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Inflation: Failures of Inflation Targeting—A European Perspective

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1 Introduction

Since the end of the 1980s, when New Zealand first introduced inflation targeting as the objective of monetary policy, the number of countries using inflation targeting has constantly increased. While until the early 2000s only advanced economies joined the club of inflation targeters, it is mainly emerging economies which have become inflation targeters since then. Following Niedźwiedzińska (2018), who analysed the period until mid-2018 for the structure and development of economies and included within the spectrum of 42 economies explicit and implicit—or as Mishkin (2000a) calls it—hybrid inflation targeters (see Table 1).

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Within the latter group, for example the Euro Area,[1] as well as Japan, Switzerland and the United States can be found. Although many empirical studies focus in their analyses only on explicit targeters, this chapter follows the broader approach of inflation targeting and includes explicit and implicit targeting economies, with a focus on the Euro Area. Apart from a distinction between economies that explicitly or implicitly follow inflation targeting, countries can also be classified according to four different modes of inflation targeting, following a band target, a band target with midpoint, a point target or a point target with tolerance level. While the most important mode for emerging markets who account now for almost 70% of all inflation targeters clearly is a point target with tolerance level, advanced economies mostly follow two different modes, a point target and a band target. Similar to the different reasons for economies to join the club of inflation targeters also explanations for introducing the one or other mode, or switching over time from one to another mode vary substantially according to the individual institutional setting and historical background. No matter which mode of inflation targeting is implemented by developed or emerging economies, the underlying theoretical background stemming from a modern orthodox macroeconomic concept prioritizes the fight against inflation over the macroeconomic goals of full employment and economic growth.

New facets of inflation targeting were implemented after the global financial crisis of 2008/2009, as modes of unconventional monetary policy were introduced worldwide. In the case of the Euro Area the term unconventional monetary policy covers two different areas. On the one hand open market operations, called *main refinancing operations*, which are an important tool of conventional monetary instruments, were structurally redesigned. On the other hand, *additional monetary tools* were added to the system. Changes were designed to deal with the challenges—e.g. lack of liquidity due to disruptions in the interbank market and the fear of systemic financial instability—the ECB was confronted with the aftermath of the global financial crisis. The structural

[1]Especially in empirical studies Member States of the Euro Area are also addressed as non-targeting economies, when no distinction between explicit and implicit targeters is applied (see among others Ismailov et al. 2016; Johnson 2002).

changes within main refinancing operations can be highlighted with the full accommodation of commercial banks' needs within fixed rate tenders and the enlargement of assets accepted within the tender system. These structural changes, which aim to ease the refinancing options for commercial banks together with the overall decrease in interest rates, are also referred to as *easy money*.[2] The *covered bond purchasing program* can be quoted as the most influential *additional monetary tool* implemented after the financial crisis (see for more details Beirne et al. 2011).

The Euro Area has experienced now almost a decade of easy money and ultra-low inflation policy and despite increases in economic growth in recent years in some member states, the inflation target of 2% has still not been reached. In the last decade under the umbrella of inflation targeting, monetary policy had to serve multiple goals, strengthen financial stability, promote investment and raise confidence in the existing economic system. Increasing asymmetries among Member States of the Euro Area became visible also as interest rate spreads for long-term government bonds increased sharply on the early 2010s and peaked to yields for Greece long-term government bonds of 22.5% in 2012 while German long-term government bonds reached only 1.5% in the same year (see Fig. 5). The aim of the central bank was to increase not only monetary stability but to boost fiscal stability.

Additionally the effects of easy money, like the increase of asset prices and the boost of *financialization*, which led to a further asymmetric distribution of wealth among and within Euro Area member states (see among others, Fessler and Schürz 2018), are widely neglected under the current monetary policy structure. The term *financialization* not only means the general importance of financial markets for non-financial enterprises and households, which seems to infuse everyday life and businesses, but also a structural and institutional shift in asset markets, e.g. the housing sector. This means that despite the discussion on the potential effectiveness of inflation targeting for macroeconomic goals, the mode of capitalism is affected.

[2]By defining *easy money* as period of expansionary monetary policy after the financial crisis of 2008, this chapter follows the distinction of periods of monetary policy of Vítor Constâncio former Vice president of the ECB (2018). This period is replaced by *ultra-low inflation and Quantitative Easing* from 2014 to 2018.

This chapter proceeds with an overview over the historical settings of monetary policy and the macroeconomic implications set up by orthodox economists. Critique regarding the theoretical background, the institutional and structural set-up, as well as the implementation of the Taylor rule as monetary policy from a Post-Keynesian perspective is presented. Building on these arguments the focus is laid on the impacts of monetary policy after the global financial crisis in the Euro Area and detects further weaknesses of the focus on a European inflation target of 2%, which became visible in the last decade.

2 Monetary Policy: Historical Settings and Macroeconomic Implications

Not only is the effectiveness of monetary policy to shape real activities in the short and/or in the long run discussed in macroeconomic schools of thought, but also the causal mechanisms and monetary instruments derived from the opposing theoretical backgrounds. This means the core questions are: Is money neutral? Which intermediate target works best to achieve the goals of monetary policy, money stock versus interest rates? How should monetary policy be implemented, rules-based versus discretionary monetary policy?

2.1 Framing the Historical Setting: When Inflation Got into the Centre of Macroeconomics Analysis

As output increased after World War II, economists started to worry about the negative effects of creeping inflation by the end of the 1960s. Assuming that inflation is determined as demand push factor in a boom phase, a decade, which in Europe is synonymous with a strong catching up process in economic growth and development. Only in the 1960s growth policy became a goal for economic policy makers, before the main focus was an anti-inflationary policy (Kienzl 1970, p. 30). Worries increased that households would live beyond their financial means and

drive up inflation as they aim to become winners of the redistribution effects of inflation (Ausch 1970, pp. 5f.).

Given this empirical background central bankers and monetary economists of countries witnessing strong economic growth throughout the 1960s and had a history of hyperinflation after World War I and the interwar period, like Austria (hyperinflation accumulated to an almost 14,000% increase in prices from 1914 to 1924; see Beer et al. 2016, p. 15), started to focus more strongly on low inflation rates to account for economic stability.

Apart from a classification of inflation into cost-push and demand-pull factors, the phenomenon of creeping inflation was discussed within the categories of state inflation—as category of demand inflation, income inflation, credit inflation and imported inflation. According to Ausch (1970) especially the two categories could be controlled via direct central bank intervention on commercial banks discount rates and open market operations, which should be accompanied in the case of imported inflation with 'adequate' trade tools. Income and state inflation are reflections of a change in society due to the shift towards an individual-based mass consumption society. Private households aim to increase their wealth, while state budgets are supposed to follow an anti-cyclical budget policy leading public infrastructure to erode.

Solutions to these structural changes in society are quite diverse and lead from necessary shifts in thinking of 'opinion leaders' (Ausch 1970, p. 25) towards concrete shifts in monetary policy. Among others Pech (1970) and Liskar (1970) reflected already on the necessity to focus on the monetary stock or another closely related monetary aggregate to determine the amount of money and in its impact on inflation; whereas interest rates were said to have a minor impact as the central bank would have only control over interest rates. This is already in line with Friedman's view on the power of monetary tools:

> The more important problem is these monetary powers of the Reserve System. As you know, they consist primarily of three items: (1) the power to change reserve requirements of member banks; (2) the power to rediscount for member banks; and (3) the power to engage in open-market operations. Of these three powers, the first two are, I think, inefficient and poorly designed tools of monetary management. In making

> this judgment, I am assuming that our present system is in all respects unchanged, that the institutional organization of the banking system is what it is and that the criteria for controlling the stock of money are whatever they now are. My purpose in doing this is to separate issues: whatever the criteria are, there remains the question whether present powers are efficient tools for achieving them. (Friedman 1965, p. 13)

Furthermore, the general impact of monetary policy on real activities was questioned and regarded as complicated, while too great liquidity seems to be the reason for price increases and the given competitive structure (Vieweger 1970, pp. 152ff.).

The slowdown of inflation that holds for all economies presented in Fig. 1 seems to be the effect of this policy shift. Furthermore, this effect seems to hold regardless of the level of inflation during the 1970s. While some economies were affected more severely by the increase of inflation in the 1970s, they converged towards a level of 2%. An important feature that is not addressed in Fig. 1 is the type of measurement of inflation rate. Even within the Euro Area member states, which are presented in Fig. 1 by France, Austria and Germany, distortions in the measurement cannot be neglected. As Erber and Hagemann (2010) point out, the introduction of the so-called harmonized consumer price

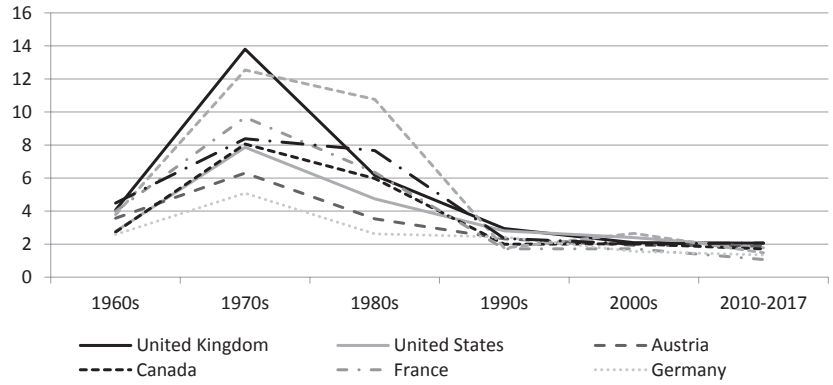

Fig. 1 Consumer price index of selected advanced inflation targeting economies, 10 year average (*Source* OECD [n.d.-a]; Own calculations)

index, which represents a unified measurement with identical weights for goods' categories, does not lead to a convergence of inflation per se. Therefore, a shift from a harmonized consumer price index approach towards the focus on purchasing power parities between member states is proposed. Although such critique regarding the measurement process is fundamental for the assessment of the inflation targeting scheme, it is put aside in this chapter as focus is laid upon the causal relations and effects on real activities, not on the level of inflation rates per se.

The power to establish this seemingly international convergence of inflation rates can be traced back to monetarists and the analysis of Friedman and Schwartz in their work *A Monetary History of the United States 1867 to 1960* (referred to as AMH) according to Bordo and Rockoff (2013), as the following statement shows. But also the public and the fear of households of an increase in inflation is said to have pushed the Federal Reserve to change monetary policy. The term *Great Moderation* refers to the period from the mid-1980s till the mid-2000s. Although Great Moderation refers primarily to the development in the United States, a similar trend can also be observed in OECD economies (see for more detail González Cabanillas and Ruscher 2008).

> Slower monetary growth per unit of output during the Great Moderation appears to have contributed to the slowing of inflation from about 6 per cent per year from 1965 to 1982 to about 2.5 percent per year from 1982 to 2008. The monetary regime changed because the Fed was persuaded to put greater emphasis on price stability. The main reason was that the public was frightened by inflation and demanded action to stop it. But some of the credit for the change in the policy regime must go to the monetarists and to AMH. (Bordo and Rockoff 2013, p. 6)

The immediate question arises, whether this power of the public and the household sector is integrated in the underlying monetary theory. Furthermore, whether or not economies had suffered in the past from high inflation rates or hyperinflation, they converged towards lower inflation rates from the 1990s and onwards (as Fig. 1 shows). It cannot be explained why some economies had experienced a strong increase in inflation the decades before, while others—although they were sharing

similar geographical and industrial background like Germany, UK, France and Austria—experienced only minor increases with high growth rates. Inflation perception and the power of the public to determine monetary policy seem to be of lesser explanatory value. The inclusion of the institutional setting and financial structure is of importance for monetary policy; this was also concluded by Taylor (1999) when comparing the effectiveness of different monetary policy rules for the United States. He claims that 'hence, the historical approach to monetary policy evaluation is a necessary complement to the model-based approach. By focusing on particular episodes or case studies one may get a better sense about how a policy rule might work in practice' (Taylor 1999, p. 320). For the United States, the underlying historical analysis, which also earmarked the shift in monetary theory, is the work of Friedman and Schwartz, as mentioned above. It can be concluded that inflation targeting as model derived from the theoretical analysis of the Monetarists and New Classical Macroeconomics is historically and institutionally determined by the experiences of the United States; also, and although historical reflections are perceived as important, model-based structures for monetary policy seem to be implemented in the course of time in many developed and emerging economies.

2.2 Monetary Theory: Paving the Way for Inflation Targeting

Competing economic analyses and modelling challenge economic policy makers with opposing views, within the so-called mainstream economics on the impact of monetary theory on the real world. Flexible price models of new classical macroeconomics and of real business cycle analysis, oppose sticky price models of New Consensus Macroeconomics (NCM) economists, which are understood as long-term equilibrium models. Whereas the former see monetary policy as unimportant for real economic activity, the latter do the opposite in the short run (Goodfriend and King 1997, p. 231). Numerous fundamental critiques have been articulated, since formulation of this model. Only some of these fundamental inconsistencies are mentioned here briefly.

The three equations relationship: money supply (1), the quantity Eq. (2) and the Cambridge cash-balance Eq. (3) had determined the monetary view of the neoclassical synthesis model (ISLM model) (Papademos and Stark 2010, pp. 22ff.):

$$M = mB \tag{1}$$

$$Mv = Py \tag{2}$$

$$M = kPy \tag{3}$$

- The money supply function (1), shows that the amount of money (M) available equals the monetary base—also called *high powered money*—(B), the most narrow definition of money resulting from the money in circulation and the reserves of commercial banks at the central bank, multiplied by the money multiplier (m). The money multiplier indicates the ability of commercial banks to create liquidity and therefore enlarge the volume of money available and is a function of the ratio of deposits to bank reserves and cash holdings to deposits.
- The quantity theory (2) suggests, money would be neutral as increases in money stock (M) would lead in the short run only to a rise in the price level (P), due to a constant velocity of money (v) and constant number of transaction (y) in the short run.
- Equation (3) can be derived from Eq. (2). M in Eq. (3) is seen as money demand, as it equals k, the inverse of income velocity v in Eq. (2), multiplied with the price level (P) and the number of transactions (y) (see Papademos and Stark 2010, p. 28). The model implemented by Hicks (1937, p. 148ff), using the Cambridge cash-balance Eq. (3) as money demand function, for the discussion of the marginal-efficiency of capital in Keynes' work leads to direct effects of monetary policy on the aggregate income/output level.

The central bank can exogenously determine the supply of money and neglect actors' behaviour within the financial structure. These assumptions are not only perceived as misleading in the real world by heterodox economists, especially Post-Keynesians, but lead also to critique within central banks (see among others Papademos and Stark 2010, p. 22).

While in the 1950s and early 1960s the followers of the neoclassical synthesis saw the need for an active approach to alter aggregate demand and therefore also acknowledged monetary policy as an important and supportive instrument to reach higher aggregate demand, the framework changed with the monetarist counter-revolution in the late 1960s. In the following decades, fiscal policy was viewed ineffective (Liskar 1970, p. 231) and the neoclassical synthesis was challenged. While macroeconomic understanding turned its back towards the neoclassical synthesis, monetarists brought back the view of the quantity theory. This had implications for the causal relation between money and inflation as well as between inflation and the transmission mechanisms (Goodfriend and King 1997, pp. 237ff.). As Friedman (1968) points out in his paper, 'The role of monetary policy', it is the real quantity of money which is important not monetary policy in terms of changes in interest rates, see quotation below. Haberler (1946), who had critically discussed the impact of fiscal multipliers, pointing especially at the potential time lags and leakages of the induced circulation process (Haberler 1946, pp. 459ff.), already in the 1930s and similarly as Pigou (Haberler 1946, pp. 499ff.; 1952) focused on the importance of wealth effects to overcome consumptions slumps out of a potentially arising liquidity trap in a Keynesian view, determined also the shift towards monetary policy (see also, Friedman 1968, pp. 2ff.).

> Inflation, stimulated by cheap money policies, not the widely heralded postwar depression, turned out to be the order of the day. The result was the beginning of a revival of belief in the potency of monetary policy. This revival was strongly fostered among economists by the theoretical developments initiated by Haberler but named for Pigou that pointed out a channel-namely, changes in wealth-whereby changes in the real quantity of money can affect aggregate demand even if they do not alter interest rates. (Friedman 1968, p. 2)

Based on this Friedman sees three major impacts in monetary policy:

> The first and most important lesson that history teaches about what monetary policy can do - and it is a lesson of the most profound importance - is

> that monetary policy can prevent money itself from being a major source of economic disturbance. (Friedman 1968, p. 12)

This means that the underlying institution—the central bank—has to aim for financial stability and needs to embody necessary and transparent tools to fulfil this task. In the second task, Friedman turns to the importance of stable inflation and the confidence connected with monetary stability:

> Our economic system will work best when producers and consumers, employers and employees, can proceed with full confidence that the average level of prices will behave in a known way in the future-preferably that it will be highly stable. (Friedman 1968, p. 13)

In the third impact of monetary policy Friedman reflects on the mode of monetary policy, and it becomes clear, that first of all the focus should be on money stock in the determination of the money growth rate and the underlying mechanism should affect money growth rather than the interest rate.

> If there is an independent secular exhilaration - as the postwar expansion was described by the proponents of secular stagnation - monetary policy can in principle help to hold it in check by a slower rate of monetary growth than would otherwise be desirable. If, as now, an explosive federal budget threatens unprecedented deficits, monetary policy can hold any inflationary dangers in check by a slower rate of monetary growth than would otherwise be desirable. (Friedman 1968, p. 14)

This means that within these three impacts, monetary policy should have the underlying causal mechanisms as well as the key prerequisites—confidence in the monetary system, financial stability and a strong (independent) monetary authority—of inflation targeting were unfolded. The theoretical modelling was not incorporated yet into the theoretical paradigm, but was shaped by further challenges the neoclassical synthesis had to face: the Lucas critique of macroeconomic policy, which introduced and formalized the concept of rational expectations.

When rational expectations were integrated into the modelling, as by early new classical economists, the view on monetary policy changed again. In general, the incorporation of rational expectations would lead to neutrality of economic policy for real economic activity. Nevertheless, monetary policy could lead to real economic fluctuations within this model, as price changes would result from the aim to offset real effects perceived in changes of monetary policy; in the long run this also leads to an absence of the tradeoff between inflation and unemployment (see among others Papademos and Stark 2010, pp. 41f.). As these changes would target money stock, the aim of the central bank should be to avoid fluctuations in money growth and aim for an annual increase in the monetary base—monetary base concept (see among others Pech 1970, p. 358; Goodfriend and King 1997, p. 24) of approximately 4% (see among others Liskar 1970, p. 237).

In the early 1980s, the first wave of NCM models incorporated insights from monetarist approaches and rational expectations into a model of sticky wages, which was in the following turned into sticky price models. From these strands in economic theory New Neoclassical Synthesis was formed, joining New Classical macroeconomics and rational expectations into dynamic modelling on the one hand and NCM in terms of sticky price models and imperfect competition on the other hand (Goodfriend and King 1997, p. 255; Papademos and Stark 2010, pp. 41ff.). Within this concept the effectiveness of monetary policy, conversely to fiscal policy was, as Snowdon and Vane (2005, p. 409) put it, 'at least in principle, re-established'. The question that arises, when monetary policy gains effectiveness is, how inflation can be controlled as it is agreed that inflation had a damaging effect on economic growth and development. All together four different monetary regimes can be distinguished (exchange rate targeting, monetary targeting, explicit and implicit inflation rate targeting) according to the nominal anchor, which is implemented to diminish the time-inconsistency problem that arises of discretionary policy (Snowdon and Vane 2005, pp. 413f.).

Summing up, the view on neutrality of money and the question of the impact of transmission of monetary policy on real activities changes throughout economic theoretical discussion. The main aim was to argue against the postwar discretionary monetary policy. The inability of

discretionary monetary policy to cope with current phenomena of the real world those days cumulated in the 1970s, a period with increasing inflation rates and persisting unemployment rates.

2.3 The Set-Up of Inflation Targeting

When introducing inflation targeting as monetary mode, which means the inflation measured by changes in the consumer price index is the nominal anchor, first focus has to be laid on an accurate measurement of consumer price changes. Debelle (1997, p. 12) points in this respect to the importance of the accuracy of the index and as mentioned above Erber and Hagemann (2010) criticized the harmonized consumer price index in the Euro Area as insufficient.

Furthermore, mainstream economists point at various 'structural institutional prerequisites', that have to be embedded, followed by a step-by-step 'action plan' to enable an effective implementation of inflation targeting. The main prerequisites are: creditability of monetary policy, sound financial system and central bank independence (Snowdon and Vane 2005, p. 414).

As a theoretical basis a model is presented as an optimization problem (Green 1996, pp. 5f.). Monetary policy aims to minimize a social loss function, which is faced by a supply constraint—the short-run Philips curve—as well as the inflationary expectations of private households driven by rational expectations. The general formulation of the monetary policy rule enables to minimize the social loss function. The approach can be summed up to a three equation model, as presented by Tsoulfidis (2010, pp. 375f.), referring to Fontana (2009) (cited in Tsoulfidis 2010, p. 375) (see also among others Arestis and Sawyer 2008, p. 631), the output gap (4), the Philipps curve (5) and the Taylor rule (6), which symbolizes the interest rate policy.

Output gap:

$$(y - y^*)_t = a_0 + a_1(y - y^*)_{t-1} + a_2 E(y - y^*)_{t+1} + a_3\left(i_t - E(\pi)_{t+1}\right) + u_1 \quad (4)$$

Phillips curve:

$$\pi_t = b_1\pi_{t-1} + b_2 E(\pi_{t+1}) + b_3(y - y^*)_t + u_2 \quad (5)$$

Taylor rule

$$i_t = i^* + a_1(\pi - \pi^*) + c_2(y - y^*)_{t-1} + u_3 \tag{6}$$

The output gap function (4) shows that the deviation of current output (y) from potential output (y^*) is affected by the output gap of the previous period $(y - y^*)_{t-1}$ as well as the expectations (E) of future deviations of real output from potential output $E(y - y^*)_{t+1}$ and interest rate (i) that is related to rational expectations about the future inflation rate $(i_t - E(\pi)_{t+1})$ (Tsoulfidis 2010, p. 376). The Phillips curve (5) determines the inflation rate π_t at a specific time t by the output gap in this respective period $(y - y^*)_t$ and the inflation rate of the past and expected future inflation rate $E(\pi_{t+1})$. The Taylor rule (6) implements the interest rate attached to the output gap $(\gamma - y^*)_{t-1}$ and inflation rate gap—deviation of the current inflation rate from the target $(\pi - \pi^*)$—and the equilibrium interest rate (for more details see Tsoulfidis [2010, pp. 375f.]).

In setting up this three equation model, a mechanistic structure is established, in which monetary policy determines the accurate interest rate to reach the ex-ante established target. Other sectors as well as the institutional and structural setting of these sectors are left apart (e.g. wage bargaining modes to impact the development of wages).

2.3.1 Prerequisites for Implementing Inflation Targeting and Additional Effects of the System

In the inflation targeting framework, postulated prerequisites for the system are also seen as positive incentives, like financial stability or fiscal discipline as discussed below, for other macroeconomic effects in the view of mainstream economists. Central bank independence is also said to increase fiscal discipline, while the prerequisite of financial soundness leads as self-fulfilling prophesy to even higher global financial stability in the future. Furthermore, expectations about future price stability should be guided by high credibility of monetary policy.

Central Bank Independence

Credibility can be achieved via a transparent monetary policy. To implement these policies, the central bank, as an authority with data and knowledge about monetary development, is supposed to work independently. Friedman points in the following citation at the three main actors for financial means of households, firms and the state. In case the public sector (treasury) uses the monetary authority to finance public debt, inflation is increased and the control over the stock of money is lost.

> That brings me to the problems of monetary reform. These can be classified under three headings: institutional organization of the private banking system; monetary powers of the Federal Reserve and the Treasury; and criteria for controlling the stock of money. (Friedman 1965, p. 10)

Despite the recommendation of Central Bank independence, not all inflation targeters implemented a high degree of broadly speaking central bank independence; in the UK or Canada, as Bernanke and Mishkin (1997, p. 102) put it, 'the government rather than the central bank retains the final control over monetary policy'. Nevertheless, inflation targeting was implemented. As Sawyer (2006, pp. 640, 649) points out, monetary arrangements were changed towards an independent central bank in the UK in 1997 and enacted with the Bank of England Act of 1998, fulfilling the prerequisites some years after the implementation of inflation targeting in 1992. In this case, a causal relation between fiscal discipline and inflation targeting is said to hold, as Minea and Tapsoba (2014) show in their empirical investigation of developed and emerging economies. They conclude that targeting economies both in developed and less developed economies improved their inflation performance compared to non-targeters. Although other empirical studies suggest (e.g. Ismailov et al. 2016) that especially developing economies with high public debts, have no incentive to implement inflation targeting, as they aim to reduce the real value of public debt through inflation, a positive effect also for the soundness of the financial system is derived by Minea and Tapsoba (2014, pp. 198).

Overall the term independence of the central bank creates confusion, as not every kind of dependence is as harmful as another. One clearly has to distinguish between 'goal independence and instrument independence' (Conti-Brown 2015), while the government might have an impact on the implementation of the underlying method of monetary policy, the general agreement on the enforcement of inflation targeting for example, the set-up of the respective measurements to achieve the goal has to rely on the monetary authority. As Conti-Brown (2015, p. 270) points out, in empirical observations of central banks independence, economists refer to the existence of such laws, but personalities of administrators and personal relationships are mostly forgotten.

When such a broad definition of independence is applied it has to be concluded, that neither the implementation of a specific monetary regime, nor the statement of legal independence as a prerequisite for the implementation of a monetary mode can serve as a sufficient condition to evaluate the independence of a national monetary authority.

Sound Financial System

When it comes to the soundness of the financial system, circular causation is at the centre of the argument. On the one hand financial stability serves as a prerequisite to enfold the functioning of monetary policy. As the following quotation from Friedman (1968) shows, financial instability is even argued to cause monetary malfunctioning. Monetary policy cannot serve as stabilization policy in case of institutional and/or structural failures; therefore, also the question whether monetary policy could have reacted in a different way and might have had another option to avoid further instability becomes obsolete.

> The main lesson I want to drive home is that the 1929–1933 period was not one in which the economic depression forced a decline in the stock of money. The decline in the stock of money was a direct consequence of the sequence of bank failures. The banking failures were not important primarily because they involved the failures of financial institutions. They were important because they forced a decline in the stock of money. (Friedman 1965, p. 9)

On the other hand, many economists argue that simply the implementation of a monetary policy like inflation targeting, which is based on a forward-looking rule-based agenda, leads to an increase in financial soundness. This argument especially becomes a research agenda after the global financial crisis of 2008/2009. Comparing inflation targeting countries with non-targeting economies, the presented empirical results show (see among others the comparison of 71 countries from 1998 to 2012 by Fazio et al. 2014) that targeting economies have less fragile banks irrespectively of their size of the banking sector and classification of national financial system. However, the question of circular causation and the impact of numerous other measures not directly related to the goal of price stability and potential monetary policies to achieve this goal, like the implementation of Basel III requirements in many economies with large banking sectors or the implementation of the banking union after the global financial crises, are not addressed.

Credibility of Monetary Policy

In order to achieve and maintain credibility of monetary policy, the central bank has to minimize the moment of surprise for economic actors, as suggested by NCM. In this respect, among others, McCallum (1984, pp. 12, 28) argued for a monetary rule, which might be also an activist one, that enables rational actors to foresee measures of monetary policy and act accordingly. The economic results of low credibility due to a discretionary monetary policy would be higher inflation rate 'and no less unemployment'. This means that credibility as a prerequisite can be enhanced by the monetary policy proposed. Additionally, the mode the monetary policy regime as presented—in a transparent way—enhances effectiveness and credibility further (Green 1996, pp. 14f.).

2.3.2 The 'Action Plan' of Inflation Targeting Within the New Consensus Framework

On the basis of the three-equation model presented above and the prerequisites, the action plan of inflation targeting involves the following main

elements (summed up after Snowdon and Vane 2005, pp. 413–414; see also, Arestis and Sawyer 2008, pp. 633ff. for more details):

- public announcement of medium term numerical target for inflation;
- institutional commitment to price stability as a primary goal of monetary policy;
- information and communication of the monetary policy;
- implementation of inflation forecasts.

Build on this broad framework, central banks set up an individual legal background of inflation targeting procedures, which leads to different schemes.

Even the target itself can be made explicit beforehand or be implemented as implicit target. Although meeting the inflation target is the primary goal of a central bank and the monetary authority is accountable to meet this target, other (secondary) goals might be at least mentioned in the reserve banks' acts. Furthermore, when the inflation target is not met, the question arises how the central bank is formally held accountable; are explicit sanctions in place for this case? Therefore, the time horizon over which to meet the target is important. Following the theoretical background of inflation targeting, the effect of monetary policy on real activities is not only minor, but if existing it is only relevant in the short run. This means the alternative secondary goals are also only relevant in the short run and the implementation of inflation targets is to be seen within the scope of a medium or longer run policy. Some possible aspects of the inflation target scheme are used only rarely. The Law of New Zealand for example includes direct accountability of central bankers, and the tenure of the governor is linked to the achieving of the respective target (Bernanke and Mishkin 1997, p. 100; Debelle 1997, p. 18). No other economies seem to have implemented such a legal accountability. Central banks present their accountability sometimes via publications, like the inflation reports or monetary policy reports (e.g. Debelle et al. 1998, p. 8).

3 Dead Ones Live Longer: Empirical Evidences and Challenges After the Financial Crisis

Numerous empirical studies on the effectiveness of inflation targeting for developed and emerging markets have been undertaken in recent decades. They vary in empirical method, countries included—with the main question whether to include or exclude so-called implicit inflation targeting economies—and time setting—before or after the global financial crisis—but have one striking feature in common: no clear evidence for the positive impact of inflation targeting in reducing rate of inflation. As for example Angeriz and Arestis (2006, p. 566) point out, inflation started to decrease in many of targeting economies even before inflation targeting as monetary policy was put in place. This clearly opposes some earlier individual case study analysis on the national level. National success stories were delivered not only by New Zealand and Canada (see Debelle 1997), as the early adopters of inflation targeting, but also by the UK. In these studies, policy variations according to the national institutional setting and the historical experiences are clearly stated. The UK for example had adopted an inflation target in 1992 after other money supply targets had failed. The system was revised, also with the independence of the Bank of England 1997 to increase the accountability of the Bank of England (Lane and Van Den Heuvel 1998, p. 4). In their empirical analysis Lane and Van Den Heuvel (1998) conclude that the performance of the first period of inflation targeting—between 1992 and 1997—was positive, leading to moderate inflation, close to its target. It has to be noted that the introduction of the new monetary framework coincides with the British withdrawal from the European Exchange Rate Mechanism.

A reason for cross country studies failing to provide evidence whether monetary schemes managed to achieve what was promised, might be the neglect of the individual institutional setting and historical background in each of the economies. Nevertheless, some of the main results are presented as follows, selected to give an overview over the causal argumentation of inflation targeting in the prerequisites and the set-up

of the monetary scheme as presented above. Mishkin (2000a) focuses on developed economies and concludes that inflation targeting in general provides a good framework to achieve better economic performance. The necessity for countries to design their individual monetary policy also within this framework accurately according to their specific needs is explained by using case studies and country-specific historical and institutional settings. Conversely to that empirical studies are not that positive. Mishkin (2000a, p. 25) claims that the operational design of inflation targeting enables economies to construct an adequate framework for their national needs—above all it is 'far from a rigid rule'. This also means that most of the arguments brought up against inflation targeting should be solvable with the correct design, only potentially rising financial instability due to the required exchange rate flexibility and the fact that the importance of fiscal policy is still existing, serve as fundamental disadvantages according to mainstream economists (see Mishkin 2000b, p. 4). Conversely to that, empirical studies using different time periods and country samples are generally less optimistic regarding the positive effects of inflation targeting and agree that the effects of inflation targeting even on the fundamental aim, which is the decrease of the inflation level, cannot be directly linked empirically. Similarly expected inflation and forecast errors cannot be minimized or are not significant (see Johnson 2002; Ardakani et al. 2018). Ball and Sheridan (2003) conclude in their pre-crisis survey of 7 OECD inflation targeters and 13 non-targeters that no evidence for the positive impact of inflation targeting for stable prices and interest rates can be found. For the analysis, the pre-targeting period was set from 1960 to 1985, while the post targeting period ends in 1998 or 2001 depending on whether targeting economies entered the Euro Area. Based on this analysis, economists conclude that the institutional aspects and prerequisites for implementing inflation targeting as presented above (e.g. central bank independence) are not important. On the other hand the authors conclude that no evidence could be found that inflating targeting 'does any harm' (Ball and Sheridan 2003, p. 17) in the investigated pre-crisis time period.

Studies which cover not only the pre-crises period but extend the analysis of the effects of inflation targeting to the changed macroeconomic

situation after the global meltdown of 2008/2009, conclude a more diverse picture of the effects of inflation targeting. In Kose et al. (2018), inflation targeting is not viewed as not harmful per se anymore, but seems to have increased real exchange rate volatility in inflation targeting economies. Therefore, the development of an inflation targeting scheme towards a hybrid version, which should incorporate measures of macroprudential regulation to decrease exchange rate volatility, is proposed. Compared to this, Ardakani et al. (2018) focus more strongly on the different effects between developed and less-developed economies. The fiscal stance in terms of debt to GDP ratios improves in all targeters, although as mentioned above, developing economies with high debt to GDP ratios have no incentive to introduce inflation targeting. The results are again dispersed in regard to exchange rate volatility. Developed economies face an increase in exchange rate volatility, while the situation improves in developing economies. Aizenman et al. (2011) come to similar results when focusing on less developed inflation targeters only.

Summing up, it can be stated that besides of the mixed picture on the success in empirical studies, case studies suggest that inflation targeting as a monetary scheme even if it is not a framework that can be implemented in similar modes but requests a national specific modelling, holds what it promises and the theoretical background of inflation targeting per se is not questioned. Furthermore, the global financial meltdown shed light on the structural deficits of the system of inflation targeting, which led to the demand for reshaping the structure even within the orthodox thinking. Two major conclusions are drawn from a mainstream perspective after the financial crisis (Reichlin and Baldwin 2013):

- Inflation targeting is an adequate monetary structure to ensure price stability and enables economic development that needed a revision after the crisis—"fix it don't scrap it" (p. 28).
- The macroeconomic environment after the global crisis request a stronger focus on credibility to determine expectations to cope with a more fragile banking sector and heavily indebted national states.

Consequently, numerous proposals for revision were brought forward, which aim to maintain the core setting of the model within the New

Synthesis framework, but adapt it to the changed environment after the financial crisis. These can be grouped according to two broad lines:

- Reshaping: measures to enlarge the goals and specifications of inflation targeting;
- Add ons: measures to enlarge the scope of inflation targeting—using additional objectives and applying additional instruments. While the goal remains unchanged these broader sets of objectives aim to grasp the interrelations between economic actors and monetary policy more accurately.

3.1 Forms of Reshaping

Numerous central banks have introduced already a second (minor) goal besides inflation. In the course of the financial crisis, inflation forecasts and forward guidance were less effective. Therefore, secondary goals could be implemented via thresholds. Woodford (2013) introduces in this respect the possibility of an 'unemployment threshold', which should help maintain low interest rates, when the economic upswing starts. The underlying assumption is that interest rates tend to rise too early and an unemployment threshold would help to maintain low interest rates for a longer period. The threshold is supposed to be reached before interest rates are allowed to rise. Similarly, the inflation target could be enlarged by a 'nominal-GDP target' (Woodford 2013; Frankel 2013), which aims to maintain low interest rates, when the economy starts to boom. A nominal-GDP target can directly be linked to an inflation target and complement the system. Frankel (2013) points out, that in Europe a nominal-GDP target of 4–5% can be linked to the inflation target. The idea of higher nominal-GDP rates together with low interest rates should accelerate GDP growth further and the inflation target, which is still in place, is reached after a recession. This means that inflation target in the long run maintains its preset level, but in the short run the nominal-GDP target is put in place instead of the Taylor rule (Frankel 2013, p. 93).

3.1.1 Add-Ons to the System of Inflation Targeting

The question on how important monitoring of asset price developments by central banks to conduct monetary policy should be is discussed after the financial crisis. While some proposals argue in line with a 'flexible inflation targeting' mechanism (Woodford 2012), others aim to introduce additional measures to enlarge the scope of inflation targeting and already derived macroprudential proposals. The latter aim to figure out, whether in the respective national banking sector bottlenecks can be detected, which might lead to low interest rates that are not spread beyond the banking sector. This means that the monetary authority has to 'think beyond a simple Taylor rule' (Brunnermeier and Sannikov 2013, p. 98). Similar to forms of reshaping goals of inflation targeting schemes, also an increase of the focus to prudential measures increase the 'flexibility of the system' of inflation targeting and aim to respond in the short term with a broader set of instruments (Banerjee et al. 2013, p. 117). It was also noted that this additional claim for greater financial stability, which is beyond a traditional view of a sound financial system but aims to provide a tool against financial crisis, implies that there might arise a gap in the medium-run to the respective target (inflation and/or nominal-GDP target).

All in all the developments after the financial crisis ask for minor changes in the modelling but do not aim to reframe its fundamentals. Concrete proposals to incorporate higher flexibility in the implementation of inflation targeting economies are not given.

4 Post-Keynesian Critique and Alternatives

To discuss monetary policy Post-Keynesian economists have grouped the most important features of an optimal monetary policy along three broad lines.[3] Leaving aside for a moment the fact that optimal

[3]Palley (2007, p. 62), articulates in this respect, five critical factors affecting the determination of monetary policy, taking a closer look at the definition of uncertainty and the distribution of information. Both factors are subsumed within the broad definition of the institutional and structural set-up, which covers, for example, the demand for credibility and accountability of the monetary policy.

monetary policy also depends on the structure of the economy that is built for: 'the specification of the underlying theoretical paradigm', that includes the determination of the assumed causal relation between money/monetary policy and other economic activities, the 'institutional and structural set up' to maximize the effectiveness of monetary policy within the underlying paradigm and the derived 'instruments of monetary policy'. Apart from these fundamental elements of critique, further problems of inflation targeting in the European perspective, resulting from the period of easy money and quantitative easing (QE) after the global financial crisis, are discussed below separately.

4.1 Reframing the Underlying Paradigm

While in New Classical approaches in the short-run Phillips curve inflation is determined by the difference of unemployment from the natural rate of unemployment (NAIRU) and the expected inflation rate, the NCM model focus is on a permanent tradeoff between inflation and unemployment with the long-run Philips curve being vertical at the NAIRU (determined by the supply side of the economy). Post-Keynesian approaches replace the NCM Phillips curve by a dynamic disequilibrium function, allowing for cost-push and demand-pull inflation scenarios. Real effects (unemployment, wages growth) of monetary policy are at the centre of the analysis, and might allow due to the shape of the wage, profit rate and growth function a backward bending Phillips curve (Palley 2003, pp. 58f.; 2007, pp. 70–74). Applying a backward bending Philips curve, leads to the effect that an increase in inflation leads first to a decrease in unemployment till a turning point is reached and implies a counterproductive effect on unemployment when inflation increases further after the turning point is reached.

Other Post-Keynesian economists (see among others Setterfield 2006; Lima and Setterfield 2008; Mota dos Santos 2011) reformulate the Phillips curve to evaluate inflation targeting. A so-called Post-Keynesian Phillips curve refrains from a natural level of output and introduces a

new variable that incorporates the 'conflicting claims' over nominal income as a source of inflationary pressure (Setterfield 2006, pp. 662, 665). Inflation targeting becomes compatible with Post-Keynesian economics, insofar as also a new monetary rule is established, which shall determine the optimum interest rate level, without applying the conventional Taylor rule. The term optimum in this case refers to an interest rate level, which accounts for the conflicting claims as mentioned above and aims to re-establish the Keynesian demand for boosting employment. Monetary policy becomes a tool to serve an employment goal rather than an inflation goal. This challenges the mainstream assumption of path dependency of the NAIRU as 'pre-existing route for the economy to follow around which the actual path followed will oscillate' (Arestis and Sawyer 2009, p. 2). When incorporating institutional set-ups and admit that history matters, an individual development path is determined. This in turn impacts the importance of monetary policy to determine the development of a geographical area of diverse institutional frameworks as the Euro Area. Furthermore, studies (see among others Onaran and Galanis 2013) show the importance of the underlying wage bargaining process, which manifest the 'conflicting claims' over nominal income as mentioned above to explain strategies to overcome an economic crisis—wage led vs. profit led systems—leading to different distributional policies (Lavoie and Stockhammer 2013, Table 1.1; Stockhammer 2013). Stockhammer and Onaran (2011) argue that the Euro Area's demand regime is wage led. This impacts on the inflation target, as bargaining structures aim to promote an increase in wages, which leads to an economic upswing and enforces an upward revision of the inflation target.

4.2 Institutional and Structural Set-Up

Taking a closer look at the institutional and structural set-up, in terms of prerequisites to achieve the assumed best outcome of inflation targeting, a checkup with real economic policy procedures presents a gap between theory and economic policy evidence.

Wray's (2007, pp. 120ff.) analysis of central bank's independence in terms of institutional and personnel independence, presented as a prerequisite by proponents of inflation targeting, can be summed up as 'non-existing'. The request of independence of monetary policy authorities from public sector financing demands to control against hyperinflation is obsolete, as sovereign governments can use the national banking sector for refinancing, while the banking sector itself enlarges its assets with treasury bonds and therefore bank reserves (see for more details Bell and Wray 2002, pp. 265f.). Apart from the fact that also political (in)dependence is determined by the institutional set-up of the central bank, as visible when comparing, for example, the Federal Reserve System of the United States with the European Central Bank System. While in the United States, the Board of Governors are politically appointed and therefore their opinions are part of their monetary policy decisions, the Governors of the National Central Banks of the Euro member states are supposed to be independent and have to refrain from direct political positions; they are also appointed in their positions by the respective national governments. Again their opinions are transmitted into the monetary decision-making process. Apart from this, Wray (2007) points to another implicitly assumed independence within the mainstream approach; the independence of a central bank to conduct whatever monetary policy is aimed to be implemented and the possibility to select any tools wanted. Referring to the concept of endogenous money, this fact only holds, when the structure of the banking sector and the importance of other financial institutions to serve as refinance options are put aside. Only within the accommodating-approach of endogenous money such an assumption holds.

Linking the question of independence to use the tools of monetary policy freely by a monetary authority to the global financial crisis it becomes evident that an accommodating approach is more likely in the situation of a non-existing interbank market than a structuralist approach; in which commercial banks receive a major part of refinancing from the interbank sector and do not need to use the central bank for refinancing options. In this respect QE policies in the Euro Area deserve attention. As Gaffard et al. (2018, p. 136) note, QE policies might also have an impact on the determination of credit supply

in times without financial crisis. Although the authors see little impact of this monetary policy on stabilization within Europe, data of the last years (since 2015) show a rise in output growth (see Fig. 2) and investment in terms of changes in industrial production (Fig. 3). As Fig. 2 depicts economic development measure with changes in the real GDP within the Euro Area is by far not homogenous. Ireland especially outlines the picture and is plotted on the right scale in Fig. 2. The reason given for these changes in real GDP is the favourable tax scheme for international companies, which led to the massive reallocation of investment to Ireland.[4] The selected southern European Economies (Greece, Italy) are well below Euro-zone average, while e.g. Estonia as a 'newcomer' performs very well. Figure 3 shows the development of industrial production from 2014 to 2018. It becomes evident, that changes in industrial production fluctuate on an annual basis strongly on country level, while these fluctuations do not become visible in the Euro Area perspective. Again, Ireland serves as an outliner and is presented on the right scale, as industrial production seems to be determined only by relocation of enterprises at a point in time. Overall, from these developments in economic growth and the Fig. 1 on inflation presented above, inflation targeting for the Euro Area with the aim to promote economic development cannot be interpreted as success.

An important feature that is noted by Gaffard et al. (2018) when discussing the effectiveness of QE to boost real activities is the increase of financialization. The term financialization is used in this chapter to describe not only the use of financial instruments as financing or speculative tool, that increases the instability of global financial systems e.g. due to an increase in securitization, but also the importance of financial markets in 'everyday life' of households; for example, due to a rise in household debt as described below in Sect. 5.1.

This rise in the importance of financial markets over real economic production in terms of return led to a decrease in the effectiveness of monetary policies such as QE after the global financial slump, but also

[4]As OECD data shows (n.d.-b) tax to GDP ratio decreased sharply in 2015—from 28.4 to 23.1%—compared to an OECD average of above 30%.

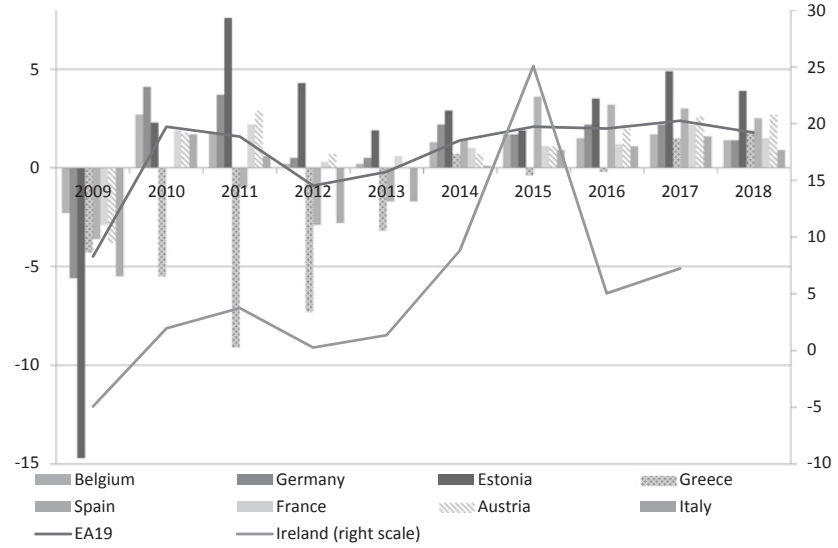

Fig. 2 Real GDP changes in % (*Source* OeNB [n.d.-a])

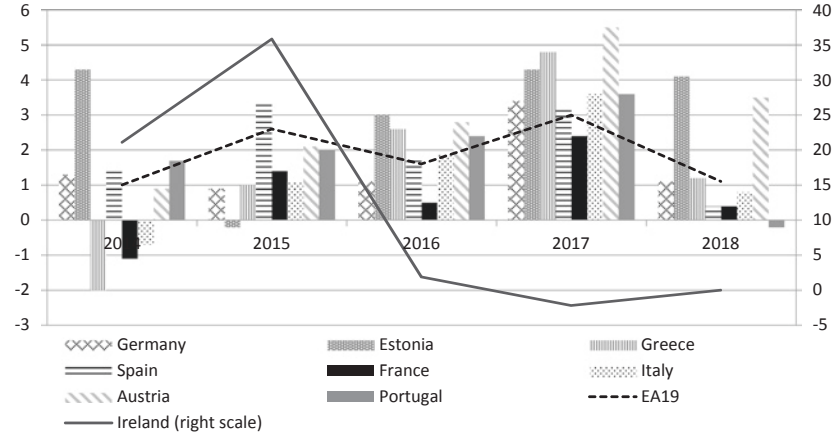

Fig. 3 Industrial production excluding construction, selected countries Euro Area (*Source* OeNB [n.d.-b])

manifested the upward price trend of assets. So far this leads directly to one of the main elements of criticism of inflation targeting, the rise of asset prices as a result of cheap money policies in times of economies downturn.

4.3 Stepping Back from the Taylor Rule

As a consequence of the shortcomings in the theoretical background and the resulting revisions of the slope of the Phillips curve, the question of how to set the optimum interest rate to achieve the optimum outcome has also to be revised.

The aim is to link monetary policy to the short-term nominal interest rate, while expected inflation is not influenced directly. This seems more promising than anchoring expected inflation and not setting the nominal interest rate, as direct monetary policy too; for example, the European main refinancing operations and the overnight interest rates can be directly determined by the central bank. Both might serve as a corridor targeting the interbank short-nominal interest rate. Two solutions are given of how to set the interest rate in an adequate way: the activist versus the parking rules (see Asensio and Hayes 2009, pp. 69ff.).

Within the 'activist rule', the Post-Keynesian approach seeks to achieve a more accurate interest rate determination that includes the real effects of monetary policy on employment and growth by acting flexible when the inflation rate ranges between a predetermined upper and lower bound. This means that the actual inflation rate does not only find a reference to a target rate but also to the respective upper and lower bound. In case the actual rate inflation rate is above the target but below the predetermined lower bound, monetary policy should still decrease interest rates moderately to profit from an increase in output. While in the short run a rise in output has positive stabilization effects, price stability will be achieved in the long run, with possible positive effects in the output level. This in turn decreases the upward pressure on prices. This approach immediately traces back to the shape of a backward bending Phillips curve, in which also a minimum unemployment rate can be detected. Palley (2003, 2007) introduces

MURI—minimum unemployment rate of inflation—to manifest the turning point in the backward bending Phillips curve. Only when monetary authorities reduce interest rates beyond the point where the minimum unemployment rate is achieved, increases in inflation cannot be offset by increases in output and employment.

While the immediate impact of short-run interest rates on the real economy is unquestioned, the ability to impact long-run interest rates via setting short-run nominal interest rates by monetary authorities remains questionable. Confidence in the future development in the economy and liquidity preference might counteract short-run interest rate policies by monetary authorities (Asensio and Hayes 2009). In this case interest rates should not be changed actively, but rather be held constant, 'be parked', at a certain level. Three versions of the parking, its rule can be observed within Post-Keynesian theory. When holding the nominal interest rate close to (Smithin Rule) or at zero (The Kansas City Rule), the aim is to focus on the distributional effects of monetary policy. Low interest rates enable the redistribution of income away from rentiers and follow Keynes' claim of a 'Euthanasia of the Rentier' (Wray 2007, pp. 136f.). As Wray (op. cit.) puts it, financial markets might be affected by a change in monetary policy, similarly as the orthodox economics claim, but the proposed rule follows as mentioned above the wish to redistribute income.

> The truth about monetary policy is rather simple: it usually does not matter much. Unexpected rate change can affect financial markets, and, as the new classicals say, random policy has larger effects, but there is not much to recommend it. …a monetary policy rule is preferred: set the overnight rate to zero, and keep it there. A properly programmed 'thin man' robot ought to do the trick. (Wray 2007, p. 138)

Compared to this, Smithin (2007, p. 114) argues that the interest rate should rather be low but not zero to maintain the 'social order' and the existing 'social contract' within the capitalist system. As presented above the theoretical frame for this monetary policy rule is set up by implementing an adapted version of the Philipps curve (Setterfield 2006). The third approach follows the 'fair interest rate' (Pasinetti's rule). Also

here capitalists are supposed to receive a reward, but not according to a certain set low or even zero interest rate, but according to the growth rate of labour productivity (Rochon and Setterfield 2012, p. 501). Within this approach, the labour market and an implicit way of wage coordination (reward for productivity) would be integrated into the mode of monetary policy.

Derived from the focus on the re-distributional effects monetary policy rules might have, also approaches to enrich Post-Keynesian economics more strongly with class conflicts over income by introducing three classes into the model (rentiers, firms and workers), reaches fruitful results (Hein and Stockhammer 2010). The crucial factor in this model is not the mode of interest rate setting but macroeconomic coordination between monetary authorities, fiscal policy and wage bargaining parties. While monetary authorities target the distribution between the classes introduced—therefore the model follows the demand for low interest rates—fiscal policy aims to reach stabilization. The triangle of targets is completed with the results of wage bargaining processes, which target inflation (Hein and Stockhammer 2010, pp. 349f.). The argument of macroeconomic coordination is central when applying inflation targeting to the European experience after the global financial downturn of 2008/2009.

5 Inflation Targeting After the Global Financial Crisis: Are Low Interest Rates What the Post-Keynesian Approach Demanded?

While the theoretical appraisal of inflation targeting within Post-Keynesian economies led to a systemic reformulation before the global financial crisis and discussions of how low to set the interest rate, the focus shifted after a decade of low interest rates and easy money to the mostly untold distribution effect of increasing asset prices; and questions of financial stability aside of the claimed financial soundness when introducing inflation targeting within the NCM model. The visible increasing European asymmetries in terms of financial stability,

economic growth, asset price development (especially house prices) and fiscal performance demand a discussion beyond the claim for macroeconomic coordination. But ask for a look at the so far hidden mechanisms of inflation targeting. The focus will be on the effects for the Euro Area.

5.1 Asset Prices Developments: Housing and Its Immediate Effects for Redistribution

Figure 4 presents the developments of house prices in selected European economies. Especially since 2015 house prices show a sharp upward trend in the European Union, which is also reflected in the Euro Area. Having a look at the national trends of economies with different institutional structures and experiences with house price developments, it becomes evident, that, independent of past experiences sharp increases are visible in almost all economies. Italy represents in this respect one of the few exceptions, similarly to Greece (not shown in Fig. 4). The surprising development in the data presented in Fig. 4 is given by

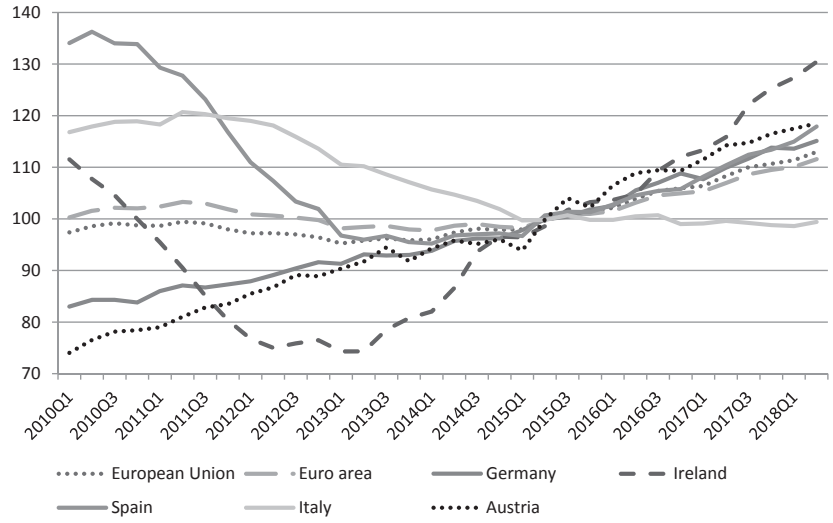

Fig. 4 House price index (2015 = 100) selected European economies (*Source* Eurostat [n.d.])

Germany and Austria. Both economies are characterized by stable house prices in the past and had not experienced a sharp increase before the global financial crisis or a decrease after. Nevertheless, house prices are increasing strongly since 2015.

The effects of the aim to spur inflation in the Euro Area towards its 'near but below' 2% target and the decade of easy money, led to derived demand for housing. 'Derived' stands for 'speculative' demand in this case and symbolizes the fact that housing is not used for the primary need for shelter but is financialized and serves the goal of yield increases in days of low interest rates. All in all, two stages of financialization can be distinguished. In stage one a shift from a renters' society is encouraged. In stage two, housing as a shelter is of minor importance and speculation gains momentum (Springler 2018). Housing becomes increasingly commodified. The tenure structure of housing as well as the respective national financial system impacts the speed of change towards the second stage of financialization. Figure 6 gives an overview of the differences in tenure status across European economies. Although it has to be noted that national definitions regarding volume and structure of the so-called social sector, inducing reduced rents, vary substantially, overall observations can be made. Countries with comparatively high fractions of tenants living at reduced price flats show only moderate price increases. As regards national financial systems, economies with a rigid mortgage market, focusing on modes bank-based financial structure experience a less dynamic house prices (Springler and Wöhl 2019). The rigidity of the mortgage market refers to the use of financial instruments, such as mortgage-backed securities for housing finance.

While international comparisons show that price to income ratios experienced a downward adjustment after the crisis of 2008/2009 and would now experience the closing of the gap with the long-run average. Affordability seems not to be tackled negatively in these studies (see Philiponnet and Turrini 2017, pp. 10ff.). However, other approaches show the increasing gap between homeowners and renters on the one hand and shrinking affordability ratios (Hypostat 2017, p. 13). European capitals face markups leading to even stronger increases in house prices. Again large differences between Euro Area Member States are visible.

To be aware of potential housing bubble, which might have negative effects on the stability of European financial markets and especially the banking sector, the Austrian Central Bank for example started to conduct a fundamental price indicator (see for more details Springler 2018). This indicator shows that prices are increasingly overvalued compared to the fundamentals driving supply and demand for housing as shelter, but financial fragility is not increased due to low interest rates and the high capability of households to bear the burden of a mortgage. This means that house prices are driven by income, the aim to financialize—at least in stage one from a mere renters' to a homeowners' society is in the focus. The second stage is promoted by low yields on best rated government bonds. This means that returns on investment in housing are comparatively high, given the low risk of the investment. This vicious cycle of increasing disparities between renters and homeowners, the constant increase in financialization and rising house prices is determined by shrinking yields on other best rated asset—government bonds. Inflation targeting and the means to overcome the financial crisis, within this monetary scheme, made it necessary to introduce measures as the Public Sector Purchasing Programme (PSPP). This programme aims to diminish interest rate spreads of government bonds within the European Monetary Union, as confidence is increased due to a predetermined monthly purchase of government bonds of European Area member states by the European Central Bank. The programme and effects are discussed below.

Apart from this interrelation of increasing house prices with monetary tools within the system of inflation targeting after the financial crisis, also another aspect enters the stage in recent years: households' debt ratios and the impact on financial stability. The awareness that households' debt increase due to ultra-loose monetary policy might increase financial instability raises, as latest reports by the European Central Bank show (Lo Duca et al. 2019). Similarly, to the fundamental price indicator in Austria, indicators to compare the state of cross country housing market stability are applied, focusing on the households' ability to bear a potentially higher debt burden when the period of low interest rates and easy money might end in the European Union. So far the policy measures derived, focus only on the potential tools of

macroprudential regulatory frame, which was put in place as part of the Banking Union in the Euro Area after the financial crisis.

As discussed above, mainstream economists proposed an added component to inflation targeting to ensure financial stability. In recent years numerous measures have been implemented to increase financial soundness. The question arises, do they follow the Post-Keynesian critique and claim for stronger financial regulation?

5.2 How Sound Is the New Buffer Regime of the European Banking Union?

Although economists demand, as presented above, a sound financial system as a precondition for the implementation of the system of inflation targeting and assume simultaneously that financial soundness is increased, the global financial crisis showed that also the Euro Area has a fragile financial structure.

The plea for an increase in financial regulation to overcome increased speculation and to diminish economic fragility was among others a main claim of Hyman Minsky. The restructuring of the neoliberal order, in which inflation targeting serves as stabilization momentum to seemingly increase confidence in the market mechanism by supporting rational expectations, asks for stronger regulations of the financial sector. Boom phases on the one hand increase financial fragility, but on the other hand weak financial regulation deepens the recession, as Palley (2011) argues when presenting the super cycle, following Minsky's Instability hypothesis over a longer period of upswings and downturns. Financial regulation with the aim to macroeconomic coordination is therefore strongly argued by Post-Keynesian economists (see among others Arestis 2017, pp. 30ff.)

In the case of the Euro Area, the Banking Union was established to serve as a main guidance against financial fragility of the banking sector and to help to shed light on the interrelations between financial sector and globally acting banks. The first pillar, the Single Supervisory Mechanism (SSM), of this three pillar concept of the Banking Union serves the objective to promote a more united supervisory mechanism

within the Euro Area. While the second pillar, the Single Resolution Mechanism (SRM), which should be in place once a bank needs to be liquidated or recapitalized and the third pillar, the Harmonized Deposit Insurance System (HDIS), is lagging behind schedule in implementation, the main focus to gain financial stability is laid upon the SSM. The European Central Bank took over the regulation of systemically important banks to track potential weaknesses resulting from their global presence more easily. Additionally, macroprudential schemes with the aim to guide also on national level the interrelations between banks and the environment of their activities were established and resulted in a wide range of buffer. These buffers' add-ons to the core capital ratios, established by Basel III, have to be implemented into national law of the respective member states. Each member state has to establish these additional buffers according to the respective needs and potential threats the national banking system has to deal with (see in this respect, for example, the national strategy to improve stability of the Austrian Financial Stability Board 2017).

In this sense, the implemented mechanism to increase stability does not follow the analysis of Post-Keynesian Economies, which argues for a restructuring of the Basel framework, towards asset-based reserve requirements instead of a focus on the probability of default of a borrower (Palley 2003). Due to its complexity, the system is in danger to lose transparency and accountability (Springler 2016).

Referring directly to the working of the inflation targeting system in place it has to be noted that to overcome the trend to increase house price bubbles and a deterioration of lending ratios, leading to potential high loan to value ratios in times of rising house prices, the system of macroprudential regulation offers instruments to put ceilings after detecting internationally valid ratios to control for house price bubbles in place. While the control of house price bubbles is an important and valid task for a regulatory authority, it has to be noted that in times of increasing financialization, induced by inflation targeting, that leads to speculatively increase house prices; such measure, in the end, hamper households demand to provide for their basic needs of housing, once no alternative to rent affordable housing is given in a specific national structure. International comparisons show a wide divide between

ownership ratios and different form of rental housing (free and subsidized housing). However, economies with strong subsidized rental sectors show less strong house price developments and fluctuations in historical perspective—for example, Austria (see Fig. 6).

All in all, the combination of induced system changes due to the focus to reach an inflation target together with the aim to satisfy the need to financial stability leads to further negative distribution effects as speculators would hardly be tackled by mortgage ceilings. Furthermore, the tools applied in financial regulation do not follow the claims made by Post-Keynesian economists, as mentioned above, to reframe the structure of banking regulation towards a stronger asset-based approach but add further elements to the existing system.

5.3 Monetary Policy and Government Bonds

The period of easy money (see Footnote 2) in the Euro Area was topped in 2015 with the implementation of QE, in which the scope of cheap money (easy money) for commercial banks was enlarged by further scopes. First of all, sterilization measures to maintain a stable exchange rate were abandoned to improve the effectiveness of the easy money policy implemented so far. Further scopes were addressed by the three pillars of QE under the heading of 'expanded asset purchase program' (see Springler 2015):

- The 'covered bond purchase program' (CBPP3)—the third implementation, as well as the 'asset-backed securities purchase program' (ABSPP) aimed to further promote stability and confidence of the inter-bank sector. The fact that financial products as asset backed securities were also the main drivers for the financial crisis of 2008 was not considered dangerous for financial stability in the Euro Area. New modes of financial regulation were implemented simultaneously and should control for macro-prudential risks. Additionally banking stress tests were conducted.
- An additional scope was addressed by the implementation of the corporate sector purchase program (CSPP). The aim was to affect

long-term interest rates and promote especially infrastructure projects, which in turn might impact long-run development processes.

The third pillar of inflation targeting focused directly on the public sector. The PSPP,[5] which was meant to decrease interest rate spreads on government bonds, is also criticized for its further downward pressure on interest rates and shall be the centre of the argumentation in this chapter.

This means that all in all the QE in the Euro Area aimed to increase and improve banks' reserves, promote long-term private investments and diminish speculative pressures on national public budgets. While inflation-targeting regimes state that fiscal discipline is not only the imperative for implementation but it is also enforced directly through the system. The QE programme of the Euro Area took separate measures to ease the situation in the member states but seem to have rather counteracted the initial aim.

The public sector purchase programme, which was put in place in March 2015, could only be used by best ranked government bonds. This excluded Greece and Cyprus from participation. All in all, and in each month 60 billion Euro were bought under the PSPP in 2015, later the monthly amount of purchases increased and then gradually phased out by the end of 2018. Currently, only reinvestments take place. This means that the aim to diminish spreads on yields on long-term government bonds could not fully develop. Furthermore, the PSPP is set up to allow only purchases with yields above or exactly the deposit facility, which was at the time of the implementation at −0.20%, fell to −0.30% in December 2015 and to −0.40% in March 2016 (past key interest rates according to ECB website[6]). Simultaneously, purchases should follow the key for shares of member states of the Euro Area, meaning that the ECB should buy from economies with large shares in the European Central Bank System. These technical circumstances pointed at Germany for large shares of PSPP; but also meant that when

[5]For more detail regarding the PSPP see Znidar (2015).

[6]Available at: www.ecb.int.

government bonds from economies with low necessity to issue new bonds; when these get dried up in the market, yields decrease. Taking the set-up of the PSPP into account, one can conclude that the aim initially stated—to diminish yield spreads and encouraging investments to finally meet the inflation target—lost its goal and promoted economies already ahead in economic prosperity in comparison to other member states of the Euro Area. Asymmetries within Europe did not decrease, the inflation target was not reached homogenously but meant that some economies got closer to the target while others were lagging behind.

6 Summary and Conclusions

Recent developments in the Euro Area, as an implicit inflation targeting zone, show the fault lines of this monetary mode for economic prosperity and even distribution. Tracing the historic roots of inflation targeting and the proposals of monetarists and proponents of rational expectations and New Classical economists, one becomes aware, that despite the constant inconsistencies regarding the proposed effects of monetary policy on real activities and the potential transmission mechanisms, inflation targeting has gained momentum ever since its first implementation. It seemed that in absence of another policy tool that one could agree upon, the mode, that at least had no *harmful impact* for economic development—as some empirical observations show—was implemented in many nations, ignoring that inflation had decreased in most economies even before leading to the misinterpretation of convergence between economies. Subsequently the mainstream paradigm of NCM seemingly fitted the empirical observations, ignoring the fundamental national differences in the structural and institutional set-up—for example, in the wage bargaining process.

By taking a closer look at the demanded prerequisites of inflation targeting, the weaknesses of the system become evident, as Post-Keynesian economists presented in their analyses of numerous shortages of the system. While the main arguments circle around the missing integration of other markets into the model and the revision of the Phillips curve, which lead to opposing views on the rationality of interest rules

compared to mainstream economics, the misperformance of inflation targeting becomes even more obvious when focusing on the last decade. Despite loose monetary policy, which was topped up with a multipillar QE structure within the Euro Area, inflation rates have not hit the target.

The weak add-ons to the existing system and proposals of flexibility of mainstream economists do not tackle the multilevel problems inflation targeting introduced in developing economies as the Member States of the Euro Area. Increasing asymmetries in economic development but also household wealth between Member States could not be diminished by the claim to reach a harmonized inflation rate of 2%. When the monetary policy was confronted by multiple problems to be solved after the crisis the result was to enforce inflation targeting with the help of a broader frame of macroprudential regulation and the help of asset purchase programmes. The result was a rise in uneven distribution, increasing asset prices—especially house prices—and erosion of government bond yields in best rated economies. The underlying structural changes in terms of increasing financialization and shifts from renters' societies to homeowners' societies, resulting in deeper class conflicts have strong impact on the capitalist structure of European Economies. In this sense, the NCM has promoted the neoliberal paradigm also after the global financial crisis. The measures implemented so far seem to be 'more of the same' regarding the underlying economic imperative they apply. Although financial regulation was enforced as proposed by numerous heterodox economists, as discussed in this chapter, the mode of regulation does not lead to a change of the existing system.

Appendix

See Table 1, Figs. 5 and 6.

Table 1 Inflations targeting countries

Albania	Hungary	the Philippines
Argentina	Iceland	Poland
Armenia	India	Romania
Australia	Indonesia	Russia
Brazil	Israel	Serbia
Canada	Japan	South Africa
Chile	Kazakhstan	Sweden
Colombia	Korea	Switzerland
Czech Republic	Mexico	Thailand
Dominican Republic	Moldova	Turkey
Euro Area	New Zealand	Uganda
Georgia	Norway	Ukraine
Ghana	Paraguay	United Kingdom
Guatemala	Peru	United States

Source Niedźwiedzińska (2018, p. 9)

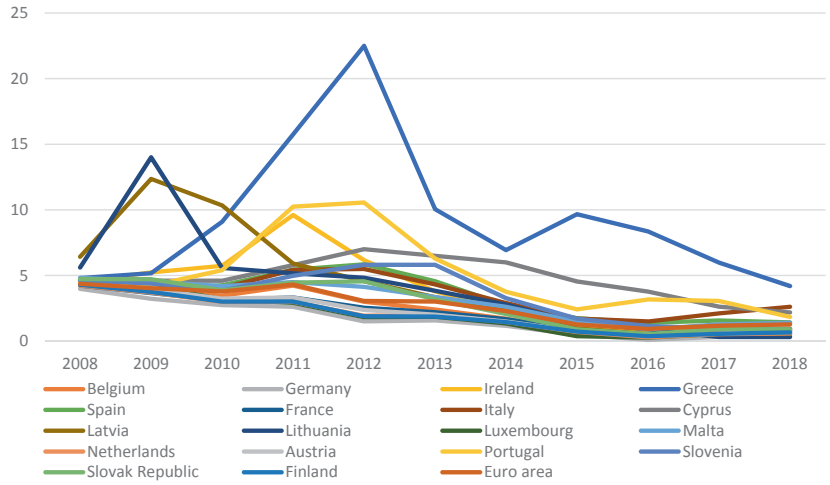

Fig. 5 Long-term government bond yields (*Source* OeNB [n.d.-c])

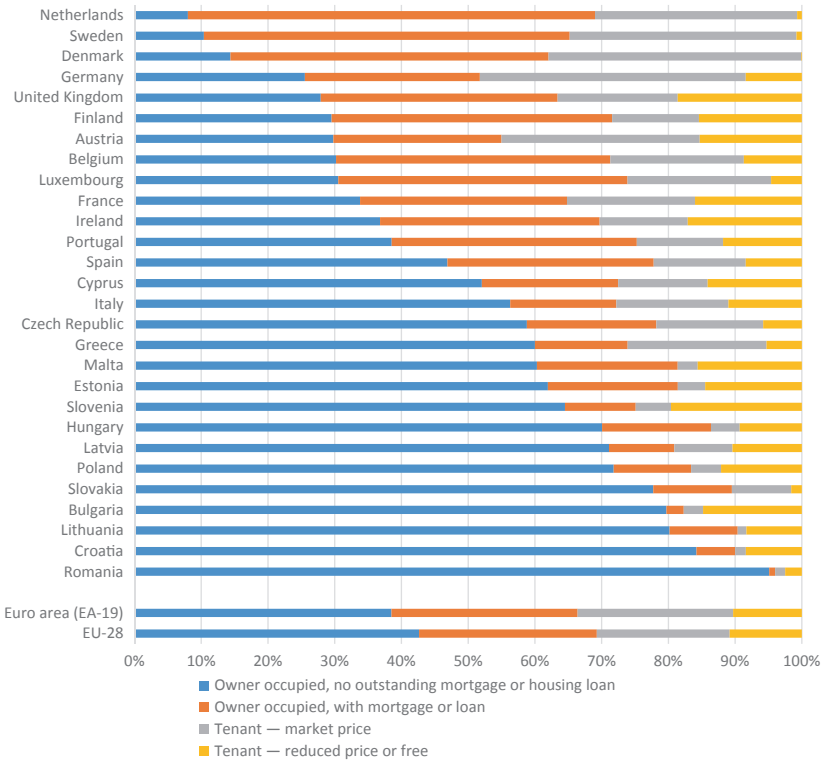

Fig. 6 Distribution of population by tenure status—2016 (*Source* Eurostat 2016)

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