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1

Introduction and Overview

Monetary, financial, and fiscal policy are always intertwined. Printing money and spending it involves both fiscal and monetary policy. Raising interest rates to stem inflation raises interest costs on government debt. It is tempting to finance government deficits or to solve sovereign debt problems by printing money to buy debt or by holding down interest rates. Bailing out banks, or lending as a last resort, uses fiscal and monetary resources to address financial instability.

Intertwined monetary, fiscal, and financial policies can create incentive problems. Knowing that a monetary rescue is available *ex post*, governments have an incentive to borrow too much *ex ante*, and bond buyers have less incentive to prepare for sovereign default risk. The problem becomes larger, the financial system is less able to bear it, and the pressure for a bailout in the next crisis is greater. Monetary and fiscal institutions are built to control these incentives.

In this book, we tell the story of how the monetary-fiscal institutions of the euro were set up, how they evolved over time, and how the current situation can be improved. Here, we give a quick overview. The following chapters tell the story in detail.

1.1 A Founding Architecture

Controlling the incentives generated by fiscal and monetary policies is even more important for a currency union with multiple member states than it is for a unitary state. It is tempting enough for a single or federal

government such as that of the United States to monetize deficits and pressure the central bank to buy government bonds. When member states run separate fiscal policies under a common monetary policy, the incentive is greater for each state to borrow too much, relying on the central bank to address any problems, as the costs in form of higher taxes or inflation are spread to other member states.

The euro was set up with a clear-eyed understanding of monetary-fiscal interactions. The rules separating monetary and fiscal policy in the eurozone were clearer and more restrictive than those in the United States.

The euro was founded by the 1992 Maastricht Treaty as a monetary union without a fiscal union. Each country retained authority for taxing and spending and responsibility for repaying its own debt. The Treaty included a fiscal “no-bail-out” principle, stating that member states or the European Union (EU) would not be liable for the sovereign debt of other member states or to provide transfers to this effect. The Treaty established debt and deficit limits for member states to keep them from getting in trouble in the first place.

The Treaty created the European Central Bank (ECB) and gave it great independence, but within prescribed limits. The ECB’s independence was designed to help it resist pressure to interfere in fiscal affairs, not to empower it to do so. The ECB’s “primary objective” or mandate was price stability, not macroeconomic stabilization, financial stability, or support for government debt markets, although many other central banks have such mandates. For the period from 1999 through 2008, the ECB held a small balance sheet and did not buy government bonds, unlike many other central banks. The ECB did not buy sovereign or private bonds. The ECB created new money by lending it to banks against collateral and counting the loan as the asset corresponding to the monetary liability, rather than by purchasing sovereign debt. The ECB conducted monetary policy by setting short-term interest rates at which it borrowed from and lent to banks. Most ECB borrowing was overnight deposits by banks at the ECB. Most ECB lending to banks had one or two week maturity. The ECB accepted long-term interest rates as determined in corporate and sovereign markets.

As with all great institutional innovations, the founding framework left a few bits unfinished. A monetary union that promises price stability either needs fiscal union or it must allow sovereigns to default while staying in the monetary union, as companies do. While the latter possibility was implicitly clear from the no-bail-out principle, neither the Treaty nor subsequent secondary EU legislation created a mechanism for sovereign default and resolution or a crisis resolution body to help avoid sovereign default. The founding framework also took no regulatory or other measures to insulate banking and financial systems from sovereign default in order to avoid banks holding a lot of sovereign debt and thus failing in a sovereign default. The architects of the euro seemed to hope that debt and deficit rules would suffice to keep countries so far from default that one could avoid spelling out those impolite eventualities, and so the ECB and fiscal authorities would be spared bailout temptations. In the context of the early 1990s, when sovereign debt troubles of advanced countries seemed to be ancient history, given the political achievement of bringing so many disparate countries into a union, and perhaps due to fear that even talking about sovereign default would make a crisis more likely, these are understandable elisions.

1.2 Erosion in Successive Crises

In 2003, however, less than five years after the founding of the euro, Germany and France violated the deficit rules and blocked the prescribed sanctions. Although the near-term effect of this violation was small—these countries did not have debt crises or require ECB financing—swift violation of the rules by the two central countries of the EU was a blow to the credibility and effectiveness of the fiscal rules, and also, plausibly, of the rest of the architecture separating monetary and fiscal policy. If this promise could be broken, how holy were the other promises and restraints?

Limitations on ECB actions weakened with each subsequent crisis: the financial crisis of 2007–2009, the sovereign debt crisis of 2010–2012, its slow-growth, zero-bound aftermath, and the events

of 2020–2023. The latter include the large fiscal and monetary response to the Covid pandemic, the Russian invasion of Ukraine and consequent energy market disruption, and the inflation of 2021–2023.

The process was not intentional. The ECB clearly was pushed hard before buying bonds and interfering in markets. But in the end, the Bank felt that huge crises were brewing, and it was the only game in town capable of addressing them.

In the wake of the financial and sovereign debt crises, the ECB made major changes to its procedures to allow for a more expansionary monetary policy. These measures were designed to, and did, increase reserves and bank borrowing from the ECB. But they had fiscal side effects.

First, the ECB allowed more generous use of bonds and bank assets as collateral for loans that the ECB made to banks. Such collateral included illiquid and nonmarketable assets, such as the bank's loans to other parties.

Second, the ECB moved to fixed-rate, full-allotment allocation of reserves: banks can now borrow all they want at a stated interest rate. Previously, the ECB limited how much it would lend at the stated rate. Now the quantity of reserves and the assets that the ECB holds in collateral are strongly affected by how much banks choose to borrow and what collateral they choose to post. Third, the ECB started to purchase covered bank bonds. Fourth, and most important, in May 2010 the ECB began to buy bonds of member states in fiscal trouble (i.e., Greece, Ireland, and Portugal). In summer 2011, the ECB began to purchase Italian and Spanish sovereign debt. The ECB exposed itself to default risk, which is consequently shared by all the member states and people of the euro area.

As sovereign debt trouble continued, the ECB believed that the trouble could spark a major financial and economic crisis, potentially including the exit of member states from the euro. The ECB viewed the member states and the EU as unable or unwilling to contain events, leaving the ECB as the only game in town when addressing any crisis. To contain the turmoil, President Mario Draghi in summer 2012 uttered the famous “whatever it takes” pledge.

This pledge was widely interpreted to mean that the ECB would buy as many troubled bonds as necessary to avoid redenomination or euro exit and default, or the higher yield spreads and financial instability associated with such risks. This announcement was operationalized via the Outright Monetary Transactions (OMT) program, which allowed sovereign debt purchases. Crucially, the ECB could only make such purchases if the member state had agreed to a policy program before purchases began, a requirement called “conditionality,” and had secured fiscal support from member states.

As it turned out, the euro did not break up, and the financial system did not implode. “Whatever it takes” was, this time, so powerful that the ECB did not immediately have to buy any bonds. From mid-2012 to the end of 2014, the consolidated balance sheet of the Eurosystem actually declined from € 3.1 trillion to € 2.2 trillion, mainly due to reduced lending to banks.

Most European economies returned to a slow recovery from these two crises. Desiring monetary stimulus and worried about too-low inflation, the ECB lowered interest rates. The deposit rate hit zero in 2012 and eventually became negative starting in June 2014. In 2015 the ECB also started to buy sovereign debt from all member states in a process known as “quantitative easing” (QE). Whether these measures raised inflation persistently and brought it closer to the target is still debated. In the end, inflation mostly remained a bit below 2% until 2021, and the recovery remained slow.

There are no atheists in foxholes, and nobody worries about moral hazard in a panic, as the sayings go. But ex-post insurance, bailouts, and other crisis-rescue measures lead people and governments to take more risks, expecting such help again in the next downturn. Someone has to remove those incentives.

Most observers recognized that several original explicit and implicit rules and traditions limiting ECB action and separating monetary and fiscal affairs had been weakened, if not broken. Some thought that this was a fine expansion of the central bank’s power to stop crises and to provide additional stimulus, but others worried that something needed to be done to make sure that the events did not repeat

on a larger scale and to restore the separation of monetary and fiscal policy.

Consequently, during and after the sovereign debt crisis, the EU and euro-area countries made several important decisions to enhance the institutional setup. An intergovernmental fiscal compact aimed to reinforce fiscal discipline. The Greek sovereign debt restructuring strengthened the credibility of the no-bail-out principle and showed that haircuts and “bail-ins” are possible. The exemption of the ECB’s Greek bond holdings from haircuts, so that the ECB took no losses, strengthened the commitment against monetary financing of sovereign debts. The European Stability Mechanism (ESM) established a euro-area crisis management institution, funded by member states. Political decisions were made to set up the single (bank) supervisory mechanism (SSM). The EU Council made strong promises to address the sovereign-bank nexus—the risk that sovereign debt problems could quickly endanger the financial system.

Against this background, the ECB may have expected that Outright Monetary Transactions were a mere bridge, buying time for member states to continue individual and joint institutional and structural reforms.

But over time the implementation of these new initiatives fell short. Important reforms such as common deposit insurance and limits on banks’ sovereign exposures were put off to another day. New debt reduction rules failed to significantly bring down high debts, in particular in several large member states, in spite of several years (2014–2019) with positive real growth, low or negative real interest rates, falling unemployment, and a sharp decline in oil prices in 2014 that persisted until 2021. In most member states, building sufficient fiscal buffers and implementing microeconomic reforms to boost productivity growth were left for later. Member states did little to prepare for future crises, and they did almost nothing to unburden the ECB. No clear expressions of self- or externally imposed limits on ECB actions were implemented.

Like many other central banks, the ECB’s bond buying and related interventions increased massively during the huge debt-financed fiscal

transfers of the pandemic, followed by Russia's Ukraine invasion and the energy market disruptions of the early 2020s. Where President Draghi calmed the waters with words in 2012, by 2022 "whatever it takes" took more and more.

The consolidated balance sheet of the Eurosystem shows that these "securities held for monetary policy purposes," mainly government bonds, increased from €0.2 trillion in 2014 to €2.6 trillion by the end of 2019, in quantitative easing, and then doubled to almost €5 trillion by mid-2022, about one-third of euro-area gross domestic product (GDP). By the end of 2023, €4.7 trillion in securities were still held by the central bank. Many other governments and central banks followed similar policies. For example, the U.S. Federal Reserve held \$8.5 trillion in securities by mid-2022 and still held \$7.2 trillion at the end of 2023.

It would be lovely if we could have a few quiet years to sort things out. That is unlikely to be the case, however. Fiscal stresses are compounding. Government debts have expanded sharply due to Covid and energy-related spending and subsidy programs. Higher interest rates, due to either global economic forces, ECB inflation-fighting efforts, or rising credit spreads, can quickly increase the cost of carrying those debts. Member states want to spend more on climate policies. The Russian war on Ukraine necessitates higher defense spending, and then supporting and rebuilding Ukraine. If Russia partly succeeds in its military aggression, Europe will face even larger longer-term defense costs. And member states already face rising pension, health, and other social costs.

A recession or financial downturn would provoke additional fiscal deficits. A larger war in the Middle East, a further Russian invasion in Europe, or A Chinese invasion or blockade of Taiwan would precipitate large economic and financial turmoil, and consequent fiscal stresses for EU member states. And, with government spending in many countries already at roughly half of their national income or higher, with declining and aging populations, there is no easy large source of long-run tax revenue to fund these initiatives or to back issuance of a lot more debt.

Bailouts have limits. Even the ECB's ability to put out fires without substantial inflation or direct fiscal support from member states is limited. Even member states' fiscal capacity is limited. If debts build up, if nobody prepares for losses and everybody counts on a bailout, eventually a crisis will come that the ECB and European governments are unable to contain. Such a crisis would be monumental.

Credible limits on central banks' ability to mop up after the fact are thus important so governments and financial institutions limit risks and structure a financial system that can bear risks. But accepting such limits is difficult. If the limits are credible enough so people do not expect central bank intervention, they also actually limit the central bank from taking actions that it might wish to take *ex post*.

Monetary and fiscal policy are also wisely separate for important reasons of political economy. Transfers of wealth from one person to another are highly politically sensitive, and usually the province of elected officials. Standard monetary policy of setting short-term interest rates does have fiscal and distributional consequences, of course. Interest rates affect the fortunes of creditors versus debtors, long-versus short-term bondholders, savers versus borrowers, and taxpayers versus bondholders. But these transfers are politically digestible to some extent as unintended consequences of politically disinterested actions. (But not always—high interest rates generated protests at the Federal Reserve in the 1970s and 1980s.) On the other hand, large-scale asset purchases aimed either at making borrowing easier or at raising bond prices, loans to banks at favorable conditions, and sovereign bailouts more directly and visibly transfer wealth among winners, losers, and taxpayers.

Should the ECB support country X's debt? If so, why not country Y's? Which spreads are justified by "fundamentals," and thus not worthy of compression, and which result from illiquidity, behavioral bias, or "dysfunctional" or "fragmented" markets, and hence get ECB support? Successful sovereign-debt interventions often require governments to launch politically difficult adjustment programs, including spending cuts, taxes, microeconomic reforms, and debt restructuring, in which a lot of people suffer.

Can an independent, apolitical organization stay independent and apolitical while involved in such deeply political decisions, hurting or benefiting the pocketbooks of so many people and powerful constituencies? Can the central bank of a monetary union stay independent if it passes judgment on the quality and credibility of a sovereign country's economic policies and of its elected political bodies, and based on this judgment, decides whether to rescue bondholders, and likely the incumbent government, with public money?

The ECB in 2015 initially structured its quantitative easing purchase programs to be neutral across countries for just this reason. But as more and more of the ECB's bond buying, lending, and other interventions move toward fiscal, economic, and transfer policies that benefit or hurt countries differentially, its independence will become fragile.

Independence is not an absolute virtue. It serves practical purposes. Governments set up independent central banks to help the government to pre-commit against using monetary policy and central bank powers for short-term political purposes, and to avoid political battles over using central bank powers for such purposes. Losing independence loses this valuable pre-commitment.

The heart of our economic analysis describes this erosion of institutional limits as a result of crisis interventions. We recommend reforms to restore a separation between monetary, fiscal, and financial policies; control disincentives; and lead to a stable and vital euro for the foreseeable future—one that can weather the shocks that are sure to hit.

A beautiful ship was constructed. Out at sea, it ran into severe storms. Its captain and crew patched the holes as best they could. Now, though, it is time to return to dry dock and fix the ship properly.

1.3 Reform

How should the monetary-fiscal arrangements of the euro be reformed to control the perverse incentives that have emerged from crisis-management expedients?

The original architects of the euro, while amazingly prescient, turned out to be too optimistic. They hoped that debt and deficit rules plus

an independent ECB with a limited mandate would keep debt crises from ever occurring. They included limits on ECB intervention and the no-bail-out fiscal rule, but they did not include mechanisms for dealing with sovereign default. To avoid the ECB stepping in again and again, we must complete the structures for which they laid the foundations.

Governments, which are responsible for fiscal policy, not the ECB, must decide whether a country in fiscal trouble and its bondholders will receive support, which kind of support, and the conditions of such support. Governments must finance that support. Governments must assess the sustainability of a country's debts, impose any fiscal or economic policy conditionality of support, and decide when an orderly sovereign debt restructuring should be a precondition for such support.

Yes, orderly restructuring. In a monetary union without fiscal union, the holders of sovereign debt must occasionally bear risks. If that is unthinkable, we have a fiscal union in which taxpayers of the whole union guarantee member states' debt. Fiscal union is fiscal union, whether achieved directly or via the printing press, whether constructed thoughtfully, or whether patched together during a crisis.

Speed being of the essence in a crisis, institutions to make such decisions must be in place ahead of time, and be ready and able to act quickly. Making it up on the fly, a default of inaction, and a requirement for unanimous decisions by all governments will not work. Decisions made on the fly, rather than via well-constructed and limited institutions, also lead to crisis-inducing uncertainty and bad economic and political incentives. Intervention should be operationalized and financed via a European fiscal crisis-management institution, which may be a new EU institution or a substantially enhanced European Stability Mechanism (ESM). Approval or disapproval of interventions should at least require only a qualified majority, not unanimity.

Banks whose deposits and lending are concentrated in their own country and that hold large quantities of that country's sovereign debt, with deposits de facto insured by the same sovereign, which may also be expected to recapitalize the same banks in a crisis, are a recipe for sovereign problems to cause financial problems. The financial system then becomes a hostage to sovereign debt. This fear of financial

meltdown invites ECB intervention or fiscal bailouts. European financial regulation must be reformed to remove this blatant fragility.

Sovereign debt in a monetary union without fiscal union cannot be risk free, yet it is still treated as such in banking regulation. Regulators must assign sovereign debt appropriate risk or concentration weights. Sovereign risk must be in the hands of investors and well-diversified financial institutions that can bear risk, but not necessarily banks. Banks that do hold significant domestic sovereign debt must hold higher capital buffers or be required to diversify their sovereign holdings.

Banks must be delinked from influence and protection by national governments. Banks must not be subject to conflicting national regulators, or to pressure from national authorities to buy that nation's bonds or subsidize its favorite industries. Banks should access a common European deposit insurance and a single European regulatory mechanism. Lender-of-last resort loans to specific banks with liquidity problem, such as Emergency Liquidity Assistance (ELA), should become a responsibility of the ECB. The ECB then also needs to be able to require recapitalization, in which banks issue new common equity to private investors or resolution by the Single Resolution Board (SRB). Banks must be able to compete and operate across the union, thereby isolating a country's economy financial system from its fiscal problems. Completing banking union as Europe has completed the single market in most other industries would be beneficial.

More generally, Europe suffers from financial disunion and fragmentation. If sovereign debt were held in well-diversified mutual funds, directly by people, and by long-term investors such as insurance companies and pension funds rather than by highly leveraged banks funded by deposits, that step alone would cure much financial fragility. With a strong European fiscal institution that can guide orderly restructuring where needed and provide fiscal transition help with conditionality, and with sovereign default no longer threatening financial meltdown, the ECB can stop buying sovereign bonds in crises. By doing so, the ECB will no longer decide whether to rescue bondholders of a country in trouble, it will no longer take on default and price risk, and it

will have much less reason to manage bond market volatility. The ECB should then move on, first to purchasing only a diversified portfolio of debts and then to purchasing only European debt issued by or guaranteed by EU institutions, such as the European Commission, euro-area intergovernmental organizations, such as the ESM, or member states collectively. The Eurosystem balance sheet should no longer carry default risks of member states. If the ECB again purchases national debts in a deep crisis, that should only happen under the authority of the European fiscal crisis-management institution, which would indemnify the ECB in case of any losses, and the debt should quickly flow off the ECB balance sheet.

Outside a deep systemic banking crisis, the ECB should no longer provide loans to banks at favorable interest rate that imply subsidization of banks relative to market conditions. In particular, the ECB should no longer accept nonmarketable claims as collateral for its main refinancing operations and longer-term loans to banks. Doing so subsidizes the issuance of risky debts. Subsidization of banks and of bank lending, as well as recapitalization of banks with public funds, are government tasks.

The rather convoluted architecture of the Eurosystem, which retains many historical functions of national central banks, should also be reformed. National central banks, which can purchase and hold their nations' sovereign bonds, are a weak point. So are large Target2 balances and ECB loans at risk-free interest rates to and from national central banks. These loans can finance national balance of payment deficits in place of private cross-border capital flows.

Finally, the ECB alone should be in charge of money creation. National central banks may continue to implement monetary policy, but they should no longer be able to create or withdraw euros via "national, non-monetary tasks" such as purchasing or selling securities or foreign reserves.

Each element of these reforms supports the others, and each provides greater incentives to accomplish the others. Bank reform makes it easier to avoid sovereign debt intervention and to allow restructuring; less intervention makes it more urgent to reform banks; and so forth.

Thus, rather than set a trap where each reform must wait for the others, a virtuous feedback loop emerges in which each reform helps on its own and increases incentives to accomplish the others.

This set of reforms is consistent with the philosophy of a monetary union without fiscal union and with the ECB's treaty obligation to "act in accordance with the principle of an open market economy." It updates the original design to reflect the lesson that fiscal troubles can occur, and the union needs a plan and institutions to manage fiscal troubles.

Many observers advocate a more comprehensive fiscal and political union to complement and reform the monetary union. This is, of course, a much larger structural and political change. We think that these monetary-fiscal reforms are urgent. The next crisis is coming sooner than you think. Reform should not await a much larger, more comprehensive, and more contentious unification project. That project requires a treaty change, which can be vetoed by any of the twenty-seven EU member states. Thus, we focus on what can be done within the current union. Our reform proposals would not hinder the development of a comprehensive fiscal union, and indeed they are likely to support such a move.

Pressures exist in the other direction as well. We have confined our analysis to economics, and our fears to the economic consequences of continuing down the present path. The political danger is real as well. Further European integration, shifting sovereignty from the national to the EU level, does not enjoy the widespread optimism and support among national governments that prevailed in the 1990s. The euro and its management by the ECB do not enjoy unqualified political support by the people or governments of the euro area. The United Kingdom stayed out of the euro and then left the EU altogether. Euroskeptical voices continue in other countries. Trust in EU institutions is declining, trust in technocrats is declining, and euroskepticism is a rising political force. Each large intervention by the ECB has produced substantial wealth transfers to member states, banks, and bondholders. The ECB explains its interventions in a mysterious language that most people, and many professional economists, including the authors, often cannot decode. Each intervention thus breeds more resentment, rightly

or wrongly. The euro and EU have held together so far. But the next great crisis and the next great bailout threaten the euro as a political institution as well as an economic one.

As much as any authors are proud of their work, however, we admit that monetary and fiscal reforms are not the most important economic problem facing the euro area. As the Draghi (2024) report persuasively argues, Europe's problems are structural: "Europe largely missed out on the digital revolution led by the internet and the productivity gains it brought: in fact, the productivity gap between the EU and the US is largely explained by the tech sector. The EU is weak in the emerging technologies that will drive future growth. Only four of the world's top 50 tech companies are European." Indeed, stagnant long-term growth is Europe's largest economic problem. Long-term growth comes from increased productivity, increased efficiency, microeconomic reform, a business environment that fosters innovation and investment, and increased productive capacity, not, centrally, anything having to do with monetary policy and central banks.¹ Monetary and fiscal policies can encourage, and fail to discourage, "an open market economy with free competition, favouring an efficient allocation of resources," as stated in the ECB's mandate. Fiscal policy is intertwined with growth as well. Long-run growth has suffered from the microeconomic effects of fiscal policy, such as the disincentives of high marginal tax rates, insufficiently targeted transfers, and misallocations of fiscal subsidies. Excessive regulation has also stifled innovation, investment, and productivity growth.² Growth stagnation has also contributed to debt problems, and faster growth would lower deficits and make debt much easier to repay.

But as much as past events such as the Great Depression have monetary and fiscal roots, Europe's current growth weakness does not stem from the monetary-fiscal troubles that we describe here. In the end, monetary, fiscal, and financial stability arrangements are part of the fundamental framework of good institutions that allow growth to emerge. They can help to avoid future crises, which would drag growth down further. They can remove existing disincentives for national governments to pursue pro-growth agendas. But monetary-fiscal

reform is not the fundamental spark needed to revitalize Europe's once fast-growing innovative economies.

We fix what we can. The European pro-growth agenda is a topic for another book entirely.

1.4 Other Voices

We are hardly the first to write about the eroding fiscal foundations of the euro, nor are all our points individually novel. That's a feature. Hopefully, the reader will find integration of points made by many other authors more convincing than claims that nobody else noticed big flaws in the quarter century of the euro's operation. We point to other views as much as we can in context, but here we acknowledge a small portion of the massive amount of related analysis and commentary on the structure of the euro.

Corsetti et al. (2015, xiii) deal with some of our issues, though with a focus on overall EU debt sustainability. They call for reforms to European Stability Mechanism lending, including "incentives to avoid excessive debt levels" and measures to "make future debt restructuring . . . less painful than is currently the case." They propose regulatory changes to eliminate the "diabolic loop between banks and sovereigns." They advocate European Safe Assets, in particular for the ECB to buy in quantitative easing operations. They note how bailout expectations led to excessive debt: "The existing rules did not prevent countries from issuing too much debt, nor providing liberally excessive lending, as both private agents and the governments correctly anticipated that the Treaty was too weak to make the no-bailout clause credible." They also add useful detail on the Greek crisis beyond our summary. However, their primary focus is a debt-swap proposal for dealing with existing sovereign debt.

Brunnermeier, James, and Landau (2016) analyze how the differing economic philosophies, historical roots, traditions, and institutions of France and Germany shaped the design of the euro and the response to

financial crises, leaving the ECB and other institutions struggling in between. Our complementary approach is focused on standard economic incentives.

Mody (2018) provides an exciting, blow-by-blow account of discussions between the key decision makers during the financial and sovereign crises. He argues that the creation of the euro was a flawed political project, unworkable because of economic differences between countries that led to significant economic difficulties and divisions within Europe. He is critical of the handling of the 2008–2012 crisis. We focus less on the decision-making process, centering our analysis instead on the institutional setup and incentives and how decisions created new institutions and incentives. Most of all, we think that different countries can share a currency without fiscal union, and the euro is a few simple reforms away from being highly beneficial to Europe.

Rostagno et al. (2021) is an excellent and insightful discussion by ECB experts on the evolution of the monetary policy design, analysis, and decisions of the ECB. It describes how the ECB came to innovative, unconventional tools in the financial crisis and the persistent zero bound era. This book is complementary to ours in that it focuses on monetary policy rather than monetary-fiscal interactions and incentives. It includes a lot of sophisticated quantitative model-based analyses.

Sinn (2014, 2018) also analyze an erosion of fiscal and monetary boundaries in the euro. He focuses on the possible political consequence that support for the euro could weaken, and offers different reform proposals.

Bénassy-Quéré et al. (2018), a joint article by fourteen prominent European economists, includes several of our key diagnoses and proposals. In current institutions, they note the “doom loop between banks and sovereigns,” and “incomplete banking union and fragmented capital markets,” which prevent “better risk sharing through market mechanisms.” They agree that “Fiscal rules are non-transparent, procyclical, and divisive, and have not been very effective in reducing public debts.” As a result, “the flaws in the euro areas fiscal architecture have overburdened the ECB,” and “The resulting loss of trust

may eventually threaten not just the euro, but the entire European project.”

They advocate six reforms that are largely congruent with ours:

First, breaking the vicious circle between banks and sovereigns through the coordinated introduction of sovereign concentration charges for banks and a common deposit insurance . . . mechanisms to bail in creditors of failing banks need to be strengthened, . . .

Second, replacing the current system of fiscal rules focused on the “structural deficit” by a simple expenditure rule guided by a long-term debt reduction target. . . .

Third, creating the economic, legal and institutional underpinnings for orderly sovereign-debt restructuring of countries whose solvency cannot be restored through conditional crisis lending. . . .

Fourth, creating a euro area fund, financed by national contributions, that helps participating member countries absorb large economic disruptions. . . .

Fifth, an initiative to create a synthetic euro area safe asset that would offer investors an alternative to national sovereign bonds. . . .

Sixth, reforming the euro area institutional architecture . . . the policy responsibility for conditional crisis lending should be fully assigned to a reformed ESM, . . . The latter should include a layer of political accountability

This book is part of an emerging strand of academic literature that uses modern dynamic economic theory to understand historical events and institutions, and it uses historical analysis to learn about theory. This literature is a stylistic and methodological inspiration, as well as an economic foundation.

Sargent (2012) is a readable and insightful analysis of fiscal and monetary affairs in the early years of the United States, and the lessons that it does and does not offer for Europe today. Hamilton’s bailout of foreign bondholders set a reputation that stood the United States in good favor for subsequent borrowing. Too good, actually—investors assumed that state debts incurred for infrastructure would be covered by federal bailouts. When the federal government allowed states to

default, that hurt overall borrowing ability. But it also induced states to balanced-budget policies, which largely put an end to sovereign bailouts or defaults.

Fiscal-monetary interactions are clear in war finance. Hall and Sargent (2022) puts the Covid spending and inflation in the context of World War I and World War II experience, and more generally by Hall and Sargent (2014), Hall and Sargent (2021) for eight wars and two insurrections. Sargent and Velde (1995) applies a wide variety of economic analysis to the fiscal and monetary crisis that precipitated the French Revolution. Kehoe and Nicolini (2021) surveys the rich and instructive monetary-fiscal history of Latin America.

Bordo and Jonung (2000) and Bordo, Jonung, and Markiewicz (2013) summarize the lessons for the euro of many historical experiences with fiscal and monetary unions.

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