The ECB's Monetary Policy Review: A Post-Keynesian Twist?

In 2021, the European central bank (ECB) decided to adjust its monetary policy strategy. Three major changes were initiated: the main objective was reformulated, but also the structure of the institution's analyses of the economic situation and how it will communicate in the future was adjusted. Can these changes be considered as being based on a Post-Keynesian view or do they still follow the "New Consensus" model largely based on standard neo-classical theory? Our main conclusion will be that the adjustments made by the ECB are not necessarily based on Post-Keynesian analysis. To justify this statement, we have developed what we consider the basic elements of a Post-Keynesian monetary policy, then we analysed what a Post-Keynesian monetary rule could be as well as the monetary policy instruments used by the ECB. Subsequently we looked at the strategy changes made by the ECB from a Post-Keynesian point of view and concluded that some of these changes can be considered as being close to Post-Keynesian theory, but other facts explain why the ECB's monetary policy is still close to the "New Consensus" model.

Keywords: Monetary policy, European Central Bank, strategy review, euro zone, Post-Keynesian theory

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Introduction

In 2021, the European central bank (ECB) decided to adjust its monetary policy strategy (ECB 2021a). Three major changes have been initiated: the main objective was reformulated, but also the structure of the institution's analyses of the economic situation and how it will communicate in the future was adjusted.

The major new features of the strategy review are (ECB 2021a):

- a new formulation of the major objective: price stability at 2% considered as a symmetric target over the medium term. Nevertheless, the rate of inflation remains the target for monetary policy;
- a reconsideration of the measure of inflation through the Harmonized Index of Consumer Prices (HICP);
- the recognition of the importance of financial stability;
- the recognition of the importance of climate change;
- the adjustment of the analytical framework for monetary policy decisions;
- and the need for an improved communication of monetary policy decisions.

But if we consider these changes, can they be considered to come closer to a Post-Keynesian view or do they still follow the "New Consensus" model largely based on standard neo-classical theory under the hypothesis that monetary policy, in the short run, has an impact on real variables and on inflation but is neutral in

the long run as prices are assumed to be flexible and expectations to be fulfilled (Clarida et al. 1999, Fontana et al. 2020; Krieseler and Lavoie 2007)? In a recent "The FT View" by its editorial board (Financial Times 2023), the authors also refer to changes in the global economy justifying a review of central banks' strategies. Some of these arguments are based on Post-Keynesian considerations like increased uncertainty or limited efficiency of monetary policy.

The general macroeconomic context also has to be considered because these adjustments were made in a low inflation environment and during low interest rates but, since then, inflation has reappeared and the problems that the implementation of monetary policy faces have changed from considering an effective lower bound on nominal interest rates and quantitative easing to coping with "normal" levels of interest rates and quantitative tightening.

To analyse these changes from a Post-Keynesian point of view, we have organised our paper as follows. Section 2 will summarize the main concepts needed to define a Post-Keynesian monetary policy, then, section 3 presents different concepts of monetary policy rules that should guide a Post-Keynesian monetary policy. Section 4 presents the ECB's monetary policy instruments through a Post-Keynesian lens and section 5 will analyse the strategy adjustments analysed from a Post-Keynesian point of view. A final section will present our conclusion.

What Can Be Considered As A "Post-Keynesian" Monetary Policy?

Post-Keynesian economics in general and the corresponding analysis of monetary policy assume that an economy should be analysed as a monetized production economy. According to Keynes (1933), a monetized production economy is "an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last."

According to Post-Keynesian theory, monetary policy should therefore be part of a policy-mix allowing to improve a real economy by aiming at objectives, as summarized by Kaldor (1971): full-employment, price stability, sustainable growth and a balanced current account (Carré and Le Héron 2018). Furthermore, Arestis (2013) considers in a similar way that economic policy should have four objectives:

• achieve full employment combined with sustainable growth;

 a constant rate of inflation consistent with output growth; not price stability.

Therefore, an income policy will be needed in case of high levels of inflation;

- a socio-economic objective: a fair distribution of income and wealth;

- and financial stability.

As a consequence, monetary policy should present the following characteristics (Arestis 2013):

- the real interest rate should be as low as possible consistent with the "trend rate of growth", by fixing a nominal rate considering the expected rate of inflation for the coming year.
- central banks need macro and microprudential toolkits to maintain financial stability;
- central banks/governments should secure a stable exchange rate and capital controls.
- fiscal and monetary policies have to be coordinated and as a consequence, from a Post-Keynesian point of view (Lavoie 2022), monetary policy should have a downgraded role, compared to fiscal policy. Policy instruments like credit controls or macroprudential rules, have to be added to control inflation. Other non-monetary policies to fight inflation, but not in a central bank's domain, should also be added, like wage and income policies.

Furthermore, an improved international cooperation between national economic policies in general will be needed to coordinate public interventions and to increase the efficiency of different national policies. This idea seems to be particular important in the European context, even if a larger international cooperation should be considered.

These theoretical considerations also have consequences for the independence of central banks. According to Post-Keynesian theory, central banks should be controlled by voters as monetary policy should be part of a general policy-mix which is clearly opposed to the mainstream view of central bank independence, illustrated by Issing (2021), for example.

The consequences are that money supply should be considered endogenous and its price should be fixed compared to the marginal efficiency of capital (expected return on investments based on effective demand). As monetary policy is part of a general policy mix, central banks should be considered as lenders of last resort for governments and should explicitly consider financial stability among their policy objectives.

These concepts will briefly be presented in the following paragraphs.

A Monetary Policy influenced by Endogenous Money Supply

To justify the claim that money creation is endogenous¹, the link between money and the production process has to be considered using Keynes's finance motive (Keynes 1936). Keynes considered that firms anticipate the effective

¹The historical basis of the endogenous money theory can be found in Robinson (1956) and Kaldor (1970, 1982). A general overview is given by Lavoie (2022a) where he summarizes the horizontalists and verticalists positions about money creation.

demand which determines their production plans. These plans will then determine the amount of short-run loans that firms will ask to realize their plans (mainly the initial financing of wages). Base money will simply follow the banks' need for liquidities determined by the amount of their loans given to the firms.

Hence, this link between effective demand and money supply can be presented in four steps (Monvoisin and Rochon 2018):

- firms define their production plan according to their expected effective demand:
- then firms address banks to obtain a loan to finance their plans;
- firms pay wages and households then pay for goods, services and for financial products which allow firms to finance their investments;
- all debts will then be settled, payments are made through bank deposits and money will be destroyed again.

Consequently, money supply is determined by effective demand and banks are considered as special as they can issue money units when according loans (Rochon and Rossi 2013). Central banks contribute to financial stability of this system as they are lenders of last resort for banks. Under these circumstances the central bank's interest rate can be considered as exogenous (Lavoie 2022).

This link between effective demand and money supply allows Post-Keynesian economists to criticise the standard "New Consensus" model used by central banks (Krieseler and Lavoie 2007):

- Post-Keynesians reject the simple interest rate/investment relation (IS relation). The interest elasticity of investment is considered as non-linear and asymmetric: "interest rates are unlikely to stimulate investment in times of recession" (Krieseler and Lavoie 2007: p. 391).
- In general, monetary policy is efficient to reduce inflation and limit growth, but less efficient to stimulate the economy. Furthermore, the effects of monetary policy take time except if interest rates are changed dramatically, thus monetary policy's efficiency is limited.

Post-Keynesians reject the neutrality of money in the short and in the long run, hence they reject a natural rate of interest (see paragraph 4.1). Even if monetary policy is assumed to be less efficient than considered by the "new consensus" defenders, the short-run interest rate fixed by the central bank has impacts on short-run and on long-run interest rates.

This point of view is also confirmed by Hein (2017). A central bank should aim at low long-term interest rates through its short-term interest rate, it should contribute to monetary, financial and real sectors stability through instruments other than the interest rate: credit control, reserve requirements, Therefore, central banks should not just be considered as lenders of last resort for banks but also for governments.

The Level of the Interest Rate should be based on the Marginal Efficacity of Capital

To have an impact on the real economy and to generate higher levels of investments, interest rates should be lower than the marginal efficiency of capital.

Keynes (1936) defines the marginal efficiency of capital "as being equal to that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price".

The investment decisions will then be based on the investments' expected yields and on current supply prices of capital-assets. The so defined marginal efficiency of capital will then be compared to the expected rate of return on money, "the market rate of interest" considered as a benchmark. Hence, the lower the interest rates, the more likely firms are to increase their levels of investments.

The importance of the real economy defines the central bank's role as a lender of last resort for governments

As public intervention should be designed to attain a set of economic objectives (cf. p. 3) and as banks can create money endogenously, there will be no crowding out effect when fiscal deficits will be financed by money creation. Therefore, central banks should become lenders of last resort for governments in case of an exceptional need of financial resources.

The importance of financial stability for monetary policy

A point that the ECB focusses on more explicitly than previously is the risk of financial instability recognizing in a certain way the potential responsibility of central banks and commercial banks in this domain, which is an important aspect of Post-Keynesian monetary theory.

The theoretical reference of this risk is Minsky's (1977) financial instability hypothesis, again finding its roots in Keynes' writings (1937). The financial and output instabilities of an economy result from market behaviour in the context of uncertainty. Under these assumptions, investment is the major variable determining the level of economic activity.

According to Minsky, Keynes adopts the point of view of City or Wall Street investment bankers in his analysis. In this context, financial crises have to be considered as systemic and not as accidental events.

To understand the development of financial crises, Minsky (1977) makes the distinction between hedge finance, speculative finance and Ponzi finance. Hedge finance is defined as the case where cash flows of investments are enough to cover the payment commitments on investors' debts. In the case of speculative finance, the cash flows are not enough to cover the payment commitments on debt² and in the final case, the Ponzi finance, new debt is needed to cover the payment commitments on investors' previous debt.

²The cash-flows should at least cover the interests to be paid by investors.

When, during an economic boom, interest rates are high and rising, then this fact "can force hedge financing units into speculative financing and speculative financing units into Ponzi financing." Bankers and investors take more risks which leads to higher levels of debt and causes the "paradox of tranquillity" (Lavoie 2022, p. 21): "a fast growing free-market economy will necessarily transform itself into a speculative booming economy" or "stability is destabilizing" (Minsky 1982 quoted by Lavoie 2022).

Therefore, and according to the financial instability hypothesis, "the capitalist economy endogenously generates a financial structure which is susceptible to financial crises". This conclusion is based on four hypotheses according to Minsky (1964) and quoted by Lavoie (2022):

- real and monetary variables are interdependent;
- the past financial structure of the economy has an impact on the likelihood of a financial crisis;
- the economy is characterized by the existence of the paradox of tranquillity and by the financial instability hypothesis;
- a boom can only be broken by a financial crisis.

This instability problem is also recognized by mainstream economists (Issing 2021), but they analyse the problem more in terms of moral hazard: does the financial system have to face the problem of instability and moral hazard or is financial instability due to moral hazard (Carstens 2021)?

Monetary policy and its consequences on inequality

Post-Keynesians are not just concerned about inflation, but also, and maybe even more, about distributional consequences of monetary policy.

The claim that monetary policy has an impact on inequality can be based on a statement by Keynes (1936, p. 185): "The general price-level depends partly on the rate of remuneration of the factors of production which enter into marginal cost and partly on the scale of output as a whole, i.e. (taking equipment and technique as given) on the volume of employment".

Hence inflation can be considered as a "social relation": a bargaining between rentiers, workers and entrepreneurs, and, finally, the level of inflation will be the result of a distributional conflict between capital owners and workers. This consequence can be summarised by the following equation:

$$\frac{\dot{p}}{p} = \frac{\dot{w}}{w} + \frac{\dot{z}}{z} - \frac{\dot{y}}{y}$$

 where the rate of inflation $\frac{\dot{p}}{p}$ depends on the relative change in wages $\frac{\dot{w}}{w}$, on the relative change in firms' mark ups $\frac{\dot{z}}{z}$ and on relative productivity gains $\frac{\dot{y}}{y}$ respectively which is equivalent to say that the rate of inflation depends on the bargaining power of different social groups, on firms' market power and on productivity.

Therefore, Post-Keynesians assume the existence of a relation between inflation rates and the wage share of income in an economy in the long run (Barbosa-Filho 2014, Taylor 2004). If the central bank targets a rate of inflation, it implicitly targets the wage share of income, hence monetary policy has an impact on income distribution.

Central Bankers recognize a certain impact of monetary policy on income distribution but are more optimistic about the consequences of their policy on inequality. For example, Villeroy de Galhau et al. (2021, pp. 105 – 106) state that "fiscal and tax policies should be the main tool to fight inequality" and that monetary policy will contribute to reduce inequalities through price stability fostering full employment.

On the other hand, main stream economists also recognize the fact that monetary policy has "allocative and distributive consequences" (Coeuré and Kotz 2021) and therefore may increase inequality.

Other effects on income distribution due to low interest rates can be summarised as follows:

- the maintenance and creation of jobs;
- the reduction of returns on savings of privileged individuals;
- the increase in house prices benefiting homeowners;
- but also, to the contribution to future "bubbles", hence future financial crises.

What should then be a Post-keynesian Monetary Policy Rule?

According to Carré and Le Huron (2018), there is no consensus among Post-Keynesian economists about a monetary policy rule.

This lack of consensus among Post-Keynesians on a monetary policy rule are due to different views about the interest rate target mentioned by Keynes. Did Keynes refer to a real rate (Smithin 2007) or to a nominal rate (Wray 2007)? As a consequence, proposals of monetary policy rules based on either real or nominal interest rates are developed by Post-Keynesians, but both proposals have in common that the objective should be a low rate either nominal or real (See 2.2).

Examples of monetary policy rules based on a real rate are Smithin (2007), Atesoglu (2008) and Passinetti (mentioned by Lavoie 2022).

Smithin (2007) considers that the central bank's objective should be to stabilize the real policy rate at a "low" but not negative level. Smithin (2007: p. 4) then presents a complex equation linking the central bank's real policy rate to a certain number of determinants like the inflation rate, the real interest rate, labour productivity, real wage growth, "a sort of socio-political index of the overall position of labour in the economy", money market factors, firms' expenditure growth and a "net autonomous demand" factor.

Atesoglu (2008) considers that monetary policy rule should be based on an objective of a low real interest rate defined as the difference between the long run nominal interest rate and the anticipated inflation rate. The central bank's target

rate should then be based on the yield on 10-year Treasury, on an estimated value of the neutral rate of interest and on an "inflation-shock variable, where 2 percent annual rate of inflation is assumed to be the benchmark." "The intercept of the equation can be interpreted as the estimated value of the neutral federal funds rate" (Atesoglu 2008: p. 404).

Atesoglu's concept of neutral interest rate is based on Keynes' neutral rate of interest (1936, p. 154), a rate considered as an optimum rate consistent with full employment. This neutral rate does not necessarily assume price stability as does the concept of natural rate of interest first mentioned by Wicksell.

The Passinetti rule simply considers that the real interest rate should be fixed on the same level as the labour productivity growth rate (Lavoie 2022).

Post-Keynesians considering a monetary policy rule based on a nominal interest rate recommend either a discretionary or a passive adjusted Taylor rule, with a short-term nominal rate tending towards $0\,\%$.

A first example is Barbera and Weise's (2010) augmented Taylor rule including a "Minsky risk term": In their analysis, the central bank's target rate should be based on a formula comprising the year-on-year change in core Consumer Price Index (CPI), the Non-accelerating Inflation Rate of Unemployment (NAIRU), the observed unemployment rate, the Wicksellian natural rate, an average term premium and finally a risk premium.

Then, passive or fixed rules called "parking it" are based on two principles: first, a rule has to coordinate and stabilize anticipations; second, a rule has to take into account the redistribution effects of monetary policy.

According to Wray (2007), interest rate changes have little to no impact on aggregate demand, but on financial markets. Therefore, the short-run nominal interest rate should tend towards zero and the nominal rates should be the target, not real rates. The justification is that nominal rates are relevant for economic decisions and can be hit by central banks' policy: "set the overnight rate at zero and keep it there" (Wray 2007: p. 22).

The problem with very low interest rates, also recognized by Post-Keynesian economists, is the risk of Minsky-like financial instability. As a consequence, Keynes' (1936) recommendation of a conventional low but different from zero (real) interest rate has been retained by Post-Keynesians.

For the moment, the ECB's rate setting can be analysed using a reaction function approach (Smets 2021) based on the simple first-difference policy rule proposed by Orphanides (2003; Orphanides and Wieland 2013), a variant of the Taylor rule. The change in the interest rate on the main refinancing operations (MRO), called "refi" rate, depends on the deviations of the one-year-ahead forecast from the ECB's inflation target and deviations of the one-year-ahead real GDP growth from potential output growth. The weights of both factors are estimated at 0.5, weights empirically confirmed by Hartmann and Smets' (2019) analysis.

This reaction function seems to take into account fewer variables than those suggested by Post-Keynesians even if the ECB's analytical framework is larger than the two previously mentioned variables (Holm-Hadulla et al. 2021).

The ECB's Monetary Policy Instruments From A Post-Keynesian Point Of View

Interest rates are still the major instrument of monetary policy considered both by mainstream economists and by Post-Keynesian economists. But we will also consider the case of non-conventional instruments as their importance has largely increased since 2008.

Interest Rates: Management of Interest Rates for different maturities

The base interest rate should be considered as main policy tool because the money market is more volatile than goods markets (Fontana et al 2020). When discussing how interest rates should be used for policy purposes, mainstream economists often consider Wicksell's natural rate of interest defined as the "rate of interest at which demand for loan capital and supply of savings exactly agree and which more or less corresponds to the expected yield on the newly created capital" (Wicksell 1934: location 9266) as a reference. This long run real equilibrium interest rate should guarantee stable prices.

This idea of a natural rate is rejected by Keynes (1936) and by endogenous money theorists (Fontana et al. 2020, Lavoie 2022b), instead they consider the interest rate as fixed at a conventional level by the central bank.

Again, this rejection is based on Keynes (1936, p. 108): "The rate of interest is not the 'price' which brings into equilibrium the demand for resources to invest with the readiness to abstain from present consumption. It is the 'price' which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash". Thus, Wicksell's theory of interest is rejected by Keynes and by Post-Keynesians (Lavoie et al. 2021).

Their recommendation is then, that the nominal interest rate should be slightly above the inflation rate, the difference being determined by the growth rate of labour productivity (Passinetti quoted by Lavoie, 2022).

But in general, Post-Keynesians prefer low interest rates and most importantly they focus on the expected changes in interest rates and not on their absolute levels. (Carré and Héron 2018, with Wray 2007 taking an extreme position with a suggested overnight rate at 0 %). Low interest rates should also contribute to the reduction of radical uncertainty that economic agents have to face when taking their economic decisions (Hein 2017).

A justification of this point of view is Keynes' (1936) consideration that deflation is worse than inflation, as inflation only has an impact on prices (at full employment) whereas deflation affects output, and consequently the level of employment.

Non-conventional Instruments

Keynes (1936, p. 132) had a broader view on money management by the central bank: "Perhaps a complex offer by the central bank to buy and sell at stated prices gilt-edged bonds of all maturities, in place of the single bank rate for short-

term bills, is the most important practical improvement which can be made in the technique of monetary management". According to Keynes, the present unconventional monetary policy tools should be considered as conventional and be part of a central bank's toolbox as they have become today.

Therefore, we can assume that the so called non-conventional instruments should correspond to Post-Keynesian recommendations about monetary policy even though monetary policy is considered as a policy with limited efficiency.

Negative interest rates, quantitative easing (the ECB's Asset Purchase Programme [APP] since 2014 and the temporary Pandemic Emergency Purchase Programme [PEPP] since 2020) and forward guidance should be favourable for the real economy in general and should also contribute to reduce general uncertainty about the economic future. Central bank's loans directly linked to loans to the real economy (TLTROs, for example) should also correspond to Post-Keynesian recommendations.

Quantitative easing (QE)/tightening

Keynes might have considered QE as an "important practical improvement" of money management, as this instrument also aims at influencing the long-term interest rates, even if this instrument has monetarist origins.

According to Carré and Le Héron (2018) QE only increased the monetary base and hence guaranteed payments among banks and improved the quality of their balance sheets, but it did not increase money in circulation. Therefore, this instrument will have limited effects on the real economy. On the other hand, Fontana et al. (2020) consider that QE presents no supplementary risks for inflation.

Lavoie (2022) considers three channels of transmission of QE to the real economy with two channels corresponding to Post-Keynesian theory. First, QE should have an impact on long-run interest rates, thereby contributing to the decrease of these rates. Then, QE should have an impact on rentiers' consumption, as lower interest rates present a lesser incentive for saving and/or investing and consequently should stimulate consumption. On the other hand, Lavoie is less convinced that the increased bank reserves due to QE will be an incentive for banks to increase their loans to the real economy.

Qualitative easing

Less known than QE, qualitative easing is the purchase of financial products (bonds) of lower quality by central banks, hence riskier financial products in order to keep long term interest rates lower and to improve the quality of commercial banks' balance sheets. This instrument should contribute to more financial stability and should be applied combined with (ex-ante) macroprudential rules in order to avoid moral hazard.

The counterparts of money and the need for prudential rules

As mentioned before, Post-Keynesians consider that money and loans should be channelled to the real economy (Lavoie 2022) and therefore, monetary policy has to aim at the productive and not at the speculative economy.

Therefore, the importance of the quality of the counterparts of money is highlighted by Post-Keynesians: This approach leads to a qualitative theory of money. As money is created endogenously, commercial banks have to be regulated by micro and macroprudential rules and supervised to improve the efficiency of the transmission channels of economic policies in general and to avoid financial instability. The regulation and supervision of commercial banks focusses then on the quality of the monetary counterparts that banks are holding as this quality should determine the banks' loans conditions.

TLTROs

"The TLTROs [Targeted Longer-Term Refinancing Operations] are targeted operations, as the amount that banks can borrow is linked to their loans to non-financial corporations and households" (ECB 2023a).

This type of loans clearly corresponds to the Post-Keynesian point of view that loans should be guided towards the productive economy (Carré and Le Héron, 2018).

Negative interest rates

Negative interest rates correspond to the Post-Keynesian idea of low interest rates even if this theory hasn't recommended negative rates (Carré and Le Héron, 2018).

Forward guidance

As forward guidance should influence economic agents' expectations, we can assume that this communication strategy by central banks should contribute to reduce the radical uncertainty that economic agents are facing and hence contribute to the stabilization of the real economic activity.

To conclude about these non-conventional instruments, we can say that they correspond to a Post-Keynesian view (Carré and Le Héron, 2018). But as money creation is endogenous, lowering the interest rate and especially non-conventional policies (QE and negative interest rates) are inefficient as they are based on the theoretical principle of an exogenous money creation by central banks, therefore these measures are inefficient in the case of an economic recession (Monvoisin and Rochon 2018), a general claim by Post-Keynesians. Apart from the concerns about the efficiency of these instruments, Carré and Le Héron (2018) consider that these instruments may contribute to the appearance of financial instability and speculative bubbles.

A different view has been presented by Hachula et al. (2020) who considered that these instruments, unconventional before 2021, had a positive impact on production, price levels and inflation expectations in the euro area as well as an heterogenous impact on national fiscal policies even if trade imbalances were slightly increased according to these authors.

For the euro area, again before 2021, these policies had an impact on financial variables (government bond yields, credit access for firms), but for macroeconomic aggregates (GDP, Prices indexes, interest rates for households and firms) empirical

effects are harder to assess and seem to be more heterogenous among member states (Dell'Ariccia et al. 2018).

The Strategy Adjustment analysed from A Post-Keynesian View

The ECB justifies the adjustment by the then low inflation context and the structural changes in the (European) economy (ECB 2021a). The causes of these structural changes are the decrease in real interest rates, the low productivity growth, aging populations, a higher demand for safe and liquid assets, globalisation and digitalisation, and an evolving financial structure (development of the shadow banking sector, the construction of a banking and a capital union within the EU/euro zone).

Apart from these economic and financial changes, the ECB mentions two more reasons for the adjustments. The need for an improved communication, mainly due to the importance of social media and the need to integrate climate change in its policy decisions.

The corresponding adjustments, already mentioned in our introduction, can be evaluated through a Post-Keynesian lens:

- the new definition of the inflation objective may generate a tendency towards lower interest rates, fact that may be compensated by a new measure of inflation.

- a more explicit consideration of financial stability risks, with a specific impact on the ECB's analytical framework that should increase the ECB's focus on the real economy.

- the link between monetary policy and the real economy will also be strengthened by considering the risks linked to climate change.

- then, finally the adjustments should also contribute to reduce radical uncertainty through a better communication, through measures to reduce financial instability and through potentially lower interest rates.

Despite these adjustments, the new strategy does not correspond to a Post-Keynesian monetary policy that should focus on unemployment rates and on rates of capacity utilization. According to Lavoie (2022: p. 250) the "target interest rates take into account, or should take into account, the evolution of exchange rates and the rate of asset inflation, in particular on the stock market", which is not the case with the new adjusted strategy.

The Price Stability Objective and its Measurement

As the ECB now considers a symmetric objective, a rate of inflation close to 2 % in the medium term, but not necessarily below 2 %, price stability is still considered as a priority compared to other economic objectives in the euro area (ref. art. 127 (1) of the Treaty of the Functioning of the European Union). A definition of price stability that the ECB is pursuing can be given according to

Lane (2021, p. 68) "as a state in which changes in the general level of prices need not be factored into consumption and investment decisions". Hence, the ECB is still inflation targeting and aims at the control of short-term interest rates (Coeuré and Kotz, 2021) which is a countercyclical policy based on the target interest rate (Lavoie 2022).

At the same time the measurement of inflation through the price index has been discussed and should be improved: The Harmonized Index of Consumer Prices (HICP), measuring headline inflation, remains the main indicator but will be improved in the future to integrate owner-occupied housing (OOH) costs. Other indicators, "including measures of underlying inflation" (HICP without energy and food prices) continue to be considered in order to get a better view on medium term evolution of the euro zone's economy (ECB 2021a).

As Post-Keynesians consider monetary policy as a demand side policy with limited efficiency, the fact of considering more explicitly core inflation can be interpreted as an acknowledgement by the ECB of the limited efficiency of its policy not just due to lagged effects but also due to the fact that some prices will not be affected by its policy as they are determined on international markets or by seasonal adjustments of demand and supply.

A critical Post-Keynesian stance are Charles and Marie's (2018) arguments that inflation targeting is equivalent to target a certain wage/output ratio and that an objective of 2% is not needed if a country has no external debt emitted in foreign currencies. Nevertheless, the authors should clarify this statement as the euro is the "national" currency for the euro zone, but no member country's central bank has the possibility to manage its own monetary policy, nor have member countries only debts in euros (at least not all of them).

The changing environment: the need for supplementary instruments and the importance of a reconsidered policy-mix

After a long period of low inflation, new instruments of monetary policy, the non-conventional instruments, are now considered as part of the "ECB's toolkit": forward guidance, APP and long-term refinancing operations (ECB 2021a). The use of these new instruments should be approved by Post-Keynesian economists, even if their efficiency might be limited.

The ECB (ECB 2021a) also recognizes the stabilizing role of fiscal and other structural policies. According to the ECB analysis, fiscal policy amplifies the effectiveness of monetary policy and combined with structural policies, it can improve productivity and labour supply growth. So, countercyclical fiscal policies during recessions should be applied, but also during boom periods to bring public debt back to sustainable levels.

Then, the secondary objectives defined by the European Treaties, are relevant to the pursuit of price stability, so that these objectives seem to have become more important for the ECB's analysis and for its definition of monetary policy.

This can be concluded from the fact that the ECB considers a certain complementarity between price stability and other macroeconomic objectives (balanced economic growth, full employment and environmental issues).

All these statements bring the ECB's policy closer to the Post-Keynesian idea of a needed policy-mix to achieve different objectives in an economy and not just price stability.

The Importance of Financial Stability

Financial stability, a major concern for Post-Keynesians (Hein 2017) especially since Minsky's analysis in this domain, has been recognized by the ECB as a precondition for price stability. The corresponding consequence is that its policies should contribute to the "prudential supervision of credit institutions and the stability of the financial system (ECB 2021a).

This is confirmed by the ECB's chief economist P. Lane (2021, p. 73) when he states that the ECB will "take financial stability considerations into account in its monetary policy deliberations".

The consequence of this increased awareness of the importance of financial stability is the "replacing" of the "monetary pillar with a monetary and financial analysis" (Villeroy de Galhau 2021) also mentioned by Holm-Hadulla et al. (2021) in their analysis of the new analytical framework.

The main feature to attain this objective will then be the development of prudential policies as well on the macro as on the micro level. Macroprudential policies will then develop measures to increase the financial system's resilience to shocks by addressing possible systemic risks (ECB 2017, Lane 2021).

Microprudential policies are tests to the stability of individual financial institutions, often called stress tests (ECB 2014).

The creation of the Single Supervisory mechanism³ (ECB 2023c) and the European Systemic Risk Board⁴ (ESRB 2023), part of the European System of Financial Supervision (ESFS), following the financial crisis (Official Journal of the European Union 2010) shows the concerns of European authorities to limit the risks of financial instability and hence to monitor the European financial system. *Climate change*

A major change in the ECB's analysis of the euro zone's economic situation is the monitoring of climate change. A justification for this focus on climate change could simply be the fact that economic policies to affect climate change are part of the secondary objectives of the ECB, if price stability is achieved. But there is a more direct justification for considering climate change when taking monetary policy decisions (Lane 2021, ECB 2023b). Climate change may have direct economic impacts that should be considered when deciding on monetary policy measures:

- severe weather events risk disrupting global production,

³The ECB is part of the SSM.

⁴The ECB 'should provide analytical, statistical, administrative and logistical support to the ESRB, also drawing on technical advice from national central banks and supervisors' (Official Journal of the European Union 2010).

- the carbon transition has consequences for firms as their costs will increase while using carbon intensive technologies and/or increase their need of investments in new technologies;
 - severe weather events and disordered carbon transition may destabilize the financial system;
 - climate change may have an impact on the value and risk profile of assets (held by the ECB).

A New Analytical Framework

The new structure of the analytical framework of the ECB has as a consequence that the economic pillar will present an analysis of short-term developments and structural trends (Holm-Hadulla et al. 2021) of the real economy. The structure of the new monetary and financial pillar is a consequence of the focus on monetary policy transmission mechanism and of explicitly taking financial stability risks into account, for example longer-term financial vulnerabilities and imbalances that should be reduced through, macroprudential measures.

According to Holm-Hadulla et al. (2021) to evaluate the efficiency of its monetary policy, the ECB's new analytical framework has been putting a higher emphasis on transmission channels since the 2008 financial crisis.

The major transmission channels that have to be considered are (Holm-Hadulla et al. 2021; Drumetz et al. 2015):

- a credit channel subdivided into two parts. First, a bank lending channel referring to the fact that an imperfect substitutability within external financing sources (bank loans vs. bonds) for firms and households who cannot issue bonds has to be considered. Then, a balance sheet channel referring to the fact that an imperfect substitutability between internal and external financing sources for firms (importance of cash-flows) has to be considered, too.
- a risk-taking channel as a high level of liquidities and low interest rates are incentives for riskier investments by firms, hence for a riskier demand for loans in such a situation.
- an interest rate channel, the main channel according to Clarida et al (1999) for the "New Consensus" model. A change in the discount rate has an impact on market rates, then on bank rates (credits and deposits).
- a cost channel, as more expensive credits increase the marginal cost of production for firms, hence decreasing output but probably increasing prices at least in the short run. In that sense higher interest rates could stimulate inflation in the short run.
- an exchange rate channel based on the non-covert interest parity condition. All else equal, a decrease in the interest rate of a currency causes the currency to depreciate against foreign currencies. The consequences are fewer capital imports and more expensive imports causing imported inflation. An increase in interest rates should have the opposite effect.

- Monetary policy has then to be considered as one factor among others explaining exchange rate changes.
 - an assert pricing channel. A change in interest rates has an impact on stocks, bonds and real estate prices. This channel should gain in importance due to quantitative easing/tightening having a signalling effect, a portfolio rebalancing effect (shares vs. bonds), and a direct pass-through effect by influencing consumption and investment (ECB 2021b).

Then, additional transmission channels of monetary policy are mentioned by the ECB (2021b):

- an expectations channel (p. 47): economic agents are assumed to understand the policy rule and to be forward looking. Therefore, monetary policy must be credible so that expectations will be anchored around the ECB's inflation target.
- a forward guidance channel causing large ("unreasonably") responses of key macroeconomic indicators when the ECB announces future interest rate changes.
- The new framework must also consider non-linearities in the transmission mechanism due to the existence of the effective lower bound on the interest rate, the non-linearity of the Phillips curve and higher borrowing constraints in recessions than in boom periods.

From a Post-Keynesian point of view, the risk-taking, the credit and cost channels will be the most important channels as Post-Keynesians consider financial instability and the availability of loans for productive activities as major problems for economic systems (Lavoie 2022; cf 4.2.1.).

Communication Strategy

A general critique addressed at central banks is their lack of accountability towards citizens as their managers are not democratically elected. In general, improved communication should increase the ECB's credibility, accountability and legitimacy as for any independent central bank (ECB 2021c).

But this critique is not specifically based on Post-Keynesian theory. From a Post-Keynesian point of view an improved communication should reduce radical uncertainty, at least about monetary policy and its underlying analytical framework.

From the ECB's point of view, an improved communication strategy should become "a key policy tool in managing expectations and economic outcomes" (ECB 2021c). Therefore, the improved strategy has to develop an "effective communication about objectives, strategy and decisions".

This effective communication should not just be for professionals, but also for the general public. The improvements suggested by the ECB (2021a) still focus mainly on (improved) information for professionals even if "a layered and more

visual version of policy communication geared towards the wider public" (ECB 2021a, p. 15) is mentioned.

Regular Reviews

 A last element of the new strategy is to launch regular reviews of the ECB's strategy, the next assessment being in 2025 (ECB 2021a). This necessity of regular adjustments is due to the changing macroeconomic environment, like the recent reappearance of inflation, for example.

Again, these adjustments should improve the ECB's credibility, accountability and legitimacy by showing that the ECB is concerned about the way it intervenes in the real economy and the financial system.

Major questions will be how often the review should be and what about the main objective(s). Should they too be revised or not? From a Post-Keynesian point of view the answers to these questions may have an impact on economic agents' perception of uncertainty and hence have an impact on their decisions.

Too many reviews and changes may decrease trust in the ECB and therefore increase uncertainty for economic agents and too few reviews may also decrease trust in the ECB's capacity to respond to structural changes and to improve its projections and its corresponding policies. In both cases the ECB may become a factor of increased uncertainty instead of contributing to the reduction of uncertainty.

Concluding Remarks

Based on the previous developments, our main conclusion will be that the adjustments made by the ECB are not necessarily based on Post-Keynesian analysis.

To justify this statement, we have developed first of all what we consider as basic elements of a Post-Keynesian monetary policy. Such a policy should recognize the importance of the real economy, the limited efficiency of monetary policy, the importance of financial stability and the need for a policy mix, not mainly relying on monetary policy. Furthermore, low interest rates should be a major policy tool, but other tools (QE, for example) should also be considered.

Looking now at the adjustments made by the ECB, some can be considered as being close to Post-Keynesian theory:

- the introduction of a symmetric inflation target, instead of an inflation target close but below 2 percent in the medium term;
- the recognition of a lag in the effects of monetary policy on the real economy, hence a certain limited efficiency of monetary policy;
- the recognition of the importance of a policy mix, by highlighting the importance of fiscal policy and by insisting on the importance of climate change policies;

- the recognition of the effects of monetary policy on financial risks and the importance of financial stability;
 - the recognition of the need of an improved communication which can be seen as a commitment to reduce uncertainty, at least about monetary policy decisions.
 - Other facts explain why the ECB's monetary policy is still close to the "New Consensus" model:
 - the ECB's analytical framework is still based on DSGE models;
 - the distributional effects of monetary policy are not explicitly mentioned in the ECB's analysis;
 - the discussion about the recent tightening of the monetary policy shows that the priority is still largely on price stability and less on a Kaldor type set of policy objectives. Despite the new inflation target the ECB is still fixed on the 2 percent level of inflation and will not allow, not even implicitly, higher levels of inflation. Consequently, no commitment to low interest rates can be deduced from this strategy review.

A next revision in 2025 should give a clearer view about a potential shift in the underlying theory of the ECB's policy decisions. At that moment, it should be easer to evaluate the new macroeconomic environment and the ECB's position towards a real economy facing on average higher levels of inflation than before 2021 when the last strategy revision was launched.

References

Arestis P (2013) 'Economic theory and policy: a coherent post-Keynesian approach.' European Journal of Economics and Economic Policies: Intervention Vol. 10 (2): 243–255.

- Atesoglu H (2008) 'Monetary Policy Rule and U.S: Monetary Policy.' *Journal of Post Keynesian Economics* Vol. 30 (3): 403 408.
- Barbera R; Weise C (2010) 'It's the right moment to embrace the Minsky model' In *The Elgar companion to Hyman Minsky* edited by D. Papadimitriou and L. Wray, Cheltenham, Edward Elgar.
- Barbosa-Filho N H (2014) 'A structural Inflation Curve.' *Metroeconomica* Vol. 65 (2): 349 376.
- Carré E; Le Héron E (2018) 'La politique monétaire post-keynésienne.' In *L'économie* post-keynésienne. Histoire, theories et politiques, edited by E. Berr, V. Monvoisin, J.-F. Ponsot. Paris, Editions du Seuil.
- Carstens A (2021) 'Central Banks Adapt to New Challenges.' *Revue d'économie financière* No 144: 27 39.
- Charles S; Marie J (2018) 'L'inflation comme rapport social' in *L'économie post-keynésienne*. *Histoire, theories et politiques*, edited by E. Berr, V. Monvoisin, J.-F. Ponsot. Paris, Editions du Seuil.
- Clarida R; Gali J; Gertler M (1999) 'The Science of Monetary Policy: A New Keynesian
 Perspective.' *Journal of Economic Literature* Vol. 37: 1661-1707.

- 1 Coeuré B; Kotz H-H (2021) 'Introduction. Lessons Learned from Crises.' *Revue* 2 *d'économie financière* No 144: 7 24.
- Dell'Ariccia G; Rabanal P; Sandri D (2018) 'Unconventional Monetary Policies in the Euro Area, Japan, and the United States.' *Journal of Economic Perspectives* Vol. 32 (4): 147-172.
- Drumetz F; Pfister C; Sahuc J-G (2015) *Politique monétaire*. 2nd edition. Ouvertures économiques. Louvain-la-Neuve, De Boeck Supérieur.
- Fontana G; Realfonzo R; Passarella M (2020) 'Monetary Economics after the Global Financial Crisis: What Happened to the Endogenous Money Theory?' *European Journal of Economics and Economic Policies: Interventions* Vol. 17 (3): 339 355.
- Eichner A; Kriegel J (1975) 'An Essay on Post-Keynesian Theory; A New Paradigm in Economics.' *Journal of Economic Literature* Vol. 13 (4): 1293 1311.
- European Central Bank (2014) 'Special Features C: Micro- versus macro-prudential supervision: potential differences, tensions and complementarities.' *Financial Stability Review* May: 135 140.
- European Central Bank (2017) 'A quick guide to macroprudential policies.' European
 Central Bank. Accessed on 22.06.23. https://www.ecb.europa.eu/ecb/educational/
 explainers/tell-me-more/html/macroprudentialpolicies.en.html

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- European Central Bank (2021a) 'An Overview of the ECB's Monetary Policy Strategy.' European Central Bank. Accessed 15.09.23. https://www.ecb.europa.eu/home/search/review/html/ecb.strategyreview_monpol_strategy_overview.en.html
 - European Central Bank (2021b) 'Review of macroeconomic modelling in the Eurosystem: current practices and scope for improvement.' *Occasional Paper Series* No 267.
 - European Central Bank (2021c) 'Clear, consistent and engaging: ECB monetary policy communication in a changing world.' *Occasional Paper Series. Revised version December 2021*. No 274.
 - European Central Bank (2023a) 'Targeted longer-term refinancing operations (TLTROs).' Accessed on 19.01.2023. https://www.ecb.europa.eu/mopo/implement/omo/tltro/html/index.en.html
 - European Central Bank (2023b) 'Interview with Frank Elderson, Member of the Executive Board of the ECB and Vice-Chair of the Supervisory Board of the ECB, conducted by Martin Arnold on 1 June 2023'. Accessed on 21.06.23. https://www.ecb.Europa.eu/press/inter/date/2023/html/ecb.in230608~7247c0aaca.en.html
- European Central Bank (2023c) 'European Central Bank. Banking Supervision. Single
 Supervisory Mechanism.' Accessed on 22.06.23. https://www.bankingsupervision.gen/html/index.en.html
- European Systemic Risk Board (2023) 'About Us.' Accessed on 22.06.23. https://www.asrb.europa.eu/about/html/index.en.html;
- Hachula M; Piffer M; Rieth M (2020) 'Unconventional Monetary Policy, Fiscal Side
 Effects, and Euro Area (Im)balances.' *Journal of the European Economic Association* Vol. 18 (1): 202 231.
- Hartmann P; Smets F (2019) 'The European Central Bank's Monetary Policy during its
 First 20 Years.' *Brooking Papers on Economic Activity* (9): 1-118.
- Hein E (2017) 'Post-Keynesian macroeconomics since the mid 1990's: main developments.' European Journal of Economics and Economic Policies: Intervention
 Vol. 14 (2): 131–172.
- Holm-Hadulla F; Musso A; Palenzuela D R; Vlassopoulos T (2021) 'Evolution of the
 ECB's Analytical Framework.' Occasional Paper Series N° 277.
- Issing O (2021) 'New Monetary Policy Guidelines: Losing the Anchor?' *Revue d'économie financière* No 144: 109 116.
- 51 Kaldor N (1970) 'The new monetarism', *Lloyds Bank Review*, No 97: 1–7.

- Kaldor N (1971) 'Conflicts in National Economic Objectives.' *Economic Journal* 81
 (March): 1-16.
 - Kaldor N (1982) The Scourge of Monetarism. Oxford: Oxford University Press.

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- Keynes J M (1933) 'A Monetary Theory of Production.' In *Der Stand und die nächste Zukunft der Konjunkturforschung: Festschrift für Arthur Spielhoff*, edited by Duncker & Humboldt: 123-125.
- Keynes J M (1936) 'The General Theory of Employment, Interest and Money. The Collected Writings of John Maynard Keynes. Vol. VII'. Cambridge: Cambridge University Press.
- 10 Keynes J M (1937) 'The General Theory of Employment.' *The Quarterly Journal of Economics* Vol 51 (2): 209 223.
- Krieseler P; Lavoie M (2007) 'The New Consensus of Monetary Policy and its Post-Keynesian Critique.' *Review of Political Economy* Vol 19 (3): 387 – 404.
- Lane P (2021) 'The Monetary Strategy of the European Central Bank.' *Revue d'économie financière* No 144: 67 79.
- Lavoie M (2022) *Post-Keynesian Economics: New Foundations. 2nd Edition.* Cheltenham:
 Edward Elgar.
- 18 Lavoie M; Monvoisin V; Ponsot J-F (2021) *L'économie post-keynésienne. Repères* 19 *Economie*, Paris: Edition La Découverte.
 - Minsky HP (1977) 'The Financial Instability Hypothesis: An Interpretation of Keynes and an Alternative to "Standard Theory".' *Nebraska Journal of Economics and Business* Vol. 16 (1): 5 -16.
 - Monvoisin V; Rochon L-P (2018) 'La monnaie endogène et la question du financement de l'économie.' In *L'économie post-keynésienne. Histoire, theories et politiques*, edited by Berr et al. 2018. Paris: Editions du Seuil.
 - Official Journal of the European Union (2010) 'Regulation (EU) no 1092/2010 of the European Parliament and of the Council of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board.' European Union. Accessed on 28.08.23. https://www.esrb.europa.eu/shared/pdf/101216_ESRB_establishment.en.pdf?20c8cadce98d21eb005aa d871b87fa6f
 - Orphanides A (2003) 'Historical Monetary Policy Analysis and the Taylor Rule.' *Journal of Monetary Economics* Vol. 50 (5): 983 1022.
- Orphanides A; Wieland V (2013) 'Complexity and Monetary Policy.' *International Journal of Central Banking* Vol. 9 (S1): 167 203.
- 36 Robinson, J (1956) *The Accumulation of Capital*. London: Macmillan.
- Rochon LP; Rossi S (2013) 'Endogenous Money: The Evolutionary versus Revolutionary
 Views.' *Review of Keynesian Economics* Vol. 1 N° 2: 41 52.
- Smets F (2021) 'Why Have Policy Rates Been So Persistently Low In The Euro Area?' *Revue d'économie financière* N° 144: 95 108.
- Smithin J (2007) 'A Real Interest Rate Rule for Monetary Policy?' *Journal of Post Keynesian Economics* Vol. 30 (1): 101 118.
- Taylor L (2004) *Reconstructing Macroeconomics: Structural Proposals and Critiques of the Mainstream.* Cambridge (Mass.), Harvard University Press.
- The FT View (2023) 'Lessons from a Reflective Jackson Hole.' *Financial Times*, August 30, European edition.
- Villeroy de Galhau F; Bignon V; Cabrillac B (2021) 'The Challenges of a More Demanding Environment on Monetary Policy.' *Revue d'économie financière* N° 144: 95 108.
- Wicksell K (1934) Lectures on Political Economy. Volume 2: Money. Fairfield: Augustus
 M. Kelley Publishers. Kindle edition.

- 1 Wray L (2007) 'A Post Keynesian View of Central Bank Independence, Policy Targets,
- and the Rules versus Discretion Debate.' *Journal of Post Keynesian Economics* Vol.
- 30 (1): 119 141.