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Executive summary

- members su ered from unsustainable developments after they joined the euro in 1999 and up to 2008, and have had great di culties since. Inadequate national policies were the main causes of these unsustainable developments, but euro membership played a role before 2008 by leading to low real interest rates (which fuelled credit booms) and by enabling complacency about potential vulnerabilities. Euro-area crisis management was also de cient in a number of ways.

countries that joined the EU between 2004 and 2013, seven have entered the euro area. Many faced similar problems to southern Europe in the pre-crisis period when they had xed exchange rates, but they were able to adjust inside the euro area and resume economic convergence. Slovakia, which joined the euro area at a very strong exchange rate in 2009, and Bulgaria, which has a currency board xed to the euro, performed similarly or even better in macroeconomic terms than the Czech Republic, Hungary and Romania between 2008 and 2019, even though the exchange rates of those three countries depreciated signi cantly after 2008. Two oating-rate countries, Hungary and Romania, had to apply for nancial assistance after 2008. Croatia had many di cult years under a tightly managed exchange rate, but was eventually able to adjust and return to economic convergence. ere were thus good and bad macroeconomic performances in both exible and xed exchange-rate regime countries. Euro-area membership (or the use of a xed exchange rate) has not been a factor determining economic success in central Europe.

economic development is not signi cant for the euro-entry decision. Countries at lower development levels will likely face higher in ation and thereby a lower real interest rate, potentially generating booms. But globally low interest rates have already pushed the real interest rates in oating exchange rate central European countries to lower levels than those in southern European countries when they entered the euro. Moreover, the central European countries that have already entered the euro area have coped with this problem.

euro adopters should be the prevention of macroeconomic and nancial vulnerabilities and the capacity to address such imbalances if they occur. Macroprudential policy and sustainable scal policy are crucial to prevention, while exible labour and product markets help in any adjustment. Banking union membership prior to euro membership could reduce the potential for nancial and macroeconomic vulnerabilities. High quality policymaking is essential, since market signals might be muted inside the euro area.

euro non-members can be economically successful both with and

1 Introduction

The debate on euro adoption by central European EU countries has intensified since Bulgaria in 2018 and Croatia in 2019 expressed their interest in joining[1]. Other non-euro area central European governments, especially those of the Czech Republic, Hungary and Poland, have different views and have not shown an interest in adopting the single currency.

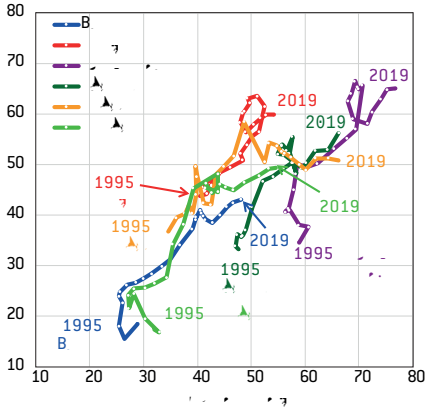
The main economic arguments in favour of euro-area membership include the elimination of exchange-rate fluctuations and the associated uncertainty and transaction costs. More certainty can help business planning and boost production. Euro-area membership also makes prices more transparent and thus facilitates competition, which could lead to productivity gains. European Central Bank monetary policy and banking supervision could bring credibility gains and enhanced financial stability, supporting business planning and reducing financial uncertainties. The drive toward euro adoption should promote reforms, for instance in the financial sector, public finance management and in relation ic finconomincial unTm[(b)mE (g cr)15 (e)-3 (dibilit) (e)1 (an C)1 (en)7 ()17 (, .1 (a)7 (tio6

2 The fate of southern EU members

Figure 1 (Panel A) shows the dismal macroeconomic performance of four southern EU countries: Greece, Italy, Portugal and Spain. Greek GDP *e ca i a* at purchasing power parity (PPP) was 67 percent of that of the average of ten 'core' EU countries in 1995, while its price level compared to the same countries was at 68 percent. *Pe -ca i a* income in Greece increased to 80 percent of that of the ten core EU countries by 2007 (movement to the right on the figure), and its price level increased to 78 percent, also by 2007 (upward movement on the figure). These developments in themselves might have suggested that Greece was on a convergence path towards the average of ten core EU countries. Between 2007 and 2009, Greece's relative income remained unchanged, while its relative price level increased (no horizontal movement, only upward movement on the figure). From 2009-15, relative *e -ca i a* income in Greece fell back dramatically from 80 percent to 58 percent, relative to the ten core countries. Greece's relative price level also declined, reflecting the deep economic contraction and the associated price-level decline. While more recently, Greece's relative *e -ca i a* income position has stabilised and even slightly improved, the 59 percent relative position in 2019 is still well below its 68 percent value in 1995.

Spain and Portugal followed similar, but less dramatic paths. e good news is that Spain's relative income position has already exceeded its 1995 value, while Portugal is on its way.

Figure 1: Real and nominal convergence, 1995-2019 (% of ten core EU countries)



Source: Bruegel based on the April 2019 IMF World Economic Outlook. Note: For each country, the two endpoints of the line represent 1995 and 2019, while each point along the line indicates a year in between. GDP per capita is measured at purchasing power parity. The ten core EU countries are: Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Sweden and the United Kingdom. The scales of the three panels are di□erent.

Italy's pattern is different: a continuous drop in relative its income position, from 101 percent of the average of ten core EU countries in 1995 to 79 percent in 2019. Italy's relative price level increased significantly up to 2009, after which it gradually dropped because of very low inflation[3]. The main reasons for this dismal economic performance over the past two decades are well understood. While there were important country-specific factors for each of the four countries, there were a number of common themes.

In anticipation of euro membership, the interest rates in southern countries gradually fell to the level of the low German interest rate from their previously higher levels (Figure 2). At the same time, these countries had higher price and wage in ation, partly re ecting the convergence of their lower price levels with the euro-area average. But lower interest rates, coupled with somewhat higher wage and price increases, lowered the real value of the interest rate, which in turn fuelled consumption and credit booms, raised wage growth beyond productivity growth and generated large external imbalances such as large current-account de cits (Figure 3). ese external de cits were primarily nanced by borrowing from abroad and therefore external indebtedness also increased to very high levels in these countries. Spain in particular saw credit and construction bubbles (Ahearne *e al*, 2008). Weak productivity growth throughout the rst decade of the euro, and even before, was a further problem, especially in Italy and Portugal[4].

Figure 2: 10-year government bond yields, 1995Q1 –2019Q3

Source: European Central Bank and IMF International Financial Statistics.

ese countries also had structurally weak public nance positions, despite the low real interest rates before the global nancial crisis. Greece and Italy had rather high public debt levels even before 2008 (around 100 percent of GDP). Spain had a seemingly good scal position with public debt below 40 percent of GDP and, in some years before 2008, budget surpluses. But too much revenue came from the construction industry and other booming sectors, while major vulnerabilities were built up in the banking sector.

3 Some increase in Italy's relative price level from 1995 was expected because Italy's nominal exchange rate weak-

Figure 3: Current-account balances (% GDP), 1995-2019

Source: IMF World Economic Outlook database, April 2019.

Ultimately, pre-2008 southern European developments turned out to be unsustainable. When the crisis hit, private capital in ows stopped. is necessitated harsh current-account adjustments, even if ECB bank nancing helped to cushion the speed of adjustment. Strained scal positions necessitated procyclical scal tightening instead of scal policy being an instrument to mitigate the economic shock. Mounting non-performing loans and large holdings of domestic government bonds (which faced large market price declines) compromised bank balance sheets and reduced the ability of banks to support economic recovery. Bank losses were partly absorbed by public-sector bailouts, limiting scal space

public debt below 60 percent of GDP[6] and budget de cit below 3 percent of GDP) at the time of euro entry is clearly inadequate for assessing a country's ability to develop successfully in the euro

4.1 Exchange-rate regimes

Of the seven CESEU euro members, six had rather rigid exchange rate regimes prior to adoption (Table 1). ese six countries used di erent currencies to x the exchange rate before entering the euro, which led to large di erences in nominal exchange rate developments (Figure 4)[8]. Only Slovakia joined the euro from a freely oating regime prior to its ERM II membership. Yet Slovakia's e ective exchange rate regime hardly changed with ERM II membership, since the Slovakian koruna's exchange rate continued its nominal appreciation path inside ERM II, leading to a revaluation of its central parity. A further particularity of Slovakia is that the euro conversion rate was xed in summer 2008, when central European currencies were at historically high levels against the euro (Figure 4). Lehman Brothers collapsed a few weeks after the Slovakian conversion rate was xed, resulting in massive 20-30 percent depreciations of the Czech koruna, Hungarian forint, Polish zloty and Romanian leu. Because its euro conversion rate had already been xed, the Slovakian koruna escaped this currency slide. It is therefore especially interesting to learn from Slovakia's euro membership experience, compared to the four oating rate countries of central and eastern Europe.

e six CESEU euro non-members have di erent exchange-rate regimes, ranging from a rigid currency board in Bulgaria (initially, from July 1997 against the Deutsche Mark and then against the euro from 1999), through to a rather managed exchange rate in Croatia, to freely- oating exchange rates in the Czech Republic, Hungary, Poland and Romania. ese oating rates are occasionally subject to large uctuations (Figure 4).

Table 1: Exchange-rate regimes of CESEU countries

E membe			**E n n-membe**	
	En da e	*Regime bef e*		*C en egime*
Slovenia	2007	tightly managed	Bulgaria	currency board
Cyprus	2008	tightly managed	Croatia	tightly managed
Malta	2008	tightly managed	Czech Republic	free oat
Slovakia	2009	free oat	Hungary	free oat
Estonia	2011	currency board	Poland	free oat
Latvia	2014	narrow band	Romania	free oat
Lithuania	2015	currency board		

Source: Bruegel.

A comparison of the four southern euro members (Greece, Italy, Portugal and Spain), CESEU euro members and CESEU euro non-members o ers important lessons about euro membership and the possible role of a stand-alone exchange rate.

8 Lithuania pegged its currency to the US dollar from 1994 to 2002 – a period when the US dollar appreciated in nominal terms, and thereby the Lithuanian litas increased in value not just relative to the euro, but also to the Latvian lats, which was pegged to the Special Drawing Right from 1995 to 2005, and the Estonian kroon, which was initially pegged to the Deutsche Mark and then to the euro after 1999. Interestingly, as Figure 1 shows, Lithuania had a lower price level than Estonia in 1995 and therefore the appreciation of the US dollar against European currencies helped the relative price adjustment between Lithuania and Estonia.

Figure 4: Nominal exchange rates against the ECU and euro (1995Q1=100), 1995Q1-2019Q3

Source: Eurostat's 'Euro/ECU exchange rates - quarterly data [ert_bil_eur_q]' dataset. Note: increase indicates exchange rate appreciation against the ECU/euro. The three panels have di erent scales. The European Currency Unit (ECU) was the former currency unit of the European Communities, which was replaced by the euro on 1 January 1999 at a rate of 1:1. The ECU was composed of a basket of currencies of the European Community member states and served as the standard monetary unit of measurement.

4.2 Baltics vs southern EU members

Developments in Estonia, Lithuania and Latvia, which maintained tightly managed exchange rates before entering the euro, were rather similar to developments in the southern euro members in the pre-crisis period and in several aspects were even more extreme. e current account de cits (as percent of GDP) of the three Baltic countries were larger, credit growth was faster and price and wage in ation were also much more rapid than in the southern euro members. An important di erence, however, related to the nancing of current-account de cits: foreign direct investment (FDI) accounted for about half of the capital in ows into the Baltic countries, while in the southern EU countries, nancing predominantly came in the form of loans. FDI nancing carries a lower risk than loan nancing, primarily because FDI involves direct risk sharing and does not have to be repaid. Loans have to be repaid and involve risk sharing only via defaults, which leads to a cumbersome legal process[9].

e economic contraction in the three Baltic countries after 2008 was much sharper than in southern Europe, but these countries were able to return to growth much faster. e GDP *e -ca i a* levels of the three Baltic countries relative to core EU countries in 2019 are much higls of the threali (h sh)l15.1 (el)1-3 (e t)1.1 7 (tr)-7 TJ7 (ar)-6haur.9 (c AL)-2 (ful adj/Span 4.1 (un)7 (t)Lange

area in 2009. Nevertheless, our nding that Slovakia achieved faster economic growth than three of the four CESEU oaters, and its export and labour market performances were espe-

percent in total) than the oating-rate Czech Republic (19.4 percent) and Hungary (20.1 percent). While in principle Bulgarian exports should have su ered from the absence of a large currency depreciation, Bulgaria's export market share has developed since 2008 in almost the same way as that of oating-rate Poland, and performance has been better than those of the Czech Republic and Hungary (Figure 6). ese developments show that a nominal exchange-rate depreciation might not be necessary for an export boost.

Bulgaria also performed much better than southern EU countries in terms of growth and export performance, while in terms of employment its record is similar to Portugal and better than those of Spain, Italy and Greece.

Overall, Bulgaria did remarkably well in terms of the adjustment to a large external shock under a xed exchange rate, suggesting that the country could perform well inside the euro area.

tions have declined much less, perhaps by around 1-2 percentage points from 1995 to 2019[13], implying a massive decline in the German long-term real interest rate. Such a decline in the safe real interest rate also drives down interest rates in CESEU countries, irrespective whether they are members of the euro area. Among the oating-rate CESEU countries, the nominal 10-year government bond yield is greatest at 4.1 percent in September 2019 in Romania. But even this yield is below the yield faced by southern EU countries when they joined the euro area in 1999-2001 and Romania now is expected to have a higher in ation than that faced by southern euro members in the early 2000s. e 10-year government bond yield is even lower (September 2019) in Hungary and Poland at 2 percent and in the Czech Republic at 1.3 percent. erefore, real interest rates in the oating-rate CESEU countries are much lower now than the real interest rates in southern euro-area members at the time of euro adoption. Floating-rate CESEU countries seem able to manage the situation.

Second, the post-2008 experiences of Bulgaria, the Baltic countries and Slovakia show overall favourable macroeconomic developments either under the euro or a xed exchange rate. It therefore seems that with appropriate attention and adequate policy instruments, such as macroprudential policy, the consequences of a low real interest rate resulting from higher than euro-area average in ation can be managed. Darvas and Pichler (2018), for example, described the macroprudential tools adopted by the National Bank of Slovakia to tame rapid credit and house-price growth.

erefore, when proper attention is paid to the management of possibly destabilising too-low real interest rates, and adequate policy tools are applied, the level of economic development is not a relevant factor in the euro-entry decision.

4.6 Croatia, a weak performer

Not all central European countries with xed or a tightly managed exchange rates have been similarly successful. For example, Croatia su ered from a GDP decline in each year between 2009 and 2014 and growth since then has raised output only slightly, by 1.6 percent, compared to its 2008 level. Croatia's export performance has been very poor in comparison to other central European countries, resulting in its market share remaining more or less at the same level in 2019 as in 2000, in contrast to most other central European countries, which have been able to double their shares (Figure 6). While there were improvements in employment since 2013, the 2019Q1 employment rate of 66 percent is far the lowest in the region (Figure 3).

Croatia's weak macroeconomic performance has mostly resulted from structural weaknesses (IMF, 2014) and weak domestic demand, partly as a consequence of large private debts. Structural weaknesses were re ected by Croatia scoring worst of the CESEU countries in the World Bank's *Ea e f D ing B ine* indicator. Croatia also scores particularly weakly in the World Economic Forum's labour and goods markets e ciency indicators. Fiscal policy has run out of space to support demand, while a high level of foreign currency debt (the share of foreign currency loans in loans to the private sector is over two-thirds) has led the central bank to keep the exchange rate of the Croatian kuna relatively stable, since a depreciation would have adverse balance-sheet consequences, with negative feedback to the economy. Question marks about the e ciency of an independent monetary policy in a small open economy under the free movement of capital might have also made the Croatian central bank cautious about actively using monetary policy and allowing the currency to uctuate.

Nevertheless after a long adjustment period, Croatia was able overcome its problems and revive growth. It completed its 'counter-clockwise loop' as shown in Figure 1, that is, after its GDP *e ca i a* relative to core EU countries declined initially with a relatively high price

13 Lack of precise data on in ationary expectations in 1995 hinder the quanti cation of the decline in expected in a-tion. Average in ation in Germany in the rst half of the 1990s was 3.5 percent, while in the second half of the 1990s it was lower at 1.1 percent. Presumably, expectations did not di er much from actual in ation developments. Market-based in ationary expectations in September 2019 indicated an average 1.3 percent in ation rate in Germany over the next ten years.

level, its price level also declined, followed by resumed convergence and some accompanying relative price increases. When growth restarted, the current-account balance remained in surplus, and the employment rate also increased from 56 percent of the population in 2013 to 66 percent in 2019Q1, though it is still the lowest in the region. is macro adjustment is inferior to the adjustment in Bulgaria and the Baltic countries, yet ultimately Croatia has been

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