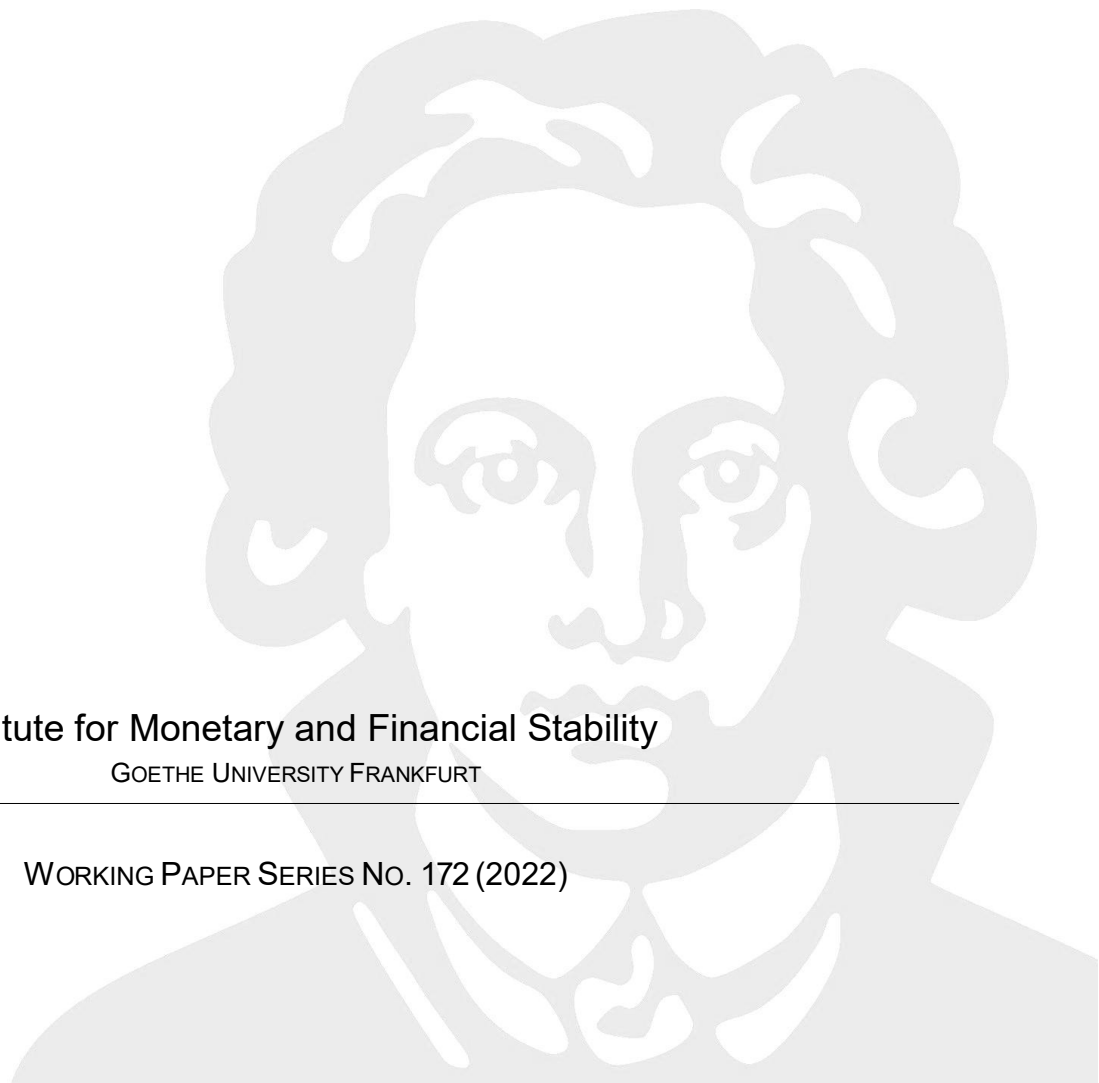


HELMUT SIEKMANN

Inflation, price stability, and monetary policy –
on the legality of inflation targeting by the Eurosystem

Institute for Monetary and Financial Stability
GOETHE UNIVERSITY FRANKFURT

WORKING PAPER SERIES No. 172 (2022)



This Working Paper is issued under the auspices of the Institute for Monetary and Financial Stability (IMFS). Any opinions expressed here are those of the author(s) and not those of the IMFS. Research disseminated by the IMFS may include views on policy, but the IMFS itself takes no institutional policy positions.

The IMFS aims at raising public awareness of the importance of monetary and financial stability. Its main objective is the implementation of the “Project Monetary and Financial Stability” that is supported by the Foundation of Monetary and Financial Stability. The foundation was established on January 1, 2002 by federal law. Its endowment funds come from the sale of 1 DM gold coins in 2001 that were issued at the occasion of the euro cash introduction in memory of the D-Mark.

The IMFS Working Papers often represent preliminary or incomplete work, circulated to encourage discussion and comment. Citation and use of such a paper should take account of its provisional character.

Institute for Monetary and Financial Stability

Goethe University Frankfurt

House of Finance

Theodor-W.-Adorno-Platz 3

D-60629 Frankfurt am Main

www.imfs-frankfurt.de | info@imfs-frankfurt.de

Inflation, price stability, and monetary policy - on the legality of inflation targeting by the Eurosystem -

*Helmut Siekmann**

Whatever the reasoning is in the following, it has to be kept in mind that strong grounds exist to expect that the Court of Justice of the EU (CJEU) will not follow it. Moreover, it will not even consider it in a (future) judgment. In past decisions, it has widely refrained from seriously examine the concerns of the German Federal Constitutional Court,¹ not to speak of critical voices in the (German) literature.² In effect, the CJEU has always tolerated the challenged measures of the Eurosystem³ without examining in depth the contended transgression of

*

Helmut Siekmann (✉)

Institute for Monetary and Financial Stability (IMFS), Goethe University Frankfurt, Germany

Email: geld-und-waehrung@imfs-frankfurt.de

Revised version of a lecture held on May 20, 2022 at the East Asia Institute in Ludwigshafen. The lecture style has been retained enriched by references.

¹ GFCC judgment of 12 September 2012, cases: 2 BvR 1390/12, 2 BvR 1421/12, 2 BvR 1438/12, 2 BvR 1439/12, 2 BvR 1440/12, 2 BvE 6/12, [*SMP-temporary injunction*], BVerfGE [Reports of Judgments of the Federal Constitutional Court] 132, 195 et seq. at margin nos. 174, 189; GFCC, judgment of 14 January 2014, cases: 2 BvR 2728/13, 2 BvR 2729/13, 2 BvR 2730/13, 2 BvR 2731/13, 2 BvE 13/13, English version available at: http://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2014/01/rs20140114_2bvr272813en.html?nn%45403310, [*OMT-referral*], BVerfGE [Reports of Judgments of the Federal Constitutional Court], 134, 366; pronounced on 7 February 2014, at margin nos. 56-83, 84-86, 87-93; GFCC, judgment of 18 July 2017, cases: 2 BvR 859/15, 2 BvR 1651/15, 2 BvR 2006/15, 2 BvR 980/16, English version available at: https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2017/07/rs20170718_2bvr085915en.html [*PSPP-referral*], BVerfGE [Reports of Judgments of the Federal Constitutional Court] 146, 216, at margin nos 80 & 81-99.

² See e.g. Martin Seidel (2010, pp. 521 et seq.); Helmut Siekmann (2013a, pp. 141, 147 et seq.); *ibid.* (2015, pp. 116-118); Ashoka Mody (2014a); *ibid.* (2014b, p. 6 et seq.); Reiner Schmidt (2015, pp. 323, 325); Matthias Ruffert (2019); approving under caveats which are not fulfilled: Jürgen Matthes and Markus Demary (2013); in principle apologetic but some restrictions, little concise and under-complex Markus Ludwigs (2015); *ibid.* (2017); explicitly dissenting Christoph Herrmann (2010).

³ CJEU, judgment of 16 June 2015, case C-62/14, *Gauweiler*, ECLI:EU:14:C:2015:400; CJEU, judgment of 11 December 2018, case: C-493/17, *Weiss*, ECLI: EU:C:2018:1000.

competences and powers. It has ceded a wide margin of appreciation or discretion to the acting organs⁴ and refrained from validating the facts alleged by the ECB.⁵

Thus, in hindsight the long-standing mantra of the Presidents of the ECB simply contending that “we act within our mandate”⁶ has been justified. Judicial control of an institution whose actions affect the life of the population and the development of the economy to an extraordinary degree looks different in an area governed by the rule of law.⁷ Hence, consistent to his former case-law on *ultra-vires* and the protection of the identity of the German Federal Constitution, the *Basis Law*, the GFCC, in his final decision on the PSPP of 5 May 2020 declared the preceding preliminary judgment of the CJEU as partially non-binding.⁸ These words caused an

⁴ CJEU Gauweiler (note 3 above), at margin nos. 48 & 68: “a broad discretion”; CJEU Weiss (note 3 above), at margin no. 56.

⁵ Uncritical *Alicia Hinarejos* (2020, at margin nos. 41.30-41.36), without in depth analysis of the “ECB’s Expanded Role” (margin nos. 41.3 et seq.).

⁶ E.g. President Draghi in his famous “whatever it takes” statement, at an conference 26 July 2012, <https://www.ecb.europa.eu/press/key/date/2012/html/sp120726.en.html#/search/whatever%20it%20takes/1>.

⁷ *Christoph Degenhart* (2019), pp. 33 et seq.; *Klaus F. Gärditz* (2020), p. 506, emphasizing the lacking enforcement of the principles of democracy and rule of law by the CJEU in view of the institutions of the EU: “Solange sich der EuGH vornehmlich als Schutzmacht kontrollfrei gestaltender Exekutivbürokratien versteht, wird man gerade dem Missbrauch der Exekutivmacht in wankenden Rechtsstaaten kaum glaubwürdig begegnen können.” [As long as the CJEU primarily understands itself as protector of uncontrolled executive bureaucrats is it hardly possible to credibly counter the abuse of executive powers in shaky Member States].

⁸ GFCC judgment of 5 May 2020, cases: 2BvR 859/15, 2BvR 1651/15, 2 BvR 2006/15, 2BvR 980/16, ECLI: DE :BVerfG :20200505_2bvr085915 [*PSPP-final*], English version available at https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2020/05/rs20200505_2bvr085915en.html, BVerfGE [Reports of Judgments of the Federal Constitutional Court] 154, 17-152, at margin nos. 164 et seq., 180 et seq. In the last decision the Court saw in addition to the transgression of competences and the (prohibited) financing of government debt by the Eurosystem a breach of EU-law by the failure of the CJEU to adequately exert its duty of judicial control of the organs and institutions of the EU, see at margin nos. 118 et seq.

uproar in politics and the legal literature. The judgment would disrupt the foundations of the Euro and the European Union in total⁹ but also moderate voices could be heard.¹⁰

Finally, the German Court abstained from an open breach and dismissed the application to issue an order of execution pursuant to § 35 of the Federal Constitutional Court Act as inadmissible.¹¹ Earlier, it had refused to admit a constitutional complaint against the Commercial Sector Purchase Programme (CSPP),¹² one of the other asset purchase programmes within the (extended) Asset Purchase Programmes (APP).

A INTRODUCTION

When the programme of this conference was drawn up, deflationary tendencies or even a deflationary spiral of the economy were the main concern of monetary policy, even as late as summer 2021.¹³ Inflation appeared to be an “extinct volcano” and the “Modern Monetary Theory”¹⁴ delivered the academic justification for an almost limitless growth of money supply

⁹ *Wegener*, Stellungnahme für den Europa-Ausschuss des Bundestages vom 20. Mai 2020, Ausschussdrucksache 19(21)99, S. 1: „Potential zum Sprengsatz für den Euro-Raum und darüber hinaus der gemeinsamen europäischen Rechtsordnung zu werden“ [Potential to be explosive for the euro area and, furthermore, for the common european legal order], with further references in footnote 1; also seeing a substantial damage: *Katarina Barley* (2020), p. 490; *Jan Dietze, Manuel Kellerbauer, Marcus Klamert, Luigi Malferrari, Tibor Scharf & Dominik Schnichels* (2020); supported by a list of additional scholars and lawyers; *Andreas Geiger & Jasper Bartels* (2020); *Ingolf Pernice* (2020), pp. 508, 518; *Friedemann Kainer* (2020).

¹⁰ *Klaus F. Gärditz* (2020); *Markus Ludwigs* (2020); *Peter Meier-Beck* (2020); *Thomas M. J. Möllers* (2020); *Michael Pießkalla* (2020); *Helmut Siekmann* (2020); *Sven Simon & Hannes Rathke* (2020); *Stephan Wernicke* (2020).

¹¹ GFCC, judgment of 29 April 2021, cases: 2 BvR 1651/15, 2BvR 2006/15, https://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/DE/2021/04/rs20210429_2bvr165115.html, English version available at: https://www.bundesverfassungsgericht.de/SharedDocs/Downloads/EN/2021/04/rs20210429_2bvr165115en.pdf?__blob=publicationFile&v=1, ECLI:DE:BVerfG:2021:rs20210429.2bvr165115 [Order of execution].

¹² CFCC, judgment of 15 June 2020, cases: BvR 71/20, 2 BvR 72/20, 2nd chamber of the 2nd senate, http://www.bverfg.de/e/rk20200615_2bvr007120.html, ECLI:DE:BVerfG:2020:rk20200615.2bvr007120.

¹³ *Bloomberg* (2020); *Karl Whelan* (2021); see also *Ashoka Mody* (2018), pp. 363 et seq., 392, emphasizing the diverse developments in the various Member States of the euro area.

¹⁴ Originally coined by the Australian economist Bill Mitchell and popularized by politicians like Alexandria Ocasio-Cortez, see *Edward Fullbrook and Jamie Morgan* (2019); *Melanie Lockert* (2022). Main propagators in economics are: *Warren Mosler* (1996); *Dirk H. Ehnts* (2017); *L.*

and of central banks' balance sheets. An almost riskless and almost costless financing of a high and rapidly increasing public and private debt by monetary instruments appeared to be realistic.

However, COVID-19 and the war against the Ukraine showed the vulnerability of supply chains and the limits of a debt-financed demand for goods exhausting the production potential. Demographic factors and a waning pressure on prices by globalization were an additional factor fostering upward tendencies on the price level. Nevertheless, advocates of a more sustainable monetary policy, pointing out the enormous creation of money without a half-way parallel growth of production would inevitably lead to inflation or even – hyper-inflation,¹⁵ remained unheard until very recently.

The factual development seemed to profoundly contradict these warnings disregarding the solid increase of asset-prices. A sizable part of the additional money created by the banking system remained in the financial sector and the rise of real-estate prices was compensated to quite some extent by historically low and almost constantly further slumping of interest rates at least in view of the common public. The development of the interest rates was also not foreseen by the experts. That the possibilities of central banks to further enhance this – apparently “free lunch” – might be limited¹⁶ was questioned or simply neglected by most decision makers.¹⁷ The implied costs of such a policy, i.e. its embodied risks, were not sufficiently realised. The partial expropriation of savers in countries with a – traditionally – low share of homeowners, like in Germany¹⁸ was downplayed since it was not directly visible.

Randall Wray (1999); *ibid.* (2012); *ibid.* (2015); *William Mitchell, L. Randall Wray & Martin Watts* (2019), a whole macroeconomic treatise based on MMT theories and its predecessors; *Stephanie Kelton* (2020). For a (critical) review see the contributions in *Edward Fullbrook & Jamie Morgan* (eds) (2019).

¹⁵ E.g. *Hans-Werner Sinn* (2018), pp. 19-23, 27-32; *ibid.* (2019); *ibid.* (2021), pp. 109 et seq., 357 et seq.

¹⁶ See *Herrmann Remsperger* (2013); *Otmar Issing* (2019), pp.134 et seq.: “overextension”; *Daniel Stelter* (2019).

¹⁷ See the determination of the Governing Council to further increase the money supply, press release of the meeting of 25 July 2019, <https://www.ecb.europa.eu/press/pr/date/2019/html/ecb.mp190725~52d3766c9e.en.html>

¹⁸ It is probably not an outright appropriation but at least a legally questionable intrusion in the freedom of the use of property, see *Paul Kirchhof* (2021), pp. 192, 218, but as regards the question of expropriation not consistent, partially affirming partially negating (pp. 190, 218).

But the economic consequences of the corona-pandemic and the attempts to mitigate them by further increasing the money supply by another € 600 billion to a total of € 1,350 billion¹⁹ - as late as summer 2020 - already heralded a point of no return for the detriment of price stability.²⁰ The open invasion of the Ukraine by Russian military forces in February 2022 with the goal to subdue and eventually dissolve a neighbour as sovereign state suddenly brought the consequences of the problematic economic and monetary decisions of the past so unmistakably to the surface that they hardly could be denied any more. But the monetary policy of the Eurosystem still ignored them for almost half a year and grossly underestimated future inflation rates. The core inflation rate was even in 2022 Q2 – the war by the Russian federation was initiated on 24 February 2022 – estimated for the whole year of 2022 with 2.9% and 2.3% for the following year. The rate for a year ahead was also given with 2.3%. Although these numbers imply a substantial increase in comparison with the forecasts from the preceding quarter: 2.0%, 1.8% and 1.7% they were still far from the real development. The numbers for 2022 Q1 reflect an almost unbelievable des-orientation.²¹ Soaring inflation rates have become a fact of life for almost everybody and not any more a faint growling with distant lightning.²² Now, in hindsight, it seems to be utmost incredible that it was not acknowledged that “printing money” by central

¹⁹ Governing Council decision of 4 June 2020, press release, <https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.mp200604~a307d3429c.en.html>.

²⁰ Already in March of 2020 the Eurosystem had established the “temporary pandemic emergency purchase programme (‘PEPP’)” with an overall envelope of EUR 750 billion, Decision (EU) 2020/440 of the European Central Bank of 24 March 2020 on a temporary pandemic emergency purchase programme (ECB/2020/17), OJ L 2020/91/1; hastily apologetic from the legal perspective Sebastian Grund (2020), a former legal counsel at the ECB.

²¹

Survey round	Current calendar year	Next calendar year	Calendar year after next	One year ahead	Two years ahead	Longer term (five years ahead)
2021 Q3	1.2	1.3	1.5	1.3	1.4	1.7
2021 Q4	1.4	1.5	1.6	1.5	1.6	1.8
2022 Q1	2.0	1.8	1.9	1.7	1.9	1.9
2022 Q2	2.9	2.3	2.0	2.3	2.1	1.9
2022 Q3	3.6	2.9	2.3	2.9	2.3	2.2

Source:

https://www.ecb.europa.eu/stats/ecb_surveys/survey_of_professional_forecasters/html/table_hist_core.en.html.

²² HICP inflation in the euro area increased to 8.9% in July 22 ranging from 6.8 (France, Malta) to 23.2 (Estonia), https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/hicp/html/index.en.html.

banks and commercial banks in a volume that had to be observed would eventually lead to inflation - whether temporary or permanent is still not yet completely clear.

It lasted until June 2021 that the Governing Council of the ECB decided to end net asset purchases under its asset purchase programme (APP) as of 1 July 2022. But it was determined to continue to reinvest the principle payments from maturing securities and only announced a mild raise of interest rates for July.²³

To support the Member States with an irresponsible, non-sustainable fiscal policy it hinted that the reinvestments might be used to support *selectively*, i.e. legally questionably, certain Member States.²⁴ This led finally to the framing of a selective support programme for those states, the Transmission Protection Instrument (TPI), in July 2022.²⁵

B FOUNDATIONS

I. On Inflation

1. What is Inflation?

Approaching the topic from a more academic perspective, the term “inflation” has to be clarified because it is not a legal term. Some of the confusion in past debates hinges on the ambiguity of it.

At least two types of inflation have to be differentiated:

- Consumer price inflation
- Asset price inflation

Both in theoretical debates among economists and in practical policy discussions the focus is and was clearly on consumer price inflation.²⁶ This type of inflation was for quite some time

²³ Press release of 9 June 2022, <https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220609~122666c272.en.html>.

²⁴ Ibid.

²⁵ Press release of 21 July 2022, <https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220721~53e5bdd317.en.html>.

²⁶ <https://www.ecb.europa.eu/mopo/strategy/html/index.en.html>: “Inflation is measured by the Harmonised Index of Consumer Prices (HICP).”

low in the euro area - too low in the opinion of the Eurosystem, thus directing its monetary policy towards enhancing inflation.²⁷

In the legal literature, it is almost common opinion that consumer prices are the (only) adequate figure when interpreting the meaning of price stability.²⁸ Often it re-iterates only (uncritically) the stance of the ECB. To my assessment, this has to be questioned.²⁹

2. *How to measure it*

How to determine inflation is a demanding task since it is not tangible and can be gauged only indirectly.³⁰ In general, an artificial construct with a lot of downsides is used: the consumer price index (CPI), in the EU a harmonized consumer price index (HCPI).³¹ Asset price inflation is usually disregarded altogether or judged as not measurable. In any case, it is difficult to reach a consensus on what to take as a basis for gauging the development of asset prices, especially in view of real estate.

²⁷ See e.g. *Peter Praet* (2016).

²⁸ Often only uncritically referring to the practice of the ECB.

²⁹ *Helmut Siekmann* (2021), at margin no. 91; from an economic point of view in favor of a more prominent role of asset prices in the decision-making process of central banks e.g. *Éric Tymoigne* (2009), pp. 46, 53-78.

³⁰ For an analysis of the measuring problems see already *Willard L. Thorp & Richard E. Quandt* (1959), pp. 9-17.

³¹ Eurostat correctly uses the plural and limits it to consumer price inflation: “Harmonised Indices of Consumer Prices (HICPs) are designed for international comparisons of consumer price inflation.” See <https://ec.europa.eu/eurostat/web/products-datasets/product?code=tec00118>; more detailed: “The Harmonised Indices of Consumer Prices (HICP) measure the changes over time in the prices of consumer goods and services acquired by households. They give a comparable measure of inflation as they are calculated according to harmonised definitions.” See at <https://ec.europa.eu/eurostat/web/hicp>. The explanation of the ECB avoids the correct term “consumer price inflation”: “The HICP aims to be representative of the developments in the prices of all goods and services available for purchase within the euro area by consumers. It measures the average change over time in the prices paid by people for a specific, regularly updated basket of consumer goods and services. Basically all consumer goods and services purchased by means of monetary transactions come within the scope of the HICP. The technical name for these expenditures is household final monetary consumption expenditure”. https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/hicp/html/index.en.html; or less detailed: “<https://www.ecb.europa.eu/mopo/strategy/html/index.en.html>: “Inflation is measured by the Harmonised Index of Consumer Prices (HICP).”

The consumer price index is also generally accepted as a measure for price stability³² by the legal literature and used in court cases despite the problem with hedonistic inflation rates, i.e. the accounting of quality improvements. It is also referred to in Article 1 sentence 2 of Protocol (No 13) on the convergence criteria: “Inflation shall be measured by means of the consumer price index [...]”.³³ Compared to the GDP-deflator this index has consistently underassessed inflation since 2009.³⁴

3. Causes of Inflation

Manifold causes for inflation have been debated: mainly cost push and demand pull, but also political biases (especially in view of administered prices including taxes, contributions and tariffs) and government budget deficits.³⁵ Inflation expectations and second round effects play an important role but after all, a longer lasting inflation always needs the nourishing by the monetary policy. It might not be only a monetary phenomenon, not even predominantly but it always needs the support by the monetary authorities. It is at least always *also* a monetary phenomenon.³⁶

Aside from natural disasters it does not fall from heaven but is *always* the consequence of (political) decisions, often very poor decisions. For the individual it might be a given, but habitually media like to describe it as if inevitable instead of analysing and pinpointing the problematic decisions of the past.

³² See at <https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html>: “We consider the Harmonised Index of Consumer Prices (HICP) to be the appropriate measure for assessing the achievement of the price stability objective.”

³³ Consolidated version of the TEU and the TFEU, O.J. of 7.6.2016, C 202/281.

³⁴ See: *Frederic S. Mishkin* (2022), pp. 625-629; *Lars P. Feld, Clemens Fuest, Justus Haucap, Heike Schweitzer, Volker Wieland, Berthold U. Wigger* (2021), pp. 48 et seq.; see already the table at *Willard L. Thorp & Richard E. Quandt* (1959), p. 16; highly critical in view of the use of R-Star *Volker Wieland* (2019), pp. 180 et seq.

³⁵ See *Gunter Steinmann* (1979).

³⁶ *Frederic S. Mishkin* (2022), p. 623, supporting the famous adage of Milton Friedman.

4. *Stagflation*

In the past the combination of low growth and high inflation was a severe nuisance for the western economies, especially in times when politicians applied a type of vulgar Keynesianism and tried to trade-in (some) inflation for higher employment.³⁷ An attempt that eventually failed and could only be scaled back at very high social costs. But it must be very alluring for politicians since voices become loud again advocating such a detrimental policy.

II. Price Stability as a Legal Term

1. *The German Legal Situation as Starting Point*

Price stability eventually became a legal term used frequently in the EU-law, in the national constitutional law of Germany, and in sub-constitutional statutes. Its *content* was debated for quite some time in Germany, long before the term was embodied in the Treaty of Maastricht. The debate mainly circled around the question whether it should be understood in an absolute or relative meaning and whether a certain, but small rate of inflation (usually 1%) would have to be considered compatible with the aim of achieving or maintaining price stability. Aiming at any type of inflation was – as far as I can see – *never judged as legal*. Only inevitable deviations from a zero rise of the price level – due to crude policy tools and difficulties in accurate diagnoses and prognoses – appeared tolerable.

Parallel to the entering into the Treaty of Maastricht in 1992, price stability was inserted into the German federal constitutional law. A new sentence 2 of Article 88 Basic Law predicated the transfer of monetary powers to the European Central Bank on the condition that it is bound to the *primary objective of safeguarding price stability*

[“... der Europäischen Zentralbank übertragen werden, die unabhängig ist und dem vorrangigen Ziel der Sicherung der Preisstabilität verpflichtet”].

³⁷ The term “stagflation” is usually attributed to Ian Macleod, Chancellor of Exchequer in 1970, see *Edward Nelson & Kalin Nikolov* (2002), p. 8; for an early treatment see *Martin Bronfenbrenner* (1976).

2. *The Primary Law of the EU*

Under German influence, the primary law of the EU re-iterated this objective with a minor variation of the wording. The term “price stability” is used as a policy goal for the whole EU (among others) in Article 3(3) TEU and Article 119(3) TFEU. Only in the context of monetary policy and – separated from it – exchange rate policy, it is stated as its *primary objective*, Articles 119(2), 127(1), and 282(2) TFEU.

Article 3

1. [...]

2. [...]

3. The Union shall establish an internal market. It shall work for the sustainable development of Europe based on balanced economic growth and **price stability**, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment. It shall promote scientific and technological advance.

[...]

TITLE VIII

ECONOMIC AND MONETARY POLICY

Article 119

1. [...]

2. [...] these activities shall include a single currency, the euro, and the definition and conduct of a single monetary policy and exchange-rate policy the **primary objective** of both of which shall be to **maintain price stability** and, without prejudice to this objective, to support the general economic policies in the Union, in accordance with the principle of an open market economy with free competition.

3. These activities of the Member States and the Union **shall entail** compliance with the following guiding principles: **stable prices**, sound public finances and monetary conditions and a sustainable balance of payments.

CHAPTER 2
MONETARY POLICY

Article 127

1. The **primary objective** of the European System of Central Banks (hereinafter referred to as 'the ESCB') shall be to **maintain price stability**. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 of the Treaty on European Union. The ESCB shall act in accordance with the principle of an open market economy with free competition, favouring an efficient allocation of resources, and in compliance with the principles set out in Article 119.

[...]

SECTION 6
THE EUROPEAN CENTRAL BANK

Article 282

1. [...]

2. The ESCB shall be governed by the decision-making bodies of the European Central Bank. The primary objective of the ESCB shall be to **maintain price stability**. Without prejudice to that objective, it shall support the general economic policies in the Union in order to contribute to the achievement of the latter's objectives.

[...]

C INFLATION TARGETING

I. (Re-)Definition of Price Stability by the Eurosystem

1. Striving for Specific Inflation Rates

When the newly established European Central Bank, or, more precisely the Eurosystem,³⁸ started to define its understanding of price stability, it deviated from the original zero inflation

³⁸ Article 282(1) sentence 2 TFEU: The European Central Bank, together with the national central banks of the Member States whose currency is the euro, which constitute the Eurosystem, shall conduct the monetary policy of the Union.

rate goal in the then German understanding of the majority of the German legal literature³⁹ but concurrent with a predominant view in macroeconomics. At least in the medium range positive inflation rates were expressly considered to be desirable in order to fulfil its primary objective of maintaining price stability.⁴⁰ Even mere deflationary tendencies were assessed as a deviation from the primary objective⁴¹ to render a “mandate” for unconventional measures.⁴² Until present, the ECB expressly equates the legal obligation to “maintain price stability” with pursuing a “two per cent inflation target”.

This understanding prevailed even after its strategy review of 2021.⁴³ The Governing Council decided, however, (finally) to “recommend that home-ownership costs be included (...) to better reflect people’s experience [!] of rising prices” which are so far not included in the calculation of the HICP by EUROSTAT - in contrast to rents. Since its implementation will take time the ECB promised “to use available measures of inflation that include home-ownership costs to support our understanding of how prices are changing in the economy”.⁴⁴

³⁹ See *Peter J. Tettinger* (1999, Article 88 at margin no. 11b), with references; stating the strong influence of the German thinking in general see *Rosa M. Lastra* (2015), at margin nos. 7.25 et seq.

⁴⁰ In October 1998, the Governing Council of the ECB defined price stability as “a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%” and added that price stability “was to be maintained over the medium term”. The Governing Council confirmed this definition in May 2003 following a thorough evaluation of the ECB’s monetary policy strategy. On that occasion, the Governing Council clarified that “in the pursuit of price stability, it aims to maintain inflation rates below but close to 2 % over the medium term”; European Central Bank (2011a), p. 87; European Central Bank (2011b), p. 69; Executive Board Member, *Peter Praet* (2016).

⁴¹ European Central Bank (1999), p. 46: “deflation, i.e. prolonged declines on the level of the HICP index, would not be consistent with price stability”.

⁴² “For us, it is clear that price stability means guarding against inflation that is either too low or too high. That is why we are targeting an inflation rate of 2% over the medium term. Our commitment to this inflation target is symmetric. That means we view inflation that is too low just as negatively as inflation that is too high. Both are equally undesirable.” See <https://www.ecb.europa.eu/home/search/review/html/price-stability-objective.en.html>.

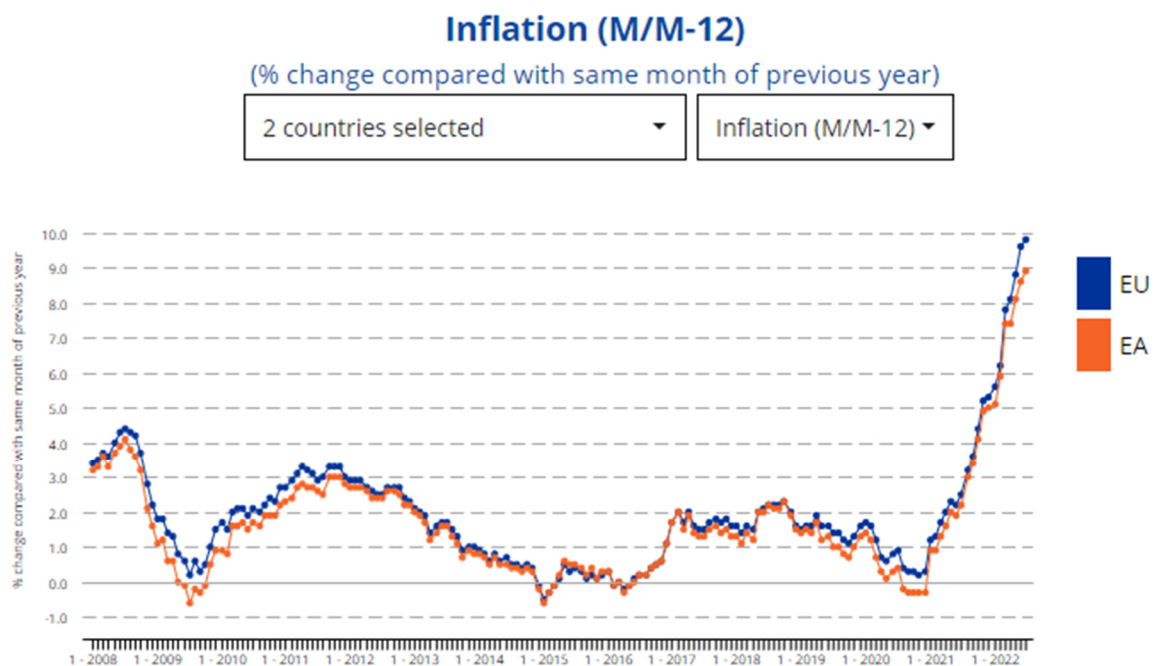
⁴³ “The Treaty does not give a precise definition of what is meant by price stability. The ECB’s Governing Council, after concluding its strategy review in July 2021, considers that price stability is best maintained by aiming for 2% inflation over the medium term.” See at <https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html>. “The ECB’s Governing Council considers that price stability is best maintained by aiming for 2% inflation over the medium term.” See at <https://www.ecb.europa.eu/mopo/strategy/html/index.en.html>.

⁴⁴ https://www.ecb.europa.eu/stats/macroeconomic_and_sectoral/hicp/html/index.en.html; more precise: “However, we recognise that the inclusion of costs related to owner-occupied housing in

The widespread claim for using an *average value* in gauging price stability was, however, not explicitly followed.

2. The Results

For more than a decade, the Eurosystem has struggled to realize a self-defined inflation rate, not the least by implementing the highly controversial asset purchase programmes and the “negative interest rates” for deposits. This monetary policy, commonly labelled with the euphemistic term “unconventional” or “non-standard”,⁴⁵ was driven by a widespread fear among economists and politicians of an imminent deflationary spiral. Even if it might have pushed down the lower zero bound, in principle, it did not achieve the aspired inflation rate, as gauged by the ECB. For a long time it was below it and recently it exploded and lingers momentarily far above it.



Source: Eurostat, <https://ec.europa.eu/eurostat/web/hicp/visualisations>

the HICP would better represent the inflation rate that is relevant for households and are working on including those costs in the inflation measure.” See at <https://www.ecb.europa.eu/mopo/strategy/pricestab/html/index.en.html>.

⁴⁵ See Rosa M. Lastra (2015), at margin nos. 7.39 et seq.; Christoph Ohler (2021).

It lead, however, to a novel explosion of the (consolidated) balance sheet of the Eurosystem and a corresponding creation of central bank money. Most likely, the “unconventional” policy has saved some Member States with an unsustainable debt level from insolvency but laid also ground for a problematic and long-lasting asset-price inflation⁴⁶ and the even more problematic upshot of the present consumer prices. This demonstrates in part the truth of the monetaristic insight that inflation is at least always (also) a monetary phenomenon.

II. The Wording of the Primary Law

Equating the objective of maintaining price stability with an inflation target is, in the first place, not a mere change in terminology: In a stochastic process an (unintended) transgression of a boundary in one direction is usually evened out by a transgression in the other direction with the result that the average remains the same in the medium range whereas the (planned) raise of a target leads to a higher mean in the same environment. In addition, failures in attaining the goal in one period are not compensated automatically in the next period. These are the reasons why the (accidental) missing of the price stability objective may be tolerable and was tolerated in parts of the earlier legal literature in Germany⁴⁷ but not the objective to achieve a (positive) inflation rate.⁴⁸ Secondly, and most important, in the *wording* of the primary law of the EU not the faintest trace of an “inflation target” can be found. It does *not* contain the competence, goal, or objective to pursue such a monetary policy by the Eurosystem.

⁴⁶ From 2011 on, the percentage changes of house prices compared with the previous years was constantly above the 2% increase target. In the recent past, they shot up to hyper-inflationary figures: Germany (EU) 2019: 5.8% (4.3%), 2020: 7.8% (5.4%), 2021: 11.% (8.3%); source: Eurostat, <https://ec.europa.eu/eurostat/web/housing-price-statistics/visualisations>.

⁴⁷ René Smits (1997), p. 185; Christian Waldhoff (2022), at margin no. 16.

⁴⁸ Otmar Issing (2017), p. 344: “fundamental flaw of inflation targeting”.

From the legal point of view, the identification of the price stability objective with a specific inflation rate is beyond ordinary *standards of interpretation*⁴⁹ even if wide parts of the legal literature do not object any more.⁵⁰

1. *The Rules on the Convergence Criteria*

Only in the context of convergence criteria a somewhat relaxed wording is employed, Article 140(1) first indent TFEU and Article 1 of Protocol (No 13) on the convergence criteria:

Article 140

1. At least once every two years, or at the request of a Member State with a derogation, the Commission and the European Central Bank shall report to the Council on the progress made by the Member States with a derogation in fulfilling their obligations regarding the achievement of economic and monetary union. These reports shall include an examination of the compatibility between the national legislation of each of these Member States, including the statutes of its national central bank, and Articles 130 and 131 and the Statute of the ESCB and of the ECB. The reports shall also examine the achievement of a high degree of sustainable convergence by reference to the fulfilment by each Member State of the following criteria:

— the achievement of a high degree of price stability; this will be apparent from a rate of inflation which is close to that of, at most, the three best performing Member States in terms of price stability,

[...]

PROTOCOL (No 13)

ON THE CONVERGENCE CRITERIA

Article 1

The criterion on price stability referred to in the first indent of Article 140(1) of the Treaty on the Functioning of the European Union shall mean that a Member State has a price performance that is sustainable and an average rate of inflation, observed over a period of one year before the examination, that does not exceed by more than 1 ½ percentage points

⁴⁹ For the problems of interpreting EU law *Christoph Ohler* (2019), p. 11 et seq.; in favor of straitening the *contra legem* limit for interpretation, however, *Thomas M. J. Möllers* (2019), pp. 48 et seq.

⁵⁰ Instead of an in depth analysis it is simply referred to a wide margin of appreciation of der ECB [*Beurteilungsspielraum*], see *Christoph Ohler* (2021), p. 300, with references.

that of, at most, the three best performing Member States in terms of price stability. Inflation shall be measured by means of the consumer price index on a comparable basis taking into account differences in national definitions.

It is, however, questionable if, and to which extent, this reference to inflation may be used to concretize the objectives, competences, and powers of an existing, integral part of the EU, the Eurosystem.

From its wording and systematic position, these rules have to be confined to the assessment of Member States' progress towards the necessary convergence with the other Member States whose currency is the euro. It requires a "price performance" that is "sustainable" and a certain rate of inflation measured as an average over the quite short "period of one year". This view is expressly addressed (only) to Member States with a derogation and *not* the euro area as a whole or the Eurosystem as an institution of the EU.⁵¹ Moreover it is open to diverse methods of measuring the consumer price index in the respective states.

2. *Tasks and Objectives of the Eurosystem*

The primary law of the EU only very sparsely employs the term "mandate" and if, only in the traditional narrow sense of the word. It is *never used in the context of monetary policy and its institutions*. Sharply contrasting to this finding is its popularity among practitioners of the Eurosystem and – even more – among journalists. Its inflationary usage has now even infected the reasoning in judgments of the German Federal Constitutional Court which (rightly) shunned it in this context until recently.⁵²

The term is vague and thus suitable for an easy usage, never completely wrong but also not very enlightening. In lieu of concise legal arguing – which is unknown for many users – it conceals the genuine topics which ought to be on the legal agenda. Often, it is used as a reinforcement of the trivial and, therefore, is suspicious for a lawyer. When the representatives of the Eurosystem pronounce that they act within their "mandate" – should they admit a

⁵¹ *Anne Schmöller & Ralf Tutsch* (2015, Article 140 TFEU), at margin no. 6, 11.

⁵² See most recently: GFCC Order of execution (note 11 above), at margin no. 25; also Christoph Ohler (2021), Section § 6 Folgen für das Mandatsverständnis. But there are still positive counter-examples still differentiating carefully between objectives and tasks shewing the term mandate, see e.g. Rosa M. Lastra (2015), at margin nos. 7.24 et seq., 7.33 et seq.

transgression of competences and powers? – this is superfluous and is – as other linguistic enforcements, like “obviously”, “clearly” “now doubt” – a sign for concealing the contrary. Experience tells that these terms should prompt an in-depth examination. In addition, the interpretation by the Court of Justice of the EU is oscillating and concedes a wide margin of appreciation.

Aside from the regulation of the primary *objectives* of the European System of Central Banks in Article 127(1) TFEU not containing the slightest hint for an inflation targeting, the second paragraph of this Article states the *tasks* to be carried out through the ESCB:

2. The basic tasks to be carried out through the ESCB shall be:
 - to define and implement the monetary policy of the Union,
 - to conduct foreign-exchange operations consistent with the provisions of Article 219,
 - to hold and manage the official foreign reserves of the Member States,
 - to promote the smooth operation of payment systems.

Again, no hint as regards inflation targeting.

3. *Contribution to other Policies of the Competent Authorities*

An opening could be the obligation to support the general economic policies *in* the Union with a view to contributing to the achievement of the objectives of the Union as laid down in Article 3 TEU. This obligation can be found in Articles 119(2), 127(1) sentence 2, and 282 TFEU. The wording was extremely carefully chosen since this was one of the crucial points when framing the Treaty of Maastricht. So it has to be followed strictly. A consensus on creating a respective competence *of* the European Union could not be reached,⁵³ only an obligation of the *Member States* to cooperate in view of the – very broad – collection of dispersed objectives of the EU.

This general obligation is specified in Article 127(5) TFEU:

5. The ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system.

⁵³ *Helmut Siekmann* (2022, Article 119 TFEU), at margin no. 23 et seq.

This provision shows that maintaining the stability of the financial system is *not* a task of the ESCB but of the Member States. According to the generally accepted rules of interpretation, this clause enjoys as *lex specialis* precedence over the general clauses. It has to be considered as *exhaustive*. Only a “contribution” to the policies of the competent authorities is allowed.⁵⁴ This can only be the exertion of an *ancillary* task.⁵⁵ Competent in this sense is not the ESCB or the Eurosystem.⁵⁶ A mere *contribution* to the policies of other institutions or bodies, which are explicitly labelled as the “competent authorities” does not create a competence of its own. This ancillary role forbids an inflation targeting by the Eurosystem via the backdoor of preserving the stability of the financial system or supporting the economic policy *in* the Member States. So good reasons existed why the Eurosystem did not base its non-standard measures on these competences.⁵⁷ Thus it could avoid the substantial legal risks by identifying its objective “maintenance of price stability” with “pursuing an inflation target”.⁵⁸

III. The Principle of Conferral

Moreover, it has to be taken into account that the competences of the EU as a whole as well as its organs and institutions are governed by the principles of conferral and subsidiarity, Articles 4(1) and 5(1, 2) TEU. As exceptions from the general rule in Article 4(1) TEU the

⁵⁴ For details see *ibid*; in favor of an active role of central banks in monetary and financial system stability *Paul Tucker* (2017), at margin nos. 3 and 4, but not arguing as a political wish and not on the basis of *lex lata*; partly disagreeing *Otmar Issing* (2017), p. 346.

⁵⁵ *Claudia Wutscher* (2019, Article 127 TFEU at margin no. 37); *Christian Waldhoff* (2022, Article 127 TFEU at margin nos. 8, 31 et seq). *Rosa M. Lastra* (2015), at margin no. 7.28, also sees a “clear hierarchy” but does not further expound the content of the clause only describing a different view on financial stability since the financial market and sovereign debt crises (margin nos. 7.30 et seq.); insofar agreeing also *Christoph Ohler* (2021), p. 306.

⁵⁶ *Helmut Siekmann* (2013a), p. 145; carefully in this direction also *Christian Waldhoff* (2022), at margin no. 32; disagreeing *Christoph Ohler* (2021), pp. 312, 314, criticizing the GFCC for its strict interpretation of the delimitation of competences in its judgment of 5 May 2020 (note 8 above).

⁵⁷ Critical, but ignoring legal rules *Paul de Grauwe* (2022), pp. 196 et seq.

⁵⁸ *Christoph Ohler* (2021), p. 305.

competences conferred have to be interpreted in the *strict sense* of the *wording* notwithstanding the principle of “*effet utile*”.⁵⁹

D CONCLUSION

Inflation targeting as a task, competence, or objective of the Eurosystem is legally highly questionable according to the common standards of interpretation even if it might be safe to prognose that the Court of Justice of the EU will also accept this.

⁵⁹ *Walter Obwexer* (2015, Article 5 TEU at margin no. 14): keine “extensive Auslegung der Unionskompetenzen” [no wide interpretation of Union competences]; see also: *Georg Lienbacher* (2019, Article 5 TEU, at margin no. 8); *Albrecht Weber* (2013, Article 5 at margin no. 5); *Rudolf Geiger* (2015, Article 5 TEU at margin no. 3); but see *Koen Lenaerts* and *Piet van Nuffel* (2011, at margin no. 7-010): “However the principle of conferral has in practice placed few limits on the action of the Union, inter alia because of ... the teleological interpretation which the Court of Justice has given to various legal bases [references].”

E REFERENCES

- Barley, K. (2020). Ein grober Klotz (Gastkommentar). *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 489 et seq.
- Bloomberg (2020). Deflation Fears at ECB Mean Stimulus Battles Ahead for Lagarde. *Investing.com*, <https://www.investing.com/news/forex-news/deflation-fears-at-ecb-mean-stimulus-battles-ahead-for-lagarde-2196053>.
- Bronfenbrenner, M. (1976). Elements of stagflation theory. *Zeitschrift für Nationalökonomie* 36, 1–8. <https://doi.org/10.1007/BF01283912>.
- Degenhart, C. (2019). EZB, EuGH und BVerfG – Garanten einer stabilen Geld- und Währungsordnung? In: T. Baums, H. Remsprger, M. Sachs & V. W. Wieland (Eds.), *Zentralbanken, Währungsunion und stabiles Finanzsystem*. Duncker & Humblot: Berlin, pp. 19-35.
- De Grauwe, P. (2022). *Economics of Monetary Union*, 14th edition, Oxford University Press: Oxford.
- Dietze, J., Kellerbauer, M., Klamert, M., Malferrari, L., Scharf, T. & Schnichels, D. (2020). Europa – Quo Vadis? Ein kritischer Kommentar zum EZB-Urteil des BVerfG. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 525-530.
- Ehnts, D. H. (2017). *Modern Monetary Theory and European Macroeconomics*. Routledge: London and New York.
- European Central Bank (1999). The stability-oriented monetary policy strategy of the Eurosystem. *ECB Monthly Bulletin*, January 1999, 39 – 50.
- European Central Bank (2011a). The reform of economic governance in the Euro Area – essential elements. *ECB Monthly Bulletin*, March 2011, 99 – 119.
- European Central Bank (2011b). *Monetary policy of the ECB*. Frankfurt am Main: European Central Bank.
- Feld, P., Fuest, C., Haucap, J., Schweitzer, H., Wieland, V. & Wigger, B.U. (2021). *Die geldpolitische Strategie der Europäischen Zentralbank: Was geändert werden sollte und was nicht*. Stiftung Marktwirtschaft: Berlin.
- Fullbrook, E. & Morgan, J. (2019). *Modern Monetary Theory and its Critics*. World Economics Association, Bristol, UK; originally published as a special edition of *real-world economics review* (issue no. 89), <http://www.paecon.net/PAEReview/issue89/whole89.pdf>.
- Fullbrook, E. & Morgan, J. (2019). Introduction: Whither MMT? *real-world economics review*, issue no. 89.
- Gärditz, K. F. (2020). Glaubwürdigkeitsprobleme im Unionsverfassungsrecht. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 505-508.

- Geiger, A. & Bartels, J. (2020). Solange du mich willst. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 537 et seq.
- Geiger, R., Khan, D.-E. & Kotzur, M. (2015). *European Union Treaties*. C.H.Beck & Hart: München.
- Grund, S. (2020). Legal, compliant and suitable: The ECB's Pandemic Emergency Purchase Programme (PEPP). *Hertie School, Policy Brief*, 25 March 2020.
- Herrmann, C. (2010). EZB-Programm für die Kapitalmärkte verstößt nicht gegen die Verträge – Erwiderung auf Martin Seidel, *Europäische Zeitschrift für Wirtschaftsrecht*. 17: 521.
- Hinarejos, A. (2020). The Legality of Responses to the Crisis. In: F. Amtenbrink & C. Herrmann (Eds.), *The EU Law of Economic and Monetary Union*, Oxford University Press: Oxford, 1363-1399.
- Issing, O. (2017). Financial stability and the ECB's monetary policy strategy. In: *ECB Legal Conference 2017*, pp. 340-348.
- Issing, O. (2019). Unabhängigkeit der Notenbank – Garantie für stabiles Geld? In: T. Baums, H. Remsperger, M. Sachs & V. Wieland (Eds.), *Zentralbanken, Währungsunion und stabiles Finanzsystem*. Duncker & Humblot: Berlin, pp. 129-137.
- Kainer, F. (2020). Aus der nationalen Brille, *Europäische Zeitschrift für Wirtschaftsrecht*. 12: 533-536.
- Kelton, S. (2020). *The Deficit Myth: Modern Monetary Theory and the Birth of the People's Economy*. Cambridge University Press: Cambridge.
- Kirchhof, P. (2021). *Geld im Sog der Negativzinsen*. C.H.Beck: München.
- Lastra, R.M. (2015). *International and Financial Law*, 2nd edition. Oxford University Press: Oxford.
- Lenaert, K. & Van Nuffel, P. (2011). *European Union Law*. 3rd edition. Sweet & Maxwell: London.
- Lienbacher, G. (2019) Article 5 EUV. In: U. Becker, A. Hatje, J. Schoo & J. Schwarze (Eds.), *EU-Kommentar*, 4th edition. Nomos: Baden-Baden.
- Lockert, M. (2022). What is Modern Monetary Theory? Understanding the alternative economic theory that's becoming more mainstream. *Business Insider* as of 22 July, <https://www.businessinsider.com/personal-finance/modern-monetary-theory?op=1>
- Ludwigs, M. (2015). Der Ultra-vires-Vorbehalt des BVerG – Judikative Kompetenanzmaßung oder legitimes [sic] Korrektiv? *Neue Zeitschrift für Verwaltungsrecht*, 537-543.
- Ludwigs, M. (2017). Die Krisenpolitik der EZB zwischen Verfassungs- und Unionsrecht. *Neue Juristische Wochenschrift*, 49: 3563-3567.
- Ludwigs, M. (2020). Scherbenhaufen oder Chance? *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 530-533.

- Matthes, J. & Demary, M. (2013). Überschreitet die EZB mit ihren Staatsanleihekäufen ihr Mandat? *Wirtschaftsdienst*, 9: 607-615.
- Meier-Beck, P. (2020). De iudicando ultra vires. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 519-524.
- Mishkin, F.S. (2022). *The Economics of Money, Banking, and Financial Markets*, 13th edition. Pearson Education: Harlow et al.
- Mitchell, W., Wray, L. R. & Watts, M. (2019). *Macroeconomics*. Red Globe Press: London.
- Mody, A. (2014a). Did the German Court Do Europe a Favour? *Bruegel Working Paper* 2014/09.
- Mody, A. (2014b). The ECB's Bridge Too Far. *Project Syndicate* of February 11, 2014.
- Mody, A. (2018). *Euro Tragedy*. Oxford University Press: Oxford.
- Möllers, T. M. J. (2019). Richtlinienkonforme Rechtsfortbildung als Teil einer modernen Methodenlehre. In: T. Baums, H. Remsprger, M. Sachs & V. W. Wieland (Eds.), *Zentralbanken, Währungsunion und stabiles Finanzsystem*. Duncker & Humblot: Berlin, pp. 37-67.
- Möllers, T. M. J. (2020). Das PSPP-Urteil des BVerfG und die Europäische Rechtsunion, *Europäische Zeitschrift für Wirtschaftsrecht*. 12: 503-505.
- Mosler, W. (1996). *Soft Currency Economics II*. Valance Company: Christiansted, USVI [US Virgin Islands].
- Nelson, E. & Nikolov, K. (May 2002). Monetary Policy and Stagflation in the UK. *Bank of England Working Paper* No. 155, available <https://ssrn.com/abstract=315180> or <http://dx.doi.org/10.2139/ssrn.315180>.
- Obwexer, W. (2015) Article 4 EUV. In: H. von der Groeben, J. Schwarze & A. Hatje (Eds.), *Europäisches Unionsrecht*, 7th edition. Nomos: Baden-Baden.
- Ohler, C. (2019). Integration durch Recht und ihre Grenzen. In: T. Baums, H. Remsprger, M. Sachs & V. W. Wieland (Eds.), *Zentralbanken, Währungsunion und stabiles Finanzsystem*. Duncker & Humblot: Berlin, pp. 3-18.
- Ohler, C. (2021). *Unkonventionelle Geldpolitik*. Mohr Siebeck: Tübingen, pp. 3-18.
- Pernice, I. (2020). Machtspruch aus Karlsruhe. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 508-519.
- Pießkalla, M. (2020). Eine wichtige rote Linie. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 538-543.
- Praet, P. (2016). The ECB's fight against low inflation: reasons and consequences. *Speech by Peter Praet, Member of the Executive Board of the ECB, at Luiss School of European Political Economy, Rome, 4 April 2016*, <https://www.ecb.europa.eu/press/key/date/2016/html/sp160404.en.html>.

- Remsperger H. (2013). Zentralbankpolitik: Überforderung statt Langeweile? *SAFE Policy Center, White paper series*, No. 3.
- Ruffert, M. (2019). Europarecht. Anleihekäufe der EZB. *Juristische Schulung*, 2: 181-184.
- Schmidt, R. (2015). Die entfesselte EZB. *Juristen Zeitung*, 7: 317-327.
- Schmöller, A. & Tutsch, R. (2015, Article 140 AEUV). In: H. von der Groeben, J. Schwarze & A. Hatje (Eds.), *Europäisches Unionsrecht*, 7th edition. Nomos: Baden-Baden.
- Seidel, M. (2010). Der Ankauf nicht markt- und börsengängiger Staatsanleihen, namentlich Griechenlands, durch die Europäische Zentralbank und durch nationale Zentralbanken – rechtlich nur fragwürdig oder Rechtsverstoß? *Europäische Zeitschrift für Wirtschaftsrecht*, 14: 521.
- Siekmann, H. (2013a). Missachtung rechtlicher Vorgaben des AEUV durch die Mitgliedstaaten und die EZB in der Staatsschuldenkrise. In: T. M. J. Möllers & F.-C. Zeitler (Eds.), *Europa als Rechtsgemeinschaft—Währungsunion und Schuldenkrise*. Tübingen: Mohr Siebeck, pp. 101-160.
- Siekmann, H. (2013b). Einführung, Article 119 and 130 TFEU. In H. Siekmann (Ed.), *Kommentar zur Europäischen Währungsunion*. Tübingen: Mohr Siebeck.
- Siekmann, H. (2015). The Legality of Outright Monetary Transactions (OMT) of the European System of Central Banks. In: F. Rövekamp, M. Bälz, H.G. Hilpert (Eds.), *Central Banking and Financial Stability in East Asia*. Springer International, Cham et al., 101–123
- Siekmann, H. (2020). Gerichtliche Kontrolle der Käufe von Staatsanleihen durch das Eurosystem. *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 491-500.
- Siekmann, H. (2021). Article 88. In: M. Sachs (Ed.), *Grundgesetz*, 9th edn. C.H. Beck: München.
- Siekmann, H. (2022). Article 119 TFEU. In: H. Siekmann (Ed.), *The European Monetary Union*. Hart: Oxford.
- Simon, S. & Rathke, H. (2020). „Schlechterdings nicht mehr nachvollziehbar“ – Warum? *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 500-503.
- Sinn, H.-W. (2018). *The ECB's Fiscal Policy*. Working Paper 24613, National Bureau of Economic Research, <https://www.nber.org/papers/w24613>.
- Sinn, H.-W. (2019). The End of ECB Restraint. *Finanz und Wirtschaft* Aug 12th 2019, <https://www.fuw.ch/article/the-end-of-ecb-restraint>
- Sinn, H.-W. (2021). *Die wundersame Geldvermehrung*. Herder: Freiburg i.Br., Basel & Wien.
- Smits, R. (1997). *The European Central Bank: institutional aspects*. Kluwer Law International: The Hague et al.
- Steinmann, G. (1979). *Inflationstheorie*. Schöningh: Paderborn München Wien Zürich.

- Tettinger, P. J. (1999). Article 88. In: M. Sachs (Ed.), *Grundgesetz*, 2nd edn. C.H. Beck: München.
- Thorp, W. L. & Quandt, R. E. (1959). *The new Inflation*. McGraw-Hill: New York, Toronto & London.
- Tucker, P. (2017). Central banks as trustee for monetary system stability: combining banking supervision with monetary policy. In: *ECB Legal Conference 2017*, pp. 325-339.
- Tymoigen, E. (2009). *Central Banking, Asset Prices and Financial Fragility*. Routledge, London and New York.
- Waldhoff, C. (2022). Article 127 TFEU In: H. Siekmann (Ed.), *The European Monetary Union*. Hart: Oxford.
- Weber, A. (2013) Article 5 TEU. In: Hermann-Josef Weber & Stelio Mangiameli (Eds.), *The Treaty on European Union (TEU)*. Springer: Heidelberg, New York, Dordrecht & London.
- Wernicke, S. (2020). Ist Europa sterblich? *Europäische Zeitschrift für Wirtschaftsrecht*, 12: 543 et seq.
- Whelan, K. (2021). Central banks and inflation: where do we stand and how did we get there? *No 202120, Working Papers from School of Economics, University College Dublin*.
- Wieland V. (2019). R-Star – The Natural Rate and its Role in Monetary Policy. In: T. Baums, H. Remsprger, M. Sachs & V. W. Wieland (Eds.), *Zentralbanken, Währungsunion und stabiles Finanzsystem*. Duncker & Humblot: Berlin, pp. 171-182.
- Wray, L. R. (1998). *Understanding Modern Money*. Edward Elgar: Cheltenham UK
- Wray, L. R. (2012). *Modern Money Theory*. Palgrave Macmillan: Houndmills, Basingstoke, Hampshire.
- Wray, L. R. (2015). *Modern Money Theory*, 2nd edition. Palgrave Macmillan: Houndmills, Basingstoke, Hampshire.
- Wutscher, C. (2019) Article 127 AEUV. In: U. Becker, A. Hatje, J. Schoo & J. Schwarze (Eds.), *EU-Kommentar*, 4th edition. Nomos; Baden-Baden.

All references to internet addresses were checked as correct between 20 and 28 August 2022.

IMFS WORKING PAPER SERIES

Recent Issues

171 / 2022	Veronika Grimm Lukas Nöh Volker Wieland	Government bond rates and interest expenditures of large euro area member states: A scenario analysis
170 / 2022	Jens Weidmann	A new age of uncertainty? Implications for monetary policy
169 / 2022	Moritz Grebe Peter Tillmann	Household Expectations and Dissent Among Policymakers
168 / 2022	Lena Dräger Michael J. Lamla Damjan Pfajfar	How to Limit the Spillover from an Inflation Surge to Inflation Expectations?
167 / 2022	Gerhard Rösl Franz Seitz	On the Stabilizing Role of Cash for Societies
166 / 2022	Eva Berger Sylwia Bialek Niklas Garnadt Veronika Grimm Lars Othér Leonard Salzmänn Monika Schnitzer Achim Truger Volker Wieland	A potential sudden stop of energy imports from Russia: Effects on energy security and economic output in Germany and the EU
165 / 2022	Michael D. Bauer Eric T. Swansson	A Reassessment of Monetary Policy Surprises and High-Frequency Identification
164 / 2021	Thomas Jost Karl-Heinz Tödter	Reducing sovereign debt levels in the post-Covid Eurozone with a simple deficit rule
163 / 2021	Michael D. Bauer Mikhail Chernov	Interest Rate Skewness and Biased Beliefs
162 / 2021	Magnus Reif Mewael F. Tesfaselassie Maik Wolters	Technological Growth and Hours in the Long Run: Theory and Evidence
161 / 2021	Michael Haliassos Thomas Jansson Yigitcan Karabulut	Wealth Inequality: Opportunity or Unfairness?
160 / 2021	Natascha Hinterlang Josef Hollmayr	Classification of Monetary and Fiscal Dominance Regimes using Machine Learning Techniques

159 / 2021	Volker Wieland	The decline in euro area inflation and the choice of policy strategy
158 / 2021	Matthew Agarwala Matt Burke Patrycja Klusak Moritz Kraemer Kamiar Mohaddes	Rising Temperatures, Falling Ratings: The Effect of Climate Change on Sovereign Creditworthiness
157 / 2021	Yvan Lengwiler Athanasios Orphanides	Collateral Framework: Liquidity Premia and Multiple Equilibria
156 / 2021	Gregor Boehl Cars Hommes	Rational vs. Irrational Beliefs in a Complex World
155 / 2021	Michael D. Bauer Eric T. Swanson	The Fed's Response to Economic News Explains the "Fed Information Effect"
154 / 2021	Alexander Meyer-Gohde	On the Accuracy of Linear DSGE Solution Methods and the Consequences for Log-Normal Asset Pricing
153 / 2021	Gregor Boehl Philipp Lieberknecht	The Hockey Stick Phillips Curve and the Zero Lower Bound
152 / 2021	Lazar Milivojevic Balint Tatar	Fixed exchange rate - a friend or foe of labor cost adjustments?
151 / 2021	Thomas Jost Franz Seitz	Designing a European Monetary Fund: What role for the IMF?
150 / 2021	Gerhard Rösl Franz Seitz	Cash and Crises: No surprises by the virus
149 / 2021	Wolfgang Lechthaler Mewael F. Tesfaselassie	Endogenous Growth, Skill Obsolescence and Output Hysteresis in a New Keynesian Model with Unemployment
148 / 2021	Gregor Boehl	Efficient Solution and Computation of Models with Occasionally Binding Constraints
147 / 2021	Brian Fabo Martina Jančoková Elisabeth Kempf Luboš Pástor	Fifty Shades of QE: Conflicts of Interest in Economic Research
146 / 2021	Robert C.M. Beyer Lazar Milivojevic	Dynamics and Synchronization of Global Equilibrium Interest Rates
145 / 2020	Lars P. Feld Volker Wieland	The German Federal Constitutional Court Ruling and the European Central Bank's Strategy
144 / 2020	Mátyás Farkas Balint Tatar	Bayesian Estimation of DSGE Models with Hamiltonian Monte Carlo