansionary, due to the existence of built-in Keynesian “automatic stabilizers.” But as the recession persisted, European “Inflation Hawks” became alarmed at the enormous rise in Debt/GDP ratios, particularly in the six southern Euro economies (Ireland, Greece, Italy, Spain and Portugal), and also, to a lesser extent, in the UK and the US. In consequence all Euroland governments have been forced to make large cuts in government spending, in their attempt to restrict growth of their budget deficits.

In order to restrain “inflationary” spending, the European Central Bank (ECB) is prohibited from lending unlimitedly to its member governments at Bank rate. Due to the so-called “**Stabilization Clause**” the ECB it is permitted to lend at Bank Rate only to solvent private firms, but not to insolvent (or even) solvent member governments. Private banks can lend to their governments, but only at commercial rates, which increase sharply as country debt ratios rise. This clause was inserted to discourage all Euroland governments from raising their debt/GDP ratios, and in order to constrain them running large deficits, and encourage them to maintain balanced budgets. Automatic-stabilizers, designed to increase government spending when private spending flags, can rapidly generate large government deficits, and so in the process cushioning the rate of decline of AD and AS (GDP).

As one important consequence the current downturn has been enormously shorter than in 1929. There soon appeared “green shoots”, suggesting the downturn might slow down and even reverse itself. Nevertheless there remains massive concern about continued increases in unemployment, unprecedented level of debt/GDP and money/GDP, and possible inflationary implications of the historically unprecedented “Quantitative Easing” increases in money supplies. The result has been conservative party’s resistance to continuing increases in government deficits. Many governments are now currently addressing the painful questions such as: how soon, and by how much, should taxes be increased, government spending cut, and budget deficits be reduced?

2. CURRENT MAINSTREAM MACROECONOMIC THEORY

In current New Consensus in Macroeconomics (NCM) models, (also termed Dynamic Stochastic General Equilibrium (DSGE) models, in order to make rational expectations models analytically tractable macro-economists have been forced to adopt radically simplifying and unrealistic assumptions. (One such was the existence of an economy of representative agents who never default, so all units are assumed to be able to pay off their debts.)²

² This has somewhat underhandedly been termed the ‘Transversality’ condition, since it incorporates a number remarkably, even absurdly strong assumptions. As Goodhart has argued, the Transversality condition in fact, “does away with all risk premia, all informational constraints, all need for financial intermediation (banks, etc.) and even really with the need for money” Buiter stated his criticism of the transversality condition as follows:

A huge gulf similarly remains between the assumptions of NCMM (New Classical Mainstream Monetary theory) and the actual operation of monetary policy by modern central banks. Most textbooks continue to start with the assumption that central banks set the monetary base, so short term rates are endogenously market-determined. This contrasts with the reality that the Central Bank (CB) directly sets the short term interest rate (Bank Rate), rendering the money supply (M) and the monetary base (B) endogenous, and the money supply function becomes horizontal in interest-money space.³ This has led to an even more serious misunderstanding: the money supply (M) is still assumed to be set via the **monetary-base multiplier process**. This in practice abstracts from virtually all the variables that determine money supply growth: the private sector's demand for bank credit, the supply price of government and private securities, commercial bank profitability, capital adequacy, and risk aversion, etc.⁴

Most economic undergraduates still get their initial textbook exposure to macroeconomic theory in the form of Hick's IS/LM model, which assumes a downward-sloping IS curve, the combination of interest rates and income that result in equilibrium ($AD = AS$) in all goods markets, an upward-sloping LM curve, and the combination of interest rates and income that result in portfolio equilibrium ($AD=AS$) in all financial markets. The intersection of the IS and LM curve determines a position of general equilibrium where both the goods markets and the financial markets, are in equilibrium. But since real world economies are complex adaptive systems where change is continual, so that a position of general equilibrium in all markets is never observed.

No real world economy or real world CB can be realistically described in this way. In the real world no general equilibrium position has ever occurred or even approached. In the real world CB's either set the short term official interest rate (Bank Rate), when they establish the price of borrowing (liquidity) in a flexible exchange rate regime, or directly maintain a fixed exchange rate peg against the currency of another country, whose a central bank in turn sets an official short term interest rate when they operate in a fixed exchange rate regime. This means that in terms of the IS-LM diagram the LM curve becomes horizontal at the current Bank Rate. The IS curve ceases to exist since planned investment never equals planned saving. Actual saving is simply the accounting record of investment and the two are identical. The IS curve must be replaced by a downward-sloping AD relationship in interest rate-output space.⁵

"In many (most?) of the most popular and calibrated (I won't call them empirical) macro-economic dynamic stochastic general equilibrium models, the concept of liquidity makes absolutely no sense. Everything is perfectly liquid. Indeed with complete contingent markets, there is never any default in equilibrium, because every agent satisfies his inter-temporal budget constraint. All contracts are costlessly and instantaneously enforced. Ad-hoc cash-in-advance constraints on household purchases of commodities and securities do not create behavior/outcomes that can be identified with liquidity constraints." Buiter, 2008; quoted in Goodhart, 2009.

³ Moore, 2009.

⁴ Moore, 1988,2009 .

⁵ Moore, 2006.

There is currently a huge discrepancy between CB discussions about current monetary policy, couched in terms of how the policy rate should be varied, and with academic analysis, concerned with how much the CB should vary the high-powered Monetary Base. (If the existence of a unique general equilibrium is assumed, there is admittedly a dual relationship, since a given interest rate implies a particular level of the monetary base. But this is of no help, since under real world levels of uncertainty, CB's never know what level of interest rates would be associated with what particular level of the monetary base.

Do Central Banks control interest rates (R), or the high powered Base (B)? This question led long ago to the much-cited (1970) Poole article, which concluded that the case for choosing to control either R or B depends on the instability (unpredictability) of the demand for money in financial markets, relative to the instability (unpredictability) of the demand for credit in the goods markets. Since short run instability in financial markets is much greater than in goods markets (prices and interest rates can vary enormously within the hour or day,) this was the cause for choosing to control R rather than B.

The unpredictability of the demand for money function in goods markets brought about the demise of official monetary targeting in the 80's. CB's no longer knew what quantity of base they should set to achieve their stabilization goals of price stability and full employment. But none of the various monetary targeting mechanisms, including Volker's famous strict non-borrowed reserve target, denied commercial banks' access to additional cash at a predictable interest rate (although in most countries borrowing at the discount window involves additional non-pecuniary costs). The reason why CB's set interest rates rather than monetary aggregates is due to their overriding obligation to preserve stability in financial markets, not to rate-of-inflation versus rate-of-employment-gap policy control objectives.

Commercial banks are price-setters and quantity-takers in both their retail loan and deposit markets. In overdraft systems banks provide loans as demanded to all borrowers whom they have judged to be credit-worthy up to some pre-designated credit line or ceiling. Bank loans operate like credit cards. Banks must maintain the convertibility of their demand deposits into cash on demand at all times. As a result commercial banks cannot operate in a fractional reserve system with relatively low ratios of cash and liquid assets without the assured continuous recourse at a predictable interest rate to cash-on-demand or liquidity, if they are to be able to maintain the general acceptability and liquidity of their deposits as a means of payment.⁶

The base -money multiplier ($M = m B$) expression is a definitional identity, derived from two other definitional identities:

- (1) $M \equiv D + C$ (the money supply is defined as the sum of total deposits plus currency in the hands of the public)
- (2) $B = R + C$ (the high-powered Base is defined as bank reserves plus currency outstanding).

⁶ Moore, 1968, 1988.

To derive the money multiplier $m=M/B$, divide (1) through by D , and then divide (1) by (2), so $m = \{1 + C/D\}/\{R/D+C/D\}$. Since the money multiplier is merely a definitional identity it can say nothing whatsoever about the direction of causality, between changes in the base and changes in the money supply. Once it is understood that the CB in practice sets the level of short term interest rates, it becomes clear that the so-called “money multiplier” determines the quantity of high powered base money and bank reserves that CB’s must create to maintain the targeted rate of interest. The base-money-multiplier relationship works in reverse. It determines the quantity of the base (B) required for a specific interest rate, and not the quantity of the money supply (M) required to generate a particular level of interest rates.

This change has not as yet been widely understood and does not yet appeared in most undergraduate textbooks. Many texts now incorporate both a Taylor reaction function **and** a standard high-powered-base” money multiplier”. The CB is presumed able to control the base (B) in order to determine the money supply (M) and set the level of interest rates!⁷ This high-powered-base “money multiplier” misunderstanding has been the cause of serious policy errors, even by central bankers. It was generally believed that raising the required reserve ratio (e.g. calls for Special Deposits) have the restrictive effect of reducing the money supply. But in practice in order to maintain the target interest rate CB’s must provide the extra reserves required, by buying or selling liquid assets to the banks.

Since such reserves are **required** to be held, and generally offer a lower or even zero interest rate, the net effect of such calls to raise required reserve ratios is to make banks both less liquid, and less profitable. This induces them to raise their markups between lending rates and deposits, and shift their portfolios toward higher-yielding and riskier loans. Reserve requirements should be viewed as a special tax on the banking system, rendering banks both less liquid and less risk-averse. Insofar as such taxes can be avoided by shifting asset locations, they will do so.

It is similarly widely believed that Central Banks (CB’s) have a choice whether to sterilize or not to sterilize their interventions in foreign exchange markets. But so long as they are obligated to maintain a policy- determined domestic interest rate, they have in practice no such choice. All foreign exchange intervention must automatically be sterilized, if they are to maintain their policy-mandated level of interest rates.

During the 2007-09 financial crises, when banks wanted more cash they were automatically given it by their central banks in all countries. Later during the post-crisis stage, when due to counterparty risk banks became unwilling to lend to each other in the three-month inter-bank market, the three-month Libor rate rose sharply relative to overnight rates. To reduce this rate, CB’s had either to lower the short-term policy rate, or to undertake an ‘*operation twist*’. This involved trying to keep overnight rates close to the stipulated policy rate by

⁷ Moore, 1988, 2006, Goodhart, 2009b.

buying three month paper, and then offsetting the effect on bank reserves by borrowing overnight in the attempt to keep overnight rates close to the policy rate. In the past such 'twist' operations have seldom been successful.⁸

In another famous article Sargent and Wallace purported to demonstrate that if the policy interest rate was exogenously set, both the economy and the price level would become unstable and explode, whereas if CB' set the money stock, the monetary system would be stable.⁹ This totally specious argument ignores the historical fact that CB's have been setting interest rates on a regular basis for years, with no accompanying price level instability. CB's do not fix interest rates at some exogenous level and attempt to keep them there. They vary interest rates pro-cyclically and exogenously, as their chief policy instrument in response to current and anticipated future inflation and output developments, in their attempt to realize their stabilization goals of price stability and full employment.

The resolution of this conflict between reality and theory has now finally been resolved by the realization that in reality CB's do not set interest rates at some exogenous level and then keep them there. They vary the policy interest rate (bank Rate) continuously in response to current and expected future macro-economic developments when inflation targeting, with special emphasis on their inflation forecasts. The division between the reality that CB's set interest rates, not monetary quantities, and mainstream theory that CB's set the high-powered Base and so the money supply, has finally been resolved, at least at the graduate level in favor of reality. Nevertheless this resolution has yet to occur in undergraduate macroeconomic text books, where money-multiplier analysis still dominates.¹⁰

This process is encapsulated in the Taylor reaction function:

$$R = a + b (\text{pdot} - \text{pdot}^*) + c(y),$$

where R = the policy rate, pdot = the forecast inflation rate, pdot* = the target inflation rate, and y = the output gap. The Taylor principle maintains that price stability will be achieved so long as $b > 1$.

The Taylor reaction function asserts CB's decide on the present change in interest rates on the basis of their forecasts of the future deviations of inflation from its target range. But since CB's base the current change in interest rates on their forecasts of future deviations of inflation from its target and of future output from potential, the forecasts that trigger these decisions are not easily available. This makes a huge difference to the econometric results of trying to estimate Taylor reaction functions.¹¹

There are several features of the current credit crunch quite distinct from changes in measured interest rate spreads, for example: the denial of access to credit to all sub-prime

⁸ Goodhart, 2009, 360.

⁹ Sargent and Wallace, 1975.

¹⁰ Moore and Boermans, 2010. (forthcoming).

¹¹ Goodhart, 2009.

borrowers: the severe tightening of credit lines for all borrowers maintaining access to credit, etc. But since these features are highly correlated with spreads, for forecasting purposes the existing models may be able to accommodate these events.

There remains a debate as to whether the current financial crisis was primarily driven by liquidity, or by credit worthiness default worries. But these two concepts are closely intertwined. Concern about credit-worthiness leads lenders to refuse to roll-over loans. Concern about illiquidity drives banks and financial systems into insolvency problems, and the anticipation of potential defaults leads to a contraction of credit. This does most of its damage without the necessity of formal default events. But the inherent lack of realism in the current consensus model with no central role for borrower default, can hardly be over-emphasized.

3. THE CRUCIAL IMPORTANCE OF COORDINATION BETWEEN FISCAL AND MONETARY POLICY

In all modern economies Central Banks (CB's) set the interest rate that they believe will enable the economy to attain their desired stabilization goals of price stability and full employment. But when animal spirits are thoroughly depressed even zero levels of interest rates may be insufficient to induce the short run level of spending sufficient to realize the goal of full employment AD and output. This was the situation the world found itself in the 1930's, and has since been termed a "*Liquidity Trap*". Keynes recommended additional government spending in this case, in order to raise AD to the level sufficient to generate full employment output.

Conservatives in many countries have now become thoroughly pessimistic about governments' ability to deliver on most of their promises. Most governments particularly in developing economies have little ability to produce demanded goods and services with the effectiveness of private markets. Most conservatives have now fully convinced themselves of this, and have made their political reputation as fierce critics of government waste and inefficiency. (Note that not a single Republican senator voted for President Obama's \$800 Trillion government expenditure package in 2010!)

Periods when liquidity traps are generated are widely lamented. Unemployment is up and output is down. It no longer appears possible to be able to stimulate the economy sufficiently, to reach full employment levels of output, even in the long run. Masses of people remain unemployed, and are hungry, miserable and angry. Moreover the present crisis has generated in unprecedentedly enormous increases in the money supply and government debt obligations. As debt-GDP ratios increase, it appears increasingly likely that many governments are rapidly approaching, or may even have reached their debt "limits". There is also recognition that public awareness of increasing future tax obligations to repay these debts operates to depress current consumption spending (the so-called Ricardian equivalence theorem), even rendering fiscal policy ineffective.

To this end conventional Debt/GDP ratios should be replaced by debt service/GDP ratios, the ratio of total interest costs to GDP (rD/GDP). Debts can always be rolled over, so the ratio interest costs (debt service ratio) rD/GDP is a more appropriate measure of the debt "burden". It was once widely believed that debt/income ratios above 100% constituted an upper limit for public debt. But in steady states the debt burden comprises solely the ratio of debt service costs to GDP. As a result at very low interest rates, all debt service burdens are dramatically reduced. (It is not widely recognized that the current Japanese Debt/GDP ratio exceeds 250 percent. But due to Japan's long historical period of very low interest rates, the average interest rate paid on government bonds is only about 1%, so even in Japan the debt service burden (rD/GDP) is only 2,5 percent, a very manageable and serviceable level.

Rather than a cause for extreme depression, liquidity trap situations can alternatively be viewed as a time of exceptional favorable social opportunities. It is of course now widely conceded that governments are quite unable to produce private or public goods and services as efficiently as the private sector. But note: governments have one huge advantage. they have very much longer time horizons than private markets, and they also know for certain that the current recession will not last forever. As a result governments are willing to make major public investments, even at times when "*animal spirits*" are at their lowest levels. But unlike private firms, governments must not show a profit in every period. They are always able to finance the construction of valuable social infrastructure projects, even when short run private prospects are dismal, since they have no annual profit and loss statement to always satisfy.

Even though they are much less efficient than private firms in designing, carrying through, and administering infrastructure investment projects, it is nowhere written that governments must nationalize, and construct these projects themselves? They should rather put these projects out for bid by those private sector firms who have a comparative advantage in efficient construction and delivery, just as is typically currently done by most governments for all highway and road construction projects.

The possibility of private employment and profits has the potential to make public infrastructure projects very attractive from a political viewpoint. Private capital can be expected to be enthusiastic about the prospect of privately creating public goods so long as they can be domestically produced, and do not compete with goods currently produced by the private sector. Military expenditures were long regarded as the choice kind of private spending, since they did not compete with goods produced by the private sector, and also offered private firms very profitable investment projects.

In contemporary circumstances the ideal public project would be social infrastructure investment to reduce climate warming: the insulation of existing buildings to save energy, and the development of alternative energy sources such as wind, tides, geo-thermal- and solar-generated power projects. Even the most conservative businessman would be in favor of the private construction of social infrastructure projects, whenever the expected returns

substantially exceed the low interest rates generally ruling in liquidity trap situations, when animal spirits have flagged, and there is little private demand for investment projects.

There is also the accompanying recognition that in credit money economies total saving is no longer volitional, but is merely the accounting record of investment spending.¹² Expenditures on social infrastructure to prevent climate warming could easily become the aggregate demand replacement for increasing military spending in wartime. It is now widely recognized that the massive government spending for WWII was largely responsible for pulling the US out of the Great Depression of the 1930's. Green expenditures, designed to economize on energy and reduce climate warming, could happily become the AD replacement of World War's for the 21st century. In liquidity trap situations all such expenditures can be extremely cheaply financed, and high rates of return can be assured.¹³

Climate warming could become the 21st century macroeconomic demand equivalent of World War in the 20th century. Intelligent political leadership can make a huge difference in how the world responds to such new opportunities. Particularly in all liquidity trap situations, it should not be difficult to persuade electorates across the globe to exchange increased spending on energy saving for the sake of the future health of our planet for increases in military spending to permit us to dominate our neighbors. The choice is ours.

¹² Moore, 2006.

¹³ Pollin, 2009.

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