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Anti-fragmentation: an incomplete diagnosis and wrong solution

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Marek Dąbrowski

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STUDY

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Anti-fragmentation: an incomplete diagnosis and wrong solution

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Anti-fragmentation: an incomplete diagnosis and wrong solution

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Abstract

The euro area suffers from excessive public debt, which is the primary cause of the so-called fragmentation. It should be remedied by fiscal consolidation instead of the quasi-fiscal activities of the European Central Bank, which are inconsistent with its legal status, compromise its independence and undermine its price stability mandate. When targeted market intervention is necessary, it should be provided by the European Stability Mechanism.

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LIST OF ABBREVIATIONS

APP	Asset Purchase Programme
CB(s)	Central bank(s)
COVID-19	Coronavirus Disaease 2019
CSPP	Corporate Sector Purchase Programme
ECB	European Central Bank
ECOFIN	Economic and Financial Committee of the Council of the European Union
EDP	Excessive Deficit Procedure
EIP	Excessive Imbalance Procedure
EFC	European financial crisis
EFSF	European Financial Stability Facility
ELA	Emergency Liquidity Assistance
ESM	European Stability Mechanism
EU	European Union
FRI	Fiscal Rules Index
GDP	Gross domestic product
GFC	Global financial crisis
GG	General government
IMF	International Monetary Fund
OMT	Outright Monetary Transactions
PSPP	Public Sector Purchase Programme
PSBR	Public sector borrowing requirement
PEPP	Pandemic emergency purchase programme
QE	Quantitative easing

QFA	Quasi-fiscal activities
SGP	Stability and Growth Pact
SMP	Securities Market Programme
TFEU	Treaty on the Functioning of the European Union
TLTRO III	Targeted longer-term refinancing operations (third series)
TPI	Transmission Protection Instrument

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EXECUTIVE SUMMARY

- **Since the 1990s, the public debt-to-GDP ratio has gradually increased in almost all current euro area member countries**. In most of them, it now exceeds the Maastricht reference value of 60%, in several of them – 100%, and in a few cases – even more. It creates a severe challenge to the stability of public finances, the entire financial system and monetary stability in the euro area.
- **The mechanism of fiscal discipline on the European Union (EU) level proved weak and failed to restrain excessive public expenditure and public debt in euro area member countries.** The market discipline built around the "no bailout" clause in Article 125 of the Treaty on the Functioning of the European Union was replaced during the European Financial Crisis (EFC) of 2010-2015 by a policy of conditional bailout. The formal fiscal rules determined by the Treaty and the Stability and Growth Pact were frequently changed and abused by Member States due to insufficient political consensus on their enforcement. In March 2020, after the outbreak of the COVID-19 pandemic, they were suspended until 2023. The same happened to the national fiscal rules in several member states.
- **Spreads between the sovereign bond yields of individual euro area countries only partly reflected differences in their fiscal positions and the size of their public debts.** Between 1999 and mid-2008, they were low. Then they increased rapidly due to the global and European financial crises. Since 2012, they started to decrease again due to interventions of the European Central Bank (ECB) and rescue programmes for the crisis-affected countries. The ECB's massive purchases of government bonds (the main component of its quantitative easing policies), initiated in 2015, further compressed both yields and spreads to a historically record-low level. The perspective of monetary policy tightening in 2022 caused an increase in bond yields in all countries, especially in the most indebted ones.
- **The ECB's involvement in backing the sovereign debt market of the most indebted countries dates back to the beginning of the EFC (2010).** It involved such instruments as the Securities Markets Programme, Outright Monetary Transactions, Emergency Liquidity Assistance and verbal interventions, including the famous "whatever it takes" declaration of the ECB President Mario Draghi in July 2012. The most recent tool – the Transmission Protection Instrument – serves the same purpose: dampening yield spreads in the euro area regardless of the fiscal stance of individual countries.
- **The problem of "fragmentation" is wrongly formulated.** It is a secondary symptom of the excessive sovereign indebtedness in some euro area economies. It should be remedied by fiscal policy measures (fiscal consolidation) rather than by the ECB's quasi-fiscal activities. The latter is not consistent with its legal status, compromises its independence (and credibility of the euro), and undermines its ability to deliver on its price stability mandate. When a targeted market intervention is necessary, it should be provided by the European Stability Mechanism, the institution created for this purpose in 2012, instead of the ECB.

1. INTRODUCTION

The economies of several Member States of the European Union (EU) had suffered from excessive public debt for a long time before the euro area started to operate in 1999. The "Maastricht criteria", which required a general government (GG) deficit not exceeding 3% of gross domestic product (GDP) and GG debt not exceeding 60% of GDP and aimed to protect the monetary union from fiscal imbalances and their negative impact on a common currency, were never fully respected. The same concerned the EU secondary legislation, such as the Stability and Growth Pact (SGP) adopted in 1997 (European Council, 1997) which aimed at reinforcing the Treaty fiscal criteria (reference values). Despite their widespread non-observance, the Excessive Deficit Procedure (EDP) never led to financial sanctions against countries that did not obey the criteria and did not correct their fiscal stance quickly enough.

As time went by, the situation further deteriorated. Each subsequent adverse shock (a near recession in the early 2000s, the global financial crisis [GFC] of 2007-2009, the European financial crisis [EFC] and the COVID-19 crisis of 2020-2021) led to higher deficits and higher debts while the periods of recovery were lost for fiscal consolidation. Furthermore, the long-term systematic decline in growth rates due to the shrinking working-age population in Europe and slower productivity growth narrowed the room for manoeuvre for fiscal policy, increased the temptation to overuse fiscal stimuli, and made fiscal consolidation more difficult, economically and politically.

The years following the GFC were the first incidence when excessive debt in some euro area economies led to *de facto* sovereign insolvency (Greece, Ireland, Portugal) or a situation close to default (Italy, Spain, Cyprus). Although the detailed characteristics of each country's troubles differed, the excessive explicit or implicit public liabilities could be considered their common cause.

The period of fiscal and financial turbulence in the euro area periphery (2010-2015), referred to in this paper as the EFC, brought three kinds of policy responses: (1) strengthening fiscal rules on an EU, euro area and national level, despite their frequent non-observance before and after the crisis; (2) a conditional bailout of countries experiencing a debt crisis (circumventing Article 125 of the Treaty on the Functioning of the European Union [TFEU];[1] and (3) engagement of the European Central Bank (ECB) in easing public debt servicing conditions.

The ECB engagement had various forms. The first instrument, the Outright Monetary Transactions (OMT), was adopted in August 2012 but never activated. The Emergency Liquidity Assistance (ELA) formally aimed to provide temporary liquidity support to solvent but illiquid banks. In practice, it was used to avoid the sovereign default of Greece in 2015.

There were also verbal interventions such as the famous "whatever it takes" declaration of ECB President Mario Draghi (2012). All these interventions contributed to decreasing yield spreads on government bonds in the euro area, including in the most indebted countries.

The launching by the ECB of large-scale asset purchasing programmes (APPs), popularly called quantitative easing (QE), in October 2014 calmed the public debt market and eliminated the necessity of targeted interventions for a while. Interest rates went down, and so did debt servicing costs for governments of EU Member States. Unfortunately, only some used these favourable market conditions (and growth recovery) to decrease the debt-to-GDP ratio. Occasionally, the nervousness of financial markets came back, and yield spreads increased temporarily.

[1] See http://register.consilium.europa.eu/pdf/en/08/st06/st06655-re07.en08.pdf

The situation became dramatic again after the outbreak of the COVID-19 pandemic and related lockdown measures. To deal with the new shock, the ECB launched a large-scale monetary stimulus (mainly the APP intensification). Bond yields continue to decrease to a historically record-low level. What was new in the Pandemic Emergency Purchase Programme (PEPP) was a departure from the principle of proportional purchases of euro area government bonds (according to the capital shares in the ECB) in favour of protecting the yields of countries most exposed to market pressure.

Sooner or later, expansionary monetary and fiscal policies had to cause inflationary consequences, which started to be seen in 2021. Central banks (CBs) had to stop and reverse QE and increase interest rates to fight inflation. Both moves had to cause an increase in public debt servicing costs, in the first instance, in the most indebted countries. Given the large amounts of government bonds in CB portfolios and slow or no progress in fiscal consolidation, CBs became hostages of fiscal disequilibria. It was perhaps the main factor that could explain the late reaction of CBs, in particular, the ECB, to rising inflation and its reluctance to start monetary policy tightening.

Confronted with the perspective of monetary policy tightening and a further increase in public sector borrowing requirements (PSBR), financial markets started to demand higher yields on government bonds, particularly of the most indebted governments. It caused the debate on the supposed fragmentation of the euro area financial market and put pressure on the ECB to counteract higher yield spreads.

Eventually, the ECB responded to this pressure by announcing on 21 July 2022 (together with the first decision to increase its interest rates)[2] a package of anti-fragmentation measures, including the new instrument called the Transmission Protection Instrument (TPI).[3] The TPI is designed as a new form of targeted ECB intervention on the secondary debt market of "…*jurisdictions experiencing a deterioration in financing conditions not warranted by country-specific fundamentals*." To be eligible to benefit from the TPI, the country cannot be subject to the EDP or the excessive imbalance procedure (EIP), and its public debt trajectory must be sustainable.

The ECB presents and justifies the TPI and other instruments of targeted interventions on the sovereign debt market as a tool to smooth the monetary policy transmission mechanism in the euro area and avoid fragmentation of the euro area financial market. However, in our opinion, they have a character of quasi-fiscal operations and constitute a hidden form of monetary financing for the public debt of countries that are most fiscally vulnerable. They are inconsistent with Article 123 of the TFEU and may undermine actual ECB independence.

We also believe that the so-called fragmentation problem is wrongly defined and diagnosed because it concentrates on secondary symptoms (high yield spreads) rather than the root causes of this phenomenon, that is, the excessive sovereign indebtedness of some euro area countries. Furthermore, the solution to this problem should be looked for in the fiscal rather than the monetary policy sphere.

The remaining part of this briefing paper verifies the above-presented working hypothesis empirically. It provides an in-depth analysis of the primary causes of the so-called fragmentation (mainly in the fiscal sphere). It presents arguments why the targeted ECB interventions on the secondary public debt market may compromise its independence, undermine its price stability mandate, and distort the financial market in the euro area. It also suggests alternative ways of addressing the "fragmentation" challenge. Chapter 2 is devoted to the history of the excessive sovereign indebtedness in the euro area,

[2] See ECB (2022), Monetary Policy Decisions, 21 July. https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220721~53e5bdd317.en.html

[3] See ECB (2022). The Transmission Protection Instrument, press release, 21 July. www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220721~973e6e7273.en.html

its intellectual and political-economy roots, and the weakness of the fiscal rules on both the EU and national levels. In Chapter 3, we present a history of ECB involvement in easing public debt service conditions in the euro area, starting from the GFC and ending with the most recent anti-fragmentation package announced on 21 July 2022. Chapter 4 concentrates on a critical assessment of the dominant approach to the so-called fragmentation, the ECB's role in its resolution, associated risks to the ECB's independence, and the credibility of a common currency. We also suggest alternative policy approaches to the so-called fragmentation problem. Finally, Chapter 5 contains a summary of our analysis and conclusions.

In our analysis, we use the data sources of the International Monetary Fund (IMF), Eurostat, the ECB, the European Commission and those collected by other researchers.

2. THE EXCESSIVE PUBLIC DEBT IN THE EURO AREA

Following our working hypothesis presented in Chapter 1 (about the excessive sovereign indebtedness in part of the euro area being the root cause of the so-called fragmentation), Chapter 2 analyses the fiscal stance and public debt dynamics in the euro area since the inception of the euro project (Section 2.1), the mechanisms of fiscal discipline (fiscal rules) in the euro area and Member States and their effectiveness (Section 2.2), intellectual, political economy and political roots of the permissive approach to high deficits and the ever-rising public debt level (Section 2.3), and the dynamics of spreads between national yield curves on the public debt instruments (Section 2.4).

2.1. Fiscal balances and public debt in the euro area 1997-2021

We start our analysis with an overview of the fiscal stance in the euro area as a whole and, separately, in individual Member States from 1997 to 2021. The starting year (1997) was chosen because its results served as the base for the final decision to launch the common currency project (since 1 January 1999) and determine the eligibility of individual EU Member States to adopt the euro.

Figure 1 presents the general government (GG) net lending/ borrowing of the entire euro area as a percentage of GDP. Despite the fluctuation in the GG deficit, partly due to a "standard" business cycle and partly due to adverse shocks (GFC, EFC and COVID-19 crisis), one can observe its increasing trend over time. In 6 of 25 analysed years, the deficit exceeded 3% of GDP, the maximum level set in Protocol No. 12 to the TFEU on the Excessive Deficit Procedure. The frequency and magnitude of excessive deficits increased in the second and third decades of the euro's existence. Furthermore, despite the SGP provision, which requires cyclically adjusted GG accounts to be balanced in the medium term, the euro area has never recorded a budget surplus or a balanced budget.[4]

The picture looks even gloomier if one analyses GG gross debt data (Figure 2). The euro area has always recorded a gross GG debt above the Treaty reference value of 60% of GDP, with the increasing trend line steeper than in the case of the GG deficit. Each subsequent round of crisis (GFC + EFC, COVID-19) pushed the debt-to-GDP ratio to a new, ever higher level, while the period of post-crisis recoveries brought only partial reductions.

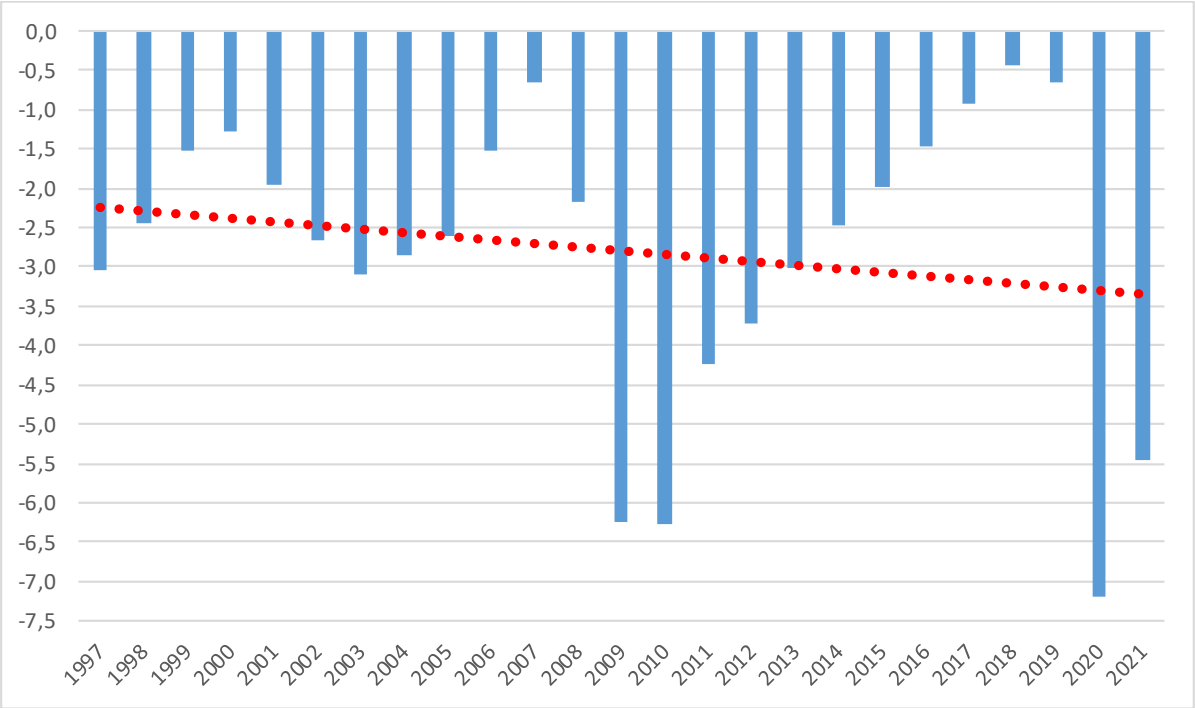
There are two reasons for the adverse debt dynamic in the euro area: (1) continuous GG deficits and (2) a declining trend of GDP growth (Figure 3). The latter can be explained by (1) adverse demographic trends (shrinking working-age population) and (2) the declining rate of growth in total factor productivity (TFP) – see Dabrowski (2021).

The Maastricht fiscal criteria – a deficit not exceeding 3% of GDP and public debt not exceeding 60% – agreed upon in the early 1990s were mutually consistent under the assumption of real economic growth of at least 3% and inflation of no more than 2%, that is, annual growth of nominal GDP of approximately 5% (Buti and Gaspar, 2021). However, as seen in Figure 3, the average real growth rates were below 3% in most euro area countries, and inflation was below 2% for most of the 2010s.[5]

[4] The lowest deficit of 0.4% GDP was recorded in 2018.

[5] Despite its negative economic, social, and political consequences, higher inflation in 2021-2022 creates an opportunity to reduce the debt-to-GDP ratio. However, it did not happen, at least in 2021.

Figure 1: Euro area – GG net lending/borrowing, in % of GDP, 1997-2021



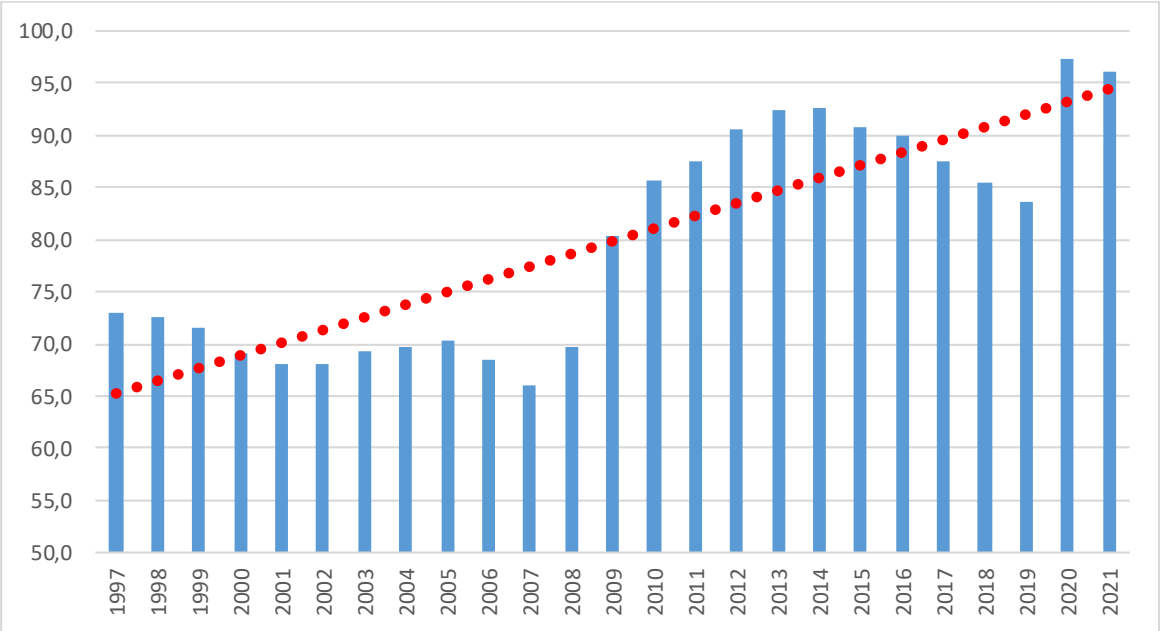
Source: IMF World Economic Outlook, April 2022.

Analysis of individual countries' fiscal performance confirms the euro area aggregate picture, although there is a substantial cross-country variation. Table 1 shows each country's GG net lending/borrowing for the period of its euro area membership plus two years before (the Council decision on the eligibility of euro adoption is taken in the middle of the preceding year based on year t-2 performance). We also mark in red font incidences of deficit higher than 3% of GDP and sum up the number of cases of breaching the Maastricht reference values for a given country in the analysed period and the euro area in a given year.

The total number of excessive deficit cases amounts to 143 out of 394 observations. Greece and Portugal breached the deficit ceiling in 18 years (out of 23 years recorded in the case of Greece and 25 in the case of Portugal). They were followed by France (17 years out of 25) and Spain (12 years out of 25). The opposite end of the spectrum is represented by Finland and Luxembourg (1 year out of 25), Estonia (1 year out of 13) and Lithuania (1 year out of 9).

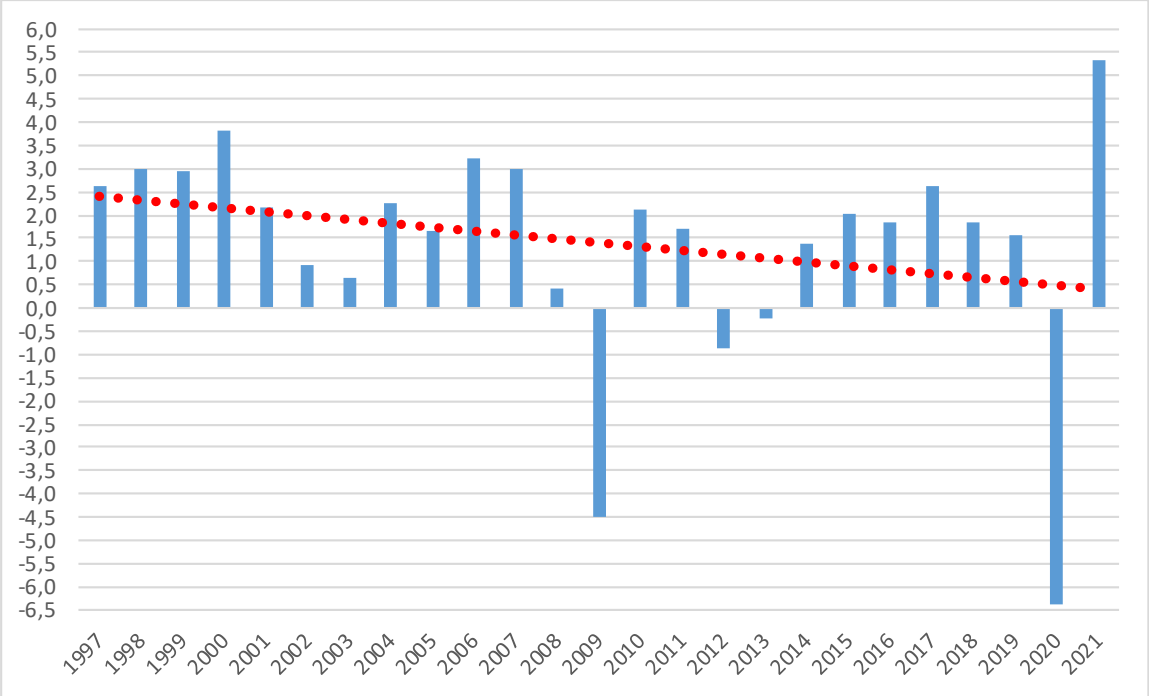
The highest number of excessive deficit cases was recorded in 2022 (all 19 countries), 2009 (14 out of 17), 2010 (13 out of 17) and 2021 (12 out of 19). In 2017, no country recorded an excessive deficit; in 1998, 1999, 2007, 2018 and 2019, only one government exceeded the debt limit of 3% of GDP.

Figure 2: Euro area – GG gross debt, in % of GDP, 1997-2021



Source: IMF World Economic Outlook, April 2022.

Figure 3: Euro area – GDP in constant prices, annual change, in %, 1997-2021



Source: IMF World Economic Outlook, April 2022.

The debt statistics disaggregated by Member State (Table 2) record 229 cases of GG gross debt exceeding 60% of GDP, out of 394 total observations, which is more than half (58%). Austria, Belgium, Greece and Italy never recorded gross debt below the 60% threshold. France recorded only two years (2000 and 2001) with debt below 60%. In Portugal, the debt exceeded the Maastricht reference value for 20 years (since 2002). Germany recorded 19 years with debt above the Treaty limit.

Table 1: GG net lending/borrowing in euro area member countries, in % of GDP, 1997-2021

Country	Joined the EA	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Years< -3%
Austria	1999	-2.4	-2.7	-2.6	-2.1	-0.7	-1.9	-1.4	-4.8	-2.5	-2.6	-1.4	-1.5	-5.4	-4.5	-2.6	-2.2	-2.0	-2.7	-1.0	-1.5	-0.8	0.2	0.6	-8.3	-5.8	5/25
Belgium	1999	-2.2	-1.0	-0.6	-0.1	0.2	0.0	-1.9	-0.2	-2.7	0.2	0.1	-1.1	-5.4	-4.1	-4.3	-4.3	-3.1	-3.1	-2.4	-2.4	-0.7	-0.8	-1.9	-9.1	-6.0	8/25
Cyprus	2008										-1.0	3.2	0.9	-5.4	-4.7	-5.7	-5.6	-5.2	-0.2	0.2	0.2	2.0	-3.5	1.3	-5.7	-1.8	7/16
Estonia	2011													-2.2	0.2	1.1	-0.3	0.2	0.7	0.1	-0.4	-0.7	-0.6	0.1	-5.6	-2.4	1/13
Finland	1999	-1.3	1.5	1.6	6.7	4.9	4.0	2.3	2.2	2.6	3.9	5.1	4.2	-2.5	-2.5	-1.0	-2.2	-2.5	-3.0	-2.4	-1.7	-0.7	-0.9	-0.9	-5.4	-2.8	1/25
France	1999	-3.7	-2.4	-1.6	-1.3	-1.4	-3.2	-4.0	-3.6	-3.4	-2.4	-2.6	-3.3	-7.2	-6.9	-5.2	-5.0	-4.1	-3.9	-3.6	-3.6	-3.0	-2.3	-3.1	-9.1	-7.0	17/25
Germany	1999	-2.9	-2.6	-1.7	-1.6	-3.0	-3.9	-3.7	-3.3	-3.3	-1.7	0.3	-0.1	-3.2	-4.4	-0.9	0.0	0.0	0.6	1.0	1.2	1.3	1.9	1.5	-4.3	-3.7	8/25
Greece	2001			-5.8	-4.1	-5.5	-6.1	-7.9	-8.9	-6.2	-6.0	-6.8	-10.3	-15.3	-11.3	-10.5	-6.7	-3.8	-4.1	-3.0	0.3	0.9	0.8	0.2	-10.9	-8.7	18/23
Ireland	1999	1.4	2.1	3.5	4.9	1.0	-0.5	0.3	1.3	1.6	2.8	0.3	-7.0	-13.9	-32.1	-13.6	-8.5	-6.4	-3.6	-2.0	-0.8	-0.3	0.1	0.5	-4.9	-2.0	8/25
Italy	1999	-3.0	-3.0	-1.8	-2.4	-3.2	-2.9	-3.2	-3.5	-4.1	-3.6	-1.3	-2.6	-5.1	-4.2	-3.6	-2.9	-2.9	-3.0	-2.6	-2.4	-2.4	-2.2	-1.5	-9.6	-7.2	10/25
Latvia	2014																0.2	-0.6	-1.7	-1.5	-0.4	-0.8	-0.7	-0.4	-3.9	-5.5	2/10
Lithuania	2015																	-2.6	-0.7	-0.2	0.3	0.5	0.6	0.3	-7.3	-3.0	1/9
Luxembourg	1999	2.7	3.0	3.2	5.6	5.6	2.0	0.3	-1.4	-0.2	1.9	4.4	3.4	-0.2	-0.3	0.7	0.5	0.8	1.3	1.3	1.9	1.3	3.0	2.4	-3.8	0.6	1/25
Malta	2008										-2.5	-2.1	-4.1	-3.2	-2.3	-2.4	-3.4	-2.3	-1.7	-1.0	0.9	3.1	1.9	0.4	-9.9	-9.3	4/16
Netherlands	1999	-1.6	-1.3	0.3	1.2	-0.4	-2.0	-3.1	-1.8	-0.5	0.0	-0.2	0.1	-5.2	-5.3	-4.5	-4.0	-3.0	-2.3	-2.1	0.0	1.3	1.4	2.3	-4.4	-5.6	7/25
Portugal	1999	-3.7	-4.3	-3.0	-3.4	-4.8	-3.8	-5.6	-6.0	-6.1	-4.1	-2.9	-3.7	-9.9	-11.4	-7.7	-6.2	-5.1	-7.3	-4.4	-1.9	-3.0	-0.3	0.1	-5.8	-2.8	18/25
Slovakia	2009											-2.1	-2.5	-8.1	-7.5	-4.3	-4.4	-2.9	-3.1	-2.7	-2.6	-1.0	-1.0	-1.3	-5.5	-6.5	7/15
Slovenia	2007									-1.3	-1.2	0.0	-1.4	-5.8	-5.6	-6.6	-4.0	-14.6	-5.5	-2.8	-1.9	-0.1	0.7	0.4	-7.8	-5.2	8/17
Spain	1999	-4.0	-2.7	-1.3	-1.2	-0.5	-0.3	-0.4	-0.1	1.2	2.1	1.9	-4.6	-11.3	-9.5	-9.7	-10.7	-7.0	-5.9	-5.2	-4.3	-3.0	-2.5	-2.9	-11.0	-7.0	12/25
No. of countries < -3%		3/11	1/11	1/12	2/12	3/12	4/12	6/12	6/12	5/13	3/15	1/16	6/16	14/17	13/17	11/17	10/18	8/19	8/19	3/19	2/19	0/19	1/19	1/19	19/19	12/19	143/394

Source: IMF World Economic Outlook database, April 2022 and author's calculation.

Notes: 1/ Tables present data for a given country's period of euro area membership plus two years before joining the euro area. 2/ Red font indicates cases when the GG deficit exceeded 3% of GDP. 3/ IMF staff estimates for Austria, Belgium, Cyprus, Finland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Slovakia and Spain in 2021.

Table 2: GG gross debt in euro area member countries, in % of GDP, 1997-2021

Country	Joined the EA	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Years >60%
Austria	1999	63.1	68.8	61.1	65.7	66.4	67.0	64.9	64.8	68.3	67.0	64.7	68.4	79.6	82.4	82.2	81.7	81.0	83.8	84.4	82.5	78.6	74.0	70.6	83.2	83.1	25/25
Belgium	1999	124.3	119.2	115.4	109.6	108.2	105.4	101.7	97.2	95.1	91.5	87.3	93.2	100.2	100.3	103.5	104.8	105.5	107.0	105.2	105.0	102.0	99.9	97.7	112.8	108.3	25/25
Cyprus	2008										59.0	53.2	44.1	52.8	55.5	65.0	79.4	102.9	109.1	107.2	103.1	92.9	98.4	91.1	115.0	103.9	11/16
Estonia	2011													7.2	6.7	6.2	9.8	10.2	10.6	10.1	10.0	9.1	8.2	8.6	19.0	18.1	0/13
Finland	1999	52.2	46.8	44.0	42.4	40.9	40.1	42.7	42.6	39.9	38.0	33.9	32.6	41.5	46.9	48.3	53.6	56.2	59.8	63.6	63.2	61.2	59.8	59.6	69.0	66.7	5/25
France	1999	61.4	61.4	60.5	58.9	58.3	60.3	64.4	65.9	67.4	64.6	64.5	68.8	83.0	85.3	87.8	90.6	93.4	94.9	95.6	98.0	98.1	97.8	97.4	115.2	112.3	23/25
Germany	1999	58.9	59.5	60.4	59.3	58.2	59.9	63.5	65.2	67.5	66.9	64.2	65.7	73.2	82.0	79.4	80.7	78.3	75.3	72.0	69.0	64.7	61.3	58.9	68.7	70.2	19/25
Greece	2001			99.7	105.8	108.0	105.8	102.3	103.7	108.3	104.5	104.0	110.3	127.8	147.5	183.9	162.0	178.7	181.7	178.7	183.1	182.7	190.1	185.1	211.9	198.9	23/23
Ireland	1999	61.6	51.4	46.6	36.4	33.6	30.9	29.8	28.1	26.1	23.6	23.9	42.5	61.8	86.2	110.5	119.7	120.0	104.3	76.7	74.3	67.8	63.1	57.2	58.4	55.3	11/25
Italy	1999	116.8	114.1	113.3	109.0	108.9	106.4	105.5	105.1	106.6	106.7	103.9	106.2	116.6	119.2	119.7	126.5	132.5	135.4	135.3	134.8	134.2	134.4	134.1	155.3	150.9	25/25
Latvia	2014																42.7	40.4	41.6	37.1	40.4	39.0	37.1	36.7	43.3	45.6	0/10
Lithuania	2015																	38.7	40.5	42.7	39.9	39.3	33.7	35.9	46.6	43.0	0/9
Luxembourg	1999	10.1	9.5	8.4	7.5	7.6	7.5	7.4	7.8	8.0	8.2	8.1	14.6	15.3	19.1	18.5	20.9	22.4	21.9	21.1	19.6	21.8	20.8	22.3	24.8	25.1	0/25
Malta	2008										64.3	61.9	61.8	66.3	65.3	69.3	65.9	65.8	61.6	55.9	54.5	47.5	43.5	40.6	53.3	57.4	9/16
Netherlands	1999	64.9	61.7	57.5	50.9	48.2	47.5	48.7	49.1	48.5	44.1	42.0	53.8	55.8	59.4	61.8	66.4	67.8	68.0	64.6	61.9	56.9	52.4	47.6	52.8	56.7	8/25
Portugal	1999	58.7	55.6	55.4	54.2	57.4	60.0	63.9	67.1	72.2	73.7	72.7	75.6	87.8	100.2	114.4	129.0	131.4	132.9	131.2	131.5	126.1	121.5	116.6	135.2	127.5	20/25
Slovakia	2009											30.3	28.6	36.4	41.0	43.4	51.8	54.7	53.6	51.9	52.4	51.6	49.6	48.1	59.7	60.4	1/15
Slovenia	2007									26.4	26.1	22.8	21.8	34.5	38.3	46.5	53.6	70.0	80.3	82.6	78.5	74.2	70.3	65.6	79.8	74.7	9/17
Spain	1999	66.2	64.2	62.5	57.8	54.1	51.3	47.7	45.4	42.4	39.1	35.8	39.7	53.3	60.5	69.9	86.3	95.8	100.7	99.3	99.2	98.6	97.5	95.5	120.0	118.7	15/25
No. of countries >60%		7/11	6/11	7/12	4/12	4/12	6/12	7/12	7/12	7/13	8/15	8/16	8/16	9/17	10/17	12/17	12/18	13/19	13/19	13/19	13/19	12/19	11/19	9/19	11/19	12/19	229/394

Source: IMF World Economic Outlook database, April 2022 and author's calculation.

Notes: 1/ Tables present data for a given country's period of euro area membership plus two years before joining the euro area. 2/ Red colour indicates cases when GG gross debt exceeded 60% of GDP. 3/ IMF staff estimates for Austria, Belgium, Cyprus, Finland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Slovakia and Spain in 2021.

On the other hand, Estonia, Latvia, Lithuania and Luxembourg always had a debt level much below this limit, although it has also grown over time. Slovakia also belonged to this group but found itself in the "red" zone in 2021. On average, new euro area members from Central and Eastern Europe, especially the Baltic states, represent lower relative debt levels thanks to their higher economic growth rates, lower initial debt and lower fiscal deficits.

The number of countries with a debt level above 60% of GDP grew steadily and amounted to 12 (out of 19) in 2021.

As mentioned before, fiscal policy responses to the GFC, EFC and the COVID-19 crisis were the main factors leading to the rapid increase of the public debt-to-GDP ratios in the analysed group. In most countries, the period between both waves of crises (the second half of the 2010s) was not used to repair fiscal balances and create sufficient room for a fiscal response to a new downturn.

Table 2 shows that by 2019 only Germany, Ireland, Malta and the Netherlands had radically improved their gross debt-to-GDP ratios (compared to the peaks during the GFC and EFC), some of them (Germany and Malta) even below their pre-GFC levels. Portugal recorded a less impressive but meaningful improvement. The euro area decreased its relative indebtedness by only nine percentage points of GDP.

The same applies to the period of post-COVID economic recovery in 2021. Only a few euro-area countries (Cyprus, Greece, Italy, Portugal and Slovenia) managed to reverse partly a rapid increase in the debt-to-GDP ratio recorded in 2020. Others further increased their relative debt burdens or stabilised them on the 2020 level.

In 2021, GG gross debt exceeded 100% of GDP in seven euro area countries: Belgium, Cyprus, France, Greece, Italy, Portugal and Spain. In Greece, it oscillates around 200% of GDP, and in Italy – about 150%. These are record-high figures for peacetime. It should not be surprising that financial markets can become nervous about their debt sustainability perspectives, especially in the context of increasing interest rates and an expected growth slowdown.

2.2. Mechanisms of fiscal discipline in the euro area and Member States and their effectiveness[6]

Fiscal discipline may be ensured by market mechanisms (danger of sovereign default), formal fiscal rules (formal constraints), or a combination of both. In turn, fiscal rules can be divided into fiscal targets and procedures, either imposed by a federal centre, self-imposed by a sub-federal entity, or negotiated by both (see Eyraud & Gomez Sirera, 2013). In the case of the euro area, below, we analyse mechanisms of fiscal discipline on the EU/euro area level and the national level separately.

2.2.1. Mechanisms of fiscal discipline on the EU/euro area level

As determined by the Maastricht Treaty, the original EU/euro area mechanism of fiscal stability was based on market discipline and budgetary rules.

The market discipline was built around the "no bailout" clause in Article 125 of the TFEU and the ban on debt monetisation by the ECB (Article 123 of the TFEU). However, the "no bail out" clause became de facto suspended with the adoption of the first financial assistance package to Greece in May 2010 and building a temporary (European Financial Stability Facility [EFSF]) and then permanent (European Stability Mechanism [ESM]) bailout facility. Thus, the "no bail out" principle was replaced by a policy of

[6] This section draws partly from Dabrowski (2015; 2017).

conditional bailout (financial assistance in exchange for a country's commitment to fiscal adjustments and necessary reforms).

On the other hand, Article 126 of the TFEU, the accompanying Protocol No. 12, and the EU's secondary legislation, the SGP (European Council, 1997), have determined fiscal rules, including numeric criteria on the maximum fiscal deficit and debt level (see Section 2.1)[7] backed by administrative and financial sanctions for breaching them. The EDP obliges rules offenders to reduce their deficit to the 3% of GDP (or lower) level and provides support to meet this obligation.

However, the implementation of the SGP has always suffered from the lack of political commitment of Member States. As a result, the SGP was watered down in 2005 by adding various exception clauses. Then after the beginning of the Greek debt crisis in 2010, the SGP was strengthened again by adding new and more automatic and financially painful sanctions. It was also amended by various preventative measures and closer monitoring of public debt. The earlier version of the SGP had focused solely on the deficit.

Several other measures accompanied the reform of the SGP. In 2011, all EU Member States were obliged to introduce the upper limits for public debt and fiscal deficits nationally (see Subsection 2.2.2). Furthermore, in 2012, a procedure for monitoring national draft budgets was introduced under the name of the European Semester.[8]

Finally, on 2 March 2012, 25 Member States signed the Fiscal Compact,[9] which came into force on 1 January 2013. Currently, all 27 Member States are signatories of this intergovernmental treaty. In general, the Compact sets forth the principles of enhanced fiscal discipline inside the EU and at the national level, especially for euro -area countries, in the form of an intergovernmental treaty.

However, as discussed in Section 2.1, the enhanced fiscal rules did not prevent a further increase in the public debt (relative to GDP). Their implementation by the European Commission and Council generally proved lax, with long adjustment periods granted to national governments remaining under the EDP, accepting numerous exceptions, and refraining from adopting financial sanctions on serial rule offenders (see Section 2.3).

In November 2015, the Economic and Financial Committee of the Council of the European Union (ECOFIN) approved the flexible implementation of the SGP to support structural reforms and investments (Council of the European Union, 2015). It meant, in practice, the relaxation of the EDP and possible sanctions.

In March 2020, after the outbreak of the COVID-19 pandemic, the SGP was suspended. Then this suspension was extended, most recently in May 2022 (until the end of 2023).[10] Parallelly, the discussion on the reform of the EU/euro area fiscal rules has been opened. While the overview of this debate goes beyond the remit of this paper, one can risk an opinion that both intellectual and political agreement on the new rules will be complicated to accomplish. Generally speaking, there is little appetite for strict regulations, and most proposals further weaken the SGP (or alternative framework, which may replace the SGP).

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7 See Pinheiro de Matos and Sanches Soliva (2021) for a historical analysis of changes in EU fiscal rules.

8 See http://www.consilium.europa.eu/en/policies/european-semester/

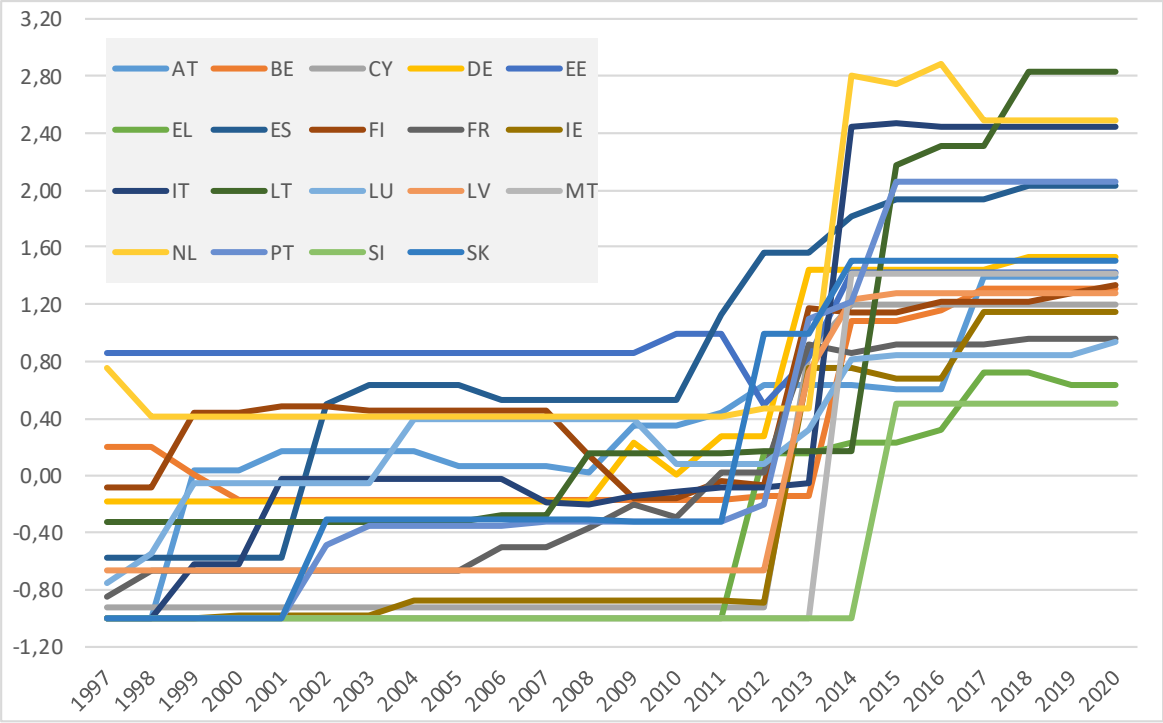
9 Its full title is the Treaty on Stability, Coordination, and Governance in the Economic and Monetary Union. See https://www.consilium.europa.eu/media/20399/st00tscg26_en12.pdf for its content.

10 See https://ec.europa.eu/commission/presscorner/detail/en/ip_22_3182

2.2.2. Mechanisms of fiscal discipline at the national level

EU member states have also developed their own fiscal rules at the national level. Moreover, in November 2011, the European Parliament and European Council adopted a directive recommending that all EU Member States would introduce upper limits for public debt and fiscal deficits into their national constitutions and legislation (Council of the European Union, 2011). This directive accelerated the creating and strengthening of such rules (see Figure 4).

Figure 4: Fiscal rules index (FRI) in the euro area Member States, 1997-2020



Source: European Commission, Directorate-General for Economic and Financial Affairs, https://economy-finance.ec.europa.eu/document/download/dc0a1d50-3d4a-4e66-9653-908bae851058_en?filename=design_of_numerical_fiscal_rules_2020.xlsx

Due to differences in national constitutions and legal systems, national fiscal rules are not homogenous and are not easily comparable. Nevertheless, the European Commission attempted to calculate a cumulative fiscal rules index (FRI) for each EU Member State on a scale from -1 (lack of rules) to over 3 (the most robust rules) (Figure 4). It evaluates each country according to five criteria: (1) legal base, (2) binding character, (3) bodies monitoring compliance and the correction mechanism, (4) correction mechanisms, and (5) resilience to shocks.[11]

As seen in Figure 4, the strictest rules within the euro area were adopted in Lithuania, the Netherlands, Italy, Portugal and Spain. Slovenia, Greece, Luxembourg and France found themselves on the other end of the spectrum with the weakest rules. However, it is worth noticing that the value of the FRI does not necessarily correlate with the actual fiscal performance of a given country, as illustrated by the deficit and debt figures in Tables 1-2. Furthermore, many national rules were suspended at the beginning of the COVID-19 crisis in 2020.

[11] See https://economy-finance.ec.europa.eu/economic-and-fiscal-governance/fiscal-governance-eu-member-states/numerical-fiscal-rules-eu-member-countries_en

2.3. Why do mechanisms of fiscal discipline remain ineffective?

Answering this question would require a comprehensive analysis, going far beyond the thematic plan of this paper. Below we concentrate on three causes: (1) political economy factors at the national level; (2) political economy factors at the European level; and (3) fallacies of economic science.

2.3.1. Political economy at the national level

The relaxation of monetary or fiscal policy is always politically more popular than its tightening. Therefore, politicians usually postpone the unpopular tightening decisions as long as possible. It often results in "too late/too little" decisions. Such delayed monetary and fiscal policy reactions were seen after the GFC and EFC and the COVID-19 crisis. This fundamental political economy asymmetry put under question the feasibility of effective countercyclical monetary and fiscal policies and other macroeconomic "fine-tuning."

The time inconsistency problem[12] (e.g., Kydland and Prescott, 1977) is another political economy problem. It refers to differences between the time decision horizon of political bodies (usually short term) and the time horizon when the economic consequences of their decisions will materialise (in most cases, in the medium-to-long term).

The theory of a "political business cycle" developed in the early 1970s has built various models of political determinants of macroeconomic policy decisions (e.g., Nordhaus, 1975; Alesina, 1987; Rogoff, 1990; Drazen, 2000). Most of them assumed the political business cycle to be equal to the election cycle, four or five years. However, in the contemporary political life driven by digital, highly tabloidised media and countless opinion polls, this cycle is much shorter, counted in months or weeks, making the time inconsistency problem even more dramatic.

Independent institutions and policy rules have been seen as solutions to both political economy problems discussed above: the unpopularity of tightening decisions and time inconsistency. This idea has been easier to implement in monetary policy and resulted in independent CBs, the decisions of which are based on transparent rules (see Kydland and Prescott, 1977; Cukierman, 1996). However, even in the case of CBs, there are limits to their independence; their charters are eventually adopted (and may be changed) by parliaments and their monetary policymakers are appointed by political bodies (Goodhart and Pradham, 2020).

The same idea was considered in fiscal policymaking and took the form of independent fiscal councils to determine the basic macroeconomic parameters of fiscal decisions. On the EU level, the European Fiscal Board, appointed by the European Commission, started to operate in 2016. Responding to the Council's directive of 2011 (Council of the European Union, 2011) discussed in Section 2.2, independent fiscal councils were created in all euro area countries. Their exact legal and institutional status varies from country to country, but their prerogatives primarily have an opinion-making character (Rawdanowicz et al., 2021). Their opinions are not binding for governments and parliaments. Furthermore, it is not easy to imagine the de-politicisation of fiscal policy decisions and delegating them to technocratic bodies, as in the case of monetary policy. Budget decisions are at the core of parliamentary democracy and cannot be overridden by decisions of independent fiscal bodies.

2.3.2. Political economy at the European level

Adopting the supranational fiscal rules on the EU level (see Subsection 2.2.1) was another constraint on national fiscal policy decisions. Their administration and enforcement by the "technocratic"

[12] Called sometimes a dynamic inconsistency problem.

European Commission were to make them immune to national political pressures. However, the European Commission is not an independent body; it is accountable to both the European Parliament and, via the Council of the European Union, to governments of Member States. The largest Member States, having the most significant voting power in the Council and the largest representation in the European Parliament, are particularly influential. Furthermore, several decisions related to SGP implementation must be eventually approved (or at least not rejected) by the Council (ECOFIN).

In such a political and institutional environment, enforcing the EU fiscal rules has always faced a *collective action problem*. There has been a lack of consensus among EU Member States to undertake the actions required to maintain fiscal discipline. The reason has been the large number of countries that could not follow the rules (see Section 2.1). Consequently, they have not been politically ready to punish their fellow Members States that had breached the rules.

The same reason can explain the circumvention of the "no bailout" clause established by Article 125 of the TFEU during the EFC, which served as the foundation of market discipline in the euro area (Dabrowski, 2015). Having high public indebtedness, high debt exposures to the sovereign debt of countries in trouble, and fragile banking systems impaired by the GFC and EFC, most Member States have been afraid of cross-country crisis contagion. This factor has decreased the political appetite of Member States to enforce the "no bailout" principle.

2.3.3. Macroeconomic misconceptions

The academic and expert community has also contributed to the failure to enforce the EU and national fiscal rules and put sufficient attention to the challenge of sovereign solvency. The representatives of the influential stream of economic thinking referring their opinions, not always correctly,[13] to Keynesian theory have constantly advocated higher government spending and higher deficits as the way to boost economic growth and employment and cushion adverse shocks, regardless of their origins. For them, there was never the right time to start consolidating public finances and rebuilding fiscal buffers to be able to react to future shocks.

While we cannot comment on all opinions and economic policy proposals presented by those who opposed, in one way or another, fiscal consolidation and downplayed the risk of sovereign debt insolvency, we will concentrate on two particularly bad ideas.

The first is the belief that fiscal multipliers can be above one. It might be the case during the Great Depression in the early 1930s when crisis-affected economies had large free capacities and were only partly opened to the external world. It is rarely the case in contemporary advanced economies with a substantial degree of openness. In such circumstances, additional demand created by fiscal stimulus "leaks" easily outside a given country, increasing its imports rather than domestic production. Furthermore, the profound structural changes accompanying the COVID-19 crisis produced several bottlenecks in supply chains rather than free capacities, so additional demand created by monetary and fiscal stimuli led to inflationary pressures instead of the substantial multiplier effect.

On an empirical ground, Blanchard and Leigh (2013) claimed that multipliers are quite often above one, while Batini et al. (2014) suggested a more careful approach. In their analysis, the fiscal multiplier was below one in most cases. Afonso and Silva Leal (2019) found that government expenditure in the euro area economies positively affected output, with an annual accumulated multiplier of 0.44, whereas tax multipliers presented negative signs. The spending multiplier showed a higher value for countries with lower levels of public debt, with negative output gaps, and during recessions.

[13] John Maynard Keynes did not advocate deficit spending and increasing public debt and did not question intertemporal fiscal constraints.

A fiscal multiplier below one can also be indirectly confirmed by the rapid growth of GG's gross debt-to-GDP ratio during the GFC, EFC and COVID-19 crisis (Figure 2 and Table 2 in Section 2.1). If the multiplier was above one, as Blanchard and Leigh (2013) suggested, countries would "grow out" of their debt.

The belief in a multiplier above one has led to three wrong policy recommendations. First, it has supported an aggressive countercyclical fiscal policy in the downturn phase, beyond automatic fiscal stabilisers, regardless of existing budgetary space. It was particularly controversial during the COVID-19 crisis when the economy was constrained mainly by administrative lockdown measures and the structural effects of the pandemic.[14]

Second, it was the permanent campaign against the supposed "austerity"[15] policies, including the concept of "self-defeating austerity" (Holland and Portes, 2012). Opponents of the "austerity" policies frequently questioned the rationale of the existing EU fiscal rules and their enforcement (see Krugman, 2012a, b; 2013; Layard, 2012; Soros, 2012; Skidelsky, 2015). In such an intellectual atmosphere, it was not easy to build political consensus in favour of strict enforcement of the EU/euro area fiscal rules.

Third, it raises naïve hopes that the economy can "outgrow" excessive debt without any fiscal consolidation effort.

The second critical misconception relates to the low nominal and real interest rates in the second half of the 2010s and 2020-2021 in advanced economies, including the euro area (Demertzis and Viegi, 2021; Edgerton, 2021; Rohde, 2021).

As a result, many policymakers and economists (e.g., Blanchard, 2019; Furman and Summers, 2020; Regling, 2022) have argued that record-low interest rates allow countries to run higher public debt levels than previously assumed without negative consequences for the stability of public finances. This optimism has been based on an (often implicit) assumption that ultra-low real interest rates will remain for long or forever. However, this is a mechanical extrapolation of the past trends without reflecting whether the factors contributing to low interest rates will continue in the future. One can imagine a gradual disappearance of a saving surplus in China and other emerging market economies (as a result of demographic changes) and an increase in investment spending related to a green transition. It will increase real interest rates (determined by the global saving-investment balance). In addition, monetary policy tightening to fight inflation pressures (already underway) will contribute to much higher nominal interest rates and, consequently, higher costs of servicing public debt.

In the first instance, higher interest rates will affect the countries with the most considerable gross financing needs (the sum of GG net borrowing and maturing GG debt in a given year). Generally, newly issued bond yields tend to increase when the debt level rises. That is, marginal yields are an increasing function of a debt level and its increase (Gros, 2021).

So far, the period of ultra-low interest rates has been lost mainly for the consolidation of public finances, as seen in our analysis carried out in Section 2.1.

[14] In this context, the recommendation of the IMF to '*spend as much as you can but keep receipts*' (Georgieva, 2020) sounded quite surprising.

[15] We abstract from the fact that the notion of "austerity" has a negative emotional context (nobody likes to be treated in an austere way) and may distort the debate on the optimal fiscal policy stance.

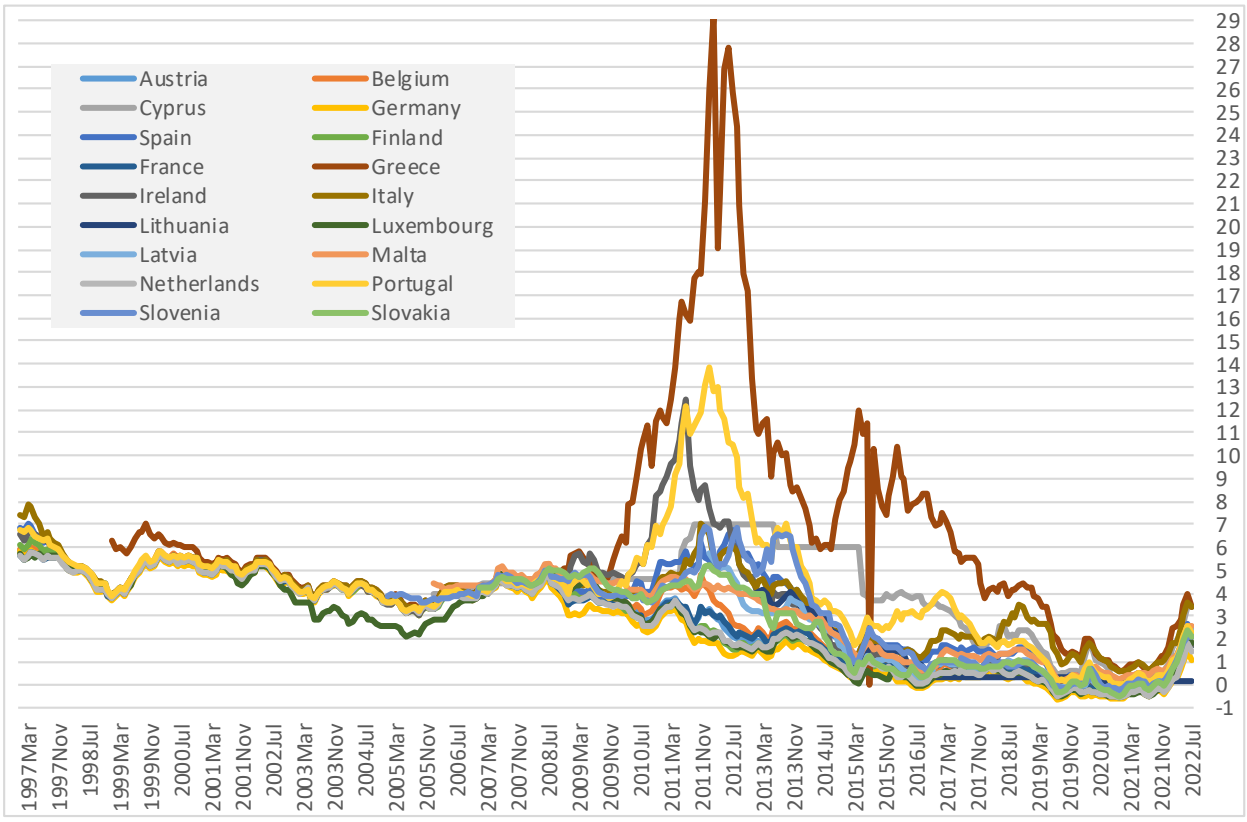
2.4. Spreads between government bond yields in the euro area

In this section, we analyse the dynamics of the 10-year bond yields of the euro area governments for 1997-2022. Data in Figure 5 is computed similarly to Tables 1 and 2: data for each country covers the period of its membership in the euro area plus two years before its accession.

Figure 5 allows us to distinguish several periods. The two years preceding the start of the euro project (1997-1998) were characterised by a rapid yield convergence to the level represented by the lowest-yield countries. The same happened with the yields of the countries that joined the euro area later.

The period between 1999 (launching the euro project) and mid-2008 (culmination of the GFC) was characterised by low yield spreads between euro area countries despite considerable differences in their fiscal positions. This interesting phenomenon can be interpreted in at least two ways, which do not necessarily exclude each other. The first interpretation refers to the low ex-ante credibility of the "no bailout" clause (Article 125 of the TFEU), confirmed by a series of conditional rescue programmes from 2010 to 2015. The second reason was the impact of a lax monetary policy in the United States, which led to abundant global liquidity from 2003 to 2008.

Figure 5: 10-year government bond yields in %, monthly averages, 1997-2022



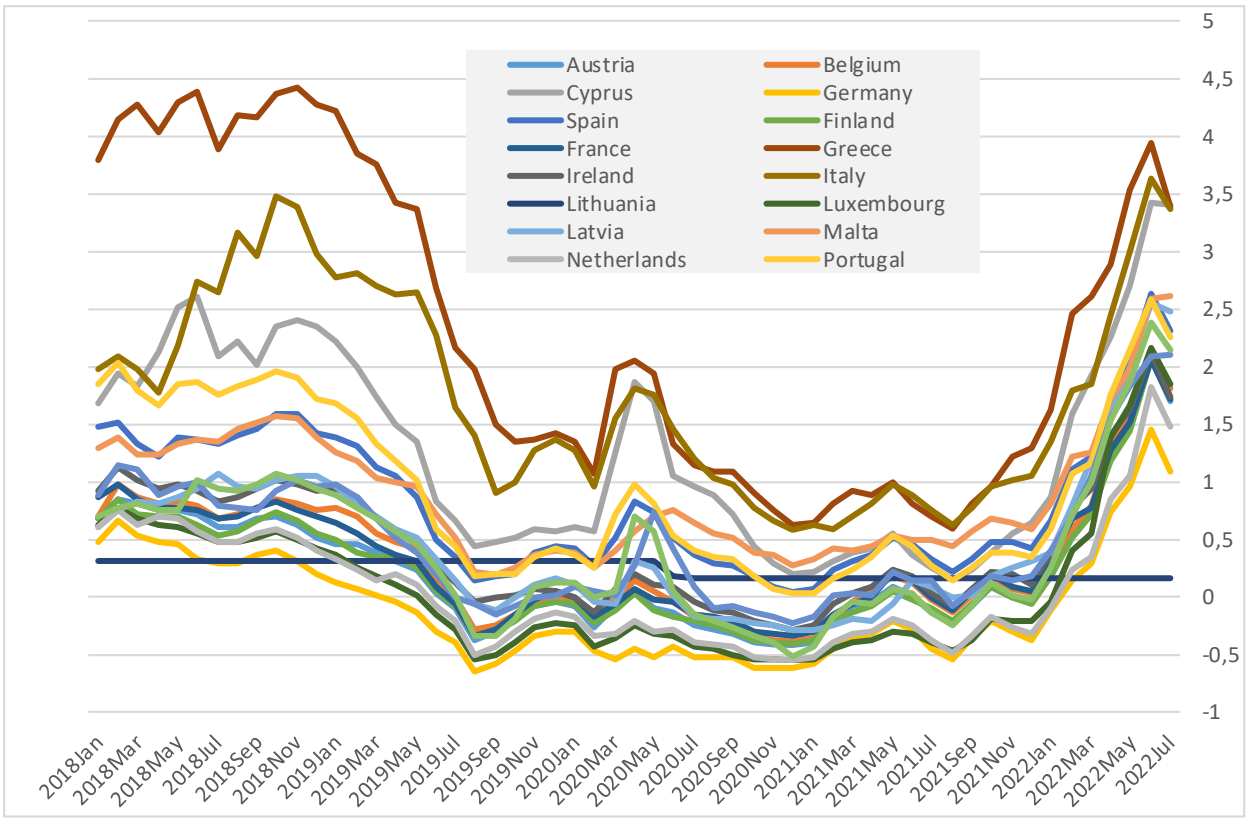
Source: ECB Statistical Data Warehouse.

The GFC and EFC changed this picture dramatically. Yields of the distressed countries increased dramatically, and they were forced to apply for the rescue programmes provided by the European Commission, IMF and ECB (the famous "troika"). The rescue programmes and ECB interventions (such as the "whatever it takes" declaration of ECB President Mario Draghi in July 2012 – see Section 3.1) cushioned market tensions and diminished yields and yield spreads. However, the spreads for the crisis-

affected countries which lost unrestricted market access (Greece, Ireland, Portugal, Cyprus and Spain) remained substantial until 2014 or even longer (Greece and Cyprus).

The launching by the ECB of large-scale asset purchasing programmes (APPs) in October 2014, only temporarily discontinued in 2018-2019, accelerated the process of lowering yields and their convergence to a historically record-low level. Inter-country yield spreads have also been compressed, but not completely. As seen in Figure 6, the yields of Greek, Italian and Cypriot government bonds have been systematically higher (on average, by 100 basis points or more) compared to the euro area "core" represented by Germany, the Netherlands and Luxembourg. The bonds of Portugal, Spain and Malta have also been higher, but by a smaller margin.

Figure 6: 10-year government bond yields in %, monthly averages, 2018-2022



Source: ECB Statistical Data Warehouse.

Figure 6 also shows that there were short periods of mini market turmoil when both yields and spreads temporarily increased, for example, at the end of 2019 and in March-April 2020, immediately after the outbreak of the COVID-19 pandemic. CBs, including the ECB, reacted to the COVID-19 crisis with a new wave of monetary easing, mainly through the intensification of APPs (see Section 3.3). It allowed continuing a downward yield trend for a while.

The situation started to change in August 2021. A post-COVID economic recovery, increasing inflation, market expectations of tighter monetary policy, and rapidly growing PSBR pushed up market interest rates, including government bond yields. Higher bond yields have also been associated with higher bond spreads for the most indebted countries (Figure 6), triggering the "fragmentation" debate.

Confronted with the necessity to tighten the euro area monetary policy, the ECB has been forced to address the "fragmentation" challenge regardless of whether it has been correctly diagnosed and

whether the ECB is the right institution to deal with this problem. We will return to these questions in Chapter 4.

3. ECB INVOLVEMENT IN SOVEREIGN DEBT MARKET IN THE EURO AREA

The ECB's involvement in easing sovereign borrowing conditions in the euro area started in the aftermath of the EFC in 2010 with targeted instruments such as the securities markets programme (SMP), OMT, ELA, verbal interventions and institutional participation in the "troika" rescue programmes (Section 3.1). It continued until 2015, the last round of Greece's debt crisis. In the meantime, launching QE in October 2014 meant a general easing of sovereign debt service conditions in the euro area (Section 3.2). After a short stop in net asset purchases (between January and October 2019), they were renewed in November 2019 and intensified after the outbreak of the COVID-19 pandemic in March 2020 (Section 3.3). In the first half of 2022, the ECB started preparations for monetary tightening, which has brought back the problem of high government bond yields in the most indebted countries. This resulted in the so-called anti-fragmentation package announced on 21 July 2022 (Section 3.4).

3.1. The period of the EFC (2010-2015)

Before the GFC and EFC, the ECB stood away from the public debt market except for accepting government bonds with a good credit rating as collateral for its lending operations and conducting open-market operations. This was in line with the best tradition of its most prominent institutional predecessor – the German Federal Bank (Deutsche Bundesbank) and the letter and spirit of the TFEU.

With the outbreak of the sovereign debt crisis in Greece in May 2010, the ECB started to intervene in the government bond market. The SMP was the first instrument launched in May 2010. It authorised the national CBs in the euro area to outright purchase "…*eligible marketable debt instruments*" within limits determined by the ECB Governing Council and respecting and "…*according to their percentage shares in the key for subscription of the ECB's capital*". National CBs could purchase private and government securities but the latter – only on the secondary market. The programme was designed as a temporary mechanism with the aim "…*to address the malfunctioning of securities markets and restore an appropriate monetary policy transmission mechanism*" (ECB, 2010). An additional monetary base created by this programme was to be sterilised by the ECB in its open-market operations.

According to Eser and Schwaab (2013), the SMP contributed to lowering the government bond yields of the most distressed euro area economies. Apart from significant announcement effects, the repeated ECB interventions decreased yields from approximately -1 to -2 basis points (for Italy) to between -17 and -21 basis points for Greece, per EUR 1 billion of bond purchases (of five-year maturity).

In August 2012, the SMP was replaced by the OMT. The OMT focused on the securities with shorter yields (1-3 years) and was seen as the complementary tool to support governments that benefited from the EFSF/ESM adjustment programmes. Again, the money supply effects of the OMT were to be fully sterilised.[16] In practice, the OMT were never activated.

Parallelly to establishing the OMT, ECB President Mario Draghi made a famous statement at the Global Investment Conference in London on 26 July 2021, saying that "*[w]ithin our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough*" (Draghi, 2012). Although he refused to specify what kind of concrete measures the ECB was ready to take, financial markets implicitly assumed that they would include interventions in the government bond markets to protect

[16] See ECB. (2012). Technical features of Outright Monetary Transactions, press release, 6 September. https://www.ecb.europa.eu/press/pr/date/2012/html/pr120906_1.en.html

the most distressed euro area countries from sovereign default and their exit from the euro area (if necessary). In practice, the ECB was never seriously tested on the credibility of Draghi's declaration.

Draghi's speech was one of the factors (apart from EFSF/ESM/IMF rescue programmes) that calmed the market nervousness observed in the first half of 2012, at the peak of the EFC. At that time, the crisis hit – with varying intensity and in various forms – several euro area countries such as Greece, Ireland, Portugal, Spain and Italy. Greece completed the "voluntary" restructuring of its public debt liabilities (Xafa, 2014). Financial markets speculated about the potential perspective of the disintegration of the euro area. As a result, the high yield spreads of some countries reflected not only the default risk but also the denomination (exchange rate) risk. As seen in Figure 5 in Section 2.4, both yields and spreads started to decrease after the "whatever it takes" declaration.

One more instrument, the ELA, should also be mentioned in the context of ECB interventions in the public debt market. Formally, it was designed as a lender-of-last-resort type of instrument to support solvent but illiquid banking systems. In practice, at least in the case of Greece, it was used to help illiquid and insolvent banks and their capacity to continue lending to the insolvent government (Magnus and Xirou, 2017).

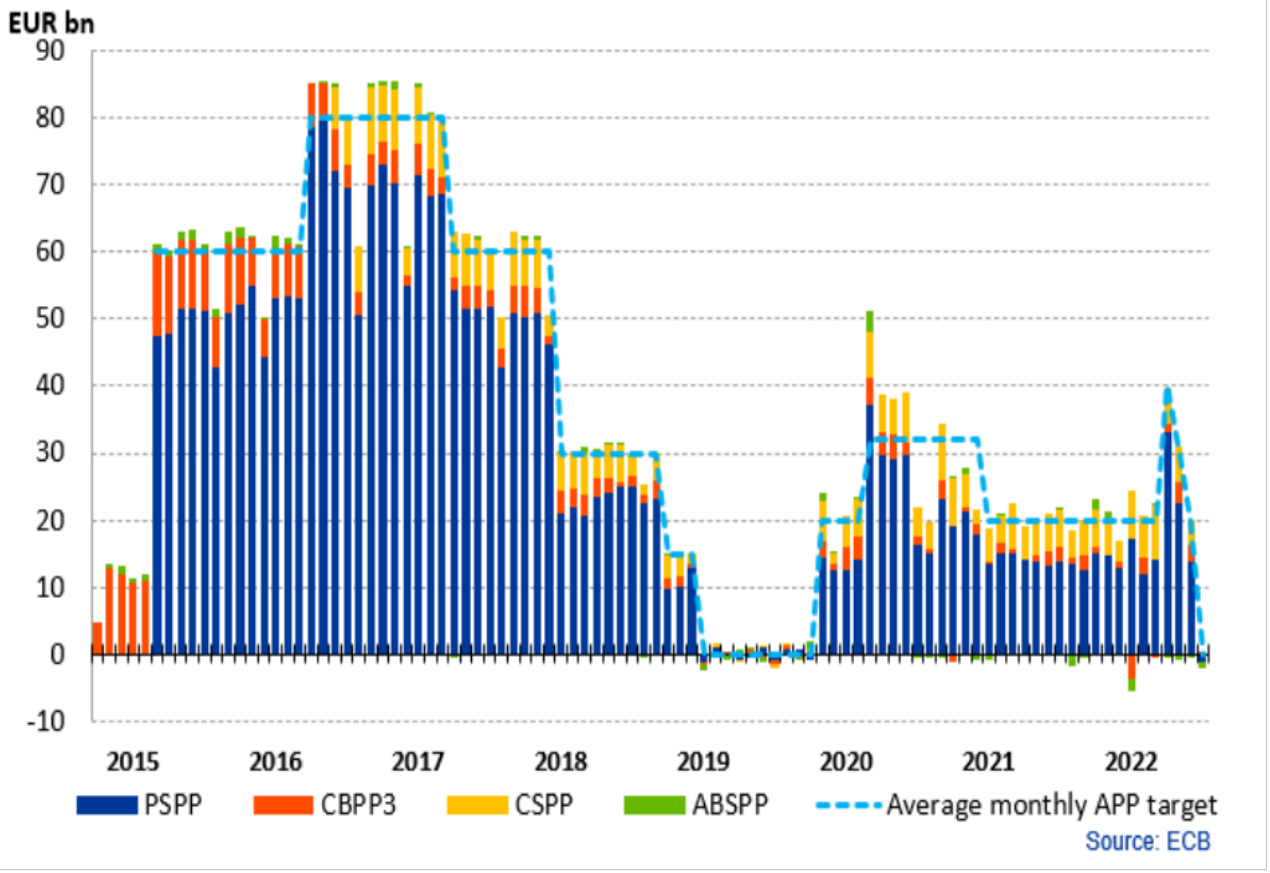
3.2. Quantitative easing of 2014-2022

In October 2014, the ECB initiated large-scale APPs (see Figure 7). In March 2015, the public sector purchase programme (PSPP) started and quickly became the dominant component of the APP.

While the APP was motivated by monetary policy considerations (fighting deflationary tendencies), it seriously contributed to rapidly decreasing public debt service costs in the euro area. In particular, the bond yields of the most indebted countries converged towards those of the most credible countries (Ehmer, 2017). This is also well illustrated by Figures 5 and 6 in Section 2.4. The declining and converging yields between 2012 and 2021 did not regularly require targeted ECB interventions. However, some periods of market nervousness were noted in 2019 and 2020 (see Section 2.4), and they forced the ECB to intervene.

The highest intensity of net purchases was recorded between March 2015 and December 2017. In 2018, the pace of monthly purchases decelerated to be entirely stopped in the first 10 months of 2019 (Figure 7). The APP was resumed in November 2019 to be intensified in March and April 2020, after the outbreak of the COVID-19 pandemic (see Section 3.3).

Figure 7: The ECB's APP, net monthly purchases in EUR billion, 2015-2022



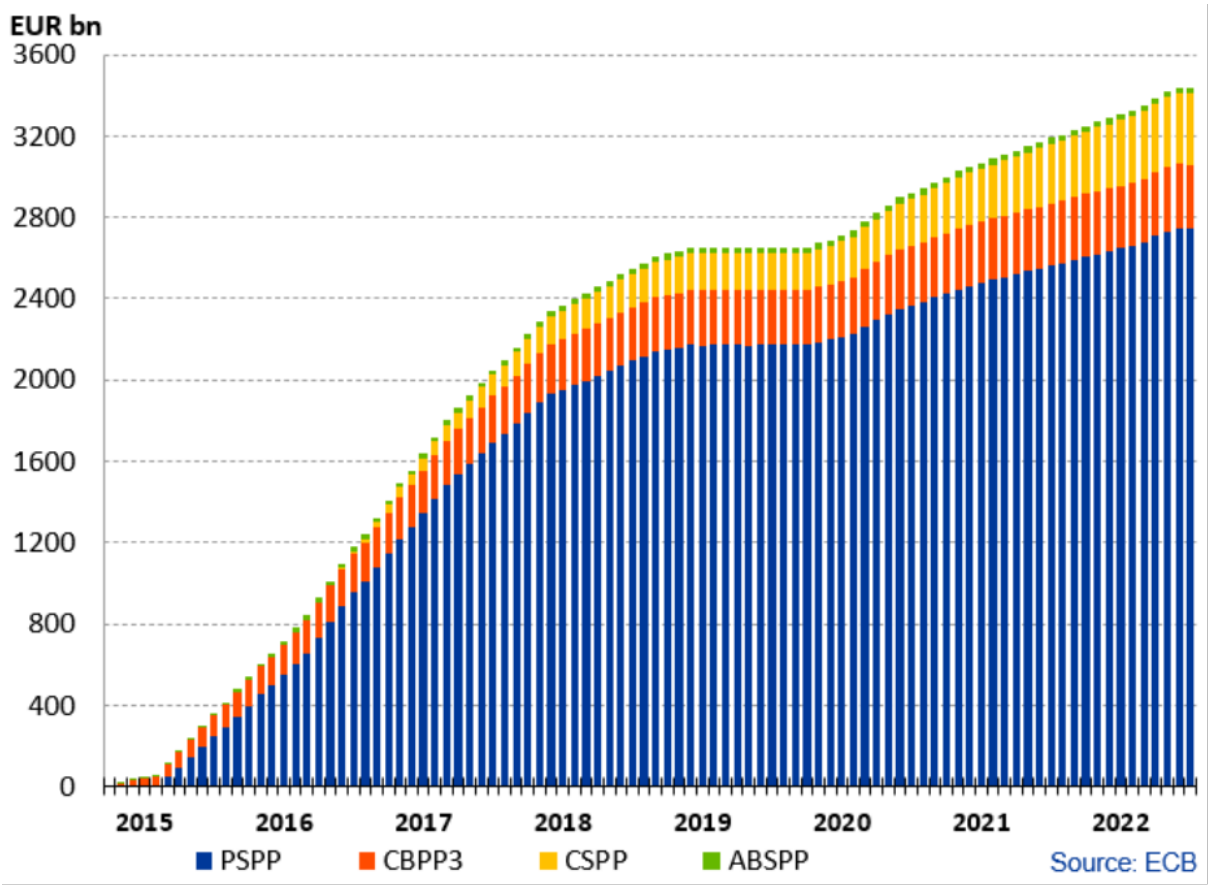
Source: European Central Bank – see https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html#pspp

Notes: PSPP – public sector purchase programme, CBPP3 – third covered bond purchase programme, CSPP – corporate sector purchase programme, ABSPP – asset-backed securities purchase programme.

Figure 8 shows that between 2015 and mid-2022, as a result of the APP, the ECB accumulated in its balance sheets financial assets worth approximately EUR 3,400 billion, most of which are government bonds. Such a portfolio has two kinds of negative consequences. First, it creates a record-high monetary base, making the disinflation policy difficult and costly. Second, it makes the ECB a hostage of the excessive sovereign debt in the euro area, which one may call fiscal dependence (Dabrowski, 2022) or fiscal dominance (Landau, 2021).

Unlike the United States Federal Reserve Board (Fed), the ECB never tried to start net sales of accumulated assets (sometimes called quantitative tightening, QT). Perhaps one reason why it was reluctant to reduce its balance sheet was a potential negative impact on the government bond yields of the most indebted countries.

Figure 8: The ECB's APP, cumulative stock of purchased assets in EUR billion, 2015-2022



Source: European Central Bank – see https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html#pspp

Notes: PSPP – public sector purchase programme, CBPP3 – third covered bond purchase programme, CSPP – corporate sector purchase programme, ABSPP – asset-backed securities purchase programme.

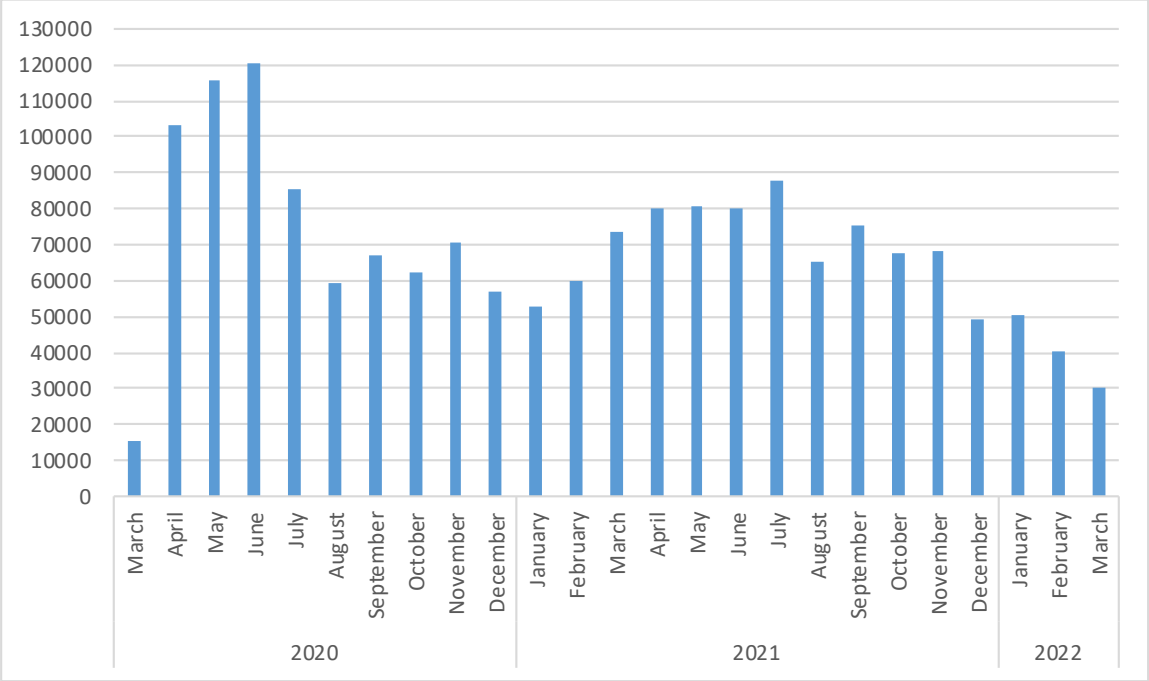
3.3. Additional quantitative easing of the pandemic era (2020-2022)

The outbreak of COVID-19 triggered a new wave of monetary policy easing in the euro area (similar to other currency areas). Apart from the continuation and intensification of the standard APP (see Section 3.2), the ECB launched the Pandemic Emergency Purchase Programme (PEPP) (Figure 9), which resulted in the total purchase of an additional EUR 1,700 billion of assets in 2020-2022,[17] primarily government securities, and the further dampening of nominal bond yields, at least until mid-2021. The highest monthly net purchases were recorded between April and July 2020 and March and September 2021.

In comparison with the standard APP, the PEPP broadened the range of accepted bond maturities, further eased the eligibility criteria (for example, by granting a waiver for securities issued by the Government of Greece), and, most importantly, by adopting a "flexibility" principle in respect to the country structure of purchased bonds. The "flexible" approach allowed supporting the market for the sovereign bonds of the most indebted countries.

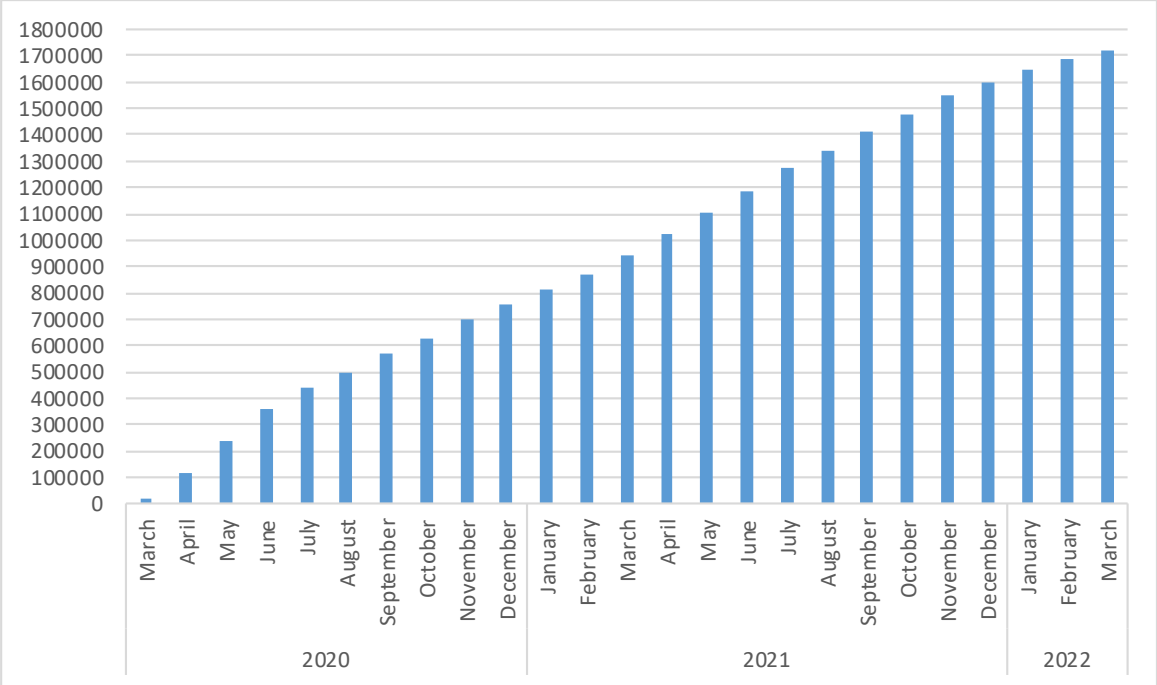
[17] See https://www.ecb.europa.eu/mopo/implement/pepp/html/index.en.html

Figure 9: The ECB's PEPP, net monthly purchases in EUR million, March 2020-March 2022.



Source: ECB https://www.ecb.europa.eu/mopo/pdf/PEPP_purchase_history.csv?b403919ca5d9c7f5c08e9a7ee1a549af

Figure 10: The ECB's PEPP, cumulative stock of purchased assets in EUR Million, March 2020 – March 2022.



Source: ECB https://www.ecb.europa.eu/mopo/pdf/PEPP_purchase_history.csv?b403919ca5d9c7f5c08e9a7ee1a549af

3.4. Towards monetary policy tightening (2022)

The surge of inflation, which started in the second half of 2021, required a firm monetary policy response through its tightening. Unfortunately, most CBs were late to respond to this challenge, and the ECB was even later than the Fed (Dabrowski, 2022). The first tightening decision was taken in March

2022 by terminating net asset purchases under the PEPP. However, the existing stock of assets purchased under the PEPP will be rolled over until at least the end of 2024. The special conditions applicable under the third series of targeted longer-term refinancing operations (TLTRO III) ended in June 2022. Net purchases under the regular APP were terminated in July 2022, but the existing stock of assets will continue to be reinvested. On 21 July 2022, the ECB Governing Council decided to increase its three key ECB interest rates by 50 basis points[18]. It also made clear that further interest rate hikes can be expected, which is what happened on 8 September 2022, when key rates were increased further by 75 basis points[19].

Simultaneously with increasing interest rates, the ECB Governing Council announced a package of anti-fragmentation measures consisting of (1) a promise to continue reinvesting the stock of assets held in its portfolio (see above); (2) flexibility in reinvesting the stock of assets accumulated under the PEPP (that is, a continuation of the departure from countries' percentage shares in the key for subscription of the ECB's capital); (3) the possibility to activate the OMT; and (4) the new instrument, the TPI.

The essence of the TPI is the possibility to conduct unlimited secondary market purchases of public debt instruments issued by a country "…*experiencing a deterioration in financing conditions not warranted by country-specific fundamentals*".[20] The eligibility criteria for the potential beneficiary country include (1) compliance with the EU fiscal framework (currently suspended – see Section 2.2), in particular, not being subject to the EDP (also suspended); (2) the absence of severe macroeconomic imbalances, in particular not being subject to the EIP; (3) the sustainability of the public debt; the assessment is based on the analyses of the European Commission, ESM, IMF and other institutions but no specific criteria are determined; and (4) compliance with the country's commitment under the Recovery and Resilience Facility (RRF) and country-specific recommendations (CSR) under the European Semester.

Like other instruments of targeted interventions on the sovereign debt market in the past, the TPI is justified to ensure the effective monetary transmission mechanism in the euro area. However, unlike in the case of instruments launched in the early 2010s (SMP, OMT) when the ECB promised the complete sterilisation of the money supply effects of these interventions, the ECB declaration is now vaguer. ("*Purchases under the TPI would be conducted such that they cause no persistent impact on the overall Eurosystem balance sheet and hence on the monetary policy stance*").

In Chapter 4, we will assess both the conceptual framework on which the TPI is based and its operational details. We will also evaluate its potential impact on the ECB's monetary policy and institutional independence.

[18] See ECB. (2022). Monetary Policy Decisions, 21 July. https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220721~53e5bdd317.en.html

[19] See ECB. (2022). Monetary Policy Decisions, 8 September. https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.mp220908~c1b6839378.en.html

[20] See ECB. (2022). The Transmission Protection Instrument, press release, 21 July. https://www.ecb.europa.eu/press/pr/date/2022/html/ecb.pr220721~973e6e7273.en.html

4. FRAGMENTATION: THE WRONGLY DEFINED CHALLENGE AND WRONG SOLUTION

This chapter concentrates on the critical assessment of the anti-fragmentation policy and its assignment to the ECB. We start with sharing our doubts regarding the correct understanding of "fragmentation" and its root causes (Section 4.1). This is followed by a critique of delegating the "anti-fragmentation" task to the ECB (Section 4.2) and an analysis of its potential negative consequences in the economic and political sphere (Section 4.3). In Section 4.4, we assess the technical details of the TPI and the entire anti-fragmentation package. In Section 4.5, we discuss alternative solutions.

4.1. "Fragmentation" as the substitute term for the sovereign debt crisis

The notion of "fragmentation" suggests the presence of administrative and institutional barriers to cross-border financial flows. Of course, such barriers still exist because the Banking Union and Capital Market Union remain incomplete. Assessing the impact of these barriers on the fragmentation of the EU/euro area financial markets along national lines would require a separate study focusing on all segments of the financial market, not only sovereign bonds.[21] Regarding the cross-country yield spreads on the sovereign debt market, the question is whether they are determined by cross-country barriers to capital/financial flows or by the various degrees of the sovereign indebtedness of individual countries.

The answer to the above question is clear: the rapidly growing public debt burden, especially in countries with the highest debt-to-GDP ratio, triggers nervousness in financial markets and their perception of increasing default risk. The absence of yield spreads, despite various debt levels in individual countries, would raise another question: whether financial markets behave rationally. Such a question was frequently asked for yield convergence in the period preceding the GFC (1999-2007) and between 2015 and 2021.

Indeed, the presence of yield spreads can be interpreted as some fragmentation of the sovereign debt market. Furthermore, given the size of the sovereign debt, its share in banking assets, and the role of government bonds as financial instruments, such fragmentation may spill over to other segments of the financial markets. However, no one should be surprised by lenders' attitudes to the differentiated degrees of the creditworthiness of individual borrowers, even if they are sovereigns. And artificially compressing risk premia can only distort market functioning and market signals.

The real challenge thoroughly analysed in Chapter 2 concerns the excessive and rapidly growing sovereign indebtedness in the euro area (and other advanced economies). It is a root cause of the periodic nervousness of financial markets. The so-called fragmentation is only a symptom of this dramatic challenge.

Unfortunately, policymakers and a substantial part of the academic and expert community are not yet ready to acknowledge the fiscal nature of the "fragmentation" problem. They prefer to deal with secondary symptoms rather than address the root causes of the repeated market tensions. The political economy and intellectual reasons for such an attitude are discussed in Section 2.3 of this paper. Another reason may relate to the ECB's legal status, which prohibits the monetary financing of public liabilities (Article 123 of the TFEU).

[21] The study of Enderlein and Berenberg-Gossler (2016) is an example of such an analysis.

4.2. The wrong task for the ECB

The expectation that the ECB will address the "fragmentation" problem is conceptually wrong. It contradicts the principle of CB independence and is at least inconsistent with the Treaties, particularly Article 123 of the TFEU.

Since the beginning of the GFC and EFC, the ECB's activism on the public debt market has triggered legal challenges before the Federal Constitutional Court of Germany and the Court of Justice of the EU. The most severe challenge concerned the PSPP, the dominant part of the APP.[22] Regarding the legal doubts related to the PSPP, conducted on a proportional basis, they could be explained as a QE tool, the main monetary policy instrument left to the ECB in an environment of interest rates close to zero.

However, the targeted instruments of ECB intervention on the sovereign debt market are more difficult to be defended as consistent with the Treaties.[23] Hence, playing various terminological substitutes such as "anti-fragmentation" or continuous referring to monetary policy transmission mechanisms as the primary justification of the targeted intervention tools.

By its economic characteristics, the targeted anti-fragmentation tools belong to quasi-fiscal activities (QFA), the worst form of CB activism, typical for politically dependent CBs in centrally planned economies and some developing countries (see Mackenzie and Stella, 1996; Markiewicz, 2001).

It looks like the ECB acceded to political and intellectual pressures to back the public debt markets of the most indebted countries. Ironically, this would mean accepting the proposals to perform the role of lender of last resort to governments, as advocated by some authors (e.g., Bofinger & Soros, 2011; Layard, 2012) in 2011-2012 at the peak of the EFC; However, these proposals were inconsistent with CB independence and its price stability mandate.

One can interpret the ECB's engagement in the anti-fragmentation policy and its anti-fragmentation package of 21 July 2022 as a pragmatic move aimed at broadening its policy space. We mean the possibility of starting monetary policy tightening without the risk of being accused of triggering a sovereign debt crisis in the euro area as well as buying more time for governments to begin fiscal consolidation. The complicated construction of the TPI and other anti-fragmentation tools such as the OMT may also indicate the intention of avoiding their practical implementation, that is, stopping at the stage of the verbal declaration.

There are, however, two caveats to the correctness of such a calculation. First, the public debt burden of the entire euro area and its most indebted Member States increased significantly compared with the first half of the 2010s, so the actual risks in a public debt market are much higher than they were 10 years ago. Public debt management can also be more difficult when monetary policy must be tightened than during its relaxation. Repeating the trick with the "whatever it takes" declaration and the OMT in 2012 may be difficult in such a situation. The financial markets may soon test the ECB's readiness to intervene on a large scale. Second, the unprecedented era of ultra-low interest rates was primarily lost for fiscal consolidation, so there is no guarantee that the additional "breathing" space for the most indebted countries provided by the ECB will push them to start an adjustment. Unfortunately, the political economy logic of fiscal consolidation (or, more broadly – policy reforms) suggests that they begin when policymakers do not have other choices.

[22] See https://www.bundesverfassungsgericht.de/SharedDocs/Pressemitteilungen/EN/2020/bvg20-032.html

[23] See Sester's (2017) opinion on the SMP.

4.3. Negative consequences of the ECB's involvement in anti-fragmentation policies

Due to the macroeconomic factors presented in Section 4.2 (rapid growth of public debt, meagre perspectives of economic growth, if any), the ECB's involvement in backing a public debt market in the highly indebted euro area countries may not end with the July 2022 anti-fragmentation package. One cannot exclude a scenario when further monetary tightening (unavoidable due to record-high inflation) will have to be accompanied by additional ECB commitments to serve as the lender of last resort to the distressed governments. This may slow down actual monetary tightening and make higher inflation persistent for a more extended period. Consequently, it will undermine the ECB's credibility in fulfilling its price stability mandate, feed higher inflationary expectations, and make future disinflation even more painful.

Such a pessimistic scenario may undermine the euro's credibility and provoke centrifugal political tendencies against the common currency in countries firmly devoted to price stability. The same may happen due to implicit intergovernmental transfers resulting from the practical implementation of the targeted anti-fragmentation tools (the effect of their quasi-fiscal character).

The euro's depreciation against the US dollar and other currencies observed since the beginning of 2022 may be interpreted as evidence of the pessimistic expectations of financial markets regarding the ECB's ability to effectively perform its price stability mandate and get out of the fiscal dependence trap. It is worth remembering that in 2010-2012, at the peak of the EFC, the euro was much stronger, despite speculations on the possible exit of some crisis-affected countries from the euro area.

4.4. Potential technical difficulties with TPI implementation

Looking at the TPI construction, one may find that this instrument will not be easy to implement in practice when needed. Several essential criteria remain underdefined. For example, the key criterion of fiscal sustainability will require an individual assessment of each country at a given time (when the implementation of the TPI is needed) based on the opinions of other institutions (see Section 3.4). What happens when these opinions differ?

Other criteria combined mean several tens or even hundreds of detailed policy recommendations issued under the EDP (temporarily suspended), the EIP, the CSR and the commitments/milestones declared in the recovery and resilience plans (under the RRF). What if some recommendations and obligations are met, but others are not (a frequent situation)? How should accomplishments and failures be weighed? How long will it take (against the urgent nature of the "fragmentation" tensions and the necessity of a quick reaction to calm markets)? Is a CB best positioned to make detailed policy evaluations in various spheres unrelated to monetary or even macroeconomic policy? Unlike the European Commission, the ESM and the IMF, the ECB seems to have neither sufficient expertise nor experience to run de facto rescue programmes for distressed governments.

The same doubts apply to the OMT, which has never been tried in practice.

Another question concerns the rationale for creating an entirely new framework (TPI) when a similar one (OMT) was never used (Angeloni and Gros, 2022).

The above-discussed criteria ambiguities and potential implementation problems suggest that, if practically implemented, the TPI and other anti-fragmentation tools may be subject to arbitrary decisions based on political rather than technocratic criteria.

4.5. The alternative to the ECB's involvement in anti-fragmentation policies

What is the alternative if the continuation of the ECB's backing of the sovereign debt market of the most indebted euro area countries involves so much economic, political and reputational risk?

The first-best option seems to be the simplest one: fiscal consolidation as quickly as possible. Regardless of its political and intellectual unpopularity, this is the only way to reduce excessive public indebtedness in the medium and long term. Waiting for another "good time" with high growth and low interest rates, which would allow "outgrowing" from debt, is too risky. Such a period existed in the second half of the 2010s, but only a few countries used it to reduce their debt burden inherited from the period of the GFC and the EFC (see Section 2.1).

Starting fiscal consolidation requires not only abandoning opaque theories on the potential of countercyclical fiscal policies (fiscal multiplier higher than one) and expectations that government bond yields will remain low forever (they have been growing since the second half of 2021). It is also critical to reinstate fiscal rules on the EU and national levels and make them simpler and more robust than before the COVID-19 crisis.

However, in the macroeconomic realities of the early 2020s, some countries accumulated so much debt that they can have problems avoiding market distress even if they start fiscal adjustment quickly. The support for them should be provided by the ESM, the institution founded in 2012 for this particular purpose but largely forgotten in the current "fragmentation" debate. The ESM is much better positioned regarding its legal mandate and institutional capacity to help governments experiencing market distress (even temporary) than the ECB. The latter should concentrate on delivering on its price stability mandate and stay away from the sovereign debt market. If necessary, the funds at the ESM's disposal should be increased, and its policy toolkit – further expanded.

All EU Member States are also IMF members. In an emergency, they can also ask this institution for help.

5. SUMMARY AND CONCLUSIONS

Since the 1990s, the public debt-to-GDP ratio has gradually increased in almost all current euro area member countries. In most of them, it now exceeds the Maastricht reference value of 60%, in several of them – 100%, and in a few cases – even more. This creates a severe challenge to the stability of public finances, the entire financial system, and monetary stability in the euro area. The excessive sovereign indebtedness led to the EFC in 2010-2015, directly affecting several euro area countries with high debt and threatening a partial disintegration of the euro area. Unfortunately, the lessons from this experience have not been learnt, and the practice of reacting with a generous fiscal stimulus to each kind of adverse shock has been continued until very recently.

Even if the problem of excessive sovereign indebtedness is often ignored by economic policy and in part of the policy analyses, it is the most critical challenge faced by most advanced economies, including the substantial number of the euro area economies. It is the main reason behind the nervous financial market reactions to the borrowing needs of heavily indebted governments. Defining it as a market fragmentation is misleading because it diverts attention from the root causes of this phenomenon, which are deep and persistent fiscal imbalances.

Since 2015, the large-scale APP conducted by the ECB created ample liquidity in the euro area, pushed nominal and real bond yields down, and decreased market perception of a sovereign default risk despite the ever-growing debt. However, the perspective of monetary tightening (because of inflationary pressures) and the rapid growth of public debt during the COVID-19 pandemic changed this perspective. The default risk has come back, and lenders started to look more closely at their sovereign borrowers' creditworthiness. All sovereign bond yields began to grow in the second half of 2021, but those of the most fiscally vulnerable countries grew faster than others.

In this context, the assessment of the ECB's new anti-fragmentation tool, the TPI, can be done using various perspectives. It can be seen as a pragmatic step, a sort of political compromise, to unblock policy room for monetary policy tightening. It may be interpreted as a tactical manoeuvre, promising market intervention that will calm financial markets for good, but which will not be required in practice (something that happened with the "whatever it takes" declaration and the introduction of the OMT in 2012). However, given the deterioration of the debt and deficit statistics compared to the decade earlier, such a manoeuvre may not succeed. Financial markets can test the ECB's readiness to intervene and require its further and deeper involvement in the sovereign debt market of the fiscally vulnerable countries to continue their financing at a reasonable price. It would create a slippery slope to the loss of actual ECB independence.

Looking at the TFEU and ECB Charter, even the anti-fragmentation tools offered a decade ago, such as the SMP or OMT, raised serious legal doubts and compromised the ECB's independence because of their quasi-fiscal character. The same can be said about the APP and PEPP when the ECB accepted substandard government bonds or departed from the proportionality principle in purchasing bonds. The TPI is in the same type of instrument but potentially even more intrusive and requires a lot of arbitrary judgment.

The increasing fiscal dependence of the ECB (measured by the already high share of government bonds in its assets) makes this institution slow in reacting to rapidly growing inflation in the euro area (Dabrowski, 2022). Its further engagement in QFA and backing the debt market of the highly indebted sovereigns will worsen things. The credibility of the ECB can be seriously compromised, and the common currency project can lose its economic and political attractiveness.

Fiscal consolidation is the best solution to the excessive debt burden and should be started as soon as possible. When it is not enough, and the direct backing of an individual country's debt market is needed, it should be provided by the ESM, the institution specially created for this purpose in 2012.

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The euro area suffers from excessive public debt, which is the primary cause of the so-called fragmentation. It should be remedied by fiscal consolidation instead of the quasi-fiscal activities of the European Central Bank, which are inconsistent with its legal status, compromise its independence, and undermine its price stability mandate. When targeted market intervention is necessary, it should be provided by the European Stability Mechanism.

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