

Should Small Open Economies Join the Euro Area: An Application to Croatia

Anne Sibert, Birkbeck, University of London, Columbia University and CEPR¹

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Croatia is on track to join the euro area and is making the right decision to join. Entrance requires meeting the five convergence requirements and Croatia should be able to do this, but some luck is required. Some euro members do well in the common currency area and others do not; the article suggests some things that Croatia might do to be part of the former group. While joining the euro area is sensible, in its current form, this monetary union is an imperfect arrangement and the article suggests some problems that the government should be aware of.

¹ The corresponding addresses are asibert@bbk.ac.uk.

So much of barbarism still remains in the transactions of the most civilized nations, that almost all independent countries choose to assert their nationality by having to their own inconvenience and that of their neighbours, a peculiar currency of their own. (John Stuart Mill (1848))¹

I. Introduction

Prime Minister Andrej Plenković has been direct about his support for joining the euro area: “Our goal is perfectly clear, strategically defined, confirmed at a referendum and adopted both in the accession negotiations and the Treaty of Accession. ... It is a policy of continuity and something that is in Croatia’s interest.”² Central bank Governor Boris Vujčić has said that Croatia plans to join the ERM-II “waiting room” next year.³ The citizenry appear less convinced. A survey conducted in April 2018 found that 50 percent were opposed to the monetary union and a single currency and only 47 percent were in favor. In November 2018, 56 percent were opposed and only 40 percent were in favor.⁴

There should be no buyer’s remorse about the decision to join the euro area. Croatia—a small economy with an open financial account and characterized by pervasive euro-ization—ought to benefit from entering the European monetary union and the associated banking union. Many of the benefits of monetary union membership are obvious: lower transactions costs, more transparent pricing and no exchange rate uncertainty vis-à-vis other members. In this article I point out two more unusual benefits: the possibility of enhanced risk sharing and improved financial stability from having the Eurosystem as a lender of last resort. There are also obvious costs of membership: a one-size-fits all monetary policy will not necessarily smooth Croatian business cycle fluctuations and even if the euro area as a whole experiences optimal inflation, Croatia may not. However, Croatia could mitigate the cost of cyclical fluctuations if its prices and wages were to become more flexible and if it maintains enough fiscal space to engage in countercyclical budgetary policy. Over time inflation may converge to the euro area average. Finally, some have argued that joining the euro area entails a loss of sovereignty.⁵ I argue that in terms of monetary policy this is not meaningfully so: Croatia is too small, too open and too euro-ized to effectively pursue an independent monetary policy.

Joining the euro area requires meeting the five convergence requirements and it is likely that Croatia can do this. However, both the criteria and the way that they are applied are flawed and arbitrary and, like other potential entrants, Croatia may need some luck. The price stability criterion is especially perverse, and a country that follows good policies can fail to meet it: Lithuania through bad luck, failed to meet the inflation benchmark by the tiniest of margins and was, in its first attempt, denied entry. The public finance criteria are opaque and most euro area members do not satisfy the benchmark levels of debt and deficits themselves; some have never met the debt criterion. But, Croatia will probably pass muster. The long-term interest rate criterion is poorly specified, but has

¹ John Stuart Mill, *Principles of Political Economy*, vol. 2 (New York: D. Appleton & Co., 1883), 176.

² Quoted in “Prime Minister Rejects Possible Referendum on Introduction of Euro,” online article, 16 November 2018, *Total Croatia News* (<https://www.total-croatia-news.com> : accessed 9 April 2019).

³ Zoltan Simon and Jasmina Kuzmanovic, “Croatia Sees ‘Revival’ in Political Will to Expand Euro Area,” online article, 15 January 2019, *Bloomberg* (<https://www.bloomberg.com> : accessed 12 April 2019).

⁴ European Commission, “Introduction of the Euro in the Member States that Have not yet Adopted the Common Currency,” *Flash Eurobarometer* 465, 18 April 2018, and “Public Opinion in the European Union,” *Standard Eurobarometer* 90, Autumn 2018, online reports, *European Commission* (<https://ec.europa.eu>).

⁵ “Prime Minister Rejects Possible Referendum on Introduction of Euro,” online article, 16 November 2018, *Total Croatia News* (<https://www.total-croatia-news.com> : accessed 9 April 2019).

enough wiggle room that Croatia is likely to satisfy it. The exchange rate criterion is straightforward and Croatia should have no problem with it.

While it is arguable that most, if not all, euro area member states have probably done better in the euro area than they would have outside, some euro area members, such as Finland, have thrived while others, such as Greece, have not. This article argues that Croatia will be more likely to be part of the former group if it continues to enact the microeconomic and regulatory reforms that would make Croatia more business friendly.

While joining the euro area is sensible, it is an imperfect arrangement and the article identifies four problems associated with the euro area that might affect Croatia. First, the current profit and loss sharing arrangements mean that it is possible for any national central bank, including Croatia's, to fail and it is not clear what would happen then. Second, to be successful the euro area needs a banking union and this project is not yet complete. Third, the fiscal framework is arbitrary; it potentially has teeth; is probably unnecessary; and costs the euro area legitimacy. Fourth, under the current rules Croatia must give up its right to collect discretionary seigniorage.

II. The Costs and Benefits of Joining the Euro Area

II.A. Two benefits of a common currency area

This section considers two benefits of a monetary union that were not considered in the original optimal currency area literature. First, monetary union can enhance risk sharing. In the euro area this is not through a U.S. style system of fiscal transfers, but through the European Stability Mechanism (ESM), the sovereign bond purchase programs of the European Central Bank and through capital market integration and banking union. Second, the common central bank can act as a lender of last resort for area banks and it may have deeper pockets and more credibility than individual national central banks.

II.A.1 Monetary union can enhance risk sharing

The United States might be viewed as a monetary union, with individual states sharing a common currency. Monetary policy is made with the country as a whole in mind and this can be a problem for a state hit by an idiosyncratic shock. However, in the United States, fiscal transfers provide insurance. Florida suffered from the collapse of a housing boom in 2007. Between 2007 and 2010—the worst point in the crisis—its annual tax payments to the federal government fell by about 33 billion dollars. Meanwhile, its annual federally funded unemployment insurance and food stamp payments rose by about seven billion dollars, for a net transfer of about 40 billion dollars: an amount equal to five percent of Florida's GDP.⁶

The euro area does not have a central fiscal mechanism to support monetary policy by responding appropriately to common euro area shocks. Nor, does not have a central fiscal facility to smooth the consequences of asymmetric shocks across countries. Despite the best efforts of the French President Emmanuel Macron to create a supranational countercyclical fiscal facility, this is unlikely to change

⁶ Paul Krugman, "Revenge of the Optimum Currency Area," in Daron Acemoglu, Jonathan Parker, and Michael Woodford, eds., *NBER Macroeconomics Annual 2012*, Volume 27 (Chicago: University of Chicago Press, 2013), 439–48, specifically 442–3.

in the foreseeable future. There are, however, facilities that permit a degree of area-wide backing to banks and support for troubled sovereigns.

The European Stabilization Mechanism (ESM) is a financial crisis mitigation mechanism.⁷ If a euro area member state loses access to financial markets and is willing to implement a macroeconomic adjustment program, then it can obtain loans from the ESM. The ESM can also buy government bonds outright in the primary or secondary markets and provide financially challenged member states with its preventive Precautionary Conditioned Credit Line and Enhanced Conditions Credit Line. If the failure of a systemically important credit institution is deemed a risk, the ESM can provide loans or recapitalize it directly. So far, the program has made loans as part of a macroeconomic adjustment program to Cyprus and Greece—Ireland, Greece and Portugal obtained loans from the ESM’s predecessor, the European Financial Stability Facility—and Spain received an ESM loan to recapitalize its banks. In addition to the ESM, the ECB can support sovereigns through its asset purchase programs, discussed in section V.

There are decentralized ways that a monetary union can enhance risk sharing. The first is by reducing the link between consumption and output at the country level by increasing the integration of capital markets. Individuals in different countries can insure themselves against a country-specific shock to their labor income by investing in the financial assets of other countries. Membership in a monetary union makes this easier as intra-union foreign exchange risk is eliminated. Unfortunately, in the euro area this source of risk sharing remains largely a theoretical possibility. In the United States, 60 to 80 percent of state-specific shocks are routinely smoothed, mostly through this channel, although about 10 to 15 percent is smoothed through the previously described fiscal transfers. In contrast, in the euro area, only about 20 percent of country-specific shocks are smoothed.⁸ Deregulation and advances in financial market integration should make this channel more effective.

Another way to enhance risk sharing is by reducing the link between national banks and the national supply of credit through increased retail banking integration. If the national economy experiences a negative shock, heavily exposed national banks will suffer large losses and reduce their lending. But, if cross-border banks can operate in all euro area countries on an equal footing, then they can provide credit. In the United States in the mid-1980s, almost every bank in Texas failed and out-of-state banks were banned from the Texas market. Since then, deregulation has increased the number of multistate banks and this has tended to decrease the volatility of business cycle shocks in the United States. Advances in banking union in Europe should make this channel more effective.⁹

Finally, if a government becomes fiscally threatened and its banks hold a disproportionate amount of their own country’s sovereign debt, then they may be threatened as well and resident taxpayers may be on the hook for any recapitalization. As discussed in section V, as the European banking union progresses, the link between banks and sovereigns and the link between banks and the particular country that they are located in will diminish and this will lower risks for taxpayers.

⁷ The ESM replaces two earlier temporary funding programs: the European Financial Stability Facility (EFSF) and the European Financial Stabilisation Mechanism (EFSM).

⁸ Jacopo Cimadomo, Sebastian Hauptmeier, Alessandra Anna Palazzo and Alexander Popov, “Risk Sharing in the Euro Area,” *ECB Economic Bulletin* 3 (2008).

⁹ Mario Draghi, “Risk-Reducing and Risk-Sharing in our Monetary Union,” speech at the European University Institute, Florence, 11 May 2018, online text, *European Central Bank* (<https://www.ecb.europa.eu>) > media > speeches > by date > 2018 > 11 May 2018.

II.A.2 Having the Eurosystem as lender of last resort may improve financial stability

The most important task of any central bank is to preserve financial stability. Any other central bank objective, such as price stability, cannot be pursued effectively unless there is financial stability. To ensure financial stability the central bank must be able to act as lender of last resort for its systemically important financial institutions and as market maker of last resort for its systemically important financial markets. In principle, the sovereign might also be a beneficiary of lender-of-last-resort and market-maker-of-last-resort operations by its central bank.

Banks are characterized by short-term liquid liabilities—deposits and short-term funding from wholesale capital markets—and long-term illiquid assets. Hence, banks—even those that hold good quality assets and that are fundamentally solvent—are subject to runs. If each depositor or other creditor believes that all other depositors and other creditors will withdraw their funds or refuse to rollover or extend new loans and that, as a consequence the bank will fail, then it is rational for each depositor or other creditor to run: to withdraw their deposits or other funding. As a result the bank will fail and the depositors' or wholesale creditors' beliefs are self-fulfilling.

The liquidity crisis of August 2007 was a case where markets became dysfunctional. The precise reason for the market failure is unknown, but in an atmosphere of pervasive uncertainty, a loss of confidence and fear, little or no trade occurred in certain classes of financial instruments.

A central bank can stop or prevent runs if it is credible that it will act as the lender of last resort to any fundamentally solvent bank. The central bank can restore function to dysfunctional markets by acting as market maker of last resort. It can do this by outright purchases and sales of assets that have become illiquid or by accepting them as collateral in repos, and in collateralized loans and advances at the discount window.

Unfortunately, a central bank cannot act as lender of last resort and market maker of last resort if a sufficiently large share of the financial-sector or non-financial-sector debt is denominated in foreign currency. A now classic example of this is Iceland during the Great Financial Crisis. By 2007 the Icelandic banking system's assets had expanded to almost eleven times Icelandic GDP and most of its liabilities were denominated in foreign currency. Unfortunately, the Icelandic central bank could only create kronur and was, thus, powerless to act as lender of last resort when its banking system collapsed in 2008.¹⁰

For Croatia to avoid (milder versions of) the same financial distress, there are two options. The first is to retain the kuna, but to de-euro-ize the economy. This would be extremely difficult operationally and politically. The second is to join the euro area. Then, if a solvent Croatian bank becomes temporarily illiquid, the Eurosystem, via the Croatian National Bank, can act as the lender of last resort. If a particular asset market became dysfunctional, endangering Croatian banks by their loss of liquidity, the Eurosystem could assist by acting as the purchaser of last resort.

II.B. The cost of a one-size-fits-all monetary policy

¹⁰ Willem Buiter and Anne Sibert, "The Icelandic Banking Crisis and What to Do About It: The Lender of Last Resort Theory of Optimal Currency Areas," CEPR Policy Insight No. 26, October 2008.

A country that joins a monetary union gives up its own exchange rate as an adjustment mechanism and it gives up the ability to make monetary policy. With asymmetric shocks, a common central bank cannot smooth output and employment in each of the constituent countries. Moreover, even if it attains the optimal level of inflation for the area as a whole, countries that consume different consumption baskets will have different levels of inflation.

II.B.1. The cost of not being able to smooth business cycles

The problem of asymmetric shocks

When a country joins a monetary union, the single monetary policy will be designed to be appropriate to the union as a whole. If a member state experiences shocks that are asymmetric, the monetary policy cannot be used to address them and a country-specific monetary instrument is gone as a result of the country joining the monetary union. Thus, a key factor in whether the euro area's one-size-fits-all monetary policy would also fit Croatia is the degree to which shocks to the Croatian and euro-area economies are correlated and the degree to which their business cycles are synchronized.

Using data from 1998 to 2016Q3, Kotarac, Kunovac and Ravnik (2017) find that after 2006, shocks to the Croatian and core euro-area economies were about as correlated as shocks to other EU periphery economies and core euro-area economies. Also since 2006, Croatian GDP has been primarily driven by shocks which can be classified as symmetric with those of the core euro-area economies, rather than by those which can be classified as asymmetric. Some caution is due because the post-2006 period has been dominated by the Great Financial Crisis and it is not clear how general the results are, but they are consistent with the idea that joining the euro area will not impose significant costs on Croatia due to the loss of its own activist monetary policy.¹¹ In addition, Frenkel and Rose (1998, 2000) argue that joining a monetary union increases the correlation between the business cycles of the new member and the rest of the monetary union.¹²

Lacking a central fiscal authority, the euro area cannot use a fiscal mechanism to smooth consumption across countries. However, individual countries can use their own fiscal policy to smooth consumption over the business cycle. Dolls et al. (2014) find that, because of higher social insurance contributions and benefits, the cyclical reaction of taxes and transfers is much higher in the euro area than in the United States. In the euro area, these automatic stabilizers absorb about 47 percent of cyclical shocks, compared with about 30 percent in the United States.¹³ Croatia currently has the fiscal space not only to let the automatic stabilizers operate during a downturn but to provide discretionary fiscal stimuli when necessary, provided this is done symmetrically. That is, the automatic fiscal stabilizers are allowed to operate and, where necessary, discretionary fiscal tightening is implemented when the economy is doing well.

¹¹ Karlo Kotarac, Davor Kunovac and Rafael Ravnik, "Coherence of Business Cycles and Economic Shocks between Croatia and Euro Area Member States," Working Paper W-53, Croatian National Bank, 2017. Core euro-area countries are Germany, France, Italy, Spain, the Netherlands, Belgium and Austria.

¹² Jeffrey Frankel and Andrew Rose, "The Endogeneity of the Optimum Currency Area Criteria," *Economic Journal* 108 (1998), 1009–1025. Jeffrey Frankel and Andrew Rose, "Estimating the Effect of Currency Unions on Trade and Output," NBER Working Papers, No. 7857 (Cambridge, MA: National Bureau of Economic Research, 2000).

¹³ Mathias Dolls, Clemens Fuest, Jan Kock, Andreas Peichl, Nils Wehrhöfer and Christian Wittneben, "Automatic stabilizers in the Eurozone: Analysis of their Effectiveness at the Member State and Euro Area Level and in International Comparison," Centre for European Economic Research, Mannheim, 26 November 2014.

The problem of sticky prices and wages

If a country that does not belong to a monetary union is hit by an idiosyncratic negative shock, adjustment might require increases in domestic prices and a decline in real wages. The simplest way for this to occur is for the value of the domestic currency to fall. Extolling the virtue of a floating exchange rate, Friedman (1953) notes, “It is far simpler to allow one price to change, namely the price of foreign exchange, rather than to rely upon changes in the multitude of prices that together constitute the internal price structure.”¹⁴ Obviously, a country that joins a monetary union must give up its own exchange rate.

Without a flexible exchange rate, domestic prices and wages must change and, as Friedman notes, “At least in the modern world, internal prices are highly inflexible. They are more flexible upward than downward, but even on the upswing all prices are not equally flexible.” He also comments that, “Wage rates tend to be among the least flexible prices.”¹⁵ Thus, adjustment is slow and associated with distortions in relative prices. If a country has its own central bank, it might pursue an expansionary monetary policy, hastening the rise in prices and decline in real wages. However, this option is not open to a country in a monetary union.

Thus, the ability of a country that has joined a monetary union to respond to an idiosyncratic shock is heavily dependent on how flexible its prices and nominal wages are. Unfortunately, Croatia appears to be characterized by price and wage stickiness. Krznar (2011) finds a puzzlingly high degree of price stickiness in Croatia.¹⁶ Once set, prices in Croatia remain unchanged for eight to 12 quarters.

Between 2009 and 2014 most firms in Croatia were exposed to a negative economic shock and almost one-sixth of the workforce in Croatia lost their jobs. Wages, however, did not fall significantly.¹⁷ Kunovac (2015) discusses a survey prepared by the European Central Bank and implemented in Croatia in 2014, seeking to uncover the firm’s reactions to the negative economic shock.¹⁸ The results suggest that firms were reluctant to cut wages and instead reduced their labor costs by reducing employment. Collective agreements and indexation rules are cited as institutional obstacles to reducing wages. Orsini and Ostojić (2015) and World Bank (2011) also note the high degree of wage rigidity in Croatia and attribute it to a relatively large public sector, a relatively high degree of unionization and complicated and inflexible collective bargaining arrangements.¹⁹

II.B.2 Country-specific inflation in a monetary union

In the European Union, the Single Market reduces price differentials. There is also robust empirical evidence that membership in a monetary union reduces transaction costs, increases price transparency

¹⁴ Milton Friedman, “The Case for Flexible Exchange Rates,” in M. Friedman, *Essays in Positive Economics* (Chicago: University of Chicago Press, 1953), 159–205, specifically 173.

¹⁵ *Ibid.*, 165.

¹⁶ Ivo Krznar, “An Analysis of the Domestic Inflation Rate Dynamics and the Phillips Curve,” Working Paper W-31, Croatian National Bank, 2011.

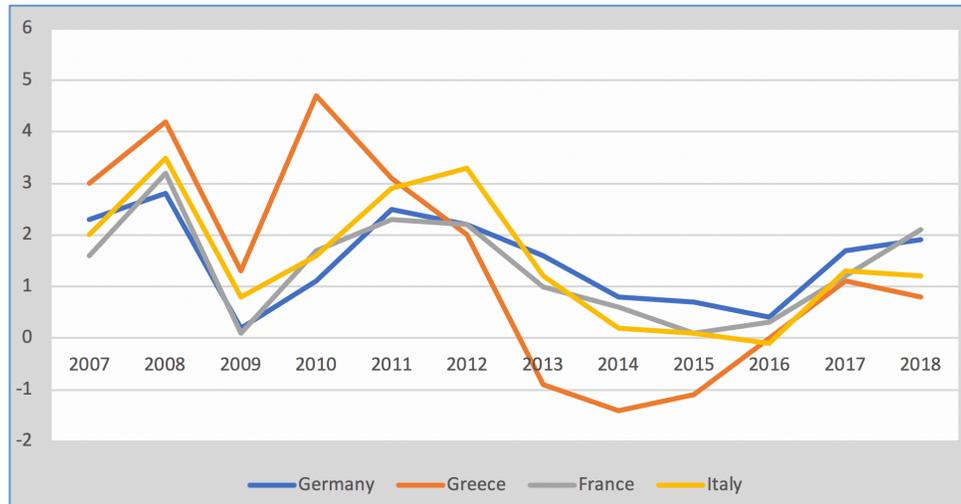
¹⁷ Predrag Bejaković, “Croatia: Wage Dynamics and Labour Costs,” online article, 22 April 2016, *Eurofound* (<https://www.eurofound.europa.eu>).

¹⁸ Marina Kunovac, “Determinants of Labour Cost Adjustment Strategies During the Crisis—Survey Evidence From Croatia,” Working Paper W-53, Croatian National Bank, 2015.

¹⁹ Kristian Orsini and Vukasin Ostojić, “Wage Dynamics in Croatia: Leaders and Followers,” *European Economy: Economic Brief 3*, online article, October 2015, *European Commission* (<https://ec.europa.eu>). World Bank, “Employment Protection Legislation and Labor Market Outcomes: Theory, Evidence and Lessons for Croatia,” *Croatia Policy Notes*, online article, July 2011 (<https://siteresources.worldbank.org>).

and encourages convergence of prices between the member states in the union. However, individual countries consume different consumption baskets. Thus, even if a good costs the same in each country, relative price changes mean that inflation differs across countries. Even if the European Central Bank could reliably attain its desired level of inflation for the area as a whole, it cannot attain it for individual countries. As seen in figure 1, in 2014 French and Italian inflation rates were close to but below two percent; Greek inflation was over four percent and German inflation was about one percent.

Figure 1: Inflation in Selected Euro Area Countries²⁰



For inflation differentials to subside consumption baskets need to become more similar and this requires both convergence in real GDP per capita and increased trade. In Croatia, relative real per capita GDP has recovered from the lows of the break-up of Yugoslavia and the armed conflicts that followed, but as seen in figure 2, there is little evidence of real convergence over the last decade. As seen in figure 3, exports plus imports as a percent of GDP have risen from around 85 percent in 2007 to just over 100 percent in 2018. However, trade openness remains well below that of other central and southeast European countries of comparable size.

II.C. Could Croatia conduct an effective activist monetary policy?

Giving up one's own currency means that a country gives up a floating exchange rate and can no longer make its own monetary policy and this might appear like a partial loss of sovereignty. But, the extent to which this is a cost depends in part on whether a floating exchange rate is a shock-absorbing mechanism or just a shock; whether a country could make activist monetary policy in an effective manner; and the costs of an independent monetary policy.

²⁰ European Commission (<https://ec.europa.eu>) > Eurostat > HCIP > Data > Main Tables, HCIP annual average rate of change.

Figure 2: GDP Per Capita in Croatia and the Euro Area (EU28 = 100)²¹

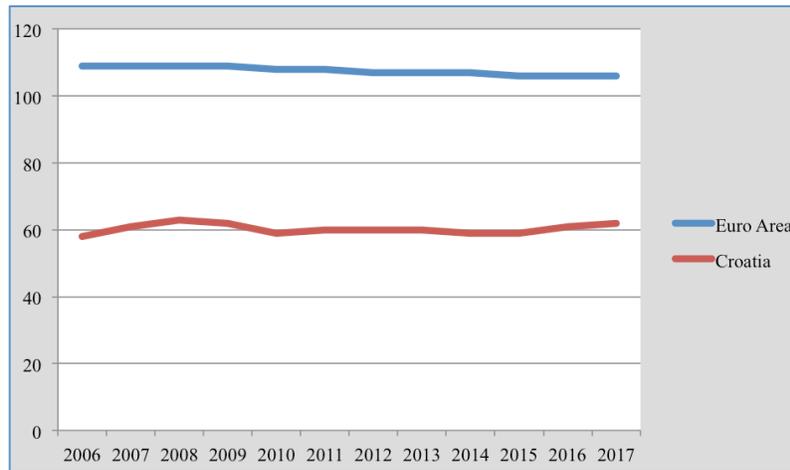
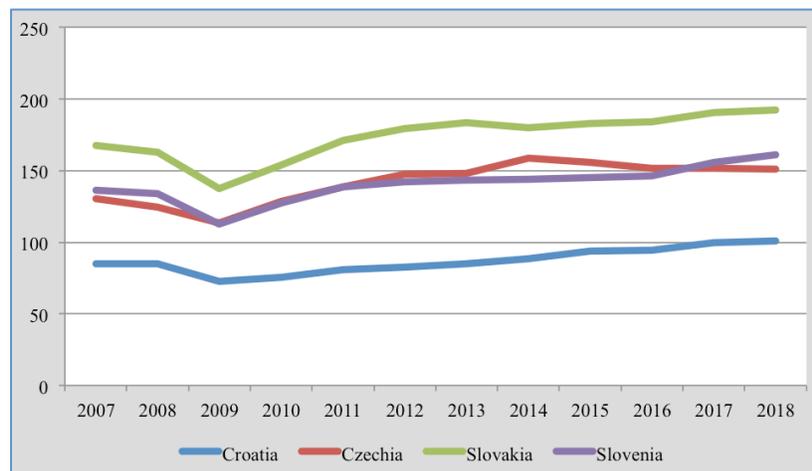


Figure 3: Exports and Imports of Goods and Services as a Share of GDP²²



Arguments in favor of retaining monetary independence include Friedman’s view that a floating exchange rate is an effective shock absorbing mechanism. The counter argument is that a market-determined exchange rate is yet one more financial asset price that can reap havoc on the relative prices of real goods and services and thus on the real economy more widely. Differing views abound on the efficiency of financial markets and on the efficiency of the foreign exchange market in particular. Willem Buiter writes, “Herd behavior, bandwagon effects, noise trading, carry trading, trading by agents caught in liquidity squeezes in other financial markets, and myriad other manifestations of irrational exuberance or pessimism make for excessive volatility and sometimes

²¹ European Commission (<https://ec.europa.eu>) > Eurostat > National Accounts (including GDP) > Data > Main Tables, data from 1 December 2018.

²² European Commission (<https://ec.europa.eu>) > Eurostat > Economic globalism > Globalism in business statistics > international trade.

quite persistent misalignments in the foreign exchange markets.”²³ Even rational behavior is consistent with bubbles.

Trading volume in the foreign exchange market is believed to be about five trillion dollars per day. In contrast, the total assets of the Federal Reserve System are less than four trillion dollars. The National Bank of Croatia could do little to prevent huge swings, up or down, in its exchange rate if market sentiment turned one way or another. I believe that the view that an asset-market-driven exchange rate can be a source of shocks, rather than an efficient mechanism for responding and adjusting to fundamental shocks cannot be dismissed lightly.

As a result of inflation in the 1990s, a fear of tail risks and an anticipation of eventual euro-area membership, the Croatian economy has become highly euro-ized. About half of the banking system’s assets and half of its liabilities are dominated in a foreign currency, mostly in the euro. Over three-quarters of the public-sector debt is denominated in a foreign currency, mostly in the euro.²⁴ As a result, monetary policy is already less effective than it would otherwise have been. Croatia could not solve the problem by fixing its exchange rate to the euro or some other currency and maintaining its own currency. One of the few things in international finance that pretty much everyone agrees on is that a small open economy with a fixed exchange rate cannot pursue its own monetary policy. Instead, monetary policy must be used to maintain its exchange rate.

With 4.096 million inhabitants, Croatia is eighth smallest EU country in terms of population. Compared with other countries that have preserved an independent monetary policy, it is more than ten times the size of Iceland (0.348 million inhabitants); slightly smaller than New Zealand (4.929 million inhabitants) and dwarfed by Australia (25.168 million inhabitants).²⁵ Unfortunately, despite its small size, Croatia has 20 ministries, eleven government offices, seven state administrative organizations and five central state offices—and they must all be staffed.²⁶ This can cause two potential problems. First, with fewer people, it is more difficult for less a populous nation to find enough talented civil servants. Second, civil servants may end up taking on more roles than they would in a more populous nation, making it more difficult to build up expertise in any particular area. Croatia’s small size alone may make delegating monetary policy to the ECB an attractive option.

III. Croatia Can Probably Satisfy the Convergence Criteria

It is likely that Croatia can satisfy the convergence criteria for entry into monetary union. Indeed it currently satisfies all of the criteria except the exchange rate criterion and this is only because it is not a member of the exchange rate mechanism.²⁷

There are five numerical convergence criteria a candidate for euro area membership must satisfy. They are given in table 1.

²³ Willem Buiter, “Optimal Currency Areas: Scottish Economic Society/Royal Bank of Scotland Annual Lecture, 1999,” *Scottish Journal of Political Economy* 47, no. 3 (2000), 213–50, specifically 235.

²⁴ Croatian National Bank, *Financial Stability*, no. 19 (Zagreb: Croatian National Bank, May 2018), 17, 47.

²⁵ “Population,” table, “Living in the EU,” webpage, *European Union* (<https://europa.eu> : accessed 28 March 2019). “World Economic Outlook Database, April 2019,” database, *International Monetary Fund* (<https://www.imf.org>).

²⁶ “Ministries and State Bodies,” webpage, *Government of the Republic of Croatia* (<https://vlada.gov.hr/en> : accessed 29 March 2019).

²⁷ Candidates to join the euro area must also have a legally independent central bank and that their legislation must be in compliance with the provisions of the treaties and compatible with the laws of the European Central Bank and the European System of Central Banks. Croatia currently satisfies this.

Table 1: Convergence Criteria²⁸

What is measured	How is it measured	Convergence Criterion
Price stability	consumer price inflation	Not more than 1.5 percentage points above the rate of the three best performing member states
Sound public finances	government deficit as a percent of GDP	Not more than three percent
Sustainable public finances	government debt as a percent of GDP	Not more than 60 percent or falling at a sufficient speed
Durability of convergence	long-term interest rate	Not more than two percentage points above the rate of the three best performing member states in terms of price stability
Exchange rate stability	deviation from a central rate	Participation in ERM II for at least two years without severe tensions

III.A. Croatia can satisfy the price stability criterion—with a bit of luck

The first criterion is the price stability test: average inflation over a year of not more than 1.5 percentage points above the rate of the three best performing member states. The 1.5 percentage point padding is to allow for the Balassa-Samuelson effect: all other things being equal, inflation is higher in developing economies than in developed ones.

The inflation test is a test of something the successful applicant will never have to do again: make monetary policy and it requires a bit of luck. As previously mentioned, one of the least controversial results in international finance is that a small open economy with freely mobile capital and a fixed exchange rate cannot follow an independent monetary policy. Thus, it is only by luck and the reasonably generous definition of exchange rate stability in the convergence criteria that a country can hope to satisfy the inflation test.

It is not entirely clear what *best performing* should mean. The ECB’s Governing Council defined price stability as inflation (measured by the Harmonized Index of Consumer prices) below two percent. Lacking any floor, and given that negative inflation is clearly undesirable, this was a poor definition. Thus, in 2003 the Governing Council clarified that it mean below “but close to” two percent.²⁹ This is still a bit vague, especially when operationalizing the price stability criterion for euro area membership. Is 1.4 percent better or worse than 2.1 percent?

Unfortunately, the European Commission and European Central Bank apparently decided that after discarding performances that are not seen as meaningful benchmarks, the reference value is determined by the three *lowest* rates—even if they are negative and clearly *not* indicative of good performance. Thus, in 2016, Cypriot and Romanian inflation rates (-1.8 and -1.3 percent, respectively) were discarded and the reference value was computed from the three lowest remaining

²⁸ “Convergence Criteria for Joining,” webpage, *European Commission* (<https://ec.europa.eu> : accessed 31 March 2019) > Business, economy, euro > euro area > enlargement of the euro area.

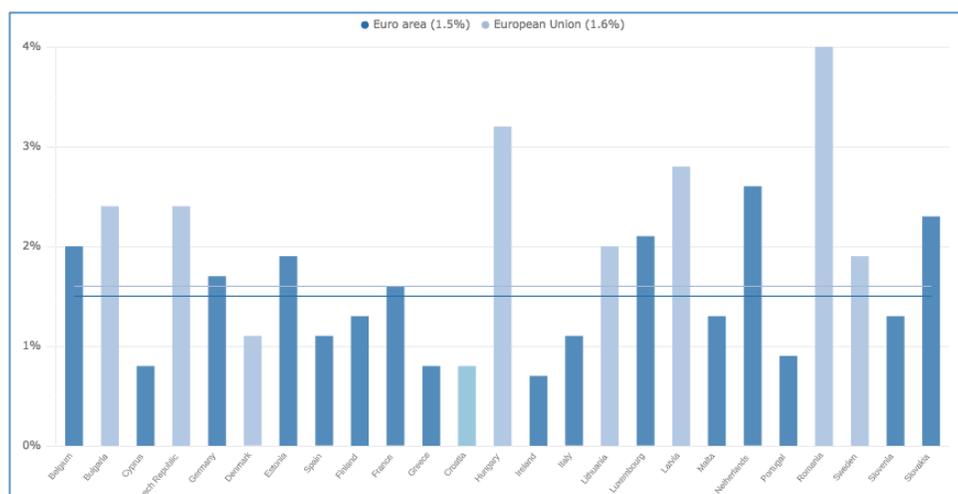
²⁹ “The Definition of Price Stability,” webpage, *European Commission* (<https://ec.europa.eu> : accessed 31 March 2019) > Monetary policy > strategy. Excessively low inflation might be disliked because of the risk of negative inflation and because measured inflation likely significantly overstates actual inflation.

rates—Bulgarian, Slovenian and Spanish inflation of -1.0, -0.8 and -0.6, respectively.³⁰ Figure 4 shows Croatia’s inflation performance relative to the euro area as a whole. Figure 5 shows its current performance relative to individual countries. Despite the deeply flawed nature of this test, Croatia fulfilled the criterion on price stability for the year to March 2018.³¹

Figure 4: Inflation in Croatia and the Euro Area³²



Figure 5: Current Inflation in Croatia and Other EU Countries³³



III.B. The public finance criteria are opaque, but Croatia can probably satisfy them

³⁰ European Commission, *Convergence Report 2016* (Luxembourg: Publications Office of the European Union, 2016), 4.

³¹ European Commission, *Convergence Report 2018* (Luxembourg: Publications Office of the European Union, 2018), 11.

³² *European Central Bank* (<https://ecb.europa.eu> : accessed 31 March 2019) > Statistics > Macroeconomics and sectoral Statistics > Measuring inflation > Inflation and the euro, HICP inflation.

³³ *Ibid.*, data for February 2019.

The second and third criteria concern public finances and are related to whether a country is in breach of the limits on fiscal policy set by the Stability and Growth Pact: government budget deficits not in excess of three percent of GDP and government debt not in excess of 60 percent of GDP.

It is encouraging that there has been a major improvement in the primary surplus of the general government since 2013, as seen in figure 6. Croatia is now running the primary surpluses necessary to bring down the general government debt burden materially. The Commission expects Croatia to satisfy this criterion in 2018 and 2019. In early 2018 Croatia received its first ratings upgrade since 2004.³⁴

Figure 6: Government Deficits as a Percent of GDP³⁵

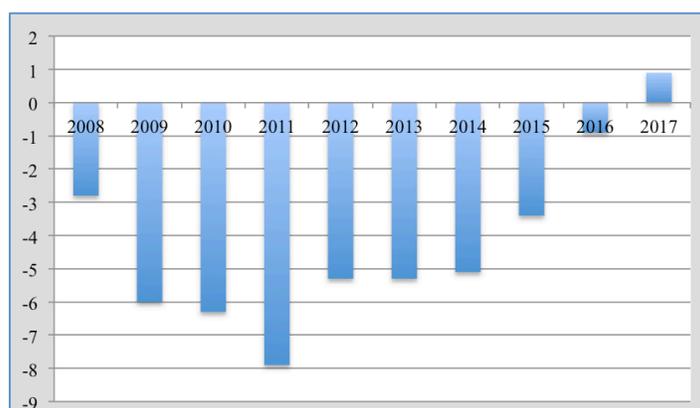
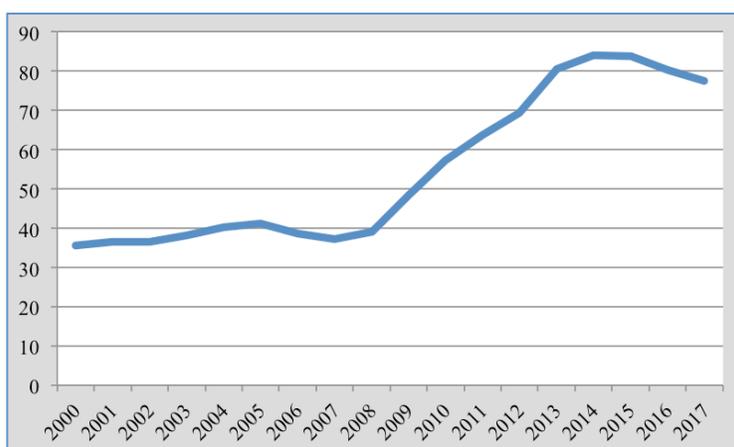


Figure 7: Croatian General Government Gross Debt as a Percent of GDP³⁶



Unfortunately, as seen in figure 7, Croatia’s debt as percent of GDP began growing rapidly in 2007 and reached a maximum of 84 percent in 2014. Since then, debt as a share of GDP has been declining; the IMF estimates that it was 73.9 percent in 2018 and projects it to reach 61 percent by

³⁴ European Commission, *Convergence Report 2018*, 12.

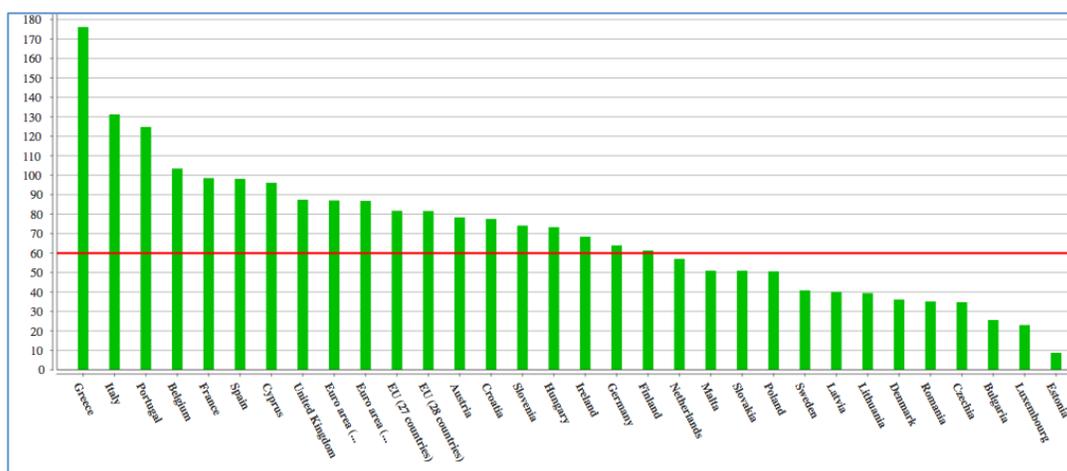
³⁵ European Commission (<https://ec.europa.eu>) > Eurostat > Government finance statistics and EDP statistics > Data > Main tables.

³⁶ European Commission (<https://ec.europa.eu>) > Eurostat > Government finance statistics and EDP statistics > Data > Main tables.

2024.³⁷ This assumption, however, assumes real GDP growth of 2.0 to 2.6 percent and primary surpluses as a fraction of GDP of 1.6 to 1.9 percent over the interim period. This forecast is subject to interest rate risk, and with 40 percent of gross debt denominated in euros, to exchange rate risk as well. Originally, compliance with the Stability and Growth Pact meant either government debt as a percent of GDP of less than 60 percent or, if above 60 percent, declining with sufficient speed to below 60 percent. Recently, however, the Commission and the European Central Bank have not consistently enforced this. However, even by this standard, Croatia would likely satisfy the criteria.

As seen in figure 8, Croatia’s debt as a percent of GDP is not particularly high by the standards of the euro area. However, it is higher than that of Slovenia, Slovakia or Czechia. Aside from meeting the convergence criteria, with future real interest rates that will probably exceed Croatia’s real growth rates, there are questions about the sustainability of the current level of debt.

Figure 8: General Government Gross Debt as a Percent of GDP³⁸



III.C. The long-term interest rate criterion is a bit strange, but Croatia can probably satisfy it

The fourth criterion is the durability of convergence criterion that requires the convergence of long-term bond yields. The yields on central government bonds with a remaining maturity of about ten years on the secondary market, gross of tax are to be not more than two percentage points above the rate of the three best performing member states in terms of price stability. This is also a slightly strange criterion: a fiscally profligate country in recession might achieve price deflation and be defined a best performing member, but it is not a model of sound public finances and its interest rate might be undesirably high. As seen in figure 9, Croatia’s convergence criterion interest rates—reflecting currency risk and sovereign risk—have been declining and converging towards the euro area average rate.

However, as seen in figure 10, Croatian long-term interest rates are still substantially above those of the countries with the lowest rates: Lithuania and Germany. In 2018, the interest rate on long-term

³⁷ International Monetary Fund, *Republic of Croatia: 2018 Article IV Consultation* (Washington, D.C., International Monetary Fund, February 2019), 34.

³⁸ *European Commission* (<https://ec.europa.eu>) > Eurostat > Government finance statistics and EDP statistics > Data > Main tables.

Croatian bonds was 2.17 percent, while the interest rate on Lithuanian bonds was 0.31 percent and the interest rate on German bonds was 0.40 percent. The average value of Croatian interest rates in the year to March 2018 was 2.6 percent. However, this is comfortably below that year's reference rate of 3.2 percent.³⁹

Figure 9: Convergence Criterion Long-Term Interest Rates: Euro Area, Germany and Croatia⁴⁰

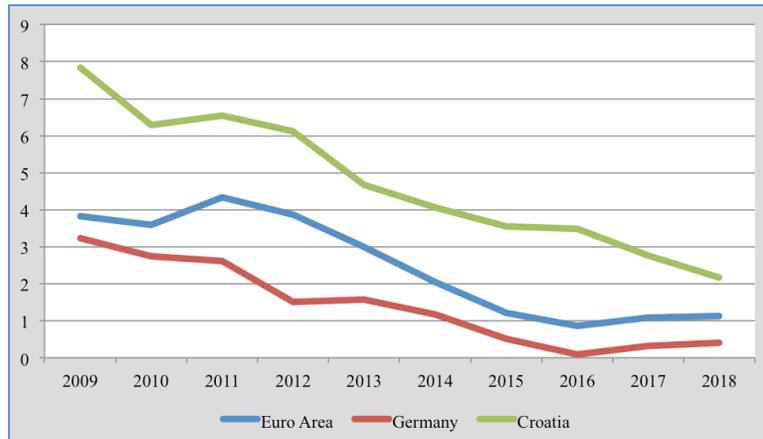
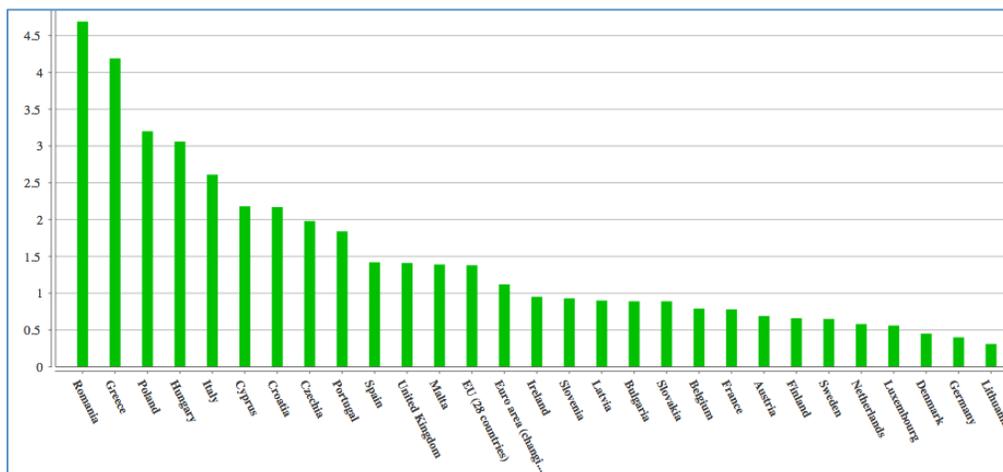


Figure 10: Convergence Criterion Long-Term Interest Rates: Euro Area Countries⁴¹



III.D Croatia should easily satisfy the exchange rate criterion

Croatia has been a European Union member since 1 July 2013 and has committed to adopt the euro as soon as it satisfies the necessary conditions. According to its central bank governor Boris Vujcic, Croatia will send a letter of intent to join the European Union's exchange rate Mechanism (ERM II)

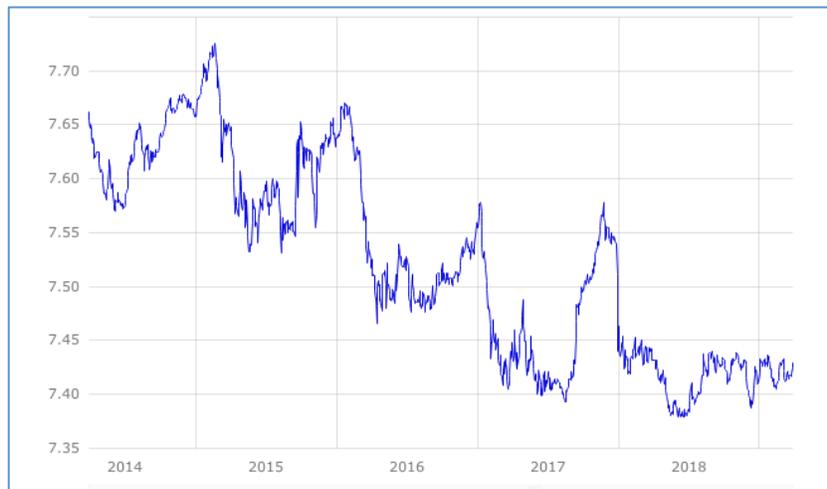
³⁹ European Commission, *Convergence Report 2018*, 12.

⁴⁰ European Commission (<https://ec.europa.eu>) > Eurostat > Exchange and interest rates > Data > Main tables.

⁴¹ European Commission (<https://ec.europa.eu>) > Eurostat > Exchange and interest rates > Data > Main tables.

by July of this year.⁴² One of the convergence criteria for entry into the euro area is participation in the ERM II without severe tensions for at least two years and Croatia is targeting a 2020 entry into ERM II. The primary objective of the Croatian National Bank is price stability, and given its highly euroized economy, it implements this by maintaining a stable exchange rate between the Croatian currency—the kuna—and the euro. The kuna floats with the central bank intervening to maintain a stable value. As seen in figure 1, the kuna has remained in a tight band for years—appreciating modestly against the euro and displaying some seasonal fluctuations due to tourism. Croatia should have not a problem keeping its currency within the ERM II’s required ± 15 percent fluctuation band.

Figure 11: Value of the Kuna⁴³



IV. Microeconomic Reform to Help Croatia Thrive in the Euro Area

Some countries have thrived within the euro area and others have not. To a great extent this has little to do with euro area membership *per se*, and a lot to do with bad microeconomic policies. Good regulatory and other microeconomic policies—policies that allow businesses to open and flourish—create jobs and income for consumption and investment. The World Bank publishes an annual index, *Ease of Doing Business*, ranking countries on how easy it is to do business in them: how easy is it to start a business; how flexible is labor market regulation; how easy is it to deal with construction permits, get electricity, register property and get credit; how well protected are minority investors, how easy is it to trade across borders and pay taxes; how quickly can contracts be enforced and insolvent businesses be resolved.

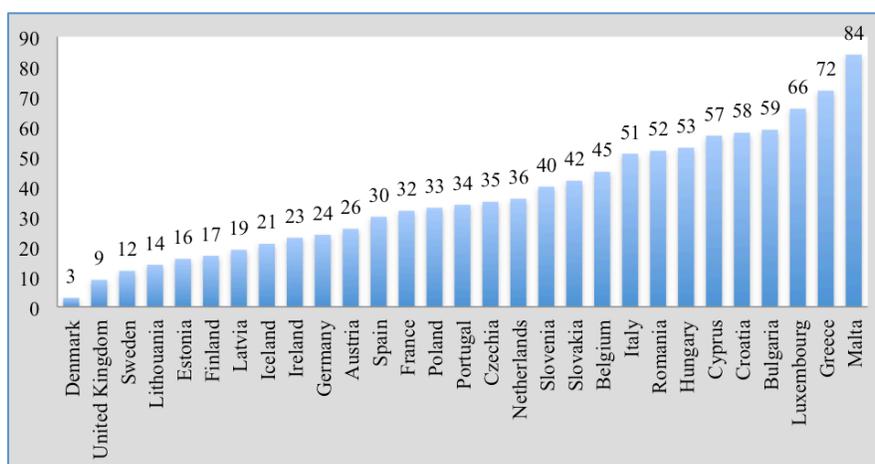
Some of the 2019 rankings are shown in figure 12. Four things are immediately apparent. The first is that Croatia is ranked 58. This is unfortunate: it is behind Hungary and Romania. In recent years the World Bank has criticized Croatia for making dealing with construction permits more expensive and making starting a business more difficult by increasing notary fees. However, it has praised Croatia

⁴² Jasmina Kuzmanovic, “Croatia to Submit Letter of Intent for ECB Waiting Room by July,” online article, 25 February 2019, *Bloomberg* (<https://www.bloomberg.com>).

⁴³ *European Central Bank* (<https://www.ecb.europa.eu> : accessed 28 March 2019) > Statistics > ECB/Eurosystem policy and exchange rates > Euro foreign exchange reference rates > Croatian kuna.

for reforms that make it easier to register and transfer property.⁴⁴ The second is how highly the Nordic countries are rated. Denmark is third, and Sweden is 12th: there is no inconsistency between being business friendly and having a strong social safety net. The third is how highly the Baltic countries are rated: Lithuania is 14th, Estonia is 17th and Latvia is 19th. Moreover, this phenomenon is not recent. The World Bank has been ranking countries since 2008. In that year Lithuania, Estonia and Latvia ranked 15th, 16th and 26th, respectively; Germany was 19th.⁴⁵ Transforming a distorted and inflexible economy into a modern, flexible market economy can be done in years, rather than decades. The fourth is how badly some euro area economies are doing: Italy is 51st and Greece is 72nd. Greece is behind Peru, Vietnam and Ukraine, although it does edge out Mongolia. In 2008 Greece was 100th, behind Ghana and Azerbaijan. Undoubtedly its abysmal business environment is an important reason for why Greece has not thrived.

Figure 12: Ease of Doing Business Rankings, 2019⁴⁶



V. Problems with Life in the Euro Area

There are currently structural flaws in the euro area monetary union that make membership less valuable than it otherwise would be. This section discusses some of these problems.

V.A. The Croatian National Bank could fail

Prior to the Great Financial Crisis the ECB tended to take the view that risks associated with monetary policy operations should be shared. However, risks associated with lender of last resort activities should be borne at the national level. The Emergency Liquidity Assistance (ELA) is a special loan facility of the Eurosystem that allows jurisdictions to act independently (up to a point) as lender of last resort to solvent counterparties that are facing temporary liquidity problems.⁴⁷ Any costs and risks arising from ELA operations are incurred by the relevant national central bank. During the crisis it was not always clear which operations were intended as conventional monetary policy, which were

⁴⁴ World Bank, *Doing Business 2017*, 174, 2018, 129, 2019, 137.

⁴⁵ World Bank, *Doing Business 2006* (Washington, D.C.: World Bank, 2006), 3.

⁴⁶ World Bank, *Doing Business 2019* (Washington, D.C.: World Bank, 2019), table 1.1, 5.

⁴⁷ Prior to 20 April 2012 the ECB did not disclose outstanding ELA balances. Apparently, between 2007 and 2012, Belgium, Germany, Greece and Ireland used the ELA. See Willem Buiter, "Is the Eurozone at Risk of Turning into the Roubal Zone," *Global Economics View*, Citigroup Global Markets, 13 February 2012.

unconventional monetary policy—designed to increase lending by area banks—and which were lender of last resort operations. Over time—in response to political concerns—views on risk sharing have changed and risk has been shifted to the national central banks.⁴⁸

In December 2011 the ECB extended the Eurosystem’s lender of last role by allowing different jurisdictions—to an extent—to accept additional types of collateral, called Additional Credit Claims, but they were required to keep them on their own balance sheets.⁴⁹ The Securities Market Program, announced in May 2010, was a market-maker-of-last-resort activity aimed at insuring liquidity in dysfunctional securities markets. Risks associated with this program were fully mutualized. In September 2012—with the intent of averting a market panic—the ECB unveiled its Outright Monetary Transactions Program, allowing the potentially unlimited purchases of the short-term sovereign debt of troubled euro area members. The associated risks were to be fully shared. The German political and economic establishment was appalled; a German Constitutional Court launched an unsuccessful legal challenge. Ultimately, the program was never used; the credibility of the announcement was enough to sway markets.⁵⁰

The third asset purchase program—the Public Sector Purchase Program—was announced in January 2015 and sold as conventional monetary policy. The ECB stated that it would buy bonds issued by euro area central governments, agencies and European institutions in the secondary market with the intent of “fulfilling the ECB’s price stability mandate.”⁵¹ The ECB is the coordinator of purchases, which are done by the national central banks. However, probably succumbing to political pressure, only twenty percent of the associated risk is mutualized. As a result of shifting views of risk sharing, as of 2017 only about half of the assets of the Eurosystem were shared risk.⁵² Allowing and forcing national central banks to take on unshared risk raises the possibility that a national central bank could become insolvent.

In the United States, aspects of the common monetary policy are implemented through different Federal Reserve Banks. However, following the Great Depression of the 1930s the federal government clarified that if a regional bank were to suffer a sizable enough loss, the U.S. Treasury would recapitalize it.

Outside of the euro area, unless a central bank holds a significant amount of foreign debt, it can avoid default by creating money to service its debt. In the euro area, if a national central bank were to become insolvent, there appears to be a presumption on the part of the European Central Bank that it would be up to the national sovereign to restore solvency. However, the national bank is likely to become insolvent at a time when its sovereign is in difficulty and unable to bail it out. This would be the case if the sovereign was forced to default on its debt and much of this debt was held by the national central bank. If the national sovereign cannot recapitalize its central bank and the rest of the

⁴⁸ For a discussion of this, see Jérémie Cohen-Setton and Shahin Vallée, “Federalizing a Central Bank: A Comparative Study of the Early Years of the Federal Reserve and the European Central Bank,” in Jacob Funk Kirkegaard and Adam S. Posen, eds. *Lessons for EU Integration from US History* (Washington, D.C.: Peterson Institute for International Economics, 2018), 108–142.

⁴⁹ The Eurosystem accepted credit claims (that is, bank loans) as collateral in its lending operation. This program allowed other types of credit claims, such as residential mortgages to be allowed under certain circumstances.

⁵⁰ The Outright Monetary Transactions program continues to be unused. This is probably because a government benefiting from it has to accept a program with conditionality.

⁵¹ “ECB Announces Expanded Asset Purchase Programme,” press release, 22 January 2015, *European Central Bank* (<https://www.ecb.europa.eu>).

⁵² Cohen-Setton and Vallée, “Federalizing a Central Bank,” 113.

Eurosystem refuses to bail it out then the insolvent national central bank becomes an ineligible counterparty in Target2, which effectively suspends its membership in the monetary union.

There appears little that can be done about risk associated with sovereign debt purchase programs. However, completion of banking union would help with lender of last resort activities. If the Eurosystem is the area-wide supervisor and regulator of banks, then it could be the area-wide lender of last resort to solvent borrowers.

V.B. The banking union is not yet complete

It is widely agreed that that the euro area needs a banking union to survive. In particular, it needs a single supervisory mechanism and a single bank resolution regime with a single resolution fund. A single deposit insurance scheme and a sovereign resolution regime are also desirable. The following are some examples of scenarios where the completion of the banking union would improve matters.

A feature of the financial system is that the failure of just one or a few sufficiently important financial institutions for idiosyncratic reasons can lead to the domino-like collapse of a chain of other financial institutions. The importance of the financial system to the real economy's functioning means that this can be catastrophic for the world economy. Conventional bankruptcy legislation is too slow to be suitable for financial firms that ought to be kept as ongoing institutions. The disorderly bankruptcy of Lehman Brothers and the resulting market disruption is a stark example. A properly funded and effective single resolution regime can alleviate or even prevent such a disturbance.

One can imagine a scenario where a German bank, believed to be insolvent or about to be, could be borrowing on more favorable terms than a Croatian bank that is believed to be solvent. This is because it is widely believed that the German central bank is more able to recapitalize its bank than the Croatian central bank. This disparity would be unfair to Croatian banks and they would pass on their higher borrowing costs to their customers; economic growth in Croatia would be less than if Croatian banks competed on an equal footing. This scenario can be avoided with a single resolution regime with a single resolution fund.

Sovereigns have historically used the banks in their jurisdiction as a dumping ground for sovereign debt that the market finds insufficiently alluring. Thus, when a sovereign defaults, banks in its jurisdiction—heavily exposed to its debt—are likely to default as well. Many banks are too systemically important or too politically well connected to be allowed to fail. The financial rescue of insolvent banks by their own sovereign can then threaten the solvency of a sovereign. This is the doom loop between the sovereign and its banks. This scenario might be avoided if the single supervisory mechanism limits the amounts of sovereign debt that resident banks can hold.

In 2013 the Cypriot president, desperate for short-term funds, looked to his only source of readily available cash – Cypriot bank deposits—and proposed a levy on all bank deposits in Cyprus. Even though it was not adopted, the extraordinary proposal that small depositors should lose a part of their savings might make one wonder, is there any credible protection for small-bank depositors in Europe? And if only some countries can provide credible protection, how can banks compete on equal terms. A single deposit insurance fund would allay insured depositors' worries and help banks compete on equal terms.

Sovereign defaults are common: Greek City states first defaulted in 13 B.C. and Greece has defaulted five times since its War of Independence.⁵³ A sovereign resolution regime would also be desirable. A single resolution regime would make sovereign defaults less costly. A unified contractual approach to sovereign debt might avoid the difficulties associated with holdouts that were experienced by Peru in its Brady Bond rescheduling.

Some progress has been made toward a banking union. There is already a Single Supervisory Mechanism made up of the ECB and the national supervisory authorities of the euro area countries.⁵⁴ The ECB has the authority to supervise; to grant and withdraw banking licenses; to ensure compliance with EU prudential rules; to set higher capital requirements. This raises the eventual possibility of a single rulebook, contributing to a level playing field. Small countries can find it difficult to supervise a large banking system and they could benefit from the ECB doing it instead. If the ECB is the supervisor, then this opens the possibility of sharing the risks of lender-of-last resort operations across member countries. The Single Supervisory Mechanism might be able to remove the home bias in sovereign debt holdings that contributes to the doom loop.

There are problems however. First, the ECB directly supervises the 119 “significant” banks of the participating countries. It should, however, supervise all of the banks: the experience of Spain suggests that even small and medium-sized banks can be a source of problems. Second, no entity as unaccountable as the ECB currently is can withdraw banking licenses and retain its legitimacy in a democratic society.

There is also already exists a Single Resolution Mechanism consisting of a Single Resolution Board and a Common Resolution Fund. In brief, it works as follows. The ECB notifies the Single Resolution Board that a bank is failing or about to fail. The full-time members of the Board (appointed by the European Council) and representatives from the countries in which the bank and its subsidiaries are located decide whether the Board should resolve the bank and if so how to resolve it and how to use the common resolution fund. To comply with EU rules, the Commission must endorse the decision. In some circumstances the Council can object to the resolution scheme.

The Single Resolution Board is untried and the common resolution fund lacks backstop funding. The operation of any bank resolution mechanism presents challenges. Systemically unimportant banks can be allowed to fail: liquidated or sold to another bank. Sufficiently systemically important banks must be recapitalized. Crisis actions need to happen overnight; there is no time for the leisurely intervention of a normal bankruptcy court. This regime needs to be able to fire the management, disenfranchise shareholders, forcibly convert unsecured debt into equity or impose a haircut.

There is an inevitable tradeoff between efficiency and property rights in the operation of a single supervisory mechanism: the single authority needs to declare a bank on the verge of insolvency and this can be difficult, especially if markets are dysfunctional and it is difficult to value the bank’s assets. Imagine a Croatian bank—believed by many to be solvent—declared insolvent and resolved by foreign officials. The resolution authorities need to be held accountable and shareholders should be allowed to appeal decisions in a court.

⁵³ Carmen Reinhart, “*This Time is Different* Chartbook,” NBER W.P. 15815, Mar. 2010, <http://www.nber.org/papers/w15815.pdf>.

⁵⁴ Membership is obligatory for euro area countries and a cooperative arrangement is possible for other EU countries, but none have yet chosen to be part.

The Common Resolution Fund is to be financed with contributions from banks. It is to be used as a last resort, once all other financing sources are exhausted. This is desirable: shareholders, unsecured debt holders and deposit holders should take their losses first. Unfortunately, the fund might not be adequate in the event of the failure of a sufficiently large bank or of a banking system. The fund needs a common backstop. In December 2017 the Commission proposed to add such a backstop to the ESM framework, renaming the mechanism the European Monetary Fund. The proposal was met with “considerable opposition” in the Council, but has been more warmly received by the European Parliament.⁵⁵

In November 2015 the Commission proposed the creation of a common European Deposit Insurance Scheme. However, there is considerable opposition—especially by Germans who fear they will foot the bill for protecting the depositors of Italian banks—and the proposal has languished.

V.C. The fiscal framework is problematic

The current European Union fiscal framework is absurdly complicated; its threatened punishment is not credible; it appears to be applied arbitrarily; and it lacks legitimacy and is possibly unnecessary.

The fiscal rules for the European monetary union—upper limits on deficits and debt as percent of GDP—were introduced by the Maastricht Treaty in 1992 and operationalized by the Stability and Growth Pact in 1997. Budget deficits were supposed to remain under three percent of GDP and debt was to remain under 60 percent of GDP or to be falling sufficiently toward this level. There were amendments in 2005 and 2011, but the reference values remain intact.

The problem with a simple rules based approach specifying these reference values for deficits and debts is that they are arbitrary and possibly unreasonable. A country wants to smooth its consumption over time. It might do this by running surpluses in good times and deficits in bad times. If a country’s output is sufficiently volatile, deficits greater than three percent may be optimal. The country might also want to borrow to finance productivity-enhancing investments, much as an individual might sensibly go into debt to finance their education. The amount of borrowing that is sustainable depends on a country’s future real interest rates and real GDP growth rates and this might well be greater than 60 percent of GDP.

As a result of the difficulty with simple rules, the European Union has adopted a more complicated approach. A key component of this is the country-specific medium-term budgetary objective (MTO)—the budgetary position that the member state should achieve to maintain to ensure sound public finances, to provide a safety margin with respect to the reference value of the deficit and if in violation of the reference value for debt, to ensure rapid progress toward sustainability. Members of the European Union are obliged to prepare annual reports detailing their fiscal plans for the next three years. These documents are called *Stability Programmes* for euro area member states and *Convergence Programmes* for non-euro area members and they are evaluated by the Commission and the finance ministers to assess whether the countries are on track to meeting their MTO. If countries are judged to be deviating from their MTO objectives, or not making fast enough progress toward them, the Commission can recommend that the Council commence a *Significant Deviation*

⁵⁵ “Commission Sets Out Roadmap for Deepening Europe’s Economic and Monetary Union” press release, 6 December 2017, *European Commission* (<https://europa.eu>) > press releases database > press release details. “Establishment of a European Monetary Fund,” *Briefing: EU Legislation in Progress*, online article, March 2019, *European Parliament* ([http://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635556/EPRS_BRI\(2019\)635556_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2019/635556/EPRS_BRI(2019)635556_EN.pdf)).

Procedure. This gives national authorities the opportunity to return to a more prudent fiscal policy, and avoid triggering an *Excessive Deficit Procedure*. A serious enough violation can result in a country being sanctioned with a tax of up to 0.5 percent of GDP, although as this has never happened the threat of it is not completely credible.⁵⁶

A breach of a reference value—debt over three percent of GDP or debt over 60 percent of GDP and not falling toward that level—does not automatically trigger the Excessive Deficit Procedure. However, the presumption is that if a country’s debt is over 60 percent of GDP then any breach of the deficit reference value, unless it is viewed as small and temporary, results in the Excessive Deficit Procedure.

The arbitrariness of the reference values has made triggering the Excessive Deficit Procedure commonplace. Indeed, only Sweden and Luxembourg have never triggered an Excessive Deficit Procedure.⁵⁷

Another problem with the current approach is how complicated it is. The European Commission’s description of the procedure is 220 pages long, with equations and charts such as the one in figure 13. Along with the complexity, there are loopholes, exceptions and escape clauses; less enforcement and reduced compliance.⁵⁸ Only one country is currently in the Excessive Deficit Procedure despite, as seen in figure 8, most countries in the European Union exceeding the reference value for debt.

Figure 13: How the European Union Fiscal Framework Works⁵⁹

Thus, the trajectories for debt: $b_i = \frac{b_0}{1+\theta_1} - bal_i + sf a_i$ and deficit: $bal_i = sb_0 + i \cdot adj + o_i + cb_i$ with $i=1, \dots, 5$, change accordingly under this scenario. In particular, for year $t1-t5$ the debt becomes:

✓ in year t_1 : $b_1 = b_1^* - adj \times e_1$

as $b_1^* - b_1 = \left(\frac{b_0}{1+\theta_1} - sb_0 - cb_1 - o_1 + sf a_1 \right) - \left(\frac{b_0}{1+\theta_1} - (sb_0 + adj) - cb_1 - o_1 + sf a_1 \right) = adj = adj \times e_1$ where $e_1 = 1$

✓ in year t_2 : $b_2 = b_2^* - adj \times e_2$

As $b_2^* - b_2 = \left(\frac{b_1^*}{1+\theta_2} - sb_0 - cb_2 - o_2 + sf a_2 \right) - \left(\frac{b_1^*}{1+\theta_2} - (sb_0 + 2adj) - cb_2 - o_2 + sf a_2 \right) = 2adj + \frac{b_1^* - b_1}{1+\theta_2} = adj \times e_2$

and, following the same logic:

✓ in year t_3 : $b_3 = b_3^* - adj \times e_3$

as $b_3^* - b_3 = 3adj + \frac{b_2^* - b_2}{1+\theta_3} = adj \times e_3$

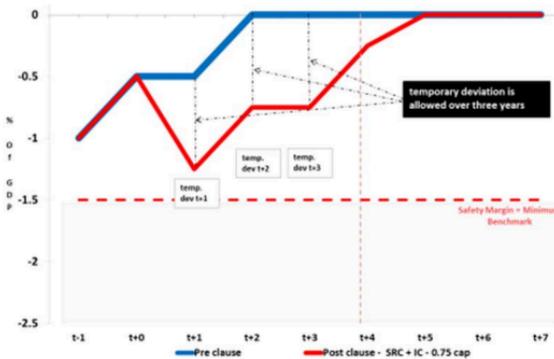
✓ in year t_4 : $b_4 = b_4^* - adj \times e_4$

as $b_4^* - b_4 = 3adj + \frac{b_3^* - b_3}{1+\theta_4} = adj \times e_4$

✓ in year t_5 : $b_5 = b_5^* - adj \times e_5$

as $b_5^* - b_5 = 3adj + \frac{b_4^* - b_4}{1+\theta_5} = adj \times e_5$

with the sequence e defined as follows:



A further criticism is the European Commission does not have the legitimacy to punish violators with a fine. It has the legal authority, given to it by the Treaty of Lisbon, but it does not have

⁵⁶ European Commission, *Vade Mecum on the Stability and Growth Pact, 2017* (Luxembourg: Printing Office of the European Union, 2017). The word “deficit” in the Excessive Deficit Procedure can refer to either an excess deficit or excess debt.

⁵⁷ “Excessive Deficit Procedures—Overview,” webpage, *European Commission* > ... > Stability and Growth Pact > The corrective arm/Excessive Deficit Procedure.

⁵⁸ Lars Feld, Christophe Schmidt, Isabel Schabel and Volker Wieland, “Refocusing the European Fiscal Framework,” online article, 12 September 2018, *Vox* (<https://voxeu.org>); Xavier Debrun, Luc Eyraud, Andrew Hodge, Victor Lledo, Catherine Pattillo, “Second-Generation’ Fiscal Rules: From Stupid to Too Smart,” online article, 22 May 2018, *Vox*.

⁵⁹ European Commission, *Vade Mecum on the Stability and Growth Pact, 2017* (Luxembourg: Printing Office of the European Union, 2017), 129, 178.

accountability: it cannot be punished by the electorate for bad decisions. In democratic societies, every decision to tax should be followed by an election that gives the electorate the final say.⁶⁰

Finally, it not clear that the fiscal framework is a necessary component of monetary union. The primary reason for it appears to be to prevent a member state from requiring supranational fiscal support from the Outright Monetary Transactions program or from the ESM. However, better sovereign and bank resolution regimes could mitigate or eliminate the need for such support and accountability to national electorates may be more of an incentive to follow a sound fiscal policy than fear of the Excessive Deficits Procedure.

V.D. The rules about monetary financing are rigid

This paper's epigraph deals with the reluctance of countries to give up their national currency, even when it might benefit them. Robert Mundell comments that countries have independent currencies which they regard, "as a mark of [their] political independence and national sovereignty as well as part of [their] national heritage and patrimony."⁶¹ It does not seem likely that this attachment results from an ability to make one's own monetary policy—which is often done rather poorly. Rather, it may result from the ability to raise seigniorage.

John Maynard Keynes commented that⁶²

A government can live for a long time ... by printing paper money. That is to say, it can by this means secure the command over real resources,—resources just as real as those obtained by taxation. The method is to be condemned, but its efficacy, up to a point must be admitted. A government can live by this means when it can live by no other. It is the form of taxation which the public find hardest to evade and even the weakest Government can enforce, when it can enforce nothing else.

Throughout history, a country's ability to wage war has been related to the seigniorage it could collect. Seigniorage is believed to be a relatively distortionary tax, but it can be the only way to raise revenue in some situations. Joining the euro area currently means losing the ability to collect seigniorage at a country's discretion. In addition to ruling out a source of emergency tax revenue, it rules out "helicopter money" drops that might serve as a discretionary fiscal stimulus.

The treaty effectively prohibits discretionary monetary financing "helicopter money" drops. It rules it out for member state governments and, should it ever be created, for a supranational EMU-wide fiscal authority.

The treaty does not, however, completely stop the ECB from providing monetary financing in a discretionary fashion: it is rather adept at getting around rules when it wants to. Additional purchases of sovereign debt under the Public Sector Purchase Program were sold as a way to meet the ECB's inflation goal. If these purchases helped fund the deficits of fiscally challenged member states, then we are apparently to think that this was just a happy coincidence.

⁶⁰ Paul de Grauwe, "Why a Tougher Stability and Growth Pact is a Bad Idea," online article, 4 October 2010, *Vox*.

⁶¹ Robert A. Mundell, "Monetary Unions and the Problem of Sovereignty," *Annals of the American Academy of Political and Social Science* 579 (2002), 123–152, specifically 127.

⁶² John Maynard Keynes, *A Treatise on Monetary Reform* (London: Macmillan & Co., 1923), 41.

Because euro-ization of the Croatian economy, although advanced is not complete, the ability of the Croatian National Bank to engage in monetary financing of government deficits retains some value from a stabilization policy perspective. There would be some cost to giving up this (admittedly limited) monetary instrument by joining a monetary union that prohibits monetary financing unless the ECB wishes to provide it and disguises it as something else (like PSPP purchases for monetary policy reasons).