THE EUROPEAN CENTRAL BANK AT 25: EFFECTIVENESS OF THE MONETARY POLICY

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Abstract: *25th anniversary of the European Central Bank is the occasion for an assessment of its monetary policy. Maintaining the price stability is the main objective according to the ECB statute. However, changes in economic conditions led to unconventional measures and additional objectives like financial stability.*

A set of indicators is used in order to assess the efficiency of the monetary policy medium-term inflation rate, deviation between the actual and the targeted interest rate on the interbank market and the output gap. Data shows that close to 50% of the time ECB failed to meet its inflation target.

Key words: *European Central Bank, monetary policy, inflation*

JEL: *E3, E4, E5*

1. Introduction

1 June 2023 marks the 25th anniversary of the European Central Bank. The main objective of this institution is to maintain price stability, and in this respect, it is the successor of the German central bank, the Deutsche Bundesbank. Formally speaking, the ECB should be the most independent central bank in the world, which in turn would contribute to the fulfilment of its objective.

Since its inception, the ECB has evolved and begun to perform tasks not originally envisaged. It is currently involved in maintaining financial stability, micro- and macro-prudential supervision, and it is also a decision-making partner of the European Commission. Some of these additional tasks have been regulated by legislative changes, while others are presumably covered by the Treaty on European Union and the Statute of the Bank.

The independence of the central bank is a very important condition for its effectiveness. Cukierman et. al. (1992) provides four measures of central bank independence and explores their relationship with inflation. The study also reveals the difference between developed and emerging markets regarding the relationship between independence and inflation. Alesina et. al. (1993) explores the relationship between central bank independence and the dynamics of key macroeconomic variables such as real interest rates, growth and unemployment. The main conclusion is that central bank independence increases price stability but cannot influence indicators related to the real economy. Fuhrer D. C. (1997) seeks empirical evidence to support the thesis that an effective central bank should be independent of political influence and should make the necessary efforts to target inflation directly. Klomp, J. and De Haan, J. (2010) examines the relationship between central bank independence and inflation in over 100 countries and finds that only a small number of countries show a statistically significant relationship.

Wellink N. (2023) points out that some of the necessary conditions for a smoothly functioning monetary union are not present in the euro area. The article examines the formulation of the

price stability objective, the use of unconventional monetary policy instruments, monetary transmission problems, and the financial stability framework.

The literature review points to the idea that the central bank should be independent, have a clear mandate and effectively implement its monetary policy instruments.

This study focuses on monetary policy and more specifically on the effectiveness of monetary policy, which is defined as the extent to which the stated objective of price stability is being met. During the period under review, there have been several major changes, especially in the instruments used in the conduct of monetary policy (so-called unconventional policy).

Depending on the fulfilment/non-fulfilment of the price stability target, several periods can be distinguished: from the establishment of the ECB until March 2002; April 2002 to September 2009 - the longest period of non-achievement of the inflation target; October 2009 to July 2012 - the financial crisis and the response to it; August 2012 to March 2014 - again non-achievement of the inflation target; April 2014 to April 2022 - the period of "missing" inflation and the COVID-19 crisis; and May 2022 to the present - high inflation.

The second part of this paper examines the objective of monetary policy to achieve and maintain price stability. The evolution of the way this objective is formulated is examined and explained.

The third part defines and explains in detail the indicators for assessing the effectiveness of monetary policy. Three main indicators are proposed: the dynamics of the inflation target itself, the deviation between the interest rate target and market interest rates, and the deviation from the euro area potential GDP (output gap). The lack of a specific definition of what is meant by inflation in the medium term makes it difficult to assess the achievement of the target. This challenge can be overcome by taking average annual inflation over a three-year period, which is consistent with the classical notion of medium-term.

The second indicator takes as target the interest rate on the main refinancing operations (MRO). ECB monetary policy will return to its classical basics when this interest rate starts to play its primary role. This means that the deposit and lending facility rates will also return to their classical meaning and role.

The output gap is an important indicator that suggests how monetary policy relates to the phases of the business cycle and whether it is pro-cyclical in certain periods.

The fourth part of the paper concludes and reflects on periods of higher and lower than target inflation and their implications for economic growth.

2. The goal of the monetary policy

The Treaty on the Functioning of the European Union (TFEU) and the Statute of the European Central Bank (ECB) set out the Bank's main task - to maintain price stability. However, price stability itself is not explicitly defined. In fact, therefore, the Governing Council of the ECB adopted its own definition in October 1998. According to this definition, price stability is an increase in the Harmonised Index of Consumer Prices on an annual basis for the euro area below 2% over the medium term. The medium-term period is considered to be between 1 and 3 years. Thus, the GC quite deliberately does not set a specific inflation target in the range between 0% and 2%.

The ECB's official target refers to the rate measured according to the overall harmonised index of consumer prices, but in addition it also uses the so-called core inflation, which is the exclusion from the index of food and energy prices, which are assumed to be more sensitive to temporary factors. Thus, both indicators (headline and core inflation) are used simultaneously by the ECB in its monetary policy decisions.

The first review of monetary policy strategy was conducted in 2002. In 2003, there is a formal publication, namely Issing et al. (2003). The Governing Council reaffirmed the chosen definition with the specification that, if the target is met, the inflation rate will be close to but below 2% in the medium term. This means in effect that the inflation target is considered to be met when the rate is between 0% and 2%, i.e. the presence of deflation in the medium term is thus interpreted as non-fulfilment.

In 2019, the ECB's Governing Council is undertaking a change to the definition of price stability. A symmetric target of around 2% was adopted. This means that the 2% upper bound is effectively removed and inflation can fluctuate on either side of 2%. The 2% inflation target in the medium term has not been changed, but the rate is now allowed to diverge and exceed this value in the short term. The ECB's commitment to price stability is thus weakened.

The formal confirmation of this change occurs in 2021 with the revision of the monetary policy strategy. The new approach is an insufficiently specified symmetric target around 2%. The impact of this change can be observed in the Bank's final period of operation from May 2022 onwards. The acceleration in inflation is also due to the increased appetite for going beyond the 2% limit.

The ECB's Governing Council sets the inflation target to be 2% and, moreover, upward or downward deviations are equally undesirable. However, changing the target does not make it any clearer, nor does it lead to increased credibility. Thus, it does not determine in what cases action would be taken in the event of deviations from the target. Such temporary deviations are possible, but if they have occurred in past periods this does not necessarily mean that corrective action should be taken. Monetary policy is forward-looking.

The understanding in society of a target defined in this way is that it would allow for longer periods of looser monetary policy, especially during an economic recovery. Thus, in the ensuing episode, when inflation started to rise in the second half of 2021 and then reached record high annualised rates in 2022, the comment from the ECB was that it would be gradually lowered to its medium-term target. However, this episode has given additional arguments to the proponents of the idea of raising the numerical value.

3. Indicators for assessing the effectiveness of monetary policy

The first indicator that could be used to assess the monetary policy of central banks under an inflation targeting regime is the inflation rate observed. According to the ECB Governing Council decision, inflation should be close to 2% (and above 0%) in the medium term. This means that in fact the inflation target should be achieved in a sustainable manner over time and short-term deviations do not define a failure with respect to the set target. Of course, such short-term deviations should not be ignored; they should serve as a signal that action should probably be taken to steer the inflation trajectory in the desired direction.

In order to be consistent with the target defined in this way, I use the annual average inflation rate over a 3-year period. According to conventional understanding, the chosen period is

adequate for the set target. Moreover, failure to meet the inflation target for an indicator defined in this way implies that the deviation is persistent and corrective action by the ESB is necessary.

This gives 283 observations until July 2023. Several periods can be distinguished according to the fulfilment of the inflation criterion (between 0% and 2% according to the defined medium-term measure). The first of these is from the establishment of the ECB until March 2001, when the criterion is met. During this period, however, the dot-com (.com) bubble burst, necessitating the ECB to adopt an accommodative policy.

As a result, inflation started to accelerate and this led to the next period, from April 2002 to October 2009, which lasted 90 months and then the ECB did not meet the inflation target. During this period, the maximum inflation rate according to the selected indicator reached 2.56%, i.e. the deviation was not that large. However, the length of the period is perplexing because of the lack of a more timely response from the ECB.

This period was characterised by the first and second waves of enlargement of the European Union (in 2004 and 2007 respectively). It has been combined with the maintenance of low monetary policy base rates, which also means negative short-term interest rates in the euro area. The monetary expansion of this period also served as an instrument to support the newly acceded EU members through short-term and direct investment flows. The most advanced economies among them managed to meet the nominal convergence criteria relatively quickly and to join the monetary union as well.

The tightening of monetary policy after the prolonged expansion, together with the development of the financial crisis in the United States, contributed to the development of a recession in the euro area. The fall in economic activity means a decline in employment, a contraction in credit and in the balance sheets of the banking system and of non-financial corporations.

The following period, which lasted until July 2012, served to recover the economies from the economic crisis and was characterised by the fulfilment of the inflation target. The ECB undertook a further aggressive cut in key interest rates. However, the financial turmoil has led to a change in investors' perceptions of the default risk of individual euro area countries. While spreads tightened strongly before the crisis, during and after the crisis quality preferences and risk aversion led to strong demand for German government securities at the expense of mostly Greek, Portuguese, Spanish, Italian and Irish ones. As a result, risk premia for the latter have risen sharply and this has contributed to the development of the euro area debt crisis.

In the 20-month period from August 2012 to March 2014, the ECB again failed to meet the medium-term inflation criterion. This time, the maximum inflation rate according to the selected indicator reached 2.34%, i.e. the deviation was relatively small.

The euro area economies then slowed down. The economic stagnation also affected the price level, which changed slowly. During this period, the interest rate on the ECB's main operations was gradually lowered to 0% and that on the deposit facility even became negative, which represented a precedent in the history of finance. In this way, euro area credit institutions effectively paid interest to the ECB on their excess reserves held with it. Despite this and asset purchases, inflation remained low.

In 2020, the COVID-19 crisis and the measures to prevent its spread involving the closure of economies and the suspension of some activities lead to a short-term severe shock that caused a serious downturn in economies around the world, including in the euro area. Previous attempts to tighten monetary policy got suspended. Massive fiscal and monetary stimulus was launched.

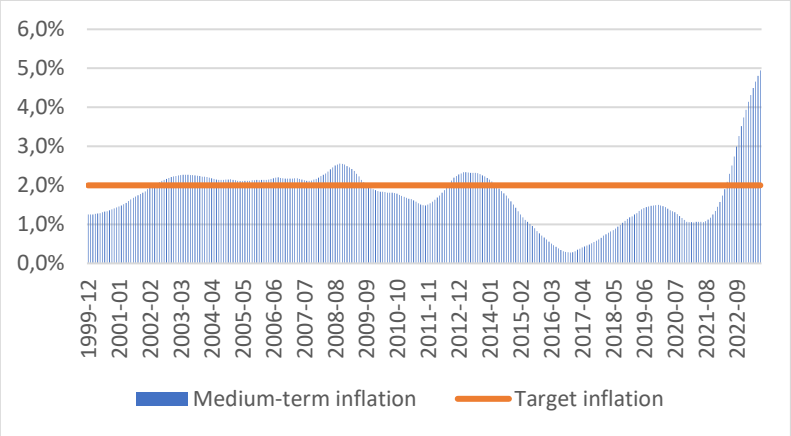
Together with the disruption of supply chains for some commodities (supply shock) and a massive demand stimulus in the recovery process, this led to a rapid acceleration in the inflation rate starting in early 2021. The process received a further boost from the outbreak of war in Ukraine and the decision of EU countries to end their dependence on energy resources and other raw materials from Russia.

However, the next period, according to my proposed inflation criterion, began in May 2022 and continues at present. This period is characterised by a failure to meet the inflation target and the presence of a serious deviation from it, with the indicator reaching a maximum value of 4.95%. The ECB's response is overdue. The arguments of the members of the Governing Council are that the deviations are temporary, the factors causing inflation are one-off effects that will subside over time and this will lead to a calming of inflation.

However, these arguments proved inadequate to the reality. The ECB is started to raise its key interest rates, but nevertheless maintained the policy of quantitative easing for a period of time, thus continuing to maintain a high level of liquidity in the euro area. This, of course, did not help to slow inflation.

After all, from the ECB's establishment until July 2023, the total number of months in which the ECB did not meet its medium-term inflation target was 124. This means that in 43.8% of the entire period the inflation target was not met, and the ECB only fulfilled its mandate in 56.2% of the period.

Figure 1: Medium-term and Target Inflation Rate



Source: The European Central Bank and author's calculations based on EUROSTAT data.

The second assessment indicator is the deviation between the target interest rate and the market interest rate. The importance of this indicator is determined by its use as a key instrument in the inflation targeting regime. The idea is that the value of the interest rate on the main operations should be as close as possible to the overnight rate on unsecured deposits in the interbank market. If the ECB manages the interest rate target and liquidity in the interbank market effectively, the achievement of the inflation target should consequently follow.

Two periods could be distinguished according to the degree of deviation of the target rate from the market rate in the interbank market. The first covered the period from the creation of the ECB until January 2009. Then, the difference between the main operations rate and the interbank market rate ranged from -31 bp to 19 bp, with an average deviation over the period of -5 bp. That is to say, during this period the ECB used the interest rate as its main monetary policy tool.

However, the outbreak of the global financial crisis and the accompanying economic recession changed the situation. The ECB started to use unconventional monetary policy measures through (massive) asset purchases. The idea of short-term interest rate management is to influence economic activity through the yield curve. When short-term interest rates rise, they are to be followed by longer-term interest rates, slowing domestic demand and the rate of inflation.

Under unconventional policy, the ECB is directly involved in other markets - it can trade longer-term government but also corporate bonds, thus directly influencing liquidity and interest rates in these markets. However, this distorted the long-term bond markets because it produced different interest rates than would have been the case without central bank intervention. Thus, the ECB's main tool is gradually shifting from short-term interest rates in the interbank market to asset purchase programmes, and the size of the balance sheet of the European System of Central Banks has become the measure of these operations.

However, the change in the tool affected the observed indicator. The difference between the target value and the market value increased. During the period from February 2009 to July 2023, the maximum difference between the two rates reached 101 bps, while the average was 44 bps. The second period therefore differed significantly from the first.

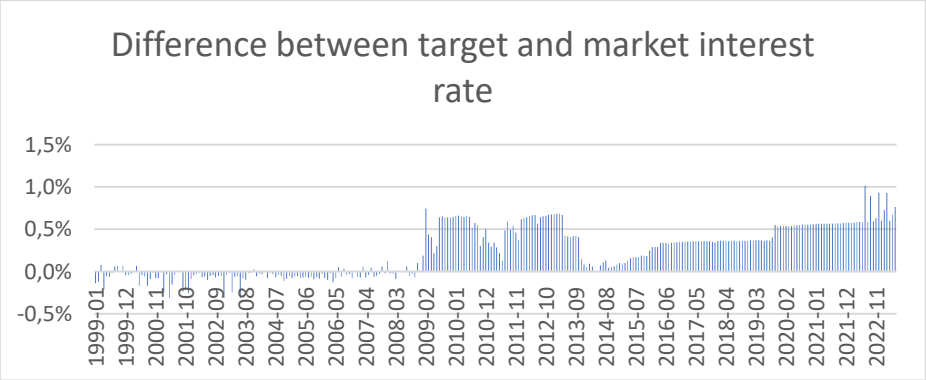
In fact, in the second period, the interbank market rate was closer to that of the deposit facility offered by the ECB to credit institutions, coupled with a prolonged period of negative values for this indicator. In November 2013, as a result of the resolution of the euro area debt crisis, the interest rate differential between the main operations rate and the interbank market rate narrowed.

In October 2014, however, a historic event in finance took place: as a result of ECB policy, the euro area interbank market rate turned negative for the first time in history. In March 2016, the ECB reintroduced a zero interest rate on the deposit facility amid prospects of the euro area stabilising and achieving higher economic activity. The next important date was 1 October 2019, when the Euro Short Term Rate was introduced, replacing the previously existing EONIA.

In July 2022, the main operations rate was raised to 0.5%, marking the start of this cycle. From September 2022, the interbank offered rate was already positive.

In fact, the change in the main instrument used and the introduction of unconventional monetary policy were the main factors behind the deviation between the target and market interest rates. However, as I also pointed out above, this also contributed significantly to the acceleration in the inflation rate from the beginning of 2021.

Figure 2: Deviation between Target and Actual Interest Rate in the Interbank Market

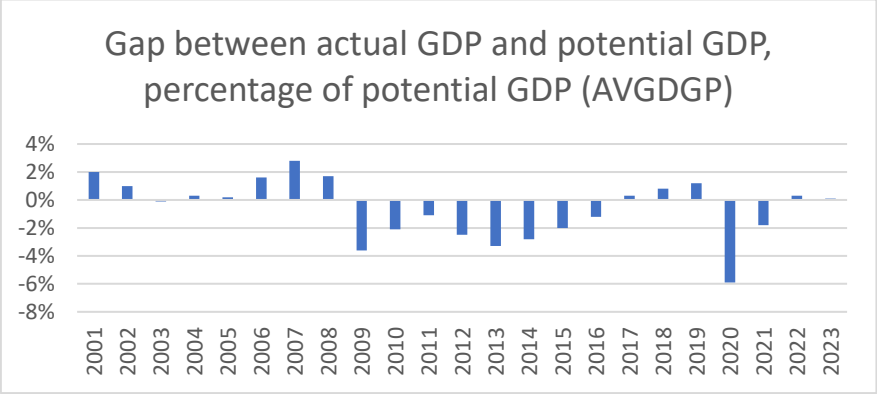


Source: The European Central Bank and author's calculations.

The third indicator is the deviation from the potential GDP of the euro area (output gap). Annual data for this indicator are available from the European Commission's AMECO database. They show that before the dotcom (.com) bubble burst, the euro area economy was above its potential, a situation that has since been corrected, with EU enlargement having an impact, as some capital flowed into these economies, which also generated additional demand for euro area output.

A highly expansionary monetary policy then led to an overshooting of potential in the period 2006-2008. This was a period of high but unsustainable growth in the euro area and the rest of the EU, which was interrupted when the global financial crisis erupted.

Figure 3: Output Gap in the euro area



Source: European Commission's database AMECO.

From 2009 to 2016 was the most prolonged period when the euro area economy was below its potential. This was driven first by the recession that accompanied the Global Financial Crisis and then by the Eurozone Debt Crisis, which permanently depressed economic growth in the region.

The ECB responded to these events by undertaking active asset purchases. The first sharp increase in its assets took place in September 2008, when, on a monthly basis, the assets of the Eurosystem increased by 35% or EUR 512 billion. Thus, at the end of 2008, they reached EUR 2 trillion for the first time. The programme for asset purchases, the Securities Markets Programme, was launched in May 2010.

Asset purchases continued and in March 2012 the Eurosystem's balance sheet total reached EUR 3 trillion. In September 2012, Outright Monetary Transactions (OMTs) were launched and in principle these two programmes should be neutral in terms of money supply. The resolution of the debt crisis and the stabilisation of the euro area economy contributed to a contraction of the ESCB's balance sheet in 2013-2014.

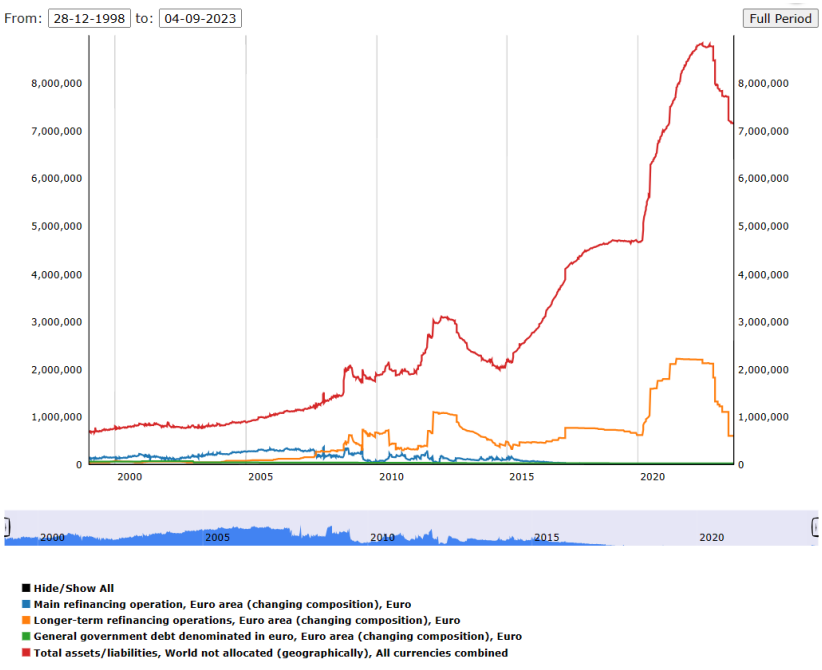
In June 2014, the programme of Targeted Long-Term Refinancing Operations was launched with a maturity of 3 years. However, asset purchases were then resumed and in April 2016 the Eurosystem's balance sheet reached EUR 3 trillion again. Then, in less than a year (until March 2017), the assets reached EUR 4 trillion, which means that their year-on-year growth exceeded 33%.

From the beginning of 2019 until March 2020, the Eurosystem's balance sheet figure remained relatively constant at around EUR 4.7 trillion. In March 2020, however, the COVID-19 crisis erupted, triggering a swift reaction. The Pandemic Emergence Purchase Programme (PEPP) was launched and by the end of the month the Eurosystem's assets had already reached EUR 5 trillion. The explicit objective of the programme was to prevent deflation.

Active asset purchases have begun, with €600 billion in asset purchases over a one-week period reaching €6 trillion at the end of June 2020. The rate of purchases remained high until the end of the year and in December the balance sheet figure was already EUR 7 trillion, i.e. in one year assets had increased by 48.7% or EUR 2.3 trillion. The record high value of the ESCB's balance sheet was reached in June 2022 at EUR 8,836 billion. In fact, net asset purchases have only been discontinued in June, even though year-on-year inflation in the euro area has since exceeded 8%. Nevertheless, the programme was launched in July in order to keep the euro area Transmission Protection Instrument (TPI) operational. As a justification for the ECB's delayed reaction, one can point to the fact that, according to the June 2022 medium-term inflation gauge, inflation exceeded 2% for only the second consecutive month, but against the pertinent background of a sustained upward trend.

Indeed, the COVID-19 crisis caused a sharp change in the deviation of current from potential output, with the euro area economy suddenly ending up well below its potential due to simultaneous demand and supply shocks. The active asset purchases commented above, together with the fiscal stimulus, contributed to the relatively rapid recovery in demand. However, the shock to global trade, together with the outbreak of war in Ukraine and the EU countries' reaction to it, contributed to catching up with the slippage already in 2022.

Figure 4: Assets of the Eurosystem



Source: The European Central Bank

4. Conclusion

In the aftermath of the Global Financial Crisis and the Debt Crisis, the euro area has experienced a prolonged period of low inflation and a divergence of the economy from its potential. This has caused lasting fears among European policymakers of a repeat of the Japanese economic scenario - prolonged deflation and low economic growth. This appeared to be a major motivation for monetary policy decisions in the euro area.

In fact, year-on-year inflation data have indicated that there have been only four episodes of deflation in the ECB's lifetime, two of which were directly related to sharp declines in economic activity - the Global Financial Crisis and the COVID-19 crisis. In both cases the deflation lasted for 5 consecutive months. In the other two episodes, between December 2014 and March 2015 and then February-May 2016, they did not last long enough to contribute to price declines according to the measure of medium-term inflation that I constructed. So, in fact the deflation fears were not justified, and at the same time the problem of slower economic growth could not be solved by means of monetary policy. This once again proves that the ECB's mandate is about price stability but not about employment or growth.

However, the bottom line is that for prolonged periods of time, the inflation rate has exceeded the inflation target set by the ECB's own Governing Council. This implies that the effectiveness of its core task could be improved. The alternative option is to recognise the existence of other objectives that are, in certain circumstances, seen as more crucial to fulfil than price stability. However, this would not be conducive to enhancing the credibility of the Bank.

References

Cukierman, A., Web, S. B. and Neyapti, B. (1992), “Measuring the independence of central banks and its effect on policy outcomes”, The World Bank Economic Review 6(3), p. 353–398.

Alesina, A. and Summers, L. H. (1993), “Central bank independence and macroeconomic performance: some comparative evidence”, Journal of Money, Credit and Banking 25(2), p. 151–162.

Fuhrer, J. C. (1997), “Central bank independence and inflation targeting: monetary policy paradigms for the next millennium?”, New England Economic Review Jan/Feb, p. 19–36

Issing, O., Angeloni, I., Gaspar, V., Klockers, H-J., Masuch, K., Nicoletti-Altimari, S., Rostagno, M., Smets, F. (2003), Background Studies for the ECB’s Evaluation of its Monetary Policy Strategy, European Central Bank, November 2003.

Klomp, J. and De Haan, J. (2010), “Central bank independence and inflation revisited”, Public Choice 144(3-4), p. 445–457.

Statute of the European Central Bank

Wellink, N., (2023), “Crises have shaped the European Central Bank”, Journal of International Money and Finance 138 (2023)