

Burkhard Wehner

A Radical Logic of Monetary Policy

Toward the Next Revolution in Central Banking

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Introduction

What do central banks do to keep the value of money – and thereby the economy – stable? What is the best way for them to achieve this goal, and what instruments should they use, and what principles and rules should they follow in doing so?

The answers given to these questions should be as plausible, as generally accepted, and as clear as possible. Where such clarity is lacking, the economy, financial markets, politicians, and citizens are significantly compromised in their planning security.

Monetary policy cannot be successful if it is perceived by the public as an inscrutable or even occult science. But precisely this impression has increasingly been conveyed by monetary policy in the recent past. Of course, this has not always been the case. Central banks and their heads have long enjoyed a repute of nearly incontestable wisdom. They followed rules that, however unfathomable, produced respectable results and thus seemed well enough founded.

If an institution has acquired such respect over a long period, this can have long-lasting effects. In that case, if monetary policy rules become increasingly diffuse over time and central banks fail to disclose their ensuing lack of orientation, their aura of wisdom can persist for decades even if the theoretical and empirical foundations of their policy concepts have long since crumbled. The public continues to believe in the wisdom of their central bank so long as they don't find more convincing guidance.

But even this condition does not seem to last any longer. A great deal of energy is still being devoted to predicting policy measures of central banks, partly because successful bets on these measures can be very profitable. But even professional central bank watchers are all the more puzzled the more unfathomable the central banks' self-imposed rules and principles appear. Thus, in financial markets, the impression is widely shared that the theoretical foundations of monetary policy are overtaken by reality and that monetary policy becomes ever more impotent.

This demystification of central banks makes the economy, financial markets, citizens, and policymakers vacillate ever more randomly between fears of inflation, hopes for stability, and fears of recession, and it makes them ever more clueless as to the future performance of real and financial assets, of real estate, bonds, and equities.

Against this backdrop, monetary policy has even become a subject of populist conspiracy theories accusing the central bank, for example, of a plot to the detriment of savers and the benefit of indebted states, deliberately expropriating parts of the citizenry and illegitimately favoring certain interest groups. In this way, a disoriented monetary policy indirectly fuels social strife and poisons political debates.

The erosion of their principles also weakens central banks in disputes with governments and political interest groups seeking to influence monetary policy to fit their interests. In the long run, central banks can only become truly independent if their decisions are based on comprehensible principles. Otherwise, they cannot confront financial markets, the economy, politics, and the general public in a convincing manner, building trust and acceptance. To this end, central banks will sooner or later have to redefine the target variable of monetary policy and create a suitable new set of policy tools.

Such a new target variable for monetary policy and a set of tools tuned to dealing with this variable are presented in this book.^{1, 2}

¹ This book is the extended English version of Wehner (2020).

² The concept of monetary policy described here is based on considerations first presented in Wehner (1995, Chapter 13, Die Logik der Geldpolitik (*The logic of monetary policy*)).

1. On the History of Monetary Policy

1.1 From the Gold Standard to Checkbook Money and Beyond

Initially, the invention and dissemination of money was as ambivalent an affair as most revolutionary technological innovations. The most obvious benefits of money were that trade transactions were easier to calculate, that wealth could be formed more easily, and that the social division of labor could unfold more thoroughly.

Another similarity with other major innovations was that the implications of money for the economy and society were nowhere near foreseeable. This led to never-ending overburdening and setbacks in dealing with money and the financial technologies of a monetary economy.

This overburdening affected almost all economic actors. Entrepreneurs, consumers, workers, investors, and borrowers had an insufficient understanding of the functioning of a monetary economy, and they were periodically mistaken, namely too optimistic or too pessimistic, about the future value of their money including their wages, and of the burden of their debt and interest.

The authorities responsible for the functioning of the monetary system were hardly less overwhelmed by their task. Politicians have rarely managed the currency in such a way that the wealth-increasing benefits of the monetary system could be reaped without painful side effects. Above all, policymakers were not able to keep the value of money sufficiently stable and predictable. Neither could they ensure stability and predictability of the interest rate, i.e. the price of the money borrowed. Where the value and price of money remained so unpredictable, economic agents were all the more overburdened in their prospective handling of money and credit.

The shortcomings on the political level lay, on the one hand, with the institutional design of the bodies responsible for monetary policy, but of course also with the choice of policy instruments. The state had to determine with which instruments and according to which rules

the wealth-enhancing function of money was to be ensured. But because the relevant knowledge was inadequate, policymakers and economic actors were recurrently surprised by inflation, hyperinflation, stabilization crises, and deflation, as well as by sudden rises or declines in the value of assets. After the invention of money, it took a few millennia for sufficient expertise to develop to at least dimly grasp the causes of these phenomena. But as money took on ever new and more diverse manifestations and thus changed its mode of functioning, the relevant expertise was hardly ever up to date. For example, for coin money, paper money, and checkbook money, a new respective theoretical understanding was needed, and thus the state had to deal with the currency in ever new ways.

As long as money existed only in the form of silver and gold coins, the demands on monetary policy remained relatively manageable. The monarchs had the coin monopoly (although they occasionally leased it temporarily to private individuals), and they provided the economy with the necessary additional money as the available stocks of precious metals allowed.

Due to the dependence on precious metal extraction, the money supply could not develop continuously in this system. The ups and downs in the volume of mintage triggered alternating stimulating and dampening impulses on the economy. Later, the so-called debasement of coinage, i.e. the reduction of the precious metal content of the coins, also carried the risk of intensifying economic overheatings and crises. By and large, though, the scope of faults in handling a coin currency was rather limited. In essence, the coins were - aside from fraudulent clandestine coin debasement on the part of monarchs - nothing other than precious metal objects standardized by weight and shape. The scarcity of precious metals was given by nature, and the scope for political manipulation of the monetary system was accordingly limited. It was too narrow to allow phenomena such as permanent or galloping inflation and deflation.

With the introduction of paper money, the monetary authorities were presented with new challenges. They had to preserve sufficient confidence in the paper money to ensure its general acceptance as a means of payment and store of value. This was initially achieved simply by treating paper money as a voucher for a certain amount of precious metal that would be redeemed at any time and in any amount by the monetary authority. The designations of currencies such as lira, pound, or mark were initially nothing more than weight specifications for gold.

As long as banknotes were generally recognized and accepted as vouchers for gold, the value of money remained about as stable as the value of gold. There were periods when money was losing value, but thereafter periods of rising value of money followed regularly. This long-term monetary stability ensured that the interest rate remained relatively stable. Insofar as the banknotes of different countries were vouchers for different quantities of gold, the exchange rates between the currencies also remained reasonably stable.

In this gold-based paper money system, the tasks of the monetary authorities were still relatively easy to master. The central banks had nothing more and nothing less to do than to adjust their conditions for lending money to the banking system in the event of excessive outflows or inflows of gold reserves. If, for example, confidence in paper money became weaker and too much money was exchanged for gold, then central banks immediately reacted by increasing the interest rates of loans to commercial banks, thereby making the demand for and the amount of such loans fall. As a result, money became scarcer throughout the economy, confidence in its value increased, and on the part of bank clients, the need to convert money into gold decreased accordingly. In this system, there was no need for monetary policy to be guided by complex macroeconomic data.

These were favorable conditions not only for successful performances of central banks but also for private business. Businesses and households could make longer-term financial arrangements confiding in a reasonably stable monetary system. They could decide on long-term investments in tangible and monetary assets, on longer-term loans, and on longer-term supply, sales, and labor contracts without imputing major interest rate, inflation, and exchange rate risks. From this perspective, a much better monetary order was difficult to imagine.

For many reasons, though, money could not remain a redeemable claim to gold forever. One reason was that governments printed unreasonable amounts of money for their purposes, e.g. to finance wars and other economically ruinous ventures, thereby spreading doubts about money remaining redeemable in gold. The main reason, however, was that a rapidly growing economy required a rapidly growing volume of money transactions which could be well managed only with rapid growth in the money supply. Due to the limited availability of gold, this growing money supply could, sooner or later, no longer be warranted in the form of vouchers for gold.

In such circumstances, the volume of money transactions could grow to the necessary extent only if the value – and thus purchasing power – of existing money continually rose. For the purchasing power of money to rise, though, the prices of goods purchased must fall. Thus, an increasing scarcity of gold and redeemable gold vouchers could only be compensated by a general fall in prices, i.e. by deflation, which is usually associated with economic stagnation, recession, or depression.

As it became ever more difficult to treat paper money as a redeemable claim to the gold reserves of the central bank, this was all the more true for the proliferating checkbook money. When the value of money was finally detached from the value of gold, it was no longer subject to any natural restrictions. From that point on, the scarcity – and thereby the value – of money was nothing but an artifact of monetary policy. The state had to ensure that no inflationary excess money came into circulation and that, on the other hand, the money supply did not shrink thereby inducing deflation. To this end, appropriate rules had to be invented and enacted.

Not surprisingly, the state initially lacked the expertise necessary to successfully deal with a monetary system completely detached from gold. This became evident in events such as chronic inflation, spells of hyperinflation, deflation, and other crises of the monetary system such as erratic developments of exchange rates and interest rates and collapses of the financial sector. Many failed attempts of governments to regain control of the value of money through price controls, currency controls, and other symptom-treatments also testified to the political incompetence in this field. An operable surrogate for the abandoned gold standard was not in sight for a long time.

Nonetheless, practical lessons for monetary policy were learned from the many failures following the departure from the gold standard, but this did little to remedy the lack of pertinent expertise. One reason for this was that the manifestations of money continued to change fundamentally. One of the new challenges to monetary theory and policy was the emergence of electronically networked worldwide money and capital markets, where speculative transactions such as exchanges between currencies and between money deposits and longer-term financial assets were carried out in a previously unimaginable speed and magnitude. As a result, an ever lesser proportion of monetary transactions was directly linked to real economic transactions. Up to the present, central banks have not succeeded in adapting their rules, principles, and instruments to this profound change in a convincing manner. This

problem is likely to become even more acute in the future, e.g. due to the spread of cryptocurrencies and other new financial technologies beyond traditional banking.

In the second half of the last century, monetary policy was largely focused on managing inflation. In this process, a growing consensus emerged that in principle, central banks commanded the necessary instruments to master their tasks. It remained unclear, though, how inflation could be tempered as continuously as possible, without abrupt turnarounds and the associated hardships for the economy and the citizens. It remained also unclear whether and how central banks can prevent asset price inflation and the associated risk of financial market crises as in 2007-2009.

The crisis of these years has also raised new doubts as to whether the institutions of monetary policy in their existing form are sufficiently independent of governments and thus of political parties. One may suspect, for example, that in the years leading up to the latest financial market crisis, the US central bank was tempted to practice an expansionary monetary policy to facilitate the coverage of the enormous financial needs associated with the Iraq war. This was not only apt to discredit the principles and tools of the US central bank, but also to raise legitimate doubts about its steadfastness when confronted with short term interests of governments and pressure groups.

As may be expected, the focus of monetary policy has repeatedly shifted in the light of current experience. The objective of monetary stability has often been overlaid or even displaced by targets such as securing bank liquidity or stabilizing exchange rates. But in the longer term, central banks mostly maintained the primary focus on monetary stability. To this end, they had to prevent banks from making the money supply grow excessively by uncurbed lending.

More recently, besides threats of inflation, deflationary scenarios have also become a focus of monetary policy. In the euro area and long before in Japan, it has become apparent that central banks, even when fully exploiting their tools and capacities, cannot always adequately counter deflationary tendencies. In the recent past, for example, the European Central Bank easily managed to prevent overshoots of inflation above the target of just under 2%. It proved unable, though, to continuously prevent inflation from falling below this target. This failure led to growing uncertainty as to whether the inflation target was based on an adequate notion of inflation – uncertainty, that is, as to whether the target should relate to the current or the expected rate of inflation, the statistically measured rate or the subjective rate as felt by the

citizens, and also uncertainty as to what goods should be taken into account in measuring inflation.

In the face of such uncertainties, one cannot fail to ascertain a serious crisis of monetary policy and its institutions.

1.2 The Institutions of Monetary Policy

Central banks have made progress over time in dealing with money in its modern forms. They have developed the practical expertise necessary to save the monetary system from the worst inflationary or deflationary turbulences. At least in advanced countries, hyperinflation, as in Germany in the 1920s, or a deep global economic crisis as in the 1930s, are no longer to be feared. But this progress was not sufficient to rule out financial market crises and strong cyclical fluctuations.

For a long time, another unsolved conceptual problem stood in the way of successful monetary policy. In theory, it became increasingly clear how to prevent the worst of inflationary turbulences and exchange rate and interest rate swings, but it seemed unclear which political institution would be most likely to cope adequately with such tasks.

The question if adequate treatment of new political problems might require a new institutionalization of the relevant expertise had long been given little or no attention. This issue was repressed by the conservative reflex to assign new tasks to old institutions.

In monetary policy, though, it was acknowledged earlier than in other policy areas that existing institutions often make insufficient use of the available expertise in their field of jurisdiction. Notwithstanding long-standing ideas about how to secure the value of money, uncontrolled inflationary upsurges still occurred in many countries, with all their negative economic and social implications. From this, neither old established nor young new democracies were exempted. In many post-socialist states, for example, the transition from socialist autocracy to democracy was also a transition to a highly inflationary, sometimes even hyperinflationary monetary policy. The new democratic institutions made insufficient use of the monetary policy expertise developed in the old capitalist world, being unable or unwilling to adapt it to the circumstances.

One of the main reasons for this was that in traditional democratic institutions, politicians are strongly tempted to create money for their temporary benefit. Where democratic governments had influence on how much paper money the central bank printed and how much fiat money it helped to create, they repeatedly succumbed to the temptations associated with it. They had, for example, additional money created to fix the state's short-term financial woes, to finance short-lived benefits for voters, and to trigger short-term economic stimuli that would influence voters favorably. Postponing overdue adjustments to the regulation of banking could also serve such short-term political objectives.

The only way for democratic leaders to escape these temptations was by entrusting the responsibility for monetary policy matters to independent central banks. Such independent central banks were first established in countries whose citizens had, as in Germany, a particular, historically grown interest in monetary stability. In granting central banks such independence, governments fended off their temptation to distract central banks from safeguarding the value of money.

That independent central banks are better suited to pursue successful monetary policy than democratically elected governments is, meanwhile, a rarely disputed historical fact. This can be shown by comparing performances of dependent and independent central banks, but equally revealing are comparisons between monetary policy and other policy areas such as fiscal policy. In countries with largely independent central banks, objectives of monetary policy have tended to be better met in the past than objectives of fiscal policy. In particular, the stability of the currency tended to be better preserved than the soundness of public finances.

This indicates that monetary expertise is better institutionalized in independent central banks than fiscal expertise in traditional governments. It may even suggest that there would be more reason in fiscal policy if the pertinent expertise were institutionalized in a similar way, i.e. similar to monetary policy. The logical consequence would then be to give a high degree of institutional autonomy to fiscal policy as well, even if this would involve a far-reaching restructuring of the state order.³

³ On the concept of an autonomous fiscal policy see also Wehner (1995, chap. 11, *The Logic of Fiscal Policy*) and Wehner (1992a).

Even if independent central banks are relatively steadfast politically, they are not for that reason alone necessarily prepared to meet new challenges in monetary policy. It is at least conceivable that even independent central banks become overburdened by the task of making the banking system act in a manner consistent with monetary stability; that even independent central banks, that is, can no longer adequately control the lending and money creation of commercial banks, however sophisticated the banking regulation may be.

A possible conclusion would then be to deny commercial banks the capacity to create money on their own by granting credit. To this end, banks could be obliged to hold deposits with the central bank in the same amount as – and as collateral for – their customers' demand deposits.⁴ Alternatively, it could be required that bank customers hold their demand deposits not with commercial bank accounts, but directly with the central bank. In that case, additional money could be put into circulation only if provided by the central bank itself.⁵ In such systems, central banks would have direct control over the money supply. There would be no need for sophisticated rules concerning money creation by commercial banks.

Such reforms would allow the central bank to precisely manage the money supply, but that alone would not guarantee a more competent monetary policy. If money creation were the sole power of the central bank, then the central bank would always and solely be responsible for ensuring that money is created in the right amount, at the right time, in the right manner, and at the right spot. This would amount to a much more complex task than in the past. If central banks are already overburdened in the existing system, they would be even more so under more demanding conditions.

The decentralized money creation by banks in the traditional system may frequently deviate from the central bank's objectives, but it is nonetheless triggered by current credit needs of bank customers. The inherent dynamic ups and downs of decentralized money supply must not be understood as a deviation from a well-calculated reliable optimum. Thus, direct money creation exclusively by the central bank could harbor more risks than opportunities. A more promising approach would be to provide central banks with novel instruments and rules for stabilizing the economy and the financial system.

⁴ See Fisher (1935).

⁵ Huber (2010), Gudehus (2016). Huber refers to the demand deposits in this system as "Vollgeld" (full money).

1.3 The Mandate of Monetary Policy – Multiple Goals or Clear Focus?

The institutionalization of monetary policy expertise in independent central banks and improved understanding of new forms of money were not sufficient to develop a truly sustainable concept of monetary policy.

So far, there has been broad agreement only on the primary objective of monetary policy. Central banks have a legal mandate to ensure, above all, the stability of the price level. But here, too, there is room for interpretation. There is, at least, a consensus that price stability does not have to be absolute and a continuous moderate increase of the price level should be tolerated. This facilitates necessary adjustment processes in the wage and price structure, and it also allows to annihilate excess financial capital through creeping devaluation. Thus, moderate inflation should be allowed, but it should be as continuous and as predictable as possible.

The European Central Bank has set itself the target of keeping inflation in the eurozone just below two percent. But even with such a plausible goal, there can still be dissent in the concrete implementation, e.g. about the definition and the measuring method of inflation to be used. Such a target specification is not concise enough to make central bank policy predictable and to prevent avoidable economic uncertainty.

With the establishment of a moderate inflation target, the certainties in monetary policy are largely exhausted. It remains unclear, for example, whether central banks should pursue further economic objectives in addition to monetary stability and to what extent they should take the concerns of other policy areas into account. This applies also to central banks bestowed with great political independence.

On this issue, not only the demands of politicians but also tradition and ideology continue to play an essential role. Even formally independent central banks have never been completely free in their monetary policy decisions, neither de facto nor de jure. In fixed exchange rate systems, for example, parities were not set by the central bank, but by the government. Central banks only had to ensure that these predetermined parities were sustained in the foreign exchange markets as long as possible. This forced them sooner or later to buy or sell

foreign currencies in large quantities, but by doing so, they also changed the money supply. This, in turn, had an impact on the price level, the economy, and employment. Under such conditions, the central bank was not able to pursue a truly autonomous stabilization policy independent of the government.

Such experience suggests that monetary policy cannot successfully serve multiple objectives in the long run. Nevertheless, there are still widely divergent views in politics and among experts on this issue. For example, the US central bank is not only more closely controlled by Parliament than, for example, the European Central Bank, but also has the explicit legal mandate to ensure, in addition to price stability, among other things, the highest possible level of employment and moderate long-term interest rates. It has also been urged to take – more than other central banks – account of economic group and sector interests. An indication of this is the still existing legal requirement that the interests of agriculture, trade, industry, services, workers, and consumers must be represented on its executive board.⁶

Imposing as many targets on the central bank as possible has always been tempting for politicians, parties, parliaments, and governments. As long as money represented a claim for the central bank's gold reserves, the central bank could promise little more and do little more than to keep this claim incontestable. But when money was detached from gold, the scope of action for monetary policy was widened in previously unimagined ways. It seemed that a central bank could be easily instrumentalized for all policy objectives that could somehow be accomplished with money. As a potential financier of the state, the banks, and, ultimately, the economy, it could be held co-responsible for financing public tasks as well as for the level and growth of economic activity and for employment.

This is exactly what has happened time and again. The original objective of monetary policy to safeguard the value of money was thus incorporated in a multidimensional target complex, and thereby the stability task was qualified. Monetary policy has thus been intertwined with other policy areas in many ways, from fiscal policy to employment policy and distribution policy to the assertion of national economic interests against trade partners. In this course, monetary policy could always be used – intentionally, clandestinely, or unconsciously – by politicians, governments, and parties as a means to maintain power.

⁶ See the Federal Reserve Reform Act of 1977.

The willingness to compromise on the objectives of stability policy grew particularly with unexpected rises in unemployment. In the second half of the last century, for example, a long-term rise in unemployment in Western Europe was widely interpreted as a purely cyclical phenomenon attributable to an overly restrictive policy of central banks. Accordingly, many politicians succumbed to false hopes that the employment problem could be solved solely by easing monetary policy, accompanied, if necessary, by increased government spending.

Even formally independent central banks were not exempted from being integrated into a multidimensional complex of social and economic goals. For example, even the legal mandate to the German central bank (Deutsche Bundesbank) provided for a connection between monetary policy and other policy areas. Article 12 of the Bundesbank Act states that "The Bundesbank ... supports the general economic policy of the Federal Government." Although this was initially linked to the task of safeguarding monetary stability and was later placed under the condition of compatibility with the tasks of the European Central Bank system, it can be interpreted as qualifying the goal of stability, and in particular as an obligation on the part of the Bundesbank to tolerate, if demanded by the government, cyclical disturbances triggered by fiscal policy. An example of this was the policy of the Bundesbank in face of the financing of the German reunification.

There is no evidence that such consideration of monetary policy for the interests of other policy areas has brought lasting benefits. This applies, for example, to a monetary policy that fails to respond to an undisciplined fiscal policy with appropriate stabilization measures of its own. So unsurprisingly, the enticing notion of embedding monetary policy in a multidimensional target system has not resulted in coherent approaches to monetary policy. Linking monetary policy rules to rules of other policy areas could only be justified by short-term arguments. Where monetary policy was to simultaneously serve multiple objectives, this often ended in desperate and ultimately unsuccessful attempts to safeguard the value of money through government price controls – with the result that, finally, the full responsibility for monetary stability had to be shifted back to the central bank.

A monetary policy committed to many objectives simultaneously time could have gained confidence if reliable rules for its implementation had actually been developed. But such multidimensional policy has generally remained an ad hoc policy. As a result, even in monetary theory the willingness grew to more or less accept the ad hoc nature of monetary policy. Because plausible novel rules were not in sight, more attention was paid to the

question of which implicit rules can be inferred from past central bank's policies. But rules derived from past practice can have little normative power for future policy.⁷

As a result, a multidimensional monetary policy aimed at several objectives simultaneously continues to lack sufficiently comprehensible, plausible, and recognized rules. As long as such rules are not foreseeable, it is not to be expected that such a multidimensional policy will ever overcome the stage of an ad hoc policy. Under such conditions, trust in the monetary system will continue to be based more on trust in individuals than in rules and theories. This makes it all the harder for central banks to counter the impression that their policy decisions are ultimately gut decisions.

1.4 Focused Policy by Conventional Means

It has always been an obvious notion that a monetary policy that, with its limited means, is to serve several objectives at the same time, could be systematically overextended. It has always been plausible to confine the mission of central banks to the superordinate objective of monetary stability. This notion has shaped the legal mandates of many central banks.

But this alone does not make monetary policy an easy task. The mere fact that there are still very different and diffuse ideas about the causes of inflationary and deflationary processes makes monetary policy a highly complex matter. Central banks, nonetheless, have tended to become more steadfast over time in refusing to make concessions to incumbent governments pushing for a short-sighted expansionary, in the longer-term inflationary policy. As a result, central banks spared themselves to some extent overly complex considerations, making monetary policy easier to handle in practice. This also improved the prospects for comprehensible models of monetary policy allowing central banks to strictly abide by seemingly simple rules.

⁷ This also applies to one of the most discussed monetary policy rules of recent decades, the so-called Taylor Rule (Taylor 1993). This rule was shown to be well-compatible with the US central bank's past policy decisions. But it derives policy recommendations from variables such as the so-called output gap that cannot be objectively measured. For this reason, among others, it cannot provide reliable guidance for future policy.

Such a modest monetary policy could be based only on a single reliable certainty. This was the old intuitive insight that money must somehow be kept scarce for it to maintain its value; that, accordingly, if its value is to remain stable, money may not be printed or in any other way created in arbitrary amounts. Thus, it was from abstract general insight that concrete binding policy rules had to be derived.

To this end, on the one hand, objective criteria for the scarcity of money had to be found. Only based on such criteria could central banks objectively determine how much additional money should be put into or withdrawn from circulation. On the other hand, central banks also needed clear ideas as to the means for controlling the scarcity of money.

As to the latter, there was little dispute. To control the money supply, central banks had, above all, to ensure that commercial banks do not grant too much and not too little credit. To this end, central banks make their loans to commercial banks more expensive and thereby scarcer or cheaper and thereby more abundant. Such measures are a very indirect way of achieving price stability, but, not having more effective means at its command, monetary policy had to make do with them.

Within this context, monetary policy concepts differed mainly in how the indirect instruments are to be applied, and in particular, they differed in terms of how the scarcity of money is to be measured.

Thus, the choice of a monetary policy model amounted to, first of all, the choice of the measure to be used as indicator for the scarcity of money and its deviation from the stability-compliant target. Accordingly, there are as many basic models of monetary stability policy as there are appropriate measures of the scarcity of money.

To the question, though, of how the scarcity of money can be objectively determined, convincing answers were lacking. Many central banks resigned themselves to assessing the scarcity of money only indirectly by the subsequent impact on the measured inflation rate. They made money scarcer only after an unwanted decline in the value of money had already occurred. But it may take years for the dampening impact of such interventions on the inflation rate to develop. If the central bank's policy measures are determined by the current rate of inflation, the intended effects mostly ensue at a time for which sound economic forecasts are impossible to make. This implies a great risk for well-intentioned stabilization measures to intensify economic upturns and downturns.

Of course, the theory and practice of monetary policy did not want to put up with this in the long term. A possible conclusion was to determine the stability-compliant money supply with formulas derived from historical research on the interrelation between money supply and inflation. This approach resulted in comparatively clear recommendations for monetary stability policy. Central banks were advised to make use of their traditional restrictive or expansionary tools as soon as the money supply deviated from the computed stability-compliant path.

But despite temporary success in practice, this seemingly simple and plausible concept has not made monetary policy a transparent business again comprehensible for agents in the financial markets. Money supply may be a better guideline for monetary policy actions than the rate of inflation, but the questions of how exactly to define this money supply and how to determine its target value ultimately proved overly complex. An obvious reason for this is that only the money that is currently being spent has an impact on the price level. This money must be distinguished from longer-term financial capital which does not affect current demand, and it must also be distinguished from money held for any kind of speculative financial transactions. This problem alone made it impossible for coherent models of controlling inflation by controlling the money supply to be developed.

This problem of definition was further exacerbated by subsequent developments in the financial markets. The financial industry developed ever more differentiated forms of deposits and investments, making it increasingly difficult to discern which form of money would – and which would not – affect aggregate demand in the near future. At the same time, the conversion of money into longer-term money capital became ever easier, and market agents made such conversions for increasingly minor causes. This also had a significant impact on the circulation velocity of money. It was still clear that the money supply had to be controlled, but it was less and less clear which kind of money should be supplied in which amount. Monetary policy could never be sure that its target figures were not based on an outdated definition of money supply and that changes in the velocity of circulation had not rendered their target figures obsolete. As a consequence, the money supply target had to be recurrently adapted following intuitive interpretations of changing data.

In this way, an initially consistent rule-driven policy of money supply control became a de facto discretionary ad hoc policy, which, in addition to money supply, made use of further

target variables as seemed expedient. In this course, the current inflation rate also resumed an important role as a crucial indicator.

As a result, the initially seemingly transparent and plausible, rule-driven, and correspondingly steadfast policy of money supply control turned into a monetary policy of ordinary quality. As such, though, it also became more susceptible again to claims from other policy areas, and in a monetary union, it became susceptible to political demands driven by the self-interest or idiosyncratic ideologies of individual member states.

Against this background, new and more useful command variables for monetary policy were being sought. For example, consideration was given to whether monetary policy should concentrate on stabilizing the growth of nominal, i.e. non-inflation-adjusted, aggregate economic output⁸, or whether it should keep inflation expectations as constant as possible. But even such concepts do not give central banks clear guidance on when and to what extent they should intervene with expansionary or restrictive measures. They are not apt to overcome an intuition-driven ad hoc policy.

In the following, such traditional approaches to monetary policy are compared to an alternative, fundamentally different model of stability policy. This model defines the stability to be pursued by monetary policy in a way more in keeping with the times, it meets the requirements of transparency and simplicity, and above all, it yields unambiguous signals to monetary policy as to its need for action.

2. An Alternative Model: Stabilizing the Long-Term Interest Rate

The search for a new concept of monetary policy must begin with admitting that monetary theory that derives policy recommendations from traditional variables such as money supply, the current inflation rate, potential output, or even nominal GDP no longer promises progress.

⁸ For an overview of the discussion on Nominal Gross Domestic Product level targeting (NGDPLT) see e.g. Beckworth 2019.

Thus, a new target variable must be determined which gives clearer evidence than previous ones as to whether, when, how, and with which intensity central banks have to intervene.

Such a target variable must be precisely defined, and it must be precisely measurable. In a system of fixed exchange rates, this requirement was met by the exchange rate of the domestic currency. If the exchange rate is fixed, a central bank cannot – in the long term – pursue other objectives than compliance with that rate. It cannot do so, at least, if it wants to permanently eliminate the risk of a collapse of the predetermined exchange rate structure. In this system, external economic developments determine in which way the central bank has to intervene to meet its objective. Insofar, in a system of fixed exchange rates, monetary policy is a comparatively simple affair.

As long as it works, a system of fixed exchange rates will bring obvious benefits at least to countries with a high dependency on foreign trade. However, the focus on the exchange rate will sooner or later lead to a neglect of important objectives of stabilization policy. It can have inflationary or deflationary consequences and thus negative effects on the economy and employment.

An ideal target variable would make monetary policy as simple as in a system of fixed exchange rates without committing it to such a questionable, in the long-term unsustainable goal. The new target variable should also be more closely related to monetary stability than the money supply, however defined. With the stabilization of the new target variable, monetary stability should be achieved within the desired narrow limits largely by itself and in the simplest, most direct, and most comprehensible way possible.

These requirements do not leave many options in choosing the new target variable. Neither the money supply nor volume aggregates ex post derived from statistics, such as – real or nominal – aggregate output, are eligible for this purpose. Monetary policy could be much simpler and more promising if its target variable were instead a price, as was the case with the price of gold or the exchange rate. The question is whether there is a price category that could give stabilization policy at least as clear orientation as the price of gold or the exchange rate did in the past.

In a highly developed economy, there can be no single good whose price could play such a key role for monetary stability as gold once did. Nevertheless, there is at least one price that is

always very closely related to monetary stability. This price is the interest rate. It is, more precisely, the interest rate on money that is lent and borrowed for longer terms.

The interrelation between longer-term interest rates and monetary stability results from elementary economic considerations of lenders and borrowers. The higher the expected rate of money devaluation, the higher the interest rates that lenders claim for long-term credit. They demand the interest to compensate for the fact that the money lent is expected to have a lower value at the time of repayment than at the time of payment. This makes low long-term inflation expectations a prerequisite for lenders to be content with a low interest rate on longer-term loans. For the same reason, borrowers are willing to pay a higher interest rate if inflation is higher. The devaluation of money over the life of the loan reduces the real burden of the debt and thus creates financial leeway for higher interest payments.

As a result, the central bank cannot successfully keep long-term interest rates low without keeping inflation expectations low. And vice versa: it cannot keep long-term interest rates high without keeping inflation high. Accordingly, it cannot maintain a moderate level of long-term interest rates without keeping inflation expectations moderate as well.

The expected inflation would not be moderate *because* the long-term interest rate is moderate, but always *if* it is. Thus, if the central bank found the means to keep long-term interest rates stable, it would thereby also keep the expected inflation within narrow limits. In the long run, on the other hand, expected inflation can only be stabilized if also actual inflation is kept stable. At least in the long term, actual inflation and expected long-term inflation will stay in the same range.

Thus, an alternative approach to stabilization policy is to be examined here whose target variable is the long-term interest rate. This alternative model is referred to here as the **fixed-rate model**.

Definition

The **fixed-rate model** is a model of monetary policy in which the central bank undertakes to keep the interest rate for a particular type of long-term bonds to be chosen by the central bank itself constant.

In order that the potential of the fixed-rate model can be adequately assessed, its most important characteristics are presented below from the point of view of both economic actors and monetary policymakers. To economic actors, the question is what concrete advantages and disadvantages they would encounter if this model were implemented. To the central banks, the question is whether and how monetary policy could achieve a stabilization of the long-term interest rate and whether new policy instruments or even a new institutional framework may be required for this.⁹

2.1 Benefits of the Fixed-Rate System

The question of whether the long-term interest rate is stable directly affects all those who intend to borrow or lend money for longer terms. This includes entrepreneurs planning long-term investments, home buyers needing long-term loans, and households and companies wanting to build up long-term savings.

A world of fixed long-term interest rates would offer obvious benefits to these economic actors. Entrepreneurs planning long term investments would no longer worry whether unexpected hikes of the interest rate make their projects unprofitable. Creditors could no

⁹ The objective of stabilizing and curbing long term interest rates has, of course, as mentioned, long played a prominent role in the theory and practice of monetary policy. Keynes, among many others, advocated maintaining low and stable long term interest rates (Medlin 2017). The practices of yield curve control and – more recently – quantitative easing also serve this objective (For a short explanation see e.g. Kolakowski 2020. For an overview over the history of yield curve control see e.g. Amamiya 2017.) But these discussions are not directly relevant to the fixed-rate concept here proposed. Keeping the long term interest rate permanently constant as called for in this concept implies keeping this rate as low as in the long run by any means possible. But this would happen in a framework fundamentally different from conventional policies.

longer be surprised by sharply risen interest rates when fixed-rate contracts expire. Lenders no longer had to fear to have lent their money at the wrong time at an unfavorable interest rate. A fixed-rate system would create more reliable decision-making conditions for all longer-term financial provisions. The risk of financial squeezes, crises, and collapses would be greatly reduced, and the willingness for longer-term investment, longer-term lending, and longer-term saving would be strengthened. No investment decision, no savings decision, and no long-term work and supply contracts would be postponed or refrained from due to uncertainty about the development of long-term interest rates. This increased willingness to invest and to save – and the ensuing increased engagement in long term economic ventures – would lead to higher employment, stronger economic growth, and higher overall prosperity.

Successful stabilization of long-term interest rates would also eliminate an important cause of cyclical instability, namely speculation about the development of these very interest rates. Since such speculation has a significant impact on investment decisions, it reinforces cyclical fluctuations in investment behavior. When investors expect long-term interest rates – and thereby the total cost of investments – to rise, the current willingness to invest is comparatively high, giving the economy expansionary stimuli. When, on the other hand, long-term interest rates are expected to fall, investors who need long-term loans are more likely to be cautious, thereby dampening the economy. This behavior is rational, and accordingly, there are rational reasons for economic peaks to follow phases of exceptionally low long-term interest rates and for economic lows to follow periods of exceptionally high long-term interest rates. Thus, if central banks prevent major fluctuations in long-term interest rates, they thereby stabilize the economy.

If central banks committed themselves to fix the long-term interest rate indefinitely, this stabilizing effect would be indefinite as well. Speculation about the rise and fall of long-term interest rates and the destabilizing effects of such speculation on the economy would come to an end. No entrepreneur could ever hope to obtain significantly more favorable financing conditions by postponing investments, and no one would ever hoard liquid funds hoping to be able to lend them at a much higher interest rate in the future. Thereby two major causes of economic instability would be eliminated for good.

This alone would make the fixed-rate system significantly superior to traditional monetary policy concepts. It would benefit not only entrepreneurs, mortgagors, savers, and capital investors, but due to its positive effects on the economy and employment also society as a

whole. If citizens could choose between traditional monetary policy with its intransparent ad hoc decisions and a policy whereby as vital a parameter as the long-term interest rates can always be relied on, they would find this an easy decision. The choice would be for the fixed-rate system, at least if the rate of inflation in this system did not fluctuate significantly more than in conventional systems. Thus the crucial questions are, firstly, whether the fixing of long-term interest rates is viable and, secondly, whether or to what extent monetary stability would thereby be impaired or strengthened.

2.2 The Mode of Functioning of the Fixed-Rate System

The proposal that the central bank should keep long-term interest rates constant not only contradicts conventions of monetary policy but also, at first glance, market principles. The market-based objection is that long-term interest rates result from spontaneous rational interactions on the capital markets and cannot be determined by the central bank; that, at the very least, the central bank's ability to influence long-term interest rates keeps diminishing in increasingly complex and extensive capital markets; that, accordingly, any attempt to keep the long-term interest rate permanently constant is in the longer term doomed to failure as were previous attempts to impose, in a market economy, a price level or an exchange rate.

However, the long-term interest rate cannot be controlled only by means that restrict the freedom of action of market participants. Even with conventional monetary policy, the long-term interest rate is influenced by past, current, and expected measures of monetary policy, even if it is not explicitly addressed as a policy target. The question is, then, whether a central bank can influence the long-term interest rate precisely enough by market-compliant means to maintain it at a predetermined target level. To answer this question, it is important to consider the components that make up the long-term interest rate as well as the influencing factors of these components.

One component of the long-term interest rate is the compensation for the *expected* devaluation of the principal that capital market players expect over the maturity of a contract. The second component is the *expected* real, i.e. inflation-adjusted rate of return on capital. This is referred to here as the **real interest rate**. For simplicity, it is assumed here that the return on long-term financial investments is determined by – and approximately equal to – the *expected* return on

real investments. Thus, the **real interest rate** as defined above corresponds to the inflation-adjusted *expected return on real investments*.

Definition

In the following, the term **real interest rate** refers to the *expected* rate of return on long-term real investments after deduction of the *expected* capital devaluation by inflation.

This expected real return depends, on the one hand, on the level of capital supply on the capital markets. This capital supply is made up of savings, the extent of which is determined by the propensity of households and businesses to save. This propensity to save, in turn, depends on long-term basic dispositions of market participants, but also on demographic factors. The higher the propensity to save, the higher, in the long run, the capital supply.

On the other hand, on the demand side, the real return depends on how much inflation-adjusted return investors believe they can generate with credit-financed real investments. This depends on factors such as the available innovation potential, the quantity and quality of the available workforce, and the expected capacity utilization in the economy, but subjective expectations of economic developments and confidence in the political framework also play a role. Irrespective of that, though, the real return on real investment decreases as investment opportunities are increasingly exhausted. The higher the capital supply, the less profitable the real investments that would be needed to exploit this supply, and the more difficult it becomes to impose a high interest rate in the capital markets. The lower, thus, the long-term interest rate at which capital supply and capital demand are balanced.

In a fixed-rate system, it is the sum of long-term expected inflation and real interest that is to be kept constant by the central bank. Thus, if one of these two variables changed, the central bank would have to ensure that this change is compensated by a change in the other variable. In a fixed-rate system, the central bank would have to have sufficient influence on the expected inflation or the real interest rate to achieve this compensation.

Influences on the real interest rate as defined above can at best play a minor role in this. The central bank can affect the return on real investments and its determinants only indirectly and

only in the short term. For example, it could for short periods generate extraordinary economic optimism or pessimism, e.g. by spectacular boosts of money supply or spectacular changes in its key interest rates, and this optimism or pessimism can influence the expected return on real investments. But apart from such exceptional cases, real returns, and thus real interest rates, are largely independent of monetary policy.

Thus, if monetary policy wants to keep the long-term nominal interest rate constant, this must be done largely by manipulating the expected rate of inflation. For example, if in the fixed-rate system the real interest rate rises, for whatever reason, by one percentage point, the central bank must reduce the expected long-term inflation rate by one percentage point to keep the long-term nominal interest rate constant.

Thus, the fixed-rate system proposed here can be successful if monetary policy can control long-term inflation expectations in this manner; if, that is, monetary policy can influence these expectations as strongly, as quickly, and as frequently as the long-term real interest rate fluctuates for autonomous reasons. Whether this is the case depends above all on the range and the speed of the fluctuations of the real interest rate and thereby on the fluctuations in supply and demand on the capital markets.

Statistics don't give clear answers to this. A rough indication of the fluctuations in the real interest rate may be obtained, though, by deducting from the long-term nominal interest rate the respective current inflation rate for a period longer than a business cycle. If one deducts, moreover, a roughly estimated proportion of the fluctuations attributable to misguided monetary and fiscal policy, to financial market crises, currency crises, and political turbulence such as wars, trade conflicts, and oil crises, the real interest rate thus determined for investments with a maturity of more than five years is likely to have fluctuated by no more than $\pm 1.5\%$ in the recent past, with a downward trend. Moreover, some of these fluctuations are due to central banks not having been able to give sufficiently clear and reliable signals to financial markets under traditional monetary policy. For the real interest rate in the sense used here, therefore, at least in times of political stability, a fluctuation range of no more than $\pm 1\%$ should be expected in a fixed-rate system. If such a system were finally well established over a long term and across countries, a further decrease in fluctuations could be expected.

In a well-established fixed-rate system, the central bank would thus face the manageable task of steering the long-term rate of inflation as expected by the capital market players in a

maximum range of approx. $\pm 1\%$. This would be sufficient to fix the long-term nominal interest rate permanently at, or at least very near, a predetermined level. Only in rare exceptional situations would inflation expectations have to be steered in a wider range.

That central banks would be able to control inflation expectations in this way cannot, of course, be inferred with absolute certainty from experience. There is no doubt, though, that with further progress in professionalization and specialization, the primary addressees of monetary policy, i.e. the capital market players, would react ever more rationally and predictably to well-founded announcements and measures by central banks. This brings about ever better conditions for central banks to keep the long-term nominal interest rate constant in the longer term.

2.3 Prerequisites for a Successful Fixed-Rate Policy

Under the fixed-rate policy proposed here, the central bank would not need any statistical data or other metrics to identify needs for intervention. It would not even need to know the expected long-term rate of return on real investments and thus the real interest rate, nor the precise level of the expected inflation. It would simply intervene to readjust inflation expectations as soon as the long-term nominal interest rate deviates or threatens to deviate from its target value.

This sounds simple at first, but in a fixed-rate system, monetary policy would still face serious novel challenges. The central bank could control inflation expectations according to its will only in intensive communication with the financial market players. If the nominal interest rate diverges from its target value, the central bank would have to instantly announce that and how it will counteract inflation and then take appropriate action. In doing so, it would have to preclude any doubts that its impact on inflation will be sufficient and no stronger than necessary.

For the central bank to safely achieve this objective, at least the following conditions must be met:

1. The central bank's political credibility must be impeccable. Its addressees must be sure that it will not be distracted by any political influence from the objective of keeping the long-term nominal interest rate stable.
2. The central bank's professional credibility must be impeccable. Its addressees must be convinced that it has appropriate tools at its disposal to stabilize the long-term nominal interest rate and that it commands these instruments with the highest expertise.
3. The central bank's signals must be highly publicized. They must be received immediately and comprehensively by the major capital market players and also by the widest possible public.
4. The central bank must be understood. It must formulate its signals and back up its decisions in such a clear and simple manner that the major capital market players and most of the interested public can easily follow.

These four conditions are demanding but realistic. Easiest to achieve is the condition that monetary policy signals reach a high level of publicity. At least in highly developed countries, central banks command a wide range of communication channels through which they can inform markets and the public quickly and in a targeted manner, and the important capital market players follow the policy signals of central banks in their own interest with high attention and effort to ensure correct interpretation. These are good conditions for controlling inflation expectations in the financial markets.

The condition that the central bank must be properly understood by its addressees has also become ever easier to fulfill over time. There have been times when markets have largely based their inflation expectations on past and current inflation rates without much prognostic effort. Under such conditions, monetary policy can influence inflation expectations at best with years of delay, and it would thus be futile to keep the long-term nominal interest rate constant in the manner proposed here. But such passive expectation formation is a thing of the past. The key players in forming long-term interest rates, such as banks, institutional investors, and major borrowers, mobilize ever more professional expertise to base their long-term dispositions on accurate forecasts of inflation and interest rates. In doing so, they analyze perceived intentions, announcements, and measures by the central bank well before they affect inflation or upstream indicators. In these capital market players, the central bank would

find the addressees needed for the successful control of inflation expectations and thus of the long-term nominal interest rate.

To what extent capital market players believe the central bank capable to control the inflation rate as needed, also depends on how effective and accurate they hold the monetary policy instruments to be. The traditional instruments of monetary policy have, after all, if handled competently, proved at least capable of keeping inflation moderate on a longer-term average. One might assume, then, that competent central banks could successfully practice a fixed-rate policy with traditional instruments, in particular changes in the key lending rates and direct capital market interventions. But this does not stand up to serious scrutiny. In a fixed-rate system, central banks need from the outset a much broader set of instruments specifically tailored to the control of inflation expectations as hereinafter proposed.

In the fixed-rate system, the political credibility of the central bank would be no less crucial than the professional one. In their inflation expectations, capital market players would follow the central bank's signals only to the extent that its political independence could be fully relied on. Any anxieties in the capital markets that monetary policy might be susceptible to interferences from other policy areas would have to be precluded. It is highly doubtful, though, that the degrees of independence so far acquired by central banks would fulfill this requirement. To successfully operate a fixed-rate system, central banks should be granted a more complete, i.e. more radical political autonomy than ever before.

A solution to this problem is offered within the framework of a so-called *neocratic* state order.¹⁰ In this order, individual policy areas, including monetary policy, can be institutionalized as fully autonomous state divisions. Such an autonomous monetary division would have an independent parliament for monetary policy, and this "money parliament" would create a "money government" whose tasks would essentially be the same as that of a conventional central bank. This would completely separate monetary policy from the other divisions of government. The "money government" would be politically fully autonomous, and it would be fully legitimized by special democratic electoral procedures. These procedures could be designed in such a way that both money parliaments and the money

¹⁰ On the conception of the neocratic political order see Wehner (1991 to 2019).

governments emerging from them attain the best professional competence and focus on long-term goals possible.¹¹

The establishment of such an autonomous neocratic money government would be an important institutional safeguard for the success of a fixed-rate system. However, the fixed-rate concept must not and should not be forcedly linked to such a fundamental change of the state order. It is quite conceivable that, after more moderate reforms, even conventionally organized central banks could meet the requirements of a fixed-rate system. Nonetheless, if an opportunity arises to combine a bold reform of monetary policy with an equally bold reform of conventional democracy, it should not go untapped.

2.4 Fixed-Rate Rule and Business Cycles

Under the rules proposed here, the central bank – or the autonomous "money government" – would have no leeway in timing expansionary or restrictive interventions, and in total, the intensity of their measures would also be strictly determined by the circumstances. There would be leeway only in the choice of instruments and forms of communication used to control inflation expectations. This would establish a strict regulatory framework that conventional regimes of monetary policy have not come close to.

If the timing and intensity of interventions are so strictly determined, the crucial question is, of course, whether these interventions will moderate business cycles to the desired extent. At least in theory, it is conceivable that a fixed-rate rule would force central banks to act in ways that fail to dampen or even intensify trade cycles.

In the fixed-rate system, the central bank would have to take expansionary action whenever the real interest rate as defined above starts to fall, thereby depressing the nominal interest rate. This happens in particular when investors become more pessimistic and/or when the propensity to save rises. Conversely, monetary policy would have to turn to a more restrictive

¹¹ Lottery would play an important role in these electoral procedures. In addition, the monetary parliament would consist of two chambers, a highly professional chamber of experts and a professionally trained advisory chamber. See e.g. Wehner (1995, chap. 6) and the draft Constitution in www.neokratieverfassung.de.

For more details see also the postscript.

course to dampen inflation expectations whenever real interest rates begin to rise, i.e. when investors become more optimistic and/or the propensity to consume rises. A schematic representation of this is given in figure 5.1 below (chapter 2.5).

It should be undisputed that these timings of turns in monetary policy measures would be appropriate in terms of economic stabilization as well. Changes in expectations regarding returns on investment and in the saving behavior of households introduce economic turnarounds, and in the fixed-rate system, these changes become apparent when, with given inflation expectations, the long-term nominal interest rate tends to deviate from the target level. The automatism of interventions in the fixed-rate system is thus fully in line with the objectives and findings regarding economic stabilization policy.

Such automatism would, moreover, force central banks to adapt to any future development of the pertinent findings. Since central banks would have to control the inflation expectations primarily of economic actors who, in their interest, make use of the most current pertinent expertise available, central banks would have to do the same when deciding on monetary policy measures.

Since in the fixed-rate system both the timing and the intensity of central bank measures are dictated by drifts of the long-term nominal interest rate, these measures could in some cases be more abrupt and more drastic than is known from conventional monetary policy. This policy has traditionally been a policy of small tentative consecutive steps, which is at least in part attributable to the central banks' uncertainty about their own policy principles.¹² In the fixed-rate system, more drastic steps may be needed, such as drastic capital market interventions and abrupt drastic changes in the key interest rate.

To what extent such drastic measures would have to be taken depends on the fluctuations in the long-term real interest rate. At least in a politically stable environment, there is nothing to suggest that the real interest rate will undergo sudden changes, but it cannot be completely ruled out that keeping the long-term nominal interest rate stable would require occasional sudden upswings and downswings of short-term interest rates. It may be necessary, for example, to counteract a looming rise in long-term interest rates by a sharp hike of the central

¹² There has never been a convincing theoretical justification for the monetary policy of small tentative steps. This policy can indeed be plausibly justified only the uncertainty of policymakers, making them hope that by taking smaller steps they are taking smaller risks.

bank rate, which would result in a sharp rise in short-term interest rates in the financial markets. However, this would not justify sticking to the traditional policy and thereby renouncing the benefits of the fixed-rate system. Such increased swings in short-term interest rates would not harm growth nor employment, and any ensuing irritation among savers, investors, and other market participants would be short-lived.

2.5 A Formalization

The relationships described above between the long-term real interest rate as defined above, the long-term inflation expectation, and the long-term nominal interest rate are schematically represented in Fig. 5.1.

For the long-term nominal interest rate $R(n)$, a fixed target value is specified here by the monetary authority. The development of the real interest rate $R(r)$ is subject to autonomous fluctuations that are not, or at most indirectly, influenced by the central bank. A fictitious example of such fluctuations is represented in the curve $R(r)$.

The long-term nominal interest rate $R(n)$ is the sum of the long-term real interest rate $R(r)$ and the long-term inflation expectations $\pi(e)$. To keep the long-term nominal interest rate $(R(r) + \pi(e))$ constant, the central bank must ensure that inflation expectations follow the pattern shown in the $\pi(e)$ curve. According to this representation, from time $t(1)$, the central bank would have to raise inflation expectations to compensate for a fall in the real interest rate, caused, for example, by growing investor pessimism. At time $t(3)$, it would have to start dampening inflation expectations to compensate for an incipient increase in the real interest rate. From time $t(6)$ it would then have to raise inflation expectations cautiously again. At time $t(9)$, it would be necessary to switch again to a more restrictive course that dampens inflation expectations, and again to an expansionary course to increase inflation expectations at the time $t(12)$.

In this procedure, inflation expectations do not always have to follow a course exactly opposite to the real interest rate. In the short term, the central bank could influence the long-term nominal interest rate to a small extent by direct capital market interventions, thereby defending it against changes in the real interest rate. In such cases, the inflation expectations would not be adjusted continuously, but in small discontinuous leaps.

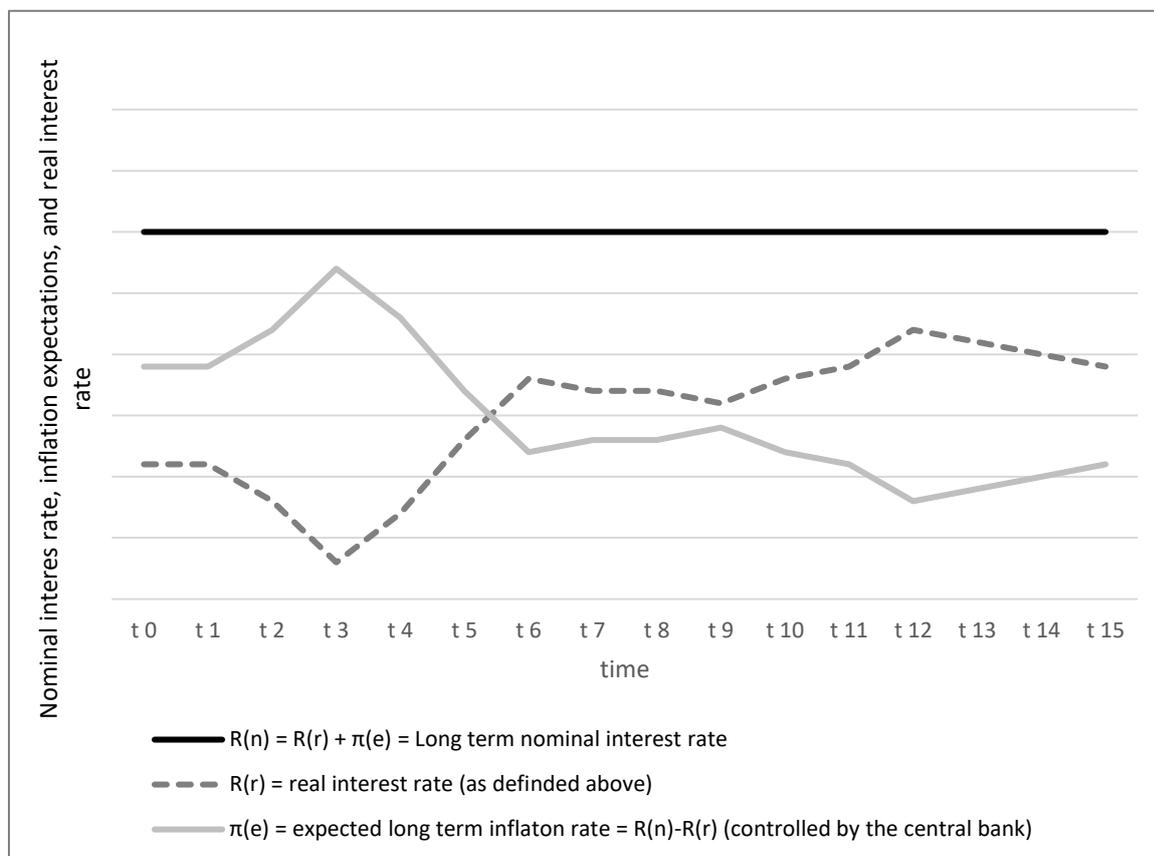


Figure 5.1 Long-term real interest rate and controlled inflation expectations with constant long-term nominal interest rate

2.6 Which Interest Rate is Fixed in the Fixed-Rate System?

Conventional approaches to stability policy suffer from the vagueness of their target variables. A monetary policy that is supposed to react, for example, to deviations in the inflation rate or the money supply from a given target value is always faced with the issue of which money supply or which inflation rate to refer to. This issue has become increasingly complicated even concerning inflation. Must, for example, real estate prices or mortgage interest rates or both be considered when calculating inflation rates? Should all consumer goods be taken into account, or is the so-called core inflation, which does not include energy and/or food prices,

more relevant for monetary policy? And what relevance has, in addition to the statistically measured rate, the "perceived" inflation?

A similar, but fortunately much less serious definition problem arises within the framework of a fixed-rate system. In this system, the long-term interest rate suggests itself as the target variable, but this rate depends, among other things, on the maturity term and on the debtor's credit rating. Thus, if the central bank wants to keep the long-term nominal interest rate constant, it can do so only for securities of a certain maturity and a well-defined credit rating category.

For which maturity the fixed interest rate is to apply cannot be answered once and for all and not only with theoretical arguments. Practical experience in managing inflation expectations will also play a role in this. Nevertheless, the range of maturities worth considering can be narrowed down with simple arguments. A minimum period of some years is evident from the fact that measures of monetary policy affect the inflation rate only after considerable delay. In the chosen period, monetary policy measures must not only begin to take effect but make a longer-term impact on the rate of inflation. Also, the central bank should be able to make amendments within this period to achieve the announced effect even if its initial measures prove to be too weak or too strong. This suggests that the long-term interest rate to be fixed should relate to securities with a maturity term of no less than five years.

There is, of course, also a ceiling for maturity terms, beyond which it would not make sense to fix interest rates. If, for example, the central bank kept the interest rate of securities of 15-years maturity constant, then the interest rate for medium-term maturities could fluctuate much more strongly than aspired to, and the stabilizing effect on the economy would be inadequate. Moreover, with such a maturity term, the imagination for the connection between monetary policy measures and their effect would be far overextended. This, in turn, would sooner or later have a negative impact on the credibility of the central bank's stabilization concept and thus on its ability to manage the nominal interest rate. Accordingly, the maturity term of the securities whose interest rates are to be kept constant should be substantially less than ten years. In consequence, the optimum maturity of these securities should be roughly in the range between five and nine years. So in the initial stage of a fixed-rate system, the central bank would be well advised to engage in keeping the interest rate of securities of seven-year maturity constant. Accordingly, the inflation expectation to be controlled by the central bank should refer to this seven-year period.

The optimal credit category to which the fixed interest rate should apply is easier to determine. If there are securities of the specified maturity term available whose creditworthiness is beyond any doubt and whose interest rate does not reflect any risk of default, then the long-term target rate should apply to precisely these securities. There may be doubts about whether such securities will always be available in the financial markets, because there may not be enough doubtlessly creditworthy private and public debtors, but this problem could be easily solved. Since a truly autonomous central bank could never become insolvent, it could always issue bonds in any quantity of any maturity, the nominal yield of which does not include any risk premium.^{13, 14} The nominal interest rate of such securities of, say, seven years maturity could then be the interest rate which the central bank undertakes to keep constant. The target variable of monetary policy in the fixed-rate system would thereby be clearly defined. The interest rate of these securities to be issued by the central bank is hereinafter referred to as **fixrate**.

Definition

The **fixrate** is the interest rate of long-term central bank bonds with a maturity term of e.g. seven years that the central bank promises to keep permanently constant.

How easy or difficult it would be for monetary policy to keep this interest rate constant in the long term depends also on fiscal policy and, in particular, on the extent to which the fiscal authority takes recourse to the capital markets. The less the treasury does so, the easier it would be for the central bank both to manage inflation expectations directly and to fine-tune the fixrate through capital market interventions. Thus, a fiscal constitution prohibiting the

¹³ In order not to cause undesirable side-effects on the capital and money market by issuing such bonds in large quantities, the central bank could in return buy up bonds of other obligors of similar maturity.

¹⁴ In recent years, some central banks have indeed issued bonds of their own, but they have done so for other purposes than here proposed. For an overview of this practice see Gray and Pongsaparn (2015).

government from taking out long-term loans on the capital market would be another important prerequisite for optimal performance of a fixed-rate system. In this system, the government should still be able to borrow long-term, but it should do so exclusively with the central bank. Accordingly, the central bank would have to be authorized to grant long-term loans to the treasury at any time at its discretion.

This makes it all the more important, though, for the central bank to be institutionalized politically fully independent, as provided for in the concept of the neocratic political order. Only this could keep the Central Bank from getting under any political pressure to grant the treasury dubious loans serving mainly the interests of governments and political pressure groups.

3. New Instruments for Monetary Policy

3.1 Stabilization Grant - Key Instrument in the Fixed-Rate System

In a fixed-rate system as proposed here, the long-term nominal interest rate would be controlled by market-compliant means and – as a fixrate as defined above – kept as constant as possible. However, how precisely this target rate can be met depends on many exogenous circumstances. Initially, central banks may be forced to allow a relatively large fluctuation margin around the fixrate.

How large this fluctuation range should initially be chosen and how fast and how far it could be reduced over time depends also on the instruments available to manage inflation expectations. The lower the aspired fluctuation range, the more effective the instruments must be and the higher the professional expertise in applying them.

A monetary policy as outlined here, its most important task being to manage long-term inflation expectations, has never been practiced. Thus, it would be pure coincidence if existing monetary policy instruments were optimal for or at least applicable to this task. Traditional monetary policy instruments can certainly influence inflation expectations, but they could not do so in the way required in a fixed-rate system. If monetary policy were

confined to the traditional instruments, the resulting fluctuation range around the fixrate would be untenably high, and the benefits of the fixed-rate system would be poorly exploited. Thus, to make a fixed-rate system a success, novel monetary policy instruments are needed.

Such new instruments would have to meet two fundamental requirements. For successful management of expectations, deployments of the instruments should be perceived as directly and intensively as possible by the markets and the public. Moreover, the instruments should have the most direct impact possible on aggregate demand and thus on the leeway in market pricing relevant to the inflation rate. Besides, this potential effect on pricing should be easy to comprehend so that market participants can anticipate the consequences of policy measures for the price level easily and quickly. In other words, when monetary policy takes measures to manage demand, it should be as easy as possible for the public to estimate when and to what extent additional demand will thereupon be generated.

An extension of monetary policy instruments that suggests itself to meet these requirements was proposed in the context of the citizens' stipend system, in which each citizen would receive an equally high moderate basic income from the state. If such basic income were paid, it could easily be increased at any time by a temporary so-called **stabilization grant**. This grant could be paid to citizens either directly by or upon instruction by the central bank.¹⁵

Definition

Stabilization grant is a temporary additional income to be paid equally to all resident citizens of a country for the purpose of influencing inflation expectations in a targeted manner.

Stabilization grants could be used by the central bank to influence the inflation expectations of capital market agents in a well-calculated way and thus work towards stabilizing the long-

¹⁵ This stabilization grant concept was proposed in Wehner (1990, chap. 4), Wehner (1992, chap. 6.1) and Wehner (1992a, chap. 6).

term interest rate.¹⁶ These grants could be applied as a temporary periodic payment, as a lump sum, or as a combination of both.

The administrative requirements for such stabilization grants would be best met in a citizen's stipend, i.e. a universal basic income system, but the stabilization grant could, of course, be applied in other types of welfare states as well. The only necessary condition would be for the autonomous central bank to be able to use the services of other state bodies to pay out the stabilization grant to all citizens.

In a fixed-rate system, the central bank would, whenever it announces or disburses stabilization grant payments, provide clear guidance regarding what change in the inflation rate it is thereby aiming for. Market participants would, of course, be well informed beforehand about the central bank's policy objective of keeping the long-term interest rate constant, and they would also know that inflation expectations play an important role in this. Nevertheless, the central bank should offer capital market players specific justifications for each stabilization grant measure with regard both to the scheduling and the scope chosen.

An economic stimulus that is granted equally to all citizens would have a significantly stronger impact on aggregate demand than most conventional measures, and it would also be superior in political terms. Politically, it would be superior because it is almost unquestionable from a distributional perspective. No interest group could question stabilization grant payments arguing that it would be disadvantaged and other groups would unduly benefit. Economically, the stabilization grant would be superior in that it would stimulate demand evenly in almost all sectors of the economy.¹⁷ Sectoral imbalances and overheating as they can arise from demand-enhancing public investment programs e.g. for the construction industry, need not be feared when applying stabilization grants.

A stabilization grant would, since all citizens would perceive it directly in their bank accounts and wallets, be superior to other expansionary measures also in terms of publicity. It could

¹⁶ On its balance sheet, the central bank could treat stabilization grant payments e.g. as "eternal" interest-free loans to citizens.

¹⁷ Ideally, anticyclical demand stimulation would encourage the state and private enterprises to increase their expenditures to the same degree as households. The central bank would not lack means to pursue this more ambitious goal. It could, for example, in addition to paying out stabilization grants, encourage the state with interest-free loans and companies with investment premiums to increase their spending.

give the central bank's promise to keep long-term interest rates constant instant and sustained credibility. By announcing and disbursing stabilization grant, the central bank would demonstrate its stabilizing power not only to the financial markets, but also to consumers, investors, the labor force, and trade unions. This would, not least, render an aggressive wage policy obsolete that in economic slowdowns calls for drastic wage hikes as a means of strengthening demand. Overall, the stabilization grant would thus have a much faster, broader, and deeper effect on economic awareness than is conceivable with existing instruments of monetary policy. Moreover, unlike wage increases, stabilization grants do not impair the international competitiveness of the domestic economy.

Stabilization grant payments would have the best possible effect also on the pricing leeway of businesses. The effect on demand would evolve in the most direct way after the disbursement – and in part already with the announcement – of stabilization grants, and almost anyone could roughly estimate this effect and understand its mode of action. Thus, if the central bank commanded this instrument, there would be little room for doubt that it can stabilize the long-term nominal interest rate within a narrow range. Speculators could no longer reasonably bet on the central bank eventually losing control of the nominal interest rate. The mere public awareness that the central bank could immediately, directly, to any amount, and for any period affect citizens' disposable incomes would make such speculation futile. Thus, the mere possibility of stabilization grants would help to align inflation expectations with the objectives of the central bank.

Nevertheless, the stabilization grant and the central bank's pertinent information policy would remain an instrument of rough-tuning rather than fine-tuning inflation expectations. But this does not affect the prospects of the fixed-rate policy. The central bank would keep all traditional instruments of monetary policy at its disposal, and it could use them, if applicable, also for the managing inflation expectations. This includes changes in the key interest rate at which commercial banks can take out short-term loans with the central bank, and, if necessary, changes in the minimum reserve ratio, i.e. the proportion of their demand deposits that commercial banks have to deposit with the central bank. If by using these instruments, the central bank makes short-term commercial bank loans cheaper, this, too, indirectly strengthens demand. Properly communicated, such measures can help to increase long-term inflation expectations of capital market players and thereby to raise the long-term nominal interest rate.

In addition to such expectation-forming measures, central banks could intervene in the financial markets with so-called open market operations to fine-tune the long-term interest rate. They could act as powerful buyers and sellers of longer-term securities to temporarily influence the interest rate of these securities. With a dual strategy of a rough control of inflation expectations and fine-tuning through such capital market interventions, they could reduce the fluctuations in the long-term nominal interest rate to a minimum.

In the comprehensive concept proposed here, the central bank would, in terms of economic stability, assume not only the traditional role of monetary policy but also the role previously assigned to fiscal policy. Governments would be barred from taking out loans on their own to finance increased spending and thereby enhance aggregate demand. Instead, the central bank, if institutionalized as an autonomous state division, could, at its discretion, grant loans to the government at any time and to any amount. These loans could be interest-free or interest-bearing, temporary, or unlimited, and they could even be granted subject to the condition of being used, for example, for short-term additional government investment in critical sectors of the economy. The use for additional public investment would be particularly appropriate if in the private sector the propensity to save is extraordinarily high, thus weakening the stimulating impact of stabilization grants to citizens. Under such conditions, the central bank would not only pursue monetary stability policy, but it would also have complete control over expansionary fiscal measures.

It is particularly true for this comprehensive dual stability policy that it should, even more than any conventional policy, be entrusted only to an institution whose competence, foresight, legitimacy, and trustworthiness are far beyond serious doubt. With a central bank that – in a neocratic sense – is politically fully autonomous and that has a clear democratic mandate, this task would be in the best hands imaginable.

3.2 Stabilization Grant in the Downturn, Stabilization Tax in the Upswing

In the fixed-rate system, stabilization grants would be the primary and most effective weapon of monetary policy. Thus, it is necessary to thoroughly investigate the potential and, even more so, the possible limitations of this instrument.

The strength of conventional monetary policy lay in dampening an overheating, but not in stimulating a sluggish economy. The reason for this is that the main instrument of this policy, the central bank's key interest rate, can stimulate demand only through lengthy detours. The opposite is true for the stabilization grant. Since this grant could, moreover, be paid out indefinitely, there are no limits to its potential effect on demand. Thus, stabilization grants could be used also as a complementary measure to conventional monetary policy to make it more effective. But the greatest benefit from stabilization grants could be gained in supporting inflation expectations in the fixed-rate system. Stabilization grants could compensate any fall in the real interest rate, however quickly or slowly it occurred in an economic downturn, by raising inflation expectations through an increase in demand.

The demand-stimulating effects of the stabilization grant would be called for when, in the downturn, the real interest rate falls, but in the fixed-rate system, effective measures are, of course, also needed to dampen demand – and thereby inflation expectations – when the real interest rate rises in the upswing. In these cases, the stabilization grant can play only a very limited role. Stabilization grant can be disbursed in indefinite quantity, but it cannot be reduced or even reclaimed indefinitely. In a basic income system, it would be easy to reduce, if necessary, current basic income payments to dampen aggregate demand, but incomes may not be lowered arbitrarily just to meet the criteria of stabilization policy. In particular, they may not be lowered below the politically accepted subsistence minimum. Accordingly, for a negative stabilization grant that would lower everyone's income, the scope for political action would be very small. Nevertheless, a central bank may not, of course, completely renounce demand-reducing measures in the upswing even if they may be controversial in distributional terms.

A central bank – or a politically autonomous, neocratic government division for monetary policy – does not have the mandate to correct distributive fallouts of monetary stabilization policy, nor would it have the necessary tools to do so. It is also doubtful that a central bank would have sufficient pertinent competence and sensitivity. If monetary policy has negative distributional consequences, it is up to other authorities to take compensating measures. Nevertheless, a central bank should do all it can to make demand-dampening measures socially acceptable from the outset.

More socially acceptable than a negative stabilization grant that reduces the incomes of all citizens equally would be a **stabilization tax** levied as a surcharge to the income tax. The

central bank could instruct the fiscal authority to temporarily – and if necessary instantly – collect such a surcharge and to transfer the revenue thereby generated to the central bank. At least with an income tax rate that excludes the subsistence minimum from taxation, such a stabilization tax could be socially acceptable. Once adopted, it could have a similar signaling effect as a negative stabilization grant and, accordingly, a similarly strong dampening effect on inflation expectations.

To dampen inflation expectations as precisely as possible in the upswing, a stabilization tax could be combined with conventional monetary policy instruments, in particular with hikes of the key interest rate. Key interest rate hikes can also dampen aggregate demand, but their effect on it is too indirect and too difficult to understand to correct inflation expectations as quickly and precisely as required. By contrast, a combination of key interest rate hikes and a wisely communicated stabilization tax could influence inflation expectations much more accurately.

In the past, there may have been extreme business cycle phases in which even such a combination of measures could not have dampened inflation expectations enough to stabilize the long-term nominal interest rate as desired. Under the conditions of the fixed-rate system, however, abrupt swings in the real interest rate requiring unduly abrupt dampening of inflation expectations would be most unlikely. Therefore, the challenges for monetary policy in the fixed-rate system should not be assessed from statistics on past business and interest rate cycles. Such statistics overstate the challenges in a tried-and-tested fixed-rate system.

But this does not mean that fixing the long-term nominal interest rate by managing inflation expectations would be a trivial affair. Indeed, unsteady market influences on long-term interest rates would automatically force the central bank to readjust and fine-tune inflation expectations as necessary. Nevertheless, the central bank should, of course, always be in a position to assess the impact of its measures in advance with the highest accuracy possible. To this end, it is necessary to continuously observe and analyze numerous parameters. The central bank must, among other things, be able to assess to what proportion its stimulating and restrictive measures affect the domestic economy and to what proportion they affect foreign economies. The higher the integration of a currency area in the international economy, i.e. the greater the import ratio, the greater the proportion to which the central bank's stabilization measures affect foreign currency areas.

Similarly, the central bank should have a precise idea as to the proportion to which expansionary stabilization measures enhance spending and to which proportion merely savings. If, for example, recipients wanted to save most of their stabilization grant, spending a lesser portion on consumption, then the effect on pricing leeway, inflation, and inflation expectations would be small. In that case, the increased savings could even increase the demand for long-term securities. This would put pressure on the long-term nominal interest rate, making it more difficult to be stabilized.

But such a scenario is highly unlikely. Of a stabilization grant paid equally to all citizens, a larger proportion would be used for consumption and a smaller proportion saved than of – generally much more unequally distributed – labor and capital income. Even if an unexpectedly large part of the stabilization grant were saved, only a small proportion of that savings is likely to flow into long-term securities thereby putting pressure on the long-term interest rate. But such examples show, nonetheless, how carefully a central bank would have to plan and meter its demand-enhancing, interest rate-stabilizing measures and, no less importantly, how carefully it would have to explain these measures to market participants. Fluctuations of the long-term nominal interest rate can be kept to a minimum only as long as capital market players don't suspect they have a better understanding of these matters than the central bank.

3.3 Fixing and Adjusting the Stabilization Grant

Up to what maximum amount would stabilization grant have to be paid and announced in the fixed-rate system to keep the fluctuation range around the fixrate near zero? This cannot be predicted with accuracy, but it can be roughly estimated.¹⁸ Suppose that the expected annual inflation rate would at some point be 0.5% lower than would be necessary for safe adherence to the fixrate. If the fixrate applied to seven-year securities, inflation expectations for the entire seven-year period would in that case be about 3.5% too low. Then the central bank would have to convince financial markets that it will raise the price level in this period by a total of 3.5% higher than so far expected.

¹⁸ It is important to note here that an effective system of automatic stabilizers such as unemployment benefits and short-time allowances should be a matter of course also in a fixed-rate system.

This would be easiest to achieve if in the initial situation the overall production potential was fully exploited. Then any additional spending induced by the stabilization grant would create pricing leeway of similar scope, and this leeway would be used without much delay. If the stabilization grant were completely spent on private consumption, the central bank would in such a case have to promise to provide an additional income of approximately 3.5% of disposable household income for the entire seven-year period. This sum could allay the fears that the target value of the long-term nominal interest rate cannot be adhered to.¹⁹

However, this 3.5% of household disposable income would only be sufficient if in the initial state the production potential of the economy is fully utilized and if no proportion of the stabilization grant is were saved. In practice, though, stabilization grant would be disbursed in situations when the production potential is not fully utilized. In consequence, much more than 3.5% of disposable income would be necessary to achieve the desired effect. Since, though, in a wisely managed fixed-rate system the economy is unlikely to fall very far below full utilization of its potential, it can be assumed that within one business cycle, at most a relatively low multiple of 3.5%, roughly between 10% and 20% of annual household income, would have to be promised and paid as stabilization grant. The maximum amount would thus be little more than two average net monthly incomes.

It is just such a simple calculation that the central bank would have to present and explain – although in somewhat catchier terms – to market players and the public to ensure the intended effect on inflation expectations.

The central bank could pay out a calculated stabilization grant needed to support the fixrate instantly, but it could also distribute the disbursement over a longer period of, in the case assumed here, up to seven years. If, on the other hand, the long-term nominal interest rate threatens to exceed the fixrate and needs to be dampened, the central bank could quickly impose or announce to impose a stabilization tax in the form of an income tax surcharge. Alternatively or in addition, it could, if necessary, claim from the citizens a negative stabilization grant which could, if applicable, be offset against announced but not yet

¹⁹ For the calculation of stabilization grant, various other reference variables could be used. In the case mentioned, for example, 3.5% of gross household income could be paid instead of 3.5% of disposable household income. In that case, the stabilization grant payments could – and should to some extent – be taxed.

disbursed stabilization grant. Thus, announcements of stabilization grant payments would always be subject to the condition that there will be no unexpected rise in the real interest rate.

In this process, the central bank may have to perform a long and rapid sequence of announcements, disbursements, adjustments, and possible offsettings of stabilization grant. Initially, such activism may seem confusing to the public. However, since all such actions would follow simple rules based on easily comprehensible grounds, such an actionist policy would not cause much public irritation. The metering of the stabilization grant would also be based, as the above example shows, on a comprehensible calculation easy to understand at least for the important capital market players. With wise use of stabilization grant and, if necessary, stabilization tax, central banks could give markets and the analysts of monetary policy a more reliable longer-term orientation than never in the past.

3.4 Adjusting the Parameters

With a fully developed fixed-rate system, a new operating principle of monetary policy would be introduced and, no less importantly, an essential element of a more progressive political order. In this order, the central bank would have unqualified political autonomy and democratic legitimacy, all other public authorities would be denied long-term-borrowing, and ideally, a soundly financed citizens' stipend system would also be introduced.²⁰ In this ideal case, the transition to a fixed-rate system would go along with the transition to a fundamentally new financial and social order.

It is only under such ideal conditions that a fixed-rate system could develop optimally, but many of its benefits could also be realized in a political, financial, and social order of the conventional kind. Yet at least the option of institutionalizing the central bank as a fully autonomous state division should always be considered and timely aspired to in the fixed-rate model context. In institutionalizing a fully autonomous central bank, monetary policy could even play a pioneering role in the process of modernizing democracy.

²⁰ A soundly funded citizens' stipend would not fully cover the minimum cost of living for the recipients. It would have to be combined with a highly developed public employment guarantee enabling every worker to earn a necessary additional income on top of the citizen's stipend on reasonable terms. See Wehner (2019) and Wehner (2020a).

The transition to a fixed-rate system would, in whatever institutional context, be a learning process for monetary policy. In this process, misjudgments in the management of inflation expectations would be inevitable, and comparatively large fluctuations in the long-term nominal interest rate would still have to be put up with. At this stage, the central bank's stabilization goals should not be too narrowly defined and, in particular, the fluctuation margin around the long-term fixrate should be somewhat generously defined. It could later be gradually minimized in the further learning process. Moreover, in the transition process, the maturity term of the securities to which the fixrate applies could be somewhat longer and handled somewhat more flexibly than would appear optimal in the long run. This would give the central bank more time to determine the maturity term for which inflation expectations can be controlled optimally.

Once determined, this maturity term should not be altered at short notice and without compelling reasons. But even in the very long term, the range of feasible maturities is likely to be no wider than approximately six to eight years. If at some point central banks consider it appropriate to switch to a different maturity term within this range, this should be enforceable without significant market disturbances.

It is equally true for modifications of the fixrate that they could most likely be implemented without major market disturbances. If the central bank found that a once chosen fixrate becomes increasingly difficult to adhere to – for example, in the event of a change in fundamental economic or demographic conditions – it could at any time cautiously modify this rate to adjust it to these conditions. An equally cautious simultaneous adjustment of the fixrate and the related maturity term is, of course, also conceivable.

3.5 Deflation, Demography, and Neocracy

The greatest challenge to monetary policy was mostly believed to be the fight against the risk of rising inflation, but this has changed significantly in recent times. Central banks in Europe, Japan, the US, and elsewhere have long been unsuccessfully engaged in preventing inflation from falling below their target level, even using all conventional instruments available, and at times have even failed to prevent deflationary expectations.

To overcome this condition, ever more central banks have lowered the key interest rate below zero while buying government and corporate bonds in unprecedented amounts. However, even these measures proved to be inadequate to achieve the desired effect over long periods. Such failure can lead market participants to interpret negative key interest rates and even the most massive bond purchases by the central bank no longer as stimuli to the economy, but rather as evidence of persistent crisis. If this happens, conventional monetary policy loses any capacity to stimulate the economy in a predictable way.

Conventional monetary policy thus lacks the means to vigorously lead an economy or a currency area out of stagnation or deflation. This is especially true in situations where, for demographic reasons, the propensity to save is particularly high, money capital is abundant, and, accordingly, the expected average return on investments is uncommonly low. The more likely and the more widespread such constellations become and the longer they last, the more urgent the transition to a fixed-rate system and the related instruments.

The fact that demographic developments can push monetary policy to its limits and financial markets into crisis does not only call for a fixed-rate system, it also calls for – at least in the very long term – a fundamental reform of the political order, however utopian it may as yet appear. It might suggest, for example, to establish – in addition to a fully autonomous central bank – at least one more fully autonomous state division on which, among other things, the responsibility for population policy could be conferred. In such a case, there would be two equally autonomous specialized policy divisions that could ensure long-term coordination between population policy and monetary policy on an equal footing.

With such coordination, independent monetary policymakers could make equally independent makers of population policy aware of the long-term negative effects of a low birth rate on monetary and economic conditions. Independent makers of population policy would then be strengthened in their efforts to redistribute income in favor of the parents of future born children, thereby increasing the birth rate. This redistribution could, analogously to the stabilization grant, take the form of a "population grant" and would be granted equally to all future born children as a supplement to their citizens' stipend.²¹

²¹ For this proposal see also Wehner (2019, chap. 4.2).

Such a vision of newly partitioned political responsibilities may still rightly appear rather seditious. On this path, existing constitutions would have to be fundamentally questioned, constitutional development would have to be recognized as the supreme political task, and this task would have to be delegated to an appropriate novel, specialized political authority. Only in this way could conditions be created for a thorough and open-minded evaluation of novel draft constitutions.²²

4. Paths to the Fixed-Rate Model – How, Where, and When?

That stable long-term nominal interest rates could be beneficial to the economy is generally undisputed, but where central banks have tried to reach this goal in the past, this has not been successful. As a result, monetary policy strictly aiming at stable long-term interest rates was eventually not considered practicable. But this could be conclusively justified only in a system of fixed exchange rates. Monetary policy that has to keep the exchange rate stable cannot indeed also keep long-term interest rates stable indefinitely.

Conventional monetary policy rightly regards stable low inflation as its unquestionably superordinate objective. However, the aspiration to work directly towards this objective, i.e. to exert immediate influence on inflation, cannot be fulfilled. So monetary policy must choose an intermediate objective on which it has a more direct impact and which is as closely connected to monetary stability as possible.

As such an intermediate objective, a constant long-term interest rate may at first glance seem implausible because it would go along with fluctuations in the inflation rate. If the long-term nominal interest rate remains constant, long-term inflation expectations must fluctuate to the same extent as the long-term real interest rate, and the fluctuation of actual inflation would then be in the same order of magnitude. Insofar, the fixrate policy proposed here would abandon the objective of keeping inflation at both a low and stable level.

²² See in particular the – so-called neocratic – draft constitution in www.neokratieverfassung.de. See also the postscript in this book..

But this objective cannot be perfectly met by applying other intermediate objectives either. The fixed-rate system proposed here may, therefore, indeed allow for the best possible combination of a low level and low fluctuation of inflation, and it may indeed be the clearly best of all conceivable intermediate objectives of monetary stabilization policy. If the long term real interest rate of a tried and tested fixed-rate system did not fluctuate by more than $\pm 1\%$, the expected – and also the actual – inflation rate would not fluctuate significantly more. If, for example, the real interest rate expected for the future were between a maximum of 3% and a minimum of 1%, it would be appropriate to fix the long term nominal interest rate at 3.5%. Then the expected – and approximately also the actual – inflation rate would in the long term fluctuate between a minimum of 0.5% and a maximum of 2.5%. This would be a very good result by historical standards. (Though, under economic conditions as at present, the range of real interest rates might be estimated somewhat lower, suggesting a somewhat lower fixrate of, say, 3% rather than 3,5%.)

One of the main defects of conventional monetary policy is to treat a stable long-term interest rate as a positive side effect of a stable inflation rate. In a fixed-rate system, the perspective and the mode of operation would be reversed. Monetary policy would keep long-term interest rates stable, and the relative stability of the value of money and of inflation would accrue as positive side effects. The effect and side effects would be achieved by controlling inflation expectations.

To the question of whether such a novel monetary policy can be successful, the correct answer might have been negative until a few decades ago. Under changed conditions, though, not least due to an increasingly competent and better informed professional public, it is time to overcome the prevailing logic of monetary policy. With the fixed-rate model and the associated instrument of stabilization grant, monetary policy would have a more up-to-date and sustainable concept at its command.

This leads to the question of how, where, and when such a concept could eventually find its way into political practice. The obstacles are enormous. A first and serious obstacle is the sheer newness and – at first glance – strangeness of the concept regarding, in particular, the institutionalization of the central bank as an autonomous state division and, perhaps even more so, the instrument of stabilization grant.

The stabilization grant can arouse skepticism solely by its being untried, but particularly in a supranational currency area such as the eurozone, more concrete objections including distributional concerns could be raised. If, for example, every citizen of such a currency area were to receive the same amount of stabilization grant, this could prove to be highly conflictual. The wealthier states could see this as an indirect cross-national redistribution for which the central bank has no mandate.

This is a legitimate objection, but it is easily refuted. The stabilization grant could, of course, be paid out in different countries at different amounts if appropriate democratic decision-making procedures were put in place for this purpose. A supra-national central bank such as the ECB, for example, could instruct national central banks to pay the stabilization grant on their territory at their appropriate national level. Per capita amounts of national stabilization grants would then be at least roughly in the same proportion to each other as national average incomes.

This, too, could meet with political resistance arguing that the wealthier states of a currency area are committed to solidarity with the less prosperous states, especially so in periods of economic crisis. But where such conflicts could not be resolved by mutual agreement, the conclusion should not be that the stabilization grant is an inappropriate instrument of monetary policy. The more adequate conclusion would be that the currency area in question is falsely demarcated.

In an inadequately demarcated currency area, a monetary policy benefitting the citizens of all member states equally is not possible anyway, neither with conventional monetary policy nor in a fixed-rate system. In consequence, any treaties establishing a supranational currency area should clearly define procedures for later corrections of its demarcation. The neocratic institutional framework of monetary policy proposed for the fixed-rate system would make the pertinent rules much easier to conceive than in conventional frameworks.

It is certainly hard to imagine that a coherent fixed-rate system will ever be created in a currency area as heterogeneous as the eurozone. It is also unrealistic that a major central bank such as the US Federal Reserve will ever lead the way with such a system change. It is realistic, though, that at some point a small state with a currency of its own will be the first to engage in a fixed-rate system project and the related institutional reforms. In this, in the

testing of the fixed-rate model on a smaller scale, central banks of larger states should – to their own benefit – be all the more interested.

For the foreseeable future, though, large central banks are likely to regard the fixed-rate model as a potential rivaling system that they may even wish to fail. Yet in the very long term, one may hope for the opposite. It is to be hoped that at some point the world's major central banks will carefully study how a pioneering small central bank gains practical experience with the fixed-rate model, thereby also providing insights into its applicability in larger currency areas.

An ideal case would be for central banks or governments of large states to at some point encourage and support the central bank of a small state in such a pioneering role. But it is also conceivable that such a supportive role will at some time be played by potent private foundations or super-rich individuals. A significant number of such foundations and individuals command sufficient financial resources to allay a small state's fears of the risks of switching to a fixed-rate system. They could provide a small state with direct financial incentives, for example with a direct grant to all its citizens or by assuming a part of the existing public debt, they could offer to cover the costs of the scientific support of the system change, and they could offer to compensate for possible fiscal burdens accruing in the unlikely event of a failure of the fixed-rate system.²³ Such private support would also greatly improve the chances for a truly unbiased and encompassing evaluation of the pioneering system change.

It is hardly conceivable that such a project could ultimately be considered a failure. A fixed-rate system would create reliable monetary and economic conditions as they have never existed for very long in the past. The fixed interest rate would provide a reliable anchor for economic planning which – unlike, for example, fixed exchange rates – could last permanently. Even in the fixed-rate system, corrections of key parameters may, of course,

²³ Small, relatively advanced states would be predestined for such a pioneering role not only in monetary policy, but in many kinds of system changes including, for example, the introduction of a basic income / citizens' stipend system. In such projects as well, larger states, potent private foundations, and super-rich individuals could play a leading role as sponsors, initiators, and guarantors. For such a constellation of roles in the global system change process see also Wehner (2019, chap. 6).

become necessary, in particular corrections of the fixed interest rate, the allowed fluctuation range, and the related maturity term, but a risk of system failure would not emerge.

With a constant long-term interest rate, the risk of asset price bubbles is also greatly reduced, as asset prices are strongly influenced by long-term interest rates and the related speculation. This is all the more important as asset market bubbles are themselves a cause or at least amplifiers of cyclical fluctuations. So in this indirect way, too, by attenuating asset price fluctuations, a fixed-rate system has a stabilizing effect on the economy.

The fixed-rate system would not only stabilize the economy in general but in particular the banking system and the entire financial sector. A major cause of financial market crises is the lack of predictability of long-term interest rates and asset prices. When large banks, investment funds, or life insurance companies are in financial trouble, this mostly follows antecedent developments that in a fixed-rate system either could not occur or at least would be easier to predict.

Despite this increased stability, a fixed-rate system should preserve the existing stabilizing regulations of the financial sector, but a need for stricter regulation would very unlikely. For example, there would be less reason than ever to require banks to deposit a higher proportion of their customers' demand deposits with the central bank, and certainly no reason to require banks to hold 100% cash reserves for these deposits, as was first discussed after the Great Depression of the 1930s.²⁴ Nor would there be any reason to reserve money creation exclusively to central banks.²⁵ Thus, the fixed-rate model can help settle some still ongoing controversies about banking regulation, and it can, moreover, make some virulent disputes in monetary theory obsolete.²⁶

The advantages of the fixed-rate system would be most fully realized if it were implemented not in a single state or currency area, but also in neighboring countries with which there is a strong economic interdependence. Ideally, if a fixed-rate system were to be introduced, a citizens' stipend system would already exist, and the central bank would already be established as a fully autonomous state division. These would be the ideal conditions, but also

²⁴ As so-called Full-Reserve Banking. See Fisher (1935).

²⁵ As intended in the so-called "Vollgeldsystem" (full money system). See Huber (2010).

²⁶ See also the supplements below, esp. chap. 5.5.

a traditionally organized state could greatly benefit by leading the way with a fixed-rate system.

However, regardless of how, where, and when a fixed-rate system would be tested first, other states should not follow hastily. The fixed-rate system is a long-term reform concept, and its implementation calls for thoroughness, not speed. If at some point a pioneering state takes the lead with this, other states should not follow before the system is thoroughly tested and scientifically evaluated in at least one full business cycle. But that is how long it would take anyway for the widespread initial skepticism to be overcome. All the sooner a first small state should be won for a pioneering role.

For the future of monetary policy, two very different conceivable scenarios emerge from all this. An obvious but sobering scenario is a further muddling through at the current level, a monetary policy, that is, on vague theoretical grounds with insufficient instruments in the hands of an overextended institution. The other scenario is a fixed-rate system with novel neocratic institutions.

5. Some Supplements

In the long term, of course, the concept of the fixed-rate system raises many questions of detail, most of which are not to be discussed here. These are questions of theory and practice of monetary policy, but also questions of the political order and the political value system. This includes questions such as these:

- Under what circumstances might a fixed-rate system come to its limits and have to be abandoned as was the case with the gold standard and systems of fixed exchange rates?
- What difference, if any, does the fixed-rate system make for redistributive and employment policies?
- What precautions, if any, would have to be taken in the constitution to ensure a sustained successful operation and thus the existence of a fixed-rate system?

- Which conventional theories is the fixed-rate system most compatible with?

A few such and related questions will be briefly addressed below.

5.1 The Use of Instruments in the Fixed-Rate System

In the fixed-rate system, the objective of monetary policy is ambitious, and correspondingly, the practice of monetary policy would be highly demanding. This is already apparent from the expanded range of policy instruments. Whereas conventional monetary policy is mostly about changes in key interest rates and sales or purchases of bonds by the central bank, in the fixed-rate system, the central bank must also consider the use of stabilization grant or stabilization tax and also consider granting new long-term loans to the treasury and adapting the maturity of existing loans. Within the fixed-rate policy framework, the central bank may also be forced to combine the sale of long-term bonds with the purchase of short-term bonds to correct or prevent distortions in the capital market. Besides, the central bank would always have to bear in mind whether the fixrate and the associated maturity are still up-to-date, even though related adjustments would, if ever, become necessary only in very long intervals.

For the central bank, all this would be largely pragmatic learning by doing which could be successful without much of a theoretical foundation.²⁷ The central bank would have to learn through experience to what extent it can stabilize the nominal interest rate by conventional means and to what extent it must intervene with stabilization grant and other novel instruments. The intervals in which the new instruments must be used will be comparatively large in phases of relative economic stability. In the event of abrupt economic impacts caused, for example, by exogenous shocks on energy or commodity markets, trade conflicts, or financial market crises, the situation would be different. In these cases, it may become necessary to announce or disburse stabilization grant at short notice. But even then, the

²⁷ In the fixed-rate system, central banks would not need to worry about theoretical variables such as the equilibrium interest rate or the so-called macroeconomic output gap, i.e. the difference between production and production potential. The central bank would just follow concrete market signals that may be related to such theoretical variables.

This suggests that the need for theory would be substantially reduced if a fixed-rate system were implemented.

financial markets would, by putting upward or downward pressure on the long-term interest rate, always send clear signals regarding the need for action of monetary policy.

An extreme case of such intervention would be the following. Suppose that the fixrate set by the central bank was 3.0%, that inflation expectations for the next seven years were stable at 2.0% per year and that, correspondingly, the long-term real interest rate was stable at 1%. If in this situation the real interest rate fell by as much as 2% due to unforeseeable events, then the central bank would have to hurry to increase long-term inflation expectations by 2%, i.e. to 4.0%. According to the above approximate calculation, in that case a temporary stabilization grant of at least 5% to 6% per year – i.e. more than 35% over the seven-year period – of annual disposable household income would have to be stipulated and publicly announced. As a rule, a payout in decreasing installments would in such cases be most effective.

This is an extreme example, and the amounts to be engaged seem extreme, but they would be appropriate to the intended effect in such an exceptional situation. If lower amounts proved sufficient in the further course, the disbursements could be adjusted accordingly at any time.

The central bank would have to find out in practice how strongly and how quickly the announcement of stabilization grant affects expectations in the financial markets. Especially in the early stages of a fixed-rate system, it might be necessary to combine promises of longer-term stabilization grant payments with a high instant payout, e.g. a one-off payment of stabilization grant for one or more years in advance. Since longer-term periodic payments of stabilization grant could be combined with such advance payments in any conceivable way, there would always be appropriate means to influence the nominal interest rate through inflation expectations as intended. Moreover, as mentioned, in extreme cases the central bank would always have the further option of adjusting the fixrate or the related maturity term or both to fundamental changes in the economy.

All in all, a fixed-rate system offers the central bank ample opportunities to achieve its objective in all conceivable circumstances. It would have the capacity to fill any gaps in aggregate demand at any time, and it could, if necessary, at any time effectively adjust, correct, and compensate any such measure. The same is true for measures taken to dampen aggregate demand.

5.2 Inflation Targets or Fixed Interest Rates?

The European Central Bank has set an inflation target of just under 2 percent for the euro area, but it has mostly missed that target, with significant deviations in both directions. As a result, doubts have grown as to whether this target is appropriate. There is an intense dispute, though, as to whether this target is to be considered too low or too high. This alone strongly indicates that committing monetary policy to a predetermined rate of inflation is fundamentally questionable. It is all the more questionable to determine a common target for the inflation rates of countries as diverse as those of the eurozone.

The fixed-rate system avoids such questionable provisions. Its political practice may be interpreted as following an implicit inflation target, but this target would, firstly, not refer to actual, but expected inflation, and, secondly, it would be self-adjusting. It would be continuously adjusted in the opposite direction to the expected real interest rate.

The history of inflation in the eurozone gives evidence of a failure of the European Central Bank's monetary policy, but this failure is at least instructive. It shows that substantial fluctuations in inflation are unavoidable and may even be essential for optimal economic development. But neither theory nor market signals provide reliable evidence on which inflation rate is optimal at what time. This, too, suggests that a target rate for long-term bonds would be a better anchor for stabilization policy than an inflation target.

In the fixed-rate system, the central bank would be forced to counteract any deflationary tendency with massive use of, in particular, stabilization grant. Thereby, it would rule out that inflation and inflation expectations – and as a consequence, the long-term nominal interest rate – follow a downward trend of the real interest rate as easily as it often appeared to in recent times.

Currently, increases in the inflation target for the eurozone are mostly argued for on the grounds that in some member states, the economy is on the brink of deflation and that stronger overall economic stimuli are required. Those, in contrast, who call for lowering the inflation target, mostly argue that if the past loose monetary policy were to continue, inflationary bubbles, price bubbles in asset markets, and, ultimately, a new financial crisis would ensue. The latter amounts to resigning to the poor economic performance in parts of the eurozone.

This dispute reflects the dilemma of monetary policy in an overly heterogeneous currency area, and it also shows that conventional monetary policy cannot do much to overcome this dilemma. If, in contrast, the European Central Bank were obliged solely to keep the interest rate on its self-issued seven-year bonds permanently constant, such fruitless controversies would be ruled out. Then there would, on the one hand, be more leeway for the course of inflation, but on the other hand less leeway in matters of granting, maintaining, ending, and denying membership in the monetary union.

5.3 Negative Real Interest Rates, Inflation, and Capital Destruction

The fact that long-term interest rates in the euro area have partly fallen below zero raises the question of why this is the case and how the central bank should react to it. An obvious answer is that the so-called equilibrium interest rate, which would result from market conditions without influence from the central bank, has fallen into the negative range, and that a central bank cannot do much about it.

There are indeed good arguments for this. A major argument is demographic development. The longer the prospective retirement age, the higher the standard of living aspired to for old age, and the higher a proportion of the population is providing for old age financially, the more savings will be made for old age in total. But the more savings are searching for profitable investments, the lower the equilibrium interest rate. If the return on savings falls into the negative range, then even more new savings must be made to compensate savers for the ongoing depreciation of previous savings, thus making the equilibrium rate fall further.

The situation is aggravated if not only households but also companies save an increasing proportion of their income. This is likely to happen when, as in recent times, the average profitability rises. Profitability, in turn, increases as more and more companies specialize in market niches and segments where profit margins are higher than in the case of perfect competition. As a result, a growing volume of accumulated corporate profits is searching for profitable investments, putting further pressure on the equilibrium interest rate.

This increased volume of capital meets an economy with greatly altered investment opportunities. At least in saturated and increasingly digitized economies of highly developed countries with shrinking population, there is no longer a need for high growth rates of

physical capital to increase prosperity, while ever more investment is needed in knowledge, know-how, and software development. This type of investment, however, is difficult to finance with traditional loans, as it lacks physical capital that could serve as loan collateral. This, too, makes investment opportunities for strongly increased savings either less profitable or riskier than in the past.

The resulting trend towards negative interest rates is of a long-term nature. Thus, interest rates on long-term bonds may fall even further, thus evoking – if monetary policy does not change its course – a long term scenario of continued stagnation and repeated recessions on the brink of deflation. This is even more likely to occur if, in such circumstances, the state, too, makes savings to reduce its debt. In such circumstances, the central bank should not only buy government bonds on a large scale, but it should also arrange for the state to increase its debt by stepping up investment expenditures. The rules of the fixed-rate system described above would empower the central bank to do so.

Of course, a fixed-rate system could not change the fundamental economic conditions that lead towards deflation and negative interest rates. Even a fixed-rate system could not enforce a higher return on long-term investment, guaranteeing savers a higher interest rate and making them better off in old age than with traditional monetary policy. A fixed-rate system could ensure, though, that the long-term nominal interest rate never drops even near the negative range and that the value of savings is not, at least nominally, eroded by inflation. At least subjectively, the consequences of negative real interest rates would thus be appreciably mitigated, thereby also preventing panic reactions of savers.

The fixed-rate system would also effectively counteract the risk of crises and collapses of the financial markets. In the traditional system, there may be situations in which an ultimately inevitable devaluation or partial destruction of excess monetary capital can only be effected by a crash in the financial markets, i.e. by the extinction of monetary claims and liabilities through collapses of companies, financial institutions, and, if applicable, states. In contrast, in the fixed-rate system, the possibility of devaluation of long-term monetary claims and liabilities through inflation would always be maintained. To this end, the central bank would only have to set the fixrate – and therewith expected and real inflation – high enough as required by the circumstances.

5.4 Fixed-Rate System and Optimum Currency Area

The eurozone could be held together only by deploying extreme monetary and fiscal emergency measures, and this makes it a cautionary example of political recklessness in delimiting currency areas. For some countries, belonging to the eurozone has paid off economically, but other countries have paid and are paying a heavy price. If so far the eurozone has not often been seriously questioned, this is mainly due – apart from the long habituation – to the lack of clear exit rules. Moreover, there seems to be a widespread fear that one country's exit could trigger a chain reaction leading to the collapse of the eurozone.

The lesson from this should be that the demarcation of currency areas is to be conceived as an open process from the outset. The eurozone should try to rise to this requirement and belatedly adopt clear and detailed democratic rules for both exit and entry.

A key to such an open process is the neocratic concept of freedom of political association.²⁸ According to this concept, decisions on entry to and exit from a political territory should lie as directly in the hands of the citizens as possible. It should also be possible to make these decisions separately for different policy areas. Such decisions would then have to be taken in very specific, highly developed procedures, tailored to the respective policy area and, wherever feasible, in multi-stage procedures.²⁹

A consequence would be to let each state and each politically demarcated region freely decide on access to or exit from a currency area by direct democratic vote. As a further consequence, the citizens of existing currency areas would then have to be entitled to decide on the accession of new states or regions in the same way, and the same would then apply to the possible exclusion of a region. This, too, could and should then be decided on directly by the citizenry of the respective currency area.

This possibility of exclusion by direct democratic vote would have far-reaching political consequences. If this were established in the eurozone, then any national central bank within the European Central Bank system would have to struggle to prevent the risk of involuntary exclusion from the eurozone by the vote of the citizenry of the other Member States.

²⁸ For this concept see Wehner (2019a) and Wehner (2020).

²⁹ For an example of such procedures see Wehner (2020).

Such direct decision-making procedures for entry, admission, exit, and exclusion of state territories could best be implemented for policy areas that are institutionalized as truly autonomous state divisions not subordinated to a generalist government responsible for all policy areas. For monetary policy, i.e. for the central bank, the conditions for eventually achieving such independence as an autonomous state sector are more promising than for other policy branches. For central banks, such autonomy would indeed be a promise, but the possibility of being excluded from a currency area by citizens' vote would be perceived as a threat. In the long term, though, such a threat would have an important salutary political effect. In the history of the eurozone, some member countries have provided ample examples of fiscal and monetary recklessness that in the face of the threat of exclusion from the eurozone by referendum would be hard to imagine.

5.5 Fixed-Rate System, Full Employment, and "Modern Monetary Theory"

Monetary policy is stabilization policy, and this is true without reservations even in a fixed-rate system. But monetary stabilization measures can, of course, have significant side effects. They can lead to overheating in the labor market and to unintended surges in inflation and, in consequence, to economic crises with high unemployment. From the isolated perspective of monetary policy, such crises, even if they originate from previous misjudgments of monetary policy, are necessary stabilization crises. Seen in this way, the associated high unemployment would also be a necessary outcome. But it would be irresponsible to dismiss the effects of stabilization crises so indifferently. Central banks are not responsible for maintaining low unemployment rates, but they are responsible for preventing serious stabilization crises and the associated rises in unemployment.

Central bankers and many economists have in the past often seemed to give little consideration to the employment problem and the social issues associated with it. One of the reasons why this impression could arise is that economic downturns and underemployment are difficult to overcome with conventional monetary policy. But dogmatic rejection of fiscal deficit spending as a means of economic stimulation has also contributed to this impression.

This rejection can be justified by historical experience since deficit-financed economic stabilization has been anything but a success story in the past. As a consequence, strict

austerity policy largely appeared to be the lesser evil, despite negative impacts on employment.

But fiscal austerity is by no means a need for stability. In conjunction with traditional – and accordingly flawed – monetary policy, strict austerity policies can even, as has been apparent also in recent times, weaken social cohesion in affected countries and even encourage political extremism. Stabilization policy, including the monetary one, has, thus, serious social and political implications. Any dogmatic restriction in the practice of stabilization policy, both monetary and fiscal, entails social and political risks.

A theory that has opposed such dogmatism is the so-called Modern Monetary Theory. This theory regards the treasury and the central bank as a single unit of action capable of stimulating demand, and thus employment, at any time to any extent through deficit-financed increased expenditure. The conventional state indeed has this capability, since it can, in its capacity as central bank, always grant itself credit to any desired extent. From this perspective, it is also true that the state, governing both monetary and fiscal policy, could ensure a steady full utilization of macroeconomic capacity. As long as the state did not overheat the economy by exaggerated deficit spending, there would, accordingly, be no serious cyclical stabilization crises, and social and political stability would also be served. But this presupposes that the responsible political authority is fully up to this task.

The concept of the fixed-rate system presented here – one can call it *neocratic monetary theory* because of the associated "neocratic" concept of political order – also opposes dogmatic limitations of conventional stability policy, but it comes to different and more fundamental conclusions. It calls for new instruments of stability policy, and it also calls for a reshaping of the institutions responsible for this policy.

The concept of the fixed-rate system recognizes the need for much more powerful instruments of stability policy than were available in the past. It discusses, in addition to the conventional instruments, expansionary per-capita stabilization grants, restrictive income tax surcharges, and – in exceptional cases – restrictive negative stabilization grants. Moreover, it provides that the central bank can allocate loans to the government on any terms that may seem expedient – if necessary at negative interest rates and for an indefinite duration.

According to neocratic theory, though, these instruments should not be entrusted to a conventional government responsible for all areas of politics at once. This theory questions

the competence of the traditional political authorities responsible for stability policy, including the central banks, and ascertains that such conventional authorities would not meet the challenges of a combined monetary and fiscal stability policy.

The more complex the task of stability policy becomes, the more frivolous the insinuation that a combined monetary and fiscal stability policy would lie in competent hands with a traditional government that is responsible for all other policy areas as well. Neocratic monetary theory demands that the central bank be institutionalized not only, as hitherto, as a nominally independent, but as a fully autonomous state division. This division would have the overall responsibility for monetary and – in the role as sole lender of the government – fiscal stability policy.

Unless combined with such institutional and instrumental innovations, the approaches of Modern Monetary Theory do not open credible realistic prospects of a more successful stability policy than in the past.

5.6 A Conclusion

The fixed-rate system would overcome fundamental flaws in traditional monetary and fiscal stability policies, but of course, these policies would not be infallible in this system either. Even a central bank that is fully autonomous as described above would be fallible and could make insufficient, excessive, and counterproductive use of the instruments proposed here. It cannot be ruled out that such a central bank would temporarily lose control of the long-term nominal interest rate which would then deviate substantially from the fixrate. With the instruments proposed here, though, the central bank would always be able to correct such deviations quickly, thereby minimizing negative impacts on employment.

The negative scenarios conventional stability policy debates revolve around time and again would no longer play a prominent role in a fixed-rate system implemented with some competence. As long as the fixrate were wisely chosen and closely adhered to, thereby stabilizing other long-term interest rates as well, there could be no deflation and no uncontrolled inflationary spurts, and if the central bank pursued a highly transparent and comprehensible information policy, there would be no serious currency crises, asset price bubbles, and financial market crises either. Cyclical overheating and subsequent stabilization

crises would also be prevented, and, at least in the longer term, there would be no more grounds for crisis-enhancing anxieties.

Achieving this ambitious goal would require "only" a paradigm shift in stability policy and "only" a political order in which the central bank gained full political autonomy and democratic legitimacy. At least mentally, this is an easy game to play.

It would be a similarly easy game even for existing central banks acting within their conventional paradigm to cautiously test novel stabilization instruments as here proposed.

Postscript:

On the Governance Structure of Fully Independent Central Banks

In an essay on monetary policy, details about electoral procedures and governance structures may seem out of place, but not so in this context. The above remarks on independence and democratic legitimacy of the central bank suggest some further explanations, however remote the matter may seem at first glance.³⁰

That monetary policy should be somehow democratically legitimized may, on the one hand, appear as a matter of course, but it may also evoke highly disturbing associations. The notion, for example, that monetary policy is debated in election campaigns of the usual kind on the usual level as in conventional democracy, is disquieting. It raises fears that a democratically legitimized monetary policy will end up in a populist quagmire rather than being elevated to the highest level of competence possible. Democratic legitimacy in monetary policy should, therefore, not be attempted to create in conventional democratic procedures. Instead, a novel

³⁰ For more details on the election procedures and governance structures here outlined see Wehner (1995) and www.neokratieverfassung.de, there in particular <http://www.neokratieverfassung.de/neokratieverfassung/home/-organisationsnormen.html>.

procedure would have to be established that combines democratic legitimacy and professional competence in the most effective way possible. This procedure must, at the same time, ensure a truly unqualified political independence of the Central Bank. These are precisely the objectives the so-called neocratic form of political order is meant to attain.

The basic organs of a neocratic monetary authority would, in principle, be the same as those of a conventional democratic state. There would be a legislative body in the form of a parliament responsible exclusively for monetary policy, and this parliament would elect an executive body, i.e. a kind of money government, which would fulfill the functions of a traditional central bank. But these elementary features would largely exhaust the institutional commonalities of a traditional democratic state and a neocratic monetary authority. The main differences lie in the procedure in which the members of the monetary parliament would be appointed.

In this procedure, the initial democratic legitimacy would not be brought about by elections but by lottery. In a first step, for example, constituencies could be formed in which interested citizens can register for the draw as initial mandate holders. This registration process would be the first modest step in raising the level of expertise of the mandate holders above the average level of the population. For the same purpose, education certificates such as academic diplomas could be made a prerequisite for the candidacy in the lottery.

Those finally appointed in the lottery process can form a convention whose members would then elect the members of the money parliament in a special multi-stage procedure reducing the number of mandate holders and raising their average qualification stage by stage.

In a final procedure, then, the money parliament – manageable in number but all the more competent – elects the money government.

In this entire process, it is crucial that the following conditions are met:

- *Candidates, mandate-, and officeholders may not be and may not have been active in other fields of politics.*
- *Candidates, mandate-, and officeholders may not be and may not have been members of a political party.*
- *Mandate- and officeholders are elected for a long singular term of, for example, no less than eight years.*

– A certain portion of the mandates is allocated by incumbent or departing mandate holders.

– External candidates are eligible for all offices.

A further option would be to install a semi-professional second chamber of the money parliament as an advisory body. The members of this body would be determined in a similar, but somewhat simpler and shorter process than those of the first chamber.

All in all, the above regulations would warrant not only an undisputably high professional competence but also a dignified democratic contest in monetary policy.

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