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New Monetary Policy and Keynes

*Philip Arestis**

The purpose of this paper is to compare new developments on the monetary policy front, or what is known as inflation targeting, with some of Keynes's ideas as propounded in a pamphlet in 1932. A number of the ingredients of the new monetary policy approach can be found in Keynes, especially that of central bank independence. However, new monetary policy is a major policy prescription closely associated with the New Consensus Macroeconomics. The ideas and policy implications of this new consensus, however, are very different from Keynes's ideas on central banking and monetary policy. We explore these propositions in this contribution.

JEL classifications: E31, E52
Keywords: central bank independence, economics of Keynes, new consensus macroeconomics, inflation targeting, monetary policy

1. Introduction

New Monetary Policy (NMP) is a major policy prescription closely associated with the New Consensus Macroeconomics (NCM) (Arestis/Sawyer 2005 and 2007). NMP is essentially Inflation Targeting (IT), a new policy initiative, which has been adopted by a number of countries since the early 1990s. However, some of the main ingredients of the IT framework can be found in Keynes. For example, Bibow (2002) argues persuasively that at least one of the key elements of IT, that of central bank independence, emanates from Keynes (1932). But there are significance differences between NMP and Keynes's ideas as

* University of Cambridge. This paper relies heavily on joint work with Malcolm Sawyer over many years. I am grateful for that collaboration and the ideas that emanate from it and are contained in this paper.

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this paper attempts to show. It is, therefore, the main focus of the paper to compare the ideas of NMP on central bank independence with those of Keynes on the same theme. It should be emphasised at the outset that the aim is not to compare the two views on macroeconomics or policy in general terms. As such, the paper attempts to provide a contribution to the history of economic ideas, this time by concentrating on the theme of central bank independence first and foremost. Where analysis on related matters is thought necessary for better understanding of the main focus, this is also provided.

Section 2 elucidates the main elements of the NCM out of which we get the NMP and IT. Section 3 investigates monetary rules at a greater depth. In section 4 we look into Keynes's (1932) notions of central bank and related aspects. Section 5 discusses the main differences between Keynes's views on monetary policy and those of the new monetary policy consensus. Section 6 summarises and concludes.

2. New Monetary Policy

NMP emanates from the NCM. The latter is distinguished by its emphasis on a number of factors: the long-run vertical Phillips curve; the absence of any impact on aggregate demand in the long-run; the supply-side determined equilibrium level of unemployment (the ›natural rate‹ or the non-accelerating inflation rate of unemployment, the NAIRU); and the elevation of monetary policy at the expense of fiscal policy (and its neglect of the potential of this policy).

2.1 The New Consensus Macroeconomics Model

NCM can be described succinctly in the following three equations (see, for example, Arestis / Sawyer 2004, and references therein):

$$Y_t^g = a_0 + a_1 Y_{t-1}^g + a_2 E_t(Y_{t+1}^g) - a_3\left[R_t - E_t(p_{t+1})\right] + s_1, \tag{1}$$

$$p_t = b_1 Y_t^g + b_2 p_{t-1} + b_3 E_t(p_{t+1}) + s_2, \tag{2}$$

$$R_t = 1 - c_3\left[RR^* + E_t(p_{t+1}) + c_1 Y_{t-1}^g + c_2\left(p_{t-1} - p^T\right)\right] + c_3 R_{t-1} + s_3 \tag{3}$$

with $b_2 + b_3 = 1$, where Y^g is the output gap, R is nominal rate of interest, p is rate of inflation, p^T is inflation rate target, RR^* is the ›equilibrium‹ real rate of interest, that is the rate of interest consistent with zero output gap which implies from equation (2), a constant rate of inflation, s_i (with $i = 1, 2, 3$) represents stochastic shocks, and E_t refers to expectations held at time t. Equation (1) is the aggregate demand equation with the current output gap determined by past and expected future output gap and the real rate of interest. Equation (2) is a Phillips curve with inflation based on current output gap and past and future inflation; in the long run the Phillips curve is assumed to be vertical. Equation (3) is a monetary policy rule (defined by, for example, Svensson 2003: 448, amongst others, as a

»prescribed guide for monetary-policy conduct«), which can be regarded as a replacement for the old LM curve. In this equation, the nominal interest rate is based on expected inflation, output gap, deviation of inflation from target (or ›inflation gap‹), and the ›equilibrium‹ real rate of interest. The lagged interest rate represents interest rate ›smoothing‹ undertaken by the monetary authorities, which is thought as improving performance by introducing ›history dependence‹ (see, for example, Rotemberg / Woodford 1997, Woodford 1999). Variations on this theme are used. For example, interest rate ›smoothing‹ in equation (3) is often ignored, as is the lagged output gap variable in equation (1) so that the focus is on the influence of expected future output gap in this equation. There are three equations and three unknowns: output, interest rate and inflation.[1]

2.2 Economic Policy Implications: NCM

As suggested elsewhere (Arestis / Sawyer 2005 and 2007), NCM is based on the New Keynesian economics approach, but goes beyond it. Equation (2) with its assumption that in the long run the Phillips curve is vertical, and equation (3) as elaborated above, is a further distinguishing feature. Furthermore, the absence of an LM relationship entails two important implications. Money is treated as a ›residual‹ in the sense that the stock of money has no causal significance within this framework. The central bank sets the rate of interest, which is therefore not a market phenomenon, and the money stock is demand-determined as a result.[2] This prompted the Governor of the Bank of England to note that

> »as central banks became more and more focused on achieving price stability, less and less attention was paid to movements in money. Indeed, the decline of interest in money appeared to go hand in hand with success in maintaining low and stable inflation« (King 2002: 162).

The form that interest rate policy may take is three-fold. The simplest is a ›weak form‹ of IT, meaning that the central bank has a desired inflation rate (p^T), which needs not be announced, and the reaction function may also include the output gap. A ›semi-strong

1 It is also possible to add a fourth equation to equations (1) to (3) reported in the text. This would relate the stock of money to ›demand for money variables‹ such as income, prices and the rate of interest, which would reinforce the endogenous money nature of this approach with the stock of money being demand determined. Clearly, though, such an equation would be superfluous in that the stock of money thereby determined is akin to a residual and does not feed back to affect other variables in the model. We have explored this issue and others related to whether the stock of money retains any causal significance at some length in Arestis / Sawyer (2003).

2 When the stock of money is treated as a residual, it is endogenously created. This raises the question of the difference between this approach and the Keynesian notion of endogenous money. There is an important difference between the two approaches. The NCM approach sees money as a residual with no further role for it. The Keynesian notion of endogenous money entails a fully articulated theory with clear policy implications where money and credit have important roles to play in their interaction with real variables (see, for example, Fontana / Palacio Vera 2002, especially p. 559).

form‹ of IT, which is concomitant to pursuing an optimal monetary policy that minimizes a loss function like equation (3)'" in the section 3.2 below, but without any precommitment (Svensson 1999). A ›strong-form‹ IT, which is the same as the ›semi-strong form‹ IT but under precommitment; for example reduce inflation today but run negative output gaps in the future (King 1997a).

There are five distinct attributes of IT central banks (Truman 2003, Kuttner 2004b):

1. stated commitment to price stability as the principal goal of monetary policy; the price stability goal may be accompanied by output stabilization so long as price stability is not violated;
2. an explicit numerical target for inflation is published; this could be a point target or a range;
3. a time horizon for reaching the inflation target after deviation is published;
4. formulation of a mechanism for transparency with respect to monetary policy formulation; IT central banks publish inflation reports that might include not only an outlook for inflation, but also output and other macroeconomic variables, along with an assessment of economic conditions;
5. some accountability mechanism: if the inflation target is not met, there should be specific steps in place the central bank should take; this may include publishing an explanation, or submitting a letter to the government explaining the reasons for missing the target and how to return to target.

Given these attributes, two types of IT central banks can be identified: the explicit type, and the implicit type. The explicit type has all the distinct attributes just identified, while the implicit IT central banks internalize the price stability objective without adopting all the ingredients of outright inflation targeting.

In order to clarify this distinction further, we may give examples of monetary policy regimes. We do so by drawing on, and adapting appropriately, Meyer (2004: 152, table 1). In table 1 we give relevant examples. Australia has an explicit numerical inflation target and a dual mandate, under which

> »monetary policy is directed at promoting both full employment and price stability, with no priority expressed, and with the central bank responsible for balancing these objectives in the short run« (Meyer 2004: 151).

The UK has an explicit numerical inflation target and a hierarchical mandate, »under which central banks are restricted in pursuing other objectives unless price stability has been achieved« (Meyer 2004: 151). It is further suggested in the same publication that the U.S. central bank, the Federal Reserve System (Fed), has a dual mandate, which is true in view of its constitution, and may have an implicit inflation target, which we argue below is not quite true in view of the discretionary character of its monetary policy. There are many other countries like the UK, twenty of them throughout the world (see table 1). Interestingly enough, Svensson (2004) argues that the dual / hierarchical distinction is not useful. For while the inflation target is a choice variable, »the output target […] is not sub-

ject to choice; it is only subject to estimation« (Svensson 2004: 161). There is, thus, Svensson suggests, only a hierarchical mandate for long-run inflation.

Table 1: Monetary Policy Regimes

Inflation Target / Mandate	*Explicit*	*Implicit*
Dual	Australia	U.S. (?)
Hierarchical	UK[1], ECB (?)	Japan (?)

1 There are other countries that may come under the explicit/hierarchical category: Brazil, Canada, Chile, Colombia, Czech Republic, Hungary, Iceland, Israel, Mexico, New Zealand, Norway, Peru, Philippines, Poland, South Africa, South Korea, Switzerland, Sweden, and Thailand. Japan may actually have an implicit zero inflation target (see, for example, Ito 2004). The European Central Bank has a desired inflation rate, but does not pursue inflation-target type of policy.

Sources: Adopted, and adapted, from Meyer (2004: 152, table 1) and Kuttner (2004b: 34–36, table 2), and own research

2.3 Main Theoretical Features of NMP

We may begin this section by summarizing the pursuit of NMP as practised currently by the 21 central banks to which we have referred. In pursuing this strategy, countries commit themselves to price stability as the main objective of monetary policy, along with medium- to long-term inflation as the nominal anchor, which gives rise to setting an inflation target. This is consistent with the monetarist view that in the long run monetary policy can only affect inflation and not real variables. Central banks commit themselves to achieving a targeted inflation rate and announce a relevant framework to achieve the set target. This approach is based on the belief that inflation is negatively related to economic growth in the long run, and, also, that high inflation is associated with high inflation variability, which is harmful to the economy. If the authorities were allowed full discretion in monetary policy, they would produce ›surprise‹ inflation, especially so for electoral benefits. This is the well-known, by now, time-inconsistency problem (Kydland / Prescott 1977). Such a problem, though, can be avoided if the government delegated monetary policy to an independent central bank. The strategy contains the single objective of price stability for monetary policy, and only if this objective were achieved output stabilization might be attempted, to avoid the time-inconsistency problem and thus the inflationary bias referred to above. The government sets the broader goal of monetary policy, while the central bank has discretion in terms of the instrument to achieve the set target. The new monetary policy framework thereby gives ›constrained discretion‹ to the independent central bank to respond to new information, an important dimension of the new framework given information asymmetries and policy lags, while at the same time putting in place rules in the conduct of monetary policy.

We may now proceed to identify the main theoretical features of the NMP. They are as follows:

1. NMP is a monetary policy framework whereby public announcement of official inflation targets, or target ranges, is undertaken. This is accompanied by explicit acknowledgement that price stability, meaning low and stable inflation, is monetary policy's primary long-term objective (King 2002).
2. The objectives of the NMP framework are achieved through the principle of »constrained discretion« (Bernanke / Mishkin 1997: 104), rather than »unfettered discretion« (King 1997b: 1). ›Constrained discretion‹ is actually viewed as ›middle ground‹ between ›rules‹ and ›discretion‹. It is »an approach that allows monetary policymakers considerable leeway in responding to economic shocks, financial disturbances, and other unforeseen developments. Importantly, however, this discretion of policy makers is constrained by a strong commitment to keeping inflation low and stable« (Bernanke 2003: 2).
3. Monetary policy is taken as the main instrument of macroeconomic policy, while fiscal policy is no longer viewed as a powerful macroeconomic instrument (in any case it is hostage to the slow and uncertain legislative process). Monetary policy has, thus, been upgraded and fiscal policy has been downgraded.
4. Monetary policy can be used to meet the objective of low rates of inflation (which are always desirable in this view, since low, and stable, rates of inflation are conducive to healthy growth rates). However, monetary policy should not be operated by politicians but by experts (whether banks, economists or others) in the form of an ›independent‹ central bank.
5. The level of economic activity fluctuates around a supply-side equilibrium. In the model outlined above this equilibrium corresponds to $Y^g = 0$ (and inflation is equal to target rate, and real interest rate is equal to RR^*). This can be alternatively expressed in terms of the non-accelerating inflation rate of unemployment (the NAIRU) such that unemployment below (above) the NAIRU would lead to higher (lower) rates of inflation. The NAIRU is a supply-side phenomenon closely related to the workings of the labour market.
6. The essence of Say's Law holds, namely that the level of effective demand does not play an independent role in the (long-run) determination of the level of economic activity, and adjusts to underpin the supply-side determined level of economic activity (which itself corresponds to the NAIRU).

These features of NMP are reflected in equations (1) to (3). The interest rate is adjusted in response to departures of the inflation rate from its target (equation 3), and it is assumed that a higher interest rate dampens down demand (equation 1), which feeds back via equation (2) to inflation. It stipulates that the nominal rate of interest is the sum of the real interest rate and expected inflation. As such, it incorporates a symmetric approach to inflation targeting. Inflation above the target dictates higher interest rates to contain inflation, whereas inflation below the target requires lower interest rates to stimulate the economy

and increase inflation. The term $E_t(p_{t+1})$ in equation (2) is important in that it contains a key channel of monetary policy. If a central bank can credibly signal its intention to achieve and maintain low inflation, then expectations of inflation will be lowered and this term indicates that it may be possible to reduce current inflation at a significantly lower cost in terms of output than otherwise. In this way monetary policy operates through an expectations channel. In the words of the Governor of the Bank of England,

> »monetary policy was able to respond by less than would otherwise have been necessary because it affected expectations«, and that »the real influence of monetary policy is less the effect of any individual monthly decision on interest rates and more the ability of the framework of policy to condition expectations« (King 2005: 7).

Equation (3) contains a stochastic shock element, implying that monetary policy operates with random shocks; this is not always the case in the literature, where in some cases this element is not incorporated in equation (3) (see, for example, McCallum 2001). In view of the importance of equation (3) we investigate its nature more closely in section 3.

3. Monetary Rules

The monetary rule depicted in equation (3) is rather different from the rest of the equations that depict NCM. This is so since the latter emanate from theoretical constructs while equation (3) is a rather *ad hoc* relationship. This, however needs not always be the case. We elaborate at length in what follows in this section, where we distinguish between ad hoc policy rules and rules based on explicit optimization.

3.1 Ad Hoc Policy Rules

The best-known example of the ad hoc type (assuming no interest rate smoothing, and no stochastic shocks for simplicity) can be shown as in equation (3)':

$$R_t = RR^* + d_1 Y_t^g + d_2\left(p_{t-1} - p^T\right) \qquad (3)'$$

where the symbols are as above, but noting that $d_2 = c_2 + 1$. This is the original monetary policy rule, with the exception of p^T, which stands in that version for the desired inflation rate (Taylor 1993). The relationship that captures U.S. monetary policy in terms of the nominal rate of interest was thought to be:

$$R_1 = 0.04 + 0.5Y_t^g + 1.5\left(p_t - 0.02\right) = 0.02 + p_t + 0.5Y_t^g + 0.5\left(p_t - 0.02\right) \quad (3.1)'$$

where the symbols are as above, with the exception of Y^g, which was expressed in that formulation as the ratio of output gap to GDP, and with the assumption that the desired rate of inflation has been two per cent. This equation suggests an equilibrium real rate (RR^*) of two per cent. Equations of the type depicted in (3)' are called Taylor rules, since

Taylor (1993), who argued that a simple equation of this form captured surprisingly well the behaviour of the U.S. federal-funds rate and the Fed monetary policy. The nominal rate is increased more than one-to-one with respect to any increase in inflation; in other words, d_2 is required to be greater than one, the ›Taylor Principle‹, for unique equilibrium in sticky-price models (Taylor 1999, Woodford 2001). This policy reaction ensures that the real rate of interest will act to lower inflation. Given inflation, the real rate of interest is also increased as a result of output-gap positive changes. Taylor rules, therefore, require monetary policy to act automatically to inflation and output. We may note that a Taylor rule does not resort to dynamic optimization; it is a rule-of-thumb, based on historical data to formulate benchmark policy (Taylor 1999). Clarida et al. (1998) argue that (3.1)' is applicable to other countries with similar coefficients.

Another example of ad hoc policy rules is the inflation-forecast-based (IFB) rules (Batini / Haldane 1999):

$$R_t = RR^* + p^T + \sum_{\tau} \theta_\tau \rho_{t+\tau,t} \qquad (3)''$$

where the monetary policy instrument (typically the short-term rate of interest under the control of the central bank) responds to deviations of expected, rather than actual, inflation from target (ρ), thereby bypassing the policy lags that are present when inflation is sticky. The nominal rate of interest depends on a distributed lead of τ-period-ahead inflation forecasts made at time t, $p_{t+\tau,t}$. In both cases just considered, we have instrument rules, which express the monetary policy instrument as a simple and usually linear function of deviation from their target levels of a few key macroeconomic variables (essentially inflation and the output gap), either as outcome-based rules (equation 3') or forecast-based rules (equation 3").

These Taylor-type rules have been criticized (for example, Svensson 2003) in terms of the possibility of instability: if the rise in the nominal rate of interest in response to a rise in expected inflation is not high enough, then the real rate of interest falls raising demand, which fails to check inflation. Mutatis mutandis, an excessive rise in the nominal rate of interest in response to a rise in expected inflation would also cause instability.[3] However, instability can be avoided if monetary authorities respond rather aggressively, that is with a coefficient above unity to expected inflation. This result has been demonstrated in the closed-economy case (Clarida et al. 2000) as well as in the small open-economy case (De Fiore / Liu 2002). Further ways to alleviate the instability include (Batini / Pearlman 2002): gradual response by the monetary authority, that is high interest rate smoothing; the monetary authority responds to averages of expected inflation, instead of expected one-period inflation; the monetary authority augments the instrument rule by also responding to the output gap.

3 In fact, Sargent / Wallace (1975) had already argued that in an equation of the (3.1)' type, the price level is indeterminate. They, thus, suggested that a simple rule of fixing the rate of interest at some level is preferable. In an uncertain world, however, this is not plausible (Bindsell 2004, Goodhart 2001).

3.2 Explicit Optimization Rules

For a recent critique and further elaboration, as well as for a discussion of rules of monetary policy and a suggestion for describing IT as a ›forecast-targeting rule‹, or ›forecast targeting‹ (with the Reserve Bank of New Zealand being cited as an example of this procedure), see Svensson (2003). This is essentially what Blinder (1998) describes as ›dynamic programming‹ and ›proper dynamic optimization‹. Rules based on optimization invariably rely on setting the monetary policy instrument as a solution to an optimization problem defined by an explicit loss function, describing the costs of the specific goal variables deviating from their target levels, and a structural model of the economy. In other words, minimization of the loss function subject to the constraints imposed by the economy's structure (summarized in the structural model utilized) produces a model-specific optimal interest rate reaction function. This determines the optimal rate of interest as a function of state variables. An inflation-targeting framework would employ a loss function of the general form (see, for example, Svensson 1999, Walsh 2002, Woodford 2004):

$$E_t \sum_{\tau=0}^{\infty} \delta^{\tau} \left[\left(p_{t+\tau} - p^{T} \right)^2 + \lambda (Y^{g})^2_{t+\tau} \right] \qquad (3)'''$$

where the parameter δ is a discount factor that satisfies $0 < \delta < 1$, and the parameter $\lambda > 0$ is the weight on output fluctuations, relative to inflation deviations. This would be ›flexible inflation targeting‹, in that the loss function contains both deviations of inflation and output gap from their targets. If the monetary authority focuses on inflation only, and thus only deviations of inflation from its target would appear in equation (3)''', the case of ›strict inflation targeting‹ emerges. It follows that ›flexible‹ IT relies heavily on the value of λ. Consequently, we have in either case target rules, whereby the appropriate setting for the monetary policy instrument is defined as the solution to a constrained optimizing problem facing the central bank. The first-order condition under such an exercise is given by (3)'''':

$$E_t \left[p_{t+1} - p^{T} \right] = \frac{\lambda}{b_1} E_t \left[(Y^{g}_{t+1}) \right] \qquad (3)''''$$

where b_1 is the coefficient on the output gap in (2) above. (3)'''' expresses a linear trade-off between the deviation of inflation from its target and the output gap, and states that the expected marginal benefit of reducing inflation from its target should be equal to the expected marginal cost of inflation reduction. A larger λ, or smaller b_1, implies higher cost in reducing inflation, which may very well imply that the monetary authority is prepared to tolerate larger deviations of inflation from its target, by appropriately manipulating the monetary instrument dictated by the optimization procedure.

In general terms, the optimal rule derived from (3)''' would not be given by the instrument rule as in either (3)' or (3)'', although this is not impossible (Kuttner 2004a). In fact, there is a degree of complementarity between instrument and target rule, in that a target rule defines inevitably an instrument rule. At the same time, it is always possible to

define a loss function and specify an economic model that would produce a specific instrument rule as a solution to an optimization exercise (Issing 2004).

4. Keynes on Central Bank Independence and Monetary Policy

Keynes (1913 and 1914) propounded the idea of central bank independence as early as the 1910s in relation to the establishment of a State Bank in India (see, also, Bibow 2002). But it was in the early 1930s when Keynes discussed the possibility of central bank independence in the case of the Bank of England. In late summer 1932 a UK Labour Party policy pamphlet was published (Labour Party 1932), and Keynes (1932) reviewed the pamphlet in a two-part article for the *New Statesman and Nation* on 17 and 24 September of that year. Keynes (1932) endorsed the Labour Party resolution that related to the nationalization of the Bank of England (but not the Big Five commercial banks, which was left in abeyance by the Labour Party in any case on that occasion), but he argued very strongly for an independent Bank of England, whose »independence and […] prestige are assets« (Keynes 1932: 132). In fact, one might justifiably suggest that Keynes saw central bank independence in quite a similar way as it is implemented currently. Especially so in terms of his preference that the government should lay down the

> »main lines of policy«, and »[t]he management of the Bank should be ultimately subject to the Government of the day and the higher appointments should require the approval of the Chancellor of the Exchequer« (Keynes 1932: 131), and »the principles of the currency system, e.g. whether or not the standard should be gold, or whether stability of wholesale prices or of the cost of living or of some other index, is to be its norm, should be determined by Parliament« (ibidem).

However,

> »[t]he less direct the democratic control and the more remote the opportunities for parliamentary interference with banking policy the better it will be« (ibidem).

The rationale being that the Bank of England in its conduct of monetary policy is »in the practice of a very difficult technique, of which Parliament will understand less than nothing.« (ibidem) Indeed, Keynes went on to suggest, »A planned economy will be impracticable unless there is the utmost decentralization in the handling of expert control« (ibidem). Central bank independence is therefore for Keynes an efficient way of conducting monetary policy, but ultimately there has to be democratic control. However, democratic control over monetary policy should not be direct, since the operations of the independent central bank are for Keynes essentially technocratic and as such should be in the hands of experts, who understand the complexities of monetary policy. This view of Keynes can be interestingly contrasted with that of Friedman (1992: 261), who argues that »money is much too serious a matter to be left to the central bankers«, and consequently bankers should be given strict rules to operate monetary policy (see, also, Bibow 2002: 776).

Another important suggestion of the Labour Party policy pamphlet, which Keynes endorsed, was the setting up of a *National Investment Board* (NIB) that should work in close collaboration with the ›publicly owned‹ Bank of England. In fact Keynes went further and made another important innovation. Such a Board for Keynes should have two clear objectives:

> »the quantitative, rather than […] the qualitative, control of new investment, partly with securing the right aggregate of new investment, and partly with securing that the amount of *foreign* lending should be appropriate to the circumstances« (Keynes 1932: 134).

The suggestion for the quantitative control of investment is very reminiscent of Keynes's ›socialisation of investment‹ (Keynes 1936). In propounding this idea, Keynes (1936: 378) argues that

> »a somewhat comprehensive socialisation of investment will prove the only means of securing an approximation to full employment; though this need not exclude all manner of compromises and of devices by which public authority will co-operate with private initiative«.

Similarly in the case of NIB,

> »what is needed is a co-ordinated policy to determine the rate of aggregate investment by public and semi-public bodies, in which case we could safely leave industry to raise what funds it needs as and when it chooses« (Keynes 1932: 135 f.).

In either proposal, socialization of investment is seen as filling the gap left by private investors and also as encouraging more private investment by reducing uncertainty through the creation of a more stable environment.

The foreign lending aspect of NIB relates directly to the sterling exchange rate. Here Keynes proposes an instrument of »controlling the value of sterling« and that »it is this which should be the main preoccupation of the proposed National Investment Board« (Keynes 1932: 136). What is meant here is that the task of NIB should be to ensure an appropriate division of the aggregate new lending between foreign and domestic borrowers in a way that it is »appropriate to the foreign exchange level best suited to the stability of domestic prices« (ibidem). Consequently, the task of the NIB is the maintenance of equilibrium between the total flow of new investment and total resources available for investment at a price level that avoids both inflation and deflation. Furthermore, this should »maintain the level of investment at a high enough rate to ensure the optimum level of employment« (Keynes 1932: 137). The NIB, therefore, should aim to pool the funds accruing for investment and then ensure that adequate demand for them prevails. The latter can be achieved

> »partly by making them available at a rate of interest which would attract a sufficient demand and partly by stimulating the undertaking of particular investment propositions« (ibidem).

This, though, should be undertaken in close collaboration with the independent central bank.

Central bank independence for Keynes is, then, rather different from that alluded to by the new monetary policy. The primary focus of the latter is on price stability. The focus of Keynes is on real economic activity without ignoring price stability at the same time.

5. Comparing NMP with Keynes's Monetary Policy

We suggest in this contribution that Keynes's (1932) ideas are rather different from those of the NMP. The best way to show these differences is to revisit the main features of NMP described above in sub-section 2.3, but this time contrasting them with the ideas as in Keynes (1932).

1. NMP is undertaken with the explicit acknowledgement that price stability, meaning low and stable inflation, is monetary policy's primary long-term objective, along with the publication of official inflation targets. This is very different from Keynes's ideas, which emphasise output, as well as price stability, as the main objectives of monetary policy. The objective of monetary policy in Keynes (1932, and elsewhere) is essentially both output and stability of prices. There is no dual and hierarchical mandate in Keynes's analysis. The overriding goals of monetary policy are output and price stability, unlike the highly hierarchical focus of the NMP view in this aspect. It is also the case that there are no inflation targets for that matter in Keynes.
2. The objectives of the IT framework are achieved through the principle of ›constrained discretion‹. This is essentially a monetary rules framework with discretion in view of the uncertainties of the economy and the lags involved in the impact of monetary policy. It is an approach which is in sharp contrast to Keynes (1932) where the principle of discretion in monetary policy is propounded. The idea of NIB in collaboration with the independent and ›nationalized‹ Bank of England is a clear indication of discretion in monetary policy. There are, of course, central banks around the globe currently that still pursue discretionary monetary policy. A good example in this regard is the Fed in the U.S., which does not pursue inflation targeting.
3. Monetary policy is taken as the main instrument of macroeconomic policy, while fiscal policy is no longer viewed as a powerful macroeconomic instrument. Fiscal policy in the NMP approach should ensure a balanced budget, preferably running surpluses during ›good times‹ so that deficits would be avoided in ›bad times‹. By contrast in Keynes, it is the other way round. Monetary policy should ensure low interest rates, and fiscal policy is the main stabilization instrument. Admittedly, this proposition of Keynes is not so clear in Keynes (1932), but it is of course very forcibly made in Keynes (1936).
4. Monetary policy can be used to meet the objective of low rates of inflation, so long as it is under the control of experts in the form of an ›independent‹ central bank. This may be the only aspect upon which NMP and Keynes may have a common charac-

teristic. But even here there are important differences. Keynes's independent central bank is predicated on the difficult nature of monetary policy, which would have to be run by experts and politicians. There is no time-inconsistency problem in Keynes. The objective of monetary policy in Keynes is the achievement of ›the optimum level of employment‹, a very different objective from that of NMP.

5. NAIRU is a supply-side phenomenon closely related to the workings of the labour market. For Keynes NAIRU assumes a completely different role, in that it is affected by policy and demand considerations. As such it does not have the meaning that it assumes in NMP. More specifically, NMP proponents assume that in the long run there is no relationship between inflation and unemployment, so that monetary policy can only affect inflation but not real economic activity. There is no such dichotomy in Keynes. Monetary policy can have real effects in both the short and long run.
6. The essence of Say's Law holds, namely that the level of effective demand does not play an independent role in the long-run determination of the level of economic activity. Here again, this is completely opposite to Keynes's stance on the matter. Keynes's (1932) insistence on the independent Bank of England to focus on achieving high levels of employment and price stability can only materialize if effective demand is thought to be able to affect long-run economic activity. Indeed, the whole point of aggregate demand analysis and its role in stabilising economic activity lies at the heart of the economics of Keynes (chiefly, 1932), and its denial of any relevance of Say's Law.

Taking items 5. and 6. together pinpoints, for the NMP, to the separation of real and monetary factors, the so-called ›classical dichotomy‹. This separation is of course completely absent in the Keynes (1932) view. Changes in interest rates do affect both the real and the nominal variables in the economy, including the exchange rate. Indeed, monetary policy is thought to have long-run effects, essentially via investment. And, if monetary policy cannot have the desirable effect on the real variables in the economy, such policies should be supplemented by more direct policies like for example the NIB as discussed in section 4.

Another aspect of NMP that is in sharp contrast to that of Keynes is on the causes of inflation. NMP focuses on the role of monetary policy (in the form of interest rates) to control demand inflation in a vertical Phillips curve framework. Control of cost inflation does not come under the remit of monetary policy. The position taken by IT on cost inflation is that it should either be accommodated, or that supply shocks come and go – and on average are zero and do not affect the rate of inflation (see, for example, Clarida et al. 1999). The relevance of the demand and cost effects discussed under this heading assumes a very different role in Keynes (1932). This theoretical framework can easily account for both demand and cost factors; there is no vertical Phillips curve in this theoretical framework. Inflationary pressures that emanate from exchange rate movements are particularly important in Keynes (1932), and the independent central bank should be mindful of these effects. In this respect the conclusion reached by the UK Lords Select Committee on Economic Affairs (House of Lords 2004a and 2004b) is particularly relevant. The Committee refers to

> »the prominent role played in the United Kingdom by the exchange rate in the transmission of interest rates to inflation«, and that »according to the Bank of England economic model, in the first year 80 % of the effect of an increase in interest rates is via an appreciation of the exchange rate« (House of Lords 2004a: 26).

This conclusion is relevant to Keynes's (1932) proposal for the NIB to be particularly vigilant to exchange rate gyrations as explored in section 4.

We may also refer to another example of concern with the exchange rate. The Reserve Bank of New Zealand, the initiator of inflation targeting in the early 1990s, appears to be moving to a new era where concern with the exchange rate becomes important. The Deputy Governor of the Reserve Bank of New Zealand has recently stated that

> »we would contemplate intervening if the exchange rate is exceptionally and unjustifiably high or low, and we think an opportunity exists that would ensure such intervention was effective« (Orr 2004: 1 f.).

The terms ›exceptionally high or low‹ and ›unjustifiably high or low‹ exchange rates are defined. Exceptionally high or low means »when the exchange rate is nearing its cyclical extremes«, and unjustifiably high or low means »when the exchange rate has moved well in excess of any relevant economic fundamentals« (Orr 2004: 2). This change of direction by the central bank of New Zealand is viewed

> »as another instrument for the Bank, consistent with achieving our monetary policy objectives, albeit a very secondary instrument to our most powerful one of the Official Cash Rate« (Orr 2004: 2 f.).

Even more important for the purposes of this contribution, »There is no mechanical rule underlying this new objective – such decisions are made in context« (Orr 2004: 2).

The determination of the equilibrium rate of interest is perhaps another aspect where a similarity might be in place. For although Keynes accepted the notion of an equilibrium natural rate of interest in the *Treatise on Money* (1930), he rejected the idea flatly in the *General Theory* (1936). A long quote makes the point vividly:

> »In my *Treatise on Money* I defined what purported to be a unique rate of interest, which I called the natural rate of interest – namely, the rate of interest which, in the terminology of my *Treatise*, preserved equality between the rate of saving (as there defined) and the rate of investment. I believed this to be a development and clarification of Wicksell's ›natural rate of interest‹, which was, according to him, the rate which would preserve the stability of some, not quite clearly specified, price level. I had, however, overlooked the fact that in any given society there is, on this definition, a *different* natural rate of interest for each hypothetical level of employment. And, similarly, for every rate of interest there is a level of employment for which the rate is the ›natural‹ rate, in the sense that the system will be in equilibrium with that rate of interest and that level of employment. Thus it was a mistake to speak of the natural rate of interest or to suggest that the above definition would yield a unique

> value for the rate of interest irrespective of the level of employment. I had not then understood that, in certain conditions, the system could be in equilibrium with less than full employment« (Keynes 1936: 242 f.); and that »[i]f there is any such rate of interest, which is unique and significant, it must be the rate which we might term the *neutral* rate of interest, namely, the natural rate in the above sense which is consistent with full employment, given the other parameters of the system; though this rate might be better described, perhaps, as the *optimum* rate« (Keynes 1936: 243).

Clearly, no similarity exists even on the equilibrium rate of interest, as in equation (3) above, between the NMP and Keynes.

6. Summary and Conclusions

We have located the theoretical foundations of NMP and identified a number of its key issues. We have emphasized the ideas of NMP on central bank independence and monetary policy, and contrasted them with those that emanate from Keynes (1932). We have compared the two theoretical models and have found them as having very little in common. Especially so in terms of the explicit and hierarchical specific objective, price stability, as well as the relationship between the policy instrument, interest rate, and the target rate of inflation, where there are significant differences between the two approaches.

A final comment is in order. Keynes (1932) suggested and explained the notion, and importance, of central bank independence and promulgated the notion in the case of the Bank of England. The latter became independent in mid-1997. This begs the question of whether the now independent Bank of England is based on the model depicted by Keynes in 1932. There may be similar characteristics, as for example in the case of accountability to the Chancellor of the Exchequers and thus to the electorate, a clear similarity. But in the case of the objective of the independent Bank of England, Keynes was far away from that of the NCM. Growth and employment in Keynes, inflation mainly and to a lesser extent output are the objectives of the independent Bank of England: a clear difference between the two models of central bank independence.

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