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Stuck on the wrong track: 20 years of euro disillusion, denial, and delusion*

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This contribution assesses the functioning of Europe's Economic and Monetary Union (EMU) during the first 20 years of the euro's existence. It argues that two formative intellectual currents converged at Maastricht to shape the design and reception of the euro regime: ordoliberalism and neoliberalism. Germany's ordoliberalism inspired and shaped the euro regime design. Neoliberalism fashioned the reception of what was agreed at Maastricht under the influence of Bundesbank dogma and power. As a product of the zeitgeist, Europe got stuck with a deeply flawed euro regime. The Maastricht Treaty institutionalized an asymmetric (growth-unfriendly) policy regime. This suited the macroeconomic mainstream well, fighting the '1970s stagflation war' for the past 40 years. Twenty years of euro disillusion have produced the exact opposite: 'stagdeflation.'

Keywords: euro, euro crisis, ordoliberalism, neoliberalism, Bundesbank, central-bank independence, optimum currency area theory, monetary policy, fiscal policy

JEL codes: E30, E44, E58, E61, E62, F34, F45

1 INTRODUCTION

This contribution assesses the functioning of Europe's Economic and Monetary Union (EMU) during the first 20 years of the euro's existence. Highlighting that the Maastricht Treaty was a product of its time, I contend that, by the time of the Maastricht negotiations in the early 1990s, two formative intellectual currents had converged to shape the euro regime's design and seal the euro's gloomy fate.

One force was Germany's peculiar ordoliberal tradition that had been molded by West Germany's post-war experience. The other was the full-blown decay of mainstream macroeconomics into a naïve 'supply-side-only' doctrine. In the era of neoliberalism, modern macroeconomics, including 'optimum currency area' (OCA) theory, came to view prosperity as resulting from the magic alliance of central-bank independence and fiscal discipline, provided that markets were properly liberalized. Mainstream economists, independent central bankers, and disciplined finance ministers were tirelessly singing from the same neoliberal hymnsheet that markets had to be freed from

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all shackles and 'rigidities' so that nothing would stand in the way of the infallible invisible hand.¹

As a result, as Germany's ordoliberalism inspired the deeply flawed German euro model, the curse of neoliberalism assured that mainstream economists were largely blind to the problems created thereby, relentlessly pushing for 'structural reforms,' so that central-bank independence cum fiscal discipline could deliver joint prosperity. This is the sobering story of how the euro got stuck on the wrong track, featuring 20 years of euro disillusion, denial, and delusion – lasting until today.

The analysis proceeds as follows. Section 2 reviews West Germany's post-war experience under the deutschmark (DM) and the German monetary narrative based upon it. This section elucidates how ordoliberalism came to inform the design of the German euro agreed at Maastricht. Section 3 then reviews the evolution of OCA theory and how the mainstream economics profession has unlearned macroeconomics since the 1970s. This section illuminates the role of neoliberalism in convincing the mainstream that the euro's design and the official policies pursued in the euro area in pre-crisis times were essentially sound. Faced with immense criticism, the mainstream has engaged in some soul-searching since the crisis, but no fundamental retreat from the curse of neoliberalism has occurred yet. Hence the mainstream's struggle of coming to grips with the euro's failure continues. Section 4 exposes the key regime defects and policy blunders, or how the Maastricht convergence of ordo- and neoliberalism ended up delivering endless euro disillusion. I argue that euro area officialdom and mainstream academia continue barking up the wrong tree until today, practicing denial and delusion. Section 5 discusses today's outstanding euro ironies, while Section 6 concludes.

2 WEST GERMANY'S DEUTSCHMARK EXPERIENCE, GERMAN UNIFICATION, AND THE EURO

This section reviews West Germany's economic history from the currency reform of June 1948 until the Maastricht Treaty. In West Germany's federal republic established in 1949 the experience of the post-war 'Wirtschaftswunder' (economic miracle) and prosperity became associated with the new DM currency and the 'stability policy' of its independent-central-bank guardian: the 'Bank deutscher Länder' (BdL), established in 1948 and succeeded in 1957 by the legendary Deutsche Bundesbank.

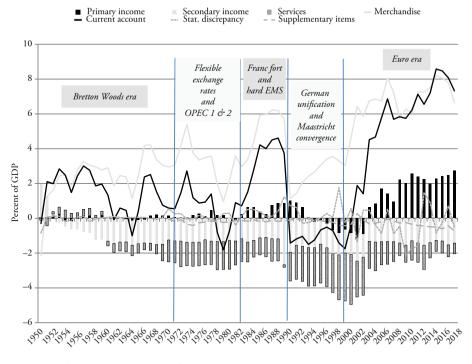
A marked export orientation and long history of sizeable external surpluses are distinctive features of West Germany's post-war record. The independent central bank's role in

1. With its roots reaching back to the Nazi era and inspired by Germany's pre-World War I late industrialization experience, ordoliberalism became a dominant influence shaping public policy in West Germany after World War II. In contrast to classical liberalism, Walter Eucken (1881–1950), the figurehead of ordoliberalism, favored a strong state to counter the concentration of private power and foster competition. In contrast to Keynesianism, which was on the rise elsewhere at the time, West Germany's ordoliberalis hold that price stability and a competitive market order are sufficient to maintain economic stability, denying any role for macroeconomic stabilization policies. Reviving nineteenth-century ideas about *laisez-faire* economic liberalism and free markets unshackled by state intervention, neoliberalism became the dominant force in the Anglo-Saxon world in the 1980s with the election of Margaret Thatcher in Britain and Ronald Reagan in the USA, spreading worldwide under the IMF's aegis (the 'Washington Consensus') and across Europe with the 'Single Market Programme.' By the time of Maastricht, mainstream macroeconomists broadly subscribed to the neoliberal mantra of freeing markets and restraining governments and saw little fault in the Maastricht dogma derived from Germany's ordoliberalism.

this context was that of acting as the prime enforcer of 'superior internal discipline.' The German perception of that era of outstanding discipline was that price stability, as maintained by the independent central bank, caused growth. It is common to attribute West Germany's post-war economic revival to ordoliberalism, a German school of thought and a peculiar variety of neoliberalism that originated in the 1930s (Rieter/Schmolz 1993). Arguably, it may be more appropriate to describe the intellectual roots of the 'German model' as 'ordo-mercantilism.'

It is widely underappreciated that the German model only worked because and as long as others (that is, West Germany's trade partners) behaved differently. When the Maastricht Treaty effectively exported the nationally successful German model to the euro area in the 1990s, the presumption that it would work equally well for Europe as a whole when everyone was behaving just like Germany featured a critical fallacy of composition. Another ill-fated mistake was then made when Germany responded to the sputtering of its old model by taking it into overdrive, effectively administering itself an 'internal devaluation.' Apart from choking domestic demand in Germany for about a decade, protracted wage repression cum austerity also lastingly unbalanced the euro area. In short, Germany's post-WWII 'ordo-mercantilism' played out on steroids under the euro – backfiring badly in due course.

Figure 1 shows the evolution of (West) Germany's current account since 1950. In the context of the Korean war, West Germany experienced a balance-of-payments crisis early on in its life. Lacking foreign reserves and other options, the country was forced



Note: West-Germany: 1950–1990, Germany since 1991. *Sources:* Deutsche Bundesbank, Destatis.

Figure 1 (West) Germany's current account since 1950

(and cheered on by foreign advisors) to quickly engineer a turnaround it its external balance. This is when its legendary 'Wirtschaftswunder' economics minister Ludwig Erhard and the president of the board of directors of the BdL Wilhelm Vocke came up with a plan that would turn this acute challenge from a one-off event into a development strategy and a persistent feature of West Germany's economic history. Their ingenious idea was to boost German competitiveness through price stability. Erhard advised that, through internal discipline, inflation in Germany should be kept below inflation elsewhere, as that would strengthen exports. Vocke was easily convinced.

By conspiring to organize 'superior internal discipline' under the Bretton Woods order of fixed exchange rates, Erhard and Vocke established a strategy that would do the trick of stimulating German exports for as long as other countries were falling behind in terms of organizing internal discipline. Part of the strategy was also that the West German authorities notoriously resisted DM appreciation for as long as possible. The strategy had the effectiveness of a *de facto* export subsidy paired with an import barrier, a strategy that would define West Germany's post-war export orientation. With Germany's dependency on exports structurally entrenched, the country's external position shows surpluses for most of the time (Hölscher 1994; Holtfrerich 2008).

Another feature of the German model was that West Germany largely refrained from managing domestic demand and, over time, developed a peculiar anti-Keynesianism (Bibow 2017).

The independent central bank's key role in the game was to act as the prime enforcer of superior internal discipline. By disciplining social partners and fiscal policy, independent central bankers attained fame through achieving West Germany's favorable price stability record. With exports acting as a growth engine and wages rising in line with productivity, assuring that prosperity was widely shared, independent central bankers got away without properly managing domestic demand growth. All it took was to turn price stability and balanced budgets into a fetish that would help anchor the Bundesbank's dominant position in economic policymaking.

According to Germany's monetary mythology, actively sponsored by the Bundesbank (Bibow 2009; Mee 2019), pre-1949 Germany had suffered two hyperinflations but apparently no deflation (Tietmeyer 1991; Schäuble 2010; 2011). The Bundesbank skill-fully managed to turn (self-orchestrated) confrontations with the government to its own advantage: over time central-bank independence attained the status of a taboo. In the context of the official German narrative of Germany's hyperinflation in the past, the independence of the central bank was increasingly seen as a vital bulwark, safeguarding the currency and upholding price stability (and hence perpetuating superior internal discipline).

In the West German experience (or perception thereof) price stability did not hinder but actually caused growth in the 1950s and 1960s. With ordoliberalism firmly established as the backing of shared prosperity, West Germany only had a belated and brief encounter with 'Keynesianism' when the country's new social democratic economics minister Karl Schiller launched a stimulus program and engineered a quick recovery from the first recession of the post-war era in 1967 (Giersch et al. 1992). When global macroeconomic instabilities took over in the 1970s, the old (ordoliberal) guard quickly managed to discredit Keynesianism in West Germany as allegedly causing nothing else but instability and 'straw fires' (Helmstädter 1988; Issing 1997).

As Figure 1 shows, DM appreciations in 1961 and 1969 only temporarily dented West Germany's external surplus position while the triad of rising wage inflation, oil-price shocks, and sharp DM appreciation saw to it that West Germany's current-account position turned into deficit in the early 1980s. The Bundesbank tightened monetary policy sharply (in line

with the 'Volcker shock' administered by the US Federal Reserve across the Atlantic), heralding the global rise of neoliberalism and a marked shift to 'supply-side' policies on both sides of the Atlantic. A critical difference was that the Reagan administration actually pursued expansionary fiscal policy while West Germany (and later Germany) sought redemption by persistent fiscal austerity.

The US recovery and strong dollar in the first half of the 1980s saw West Germany's current-account balance shift back into surplus. In the second half of the 1980s, in the context of US dollar weakness and DM appreciation, West Germany's European trade partners took over from the US in providing external stimulus. The 'hardening' of the exchange-rate mechanism (ERM) of the European Monetary System (EMS) played a critical role here. For West Germany the hard ERM essentially re-established the conditions of the German model. At least regionally, West Germany once again saw its competitiveness improve within a system of fixed exchange rates owing to 'superior internal discipline.' By the time German unification suddenly emerged as a near-term prospect, West Germany had a balanced budget together with an external surplus of 4.5 percent of GDP.

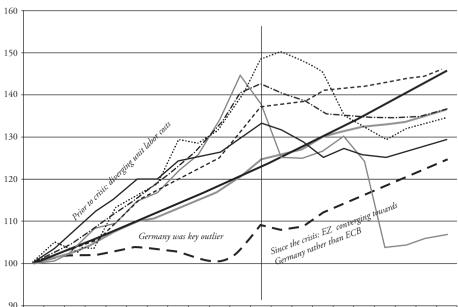
German unification (and the subsequent ERM crises) rebalanced Europe – but the new balance would not last for long under the euro. Germany dictated the design of the Maastricht euro that was erected on the Bundesbank's successful 'stability policy' principles: central-bank independence, primacy of price stability, and fiscal discipline. To the surprise and disappointment of many observers, price stability has failed to cause growth under the euro. The naïve thinking that exporting the German model would replicate the German experience across the euro area featured a critical fallacy of composition: the German model had only worked for West Germany *because and as long as others had behaved differently*.

Establishing the euro regime on principles informed by the peculiar West German post-war experience was one critical mistake. Another critical mistake happened when Germany embarked on 'internal devaluation' under the euro. Following the country's turn to unconditional austerity in 1992, wage repression was added around 1996 as the foremost national agenda to boost growth and employment. This effectively set Germany on a path of underbidding its euro partners at a time when regional exchange rates had been permanently locked in (see Figure 2).

Germany had just experienced what happens when competitiveness imbalances arise inside a monetary union. With German unification, wages and unit labor costs had soared in the former East Germany. Much of East Germany's business sector collapsed and unemployment mushroomed. As the German monetary union was also a fiscal union, huge fiscal transfers from west to east were the automatic consequence. This experience triggered enormous fears in Germany of another transfer union, namely German fiscal transfers to its euro partners.

Germany became obsessed with demanding and imposing ever-harsher fiscal discipline and austerity as a means to prevent the feared euro transfer union. Apparently, it was lost on the German authorities that Germany's internal devaluation inside the euro area would effectively replicate the unbalanced situation that had been the earlier experience with German unification. In other words, Germany failed to comprehend what I have elsewhere dubbed Germany's 'euro trilemma,' namely that: 'Germany cannot have it all – perpetual export surpluses, a no transfer / no bailout monetary union, and a "clean", independent central bank' (Bibow 2012: 1).

The next section will complement our analysis of how Germany's ordoliberalism inspired the Maastricht euro by discussing the spread of neoliberalism in mainstream macroeconomics, making the mainstream blind to diagnosing the flaws in the euro regime. OCA theory will be a particular focus of the discussion in Section 3. A critical issue is that the divergences in competitiveness positions seen in Figure 2 were *not* the



--- Spain -- Italy --- Italy Italy Italy ECB Norm --- France --- Germany ----- Greece --- Portugal --- Ireland

1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018

Source: AMECO; own calculations.

Figure 2 Nominal unit labor costs in the euro area

result of any proper 'asymmetric shock,' that is, the variety of shocks that are at the center of interest of OCA theory and policy debates in Europe's EMU, then and now.

3 EVOLUTION OF OCA THEORY AS THE MAINSTREAM UNLEARNS MACROECONOMICS

The origins of OCA date back to the reign of the 'Keynesian–Neoclassical Synthesis' in the 1960s and contemporary debates about the pros and cons of different exchangerate arrangements. In fact, in the beginning, the focus of OCA theory was on the effectiveness of exchange-rate adjustments in response to asymmetric shocks under conditions of insufficient wage–price flexibility. Mundell (1961) introduced the critical distinction between symmetric and asymmetric shock in his similar essay. While the former type of shock is common to the whole currency area and hence can be properly countered by the common monetary policy, the latter type requires country-specific adjustments, which not only rules out common polices such as monetary policy but is further complicated by the fact that exchange-rate adjustments are no longer possible inside a currency union.

For instance, if a member country is affected positively by either a demand or productivity shock while other member countries experience the opposite, then the currency union's common monetary policy provides no effective tool to respond. Regarding the absence of the exchange rate as an internal adjustment instrument, Mundell (1961) argued that labor mobility would potentially provide an alternative mode of adjustment (assuming insufficient wage–price flexibility).

OCA theory has significantly evolved since its origins in the 1960s. Its evolution has been aligned with broader developments in mainstream macroeconomics. Already in the 1970s, OCA theory shifted away from the central idea that it would take policy to counter asymmetric shocks that had destabilized the currency area economy. Mundell, once again, played a prominent role in this change in perspective, introducing the idea that market integration itself, specifically financial market integration, might help to stabilize a currency union that is subject to asymmetric shocks. The idea is that integrated financial markets would potentially provide a private insurance mechanism that could make policy reactions superfluous or at least less urgent.

It seems fair to say that with the rise of neoliberalism OCA theory largely lost its interest in demand management as a critical matter in securing the viability of a currency union. Instead, the primary concern became that of stabilizing policy rather than the economy. Researchers' foremost worries now were that discretionary macro policies might destabilize economies and/or have other detrimental effects. Rule-based policies would avoid such risks. Hence policymakers should make sure that institutional arrangements were supportive of policy credibility. Central bankers must avoid a feared 'inflationary bias.' Finance ministers must appreciate the benefits of fiscal discipline and austerity.

The so-called 'monetarist counter-revolution' led by Milton Friedman gained a first victory against the primary Keynesian concern that market economies required stabilization by appropriate macroeconomic demand management policies. Friedman (1968) argued that central banks should give up any ambitions of managing interest rates aimed at stabilizing aggregate demand and employment. He advised that central banks should follow a fixed (quantitative) rule instead and simply assure steady growth in the monetary base. The point is that Friedman considered monetary policy as very powerful, as having strong real effects apart from determining the economy's price-level trend. He blamed the Great Depression on the US Federal Reserve. Accordingly, Friedman (1962 [1969]) had no sympathy for the idea of central-bank independence. He aspired for the exact opposite: central bankers without *any* discretion (Friedman 1960).

Given the starting point of the Monetarist counter-revolution, it is quite astonishing to see where modern macroeconomics ended up over the course of the next few decades. Friedman's own pupil Robert Lucas started what has amounted to a fundamental course change that would see modern macroeconomics getting stuck in its current *cul-de-sac*. Riding on the back of the rational expectations revolution, Lucas's 'Monetarism mark II' let the juice out of Friedman's view of monetary policy as having powerful real effects in 'the short run' (which for Friedman was about a decade long). Instead, Lucas (1972) limited the effectiveness of monetary policy to 'surprises' only. As agents forming rational expectations correctly anticipate systematic policies, this would render them ineffective. Only random policy 'shocks' can have real effects, on this view.

Mainstream macroeconomics took further surprising turns with the rise of 'real business cycle' (RBC) theory in the 1980s and the 'time inconsistency' idea's gaining of notoriety in the 1990s; developments associated with Finn Kydland and Edward Prescott (1977; 1982). According to RBC theory, the business cycle is driven by 'real factors' such as productivity shocks rather than money. Money turned 'endogenous' and disappeared from the scene while monetary policy became largely irrelevant except for the new central hysteria that any monetary structure featuring 'discretion' for monetary policymakers would yield an 'inflationary bias' (Barro/Gordon 1983; Rogoff 1985).

As a result, mainstream macroeconomists became ever more excited about the overarching importance of policy 'credibility' and institutional arrangements that would secure the central bank's 'independence' (Bibow 2004). In line with the newly felt urge among mainstream macroeconomists to protect central bankers' independence (that is, discretion), a contribution by Thomas Sargent and Neil Wallace (1981) bolstered the case for disciplining fiscal policy – namely to avoid a supposed 'deficit bias' and prevent 'fiscal dominance' (that is, a situation in which monetary policy is forced to accommodate excessive fiscal deficits and hence loses control over inflation).

These were the ideas that preoccupied mainstream macroeconomists at the time of the Maastricht Treaty in the early 1990s. Mainstream economists convinced themselves that central-bank independence (CBI) was the best solution to the time-inconsistency problem. Ideally this was to be matched by fiscal safeguards that would prevent excessive deficits. Add to this 'New Classical Consensus' the general neoliberal excitement about market 'rigidities' as 'structural problems' and (microeconomic/supply-side!) 'structural reforms' as the supposed panacea to fix any economy, and it is quite easy to see how OCA theory lost any interest in demand management and was drawn into the new 'supply-side-only' view of the economic world, including currency unions.

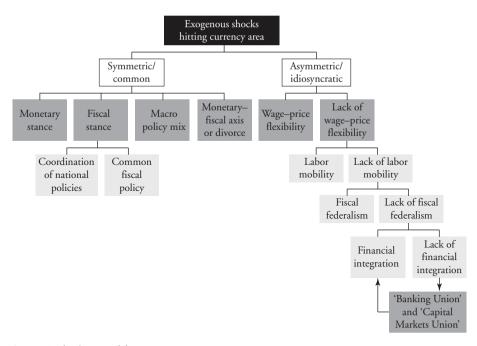
Initially, exchange-rate adjustments had provided an effective remedy in case of asymmetric shocks if the degree of wage-price flexibility was insufficient. With the evolution of macroeconomics and the rise of neoliberalism, any policy action, including deliberate exchange-rate adjustments, only met suspicion, albeit with OCA theory continuing to provide inspiration and support to the European Union's (EU) 'structural reform' mantra targeting labor market flexibility.

Note here one important, but widely overlooked, corollary to Mundell's original insight about exchange-rate changes in the face of asymmetric shocks. Based on OCA logic, diverging national wage-price trends – just like *unwarranted* exchange-rate changes – represent candidate causes of divergence and imbalance inside currency unions. Recall here also that one key rationale for forming the euro currency union was to forever rule out 'beggar-thy-neighbor' competitive devaluations (that is, exchange rates acting as shocks to the system rather than potential shock absorbers). Accordingly, in pre-euro times, in fact from the very start of European integration in the 1950s, member countries had always been required to treat exchange rates as a 'matter of common concern.' The experiences of the 1920s and 1930s had taught Europe this important lesson – a lesson that got somehow forgotten with the euro.

Figure 3 offers a schemata summarizing the evolution of OCA theory. The key distinction between symmetric and asymmetric shocks provides the starting point at the top branch. From the beginning, OCA theory has mainly focused on asymmetric shocks as these were considered more critical for the viability of a currency union. The first question – raised by Mundell (1961) – was whether labor mobility was sufficiently high in the currency union at hand. In Europe's case, and in contrast to the US, labor mobility was widely seen as insufficient.

The next critical question – raised by Kenen (1969) – was whether fiscal federalism (some form of fiscal integration) would provide a strong enough stabilizing force. Kenen (1969) emphasized that fiscal federalism was a key factor in keeping America's currency union together, both by stabilizing shocks and by facilitating income redistribution more generally, highlighting the need for interregional public insurance mechanisms. In Europe's case, following the demise of the early Werner Report (1970) and MacDougall Report (1977), which had argued that even in the early phase of monetary union a sizeable central budget of 2 to 2.5 percent of GDP would be required, researchers have generally turned pessimistic that fiscal integration might play any such comprehensive role in the near future, if ever. Or they turned overly optimistic that it would not really matter all that much.

Stuck on the wrong track: 20 years of euro disillusion, denial, and delusion 147



Source: Author's own elaboration.

Figure 3 OCA theory schemata and the focus of policy debates in Europe

In any case, research has moved on to focus on the question at the third branch – raised by Mundell (1973) – of whether financial integration might provide a strong enough private insurance mechanism that would make for an alternative to fiscal integration (Asdrubali et al. 1996; Fatás 1998). It is here that we see the connection with the EU's more recent reform initiatives aimed at establishing a 'Banking Union' and a complementary 'Capital Markets Union.'

Preoccupied with asymmetric shocks, the evolution of policy debates and initiatives in Europe have followed the OCA path, which is the right-hand path in the schemata in Figure 3. Further below I will argue that OCA theory and the EU got stuck on the wrong path as the euro area's key challenges concerned the left-hand side. Before that, the next section will briefly describe the unhealthy symbiosis of ordoliberalism and neoliberalism around the time of the Maastricht Treaty.

4 MAASTRICHT CONVERGENCE OF ORDOLIBERALISM AND NEOLIBERALISM AND THE KEY EURO FLAWS

Following the discussion of West Germany's pre-euro economic history in Section 2 and the evolution of OCA theory and mainstream macroeconomics in Section 3, I will now elucidate how the Maastricht euro is best seen as a product of its time, a brainchild of the zeitgeist of the early 1990s. At Maastricht two formative intellectual currents converged to shape the design and reception of the euro regime: ordoliberalism and neoliberalism.

Germany's ordoliberalism inspired and shaped the euro regime design. As officially recorded by the Basle–Nyborg Accord of 1987, the Bundesbank was *de facto* running Europe's monetary policy. Germany's European partners were understandably keen to end the Bundesbank's regional hegemony. The asymmetric situation was economically inefficient (as the Bundesbank operated on a German mandate: maintaining price stability in Germany rather than Europe) and politically intolerable (as only Germans were sitting at the policymaking table). For Germany's partners the euro offered the opportunity to regain and share monetary sovereignty.

But for the Bundesbank to abdicate from its reign and lend its support to the EMU, which was critically important for getting the German public on board and behind the project, the euro regime's design had to be to the Bundesbank's liking. Giving up the DM was only conceivable if the euro was built on the Bundesbank's very 'stability policy' principles that had become associated with prosperity and stability in West Germany. The central bank guarding the euro had to be independent, primarily focused on price stability, and protected from fiscal policy by imposing discipline on democratically elected politicians (Dyson/Featherstone 1999; James 2012; Blyth 2013; Feld et al. 2015; Bofinger 2016).

Neoliberalism shaped the reception of what was agreed at Maastricht under the influence of Bundesbank dogma and power. Mainstream macroeconomics had essentially converged to the very same (German) ideas.² And the Bundesbank and its 'stability policy' were held in high esteem by many non-German economists too. It was commonly agreed that CBI provided the best solution to the time-inconsistency problem. The Bundesbank had proven the case. In view of the perceived threat of fiscal dominance and Europe's apparent 'deficit bias,' the independent central bank needed to be protected by fiscal safeguards that would prevent 'excessive deficits.'

In other words, the euro was launched on the premise – widely shared among ordoliberal and neoliberal disciples alike – that 'stability policy' a la Buba, paired with the neoliberal 'structural reform' agenda, would provide the right recipe for joint prosperity in Europe. The European Central Bank (ECB) was put in the Bundesbank's former role: to act as chief enforcer of discipline and reform.

Arguably, *asymmetry* is the single most important feature of both 'stability policy' à la Bundesbank and the Maastricht euro regime more generally.

Regarding monetary policy, the ECB started out by operating on an explicitly asymmetric definition of price stability as inflation 'below 2 percent.' Apparently, inflation can only be too high, but never too low; and deflation never really be a threat.

Similarly, regarding fiscal policy, the Maastricht Treaty and the so-called Stability and Growth Pact (SGP) made it clear that budget deficits can only be too high, but never too low; and budget surpluses never really be big enough (a message that Germany's 'black zero' fetish under Wolfgang Schäuble as finance minister made all too clear!). Conspicuously, the euro fiscal regime only defines a ceiling ('below 3 percent') and only foresees punishment for deficits.

Finally, regarding competitiveness, which had always been a central concern in preeuro times, sublime changes occurred under the euro. At first competitiveness largely disappeared from policymakers' radar screens. The experience since the crisis then made it clear that no such thing as 'excessive competitiveness' can ever exist, or gaining

2. According to Issing (1999), there had been 'a very fruitful discussion [on the overriding concern for maintaining price stability] culminating in the literature on the dead-weight losses from inflation and time inconsistency. The gain monetary policy has made from this debate, and the monetary reforms that it inspired, has been invaluable.' See also Issing (1997; 2000; 2005a; 2006). competitiveness ever be wrong. Official language in the EU only features the notion of 'lost competitiveness.' Those suffering such a disgraceful loss must then undergo 'internal devaluation' – while 'internal revaluation' is missing from the vocabulary and official agenda. Post-crisis internal adjustments have been starkly asymmetric. Accordingly, wage inflation can only ever be too high, but never too low (very much to the liking of the billionaire sponsors of neoliberalism).³

The outstanding asymmetry of the euro regime perfectly matched the key characteristic of the old German model of organizing 'superior internal discipline.' Under the spell of neoliberalism, mainstream macroeconomics became strangely enamored with the same kind of asymmetry, forever fighting yesterday's war: not German hyperinflation(s), but the '1970s stagflation' (and fighting yesterday's war has continued despite all the peculiar twists and turns mainstream macroeconomics has seen since Friedman's original Monetarist counter-revolution).

The joint endeavor of unlearning macroeconomics has proved rather costly for Europe. I will now pinpoint the three key flaws and blunders that were behind 20 years of euro disillusion.

First, Europe pursued market integration without proper commensurate policy integration. The spread of the neoliberal faith in the supposedly 'self-regulating' powers of free markets since the 1980s was mainly responsible for this first blunder. The financial fragilities that resulted from it were not unique to the euro union. They were made far worse, though, by two further regime flaws.

Second, Europe failed to effectively prevent intra-area divergences in competitiveness and the corresponding build-up of financial imbalances. This was perhaps the most peculiar blunder of all. For some reason Europe had forgotten the pivotal role of competitiveness and exchange rates, which used to be a 'matter of common concern' in pre-euro times.

Third, the euro monetary union has proved wholly unprepared for coping with common shocks and crises. This deficiency was already apparent in the 2001 'global slowdown.' It proved near fatal when the global financial crisis of 2007–2009 struck. Instead of recovering, the euro area succumbed to a series of escalating internal crises and experienced a drawn-out double-dip recession. The euro area proved unable to stabilize domestic demand, and the economy incapable of overcoming crises and restoring a vivid recovery. These developments made it clear that, entranced by ordo-/neoliberal 'supply-side-only' pipedreams, Europe had established a fair-weather euro regime.

Expressed in terms of the OCA schemata in Figure 3, the euro's key failings all concerned not the well-trodden right-hand path, but the largely ignored left-hand path of symmetric/common shocks.

First, few observers would deny the ECB's starkest blunders such as the interest-rate hikes of 2011. But a sub-optimal monetary stance was the norm rather than the exception. From the outset the ECB was plagued by a clear deflationary bias as exemplified by its (original) asymmetric definition of price stability. In fairness one might add here that the monetary mythology that was introduced to the bank during the formative years by its first chief economist Otmar Issing (who had previously held the same position at the

^{3.} A subtle difference between the old German model and the euro regime emerges here. In the old German model, German unions' role was to make sure real wages would keep up with productivity (which also provided a safety net for the Bundesbank by keeping deflation risks at bay). Matters changed in Germany in the mid 1990s with the 'Bündnis für Arbeit.' Relentless pressures driven by the neoliberal 'structural reform' mantra have undermined labor unions' power across the euro area. The ECB woke up to this reality in 2014.

Bundesbank) and, at a later stage, legal challenges and uncertainties were unhelpful factors that likely hindered the establishment of sound monetary policies.

Second, turning to fiscal policy, it is hard to miss that the euro area's fiscal stance was persistently sub-optimal. With 'moral hazard' as their constant talking point, hardcore ordoliberals would argue that fiscal policy was insufficiently restrictive in 'the good years.' Apart from exceptional national cases, this argument is beside the point regarding the overall fiscal stance. The euro fiscal regime is obsessed with discipline while fiscal coordination is missing in action on a permanent basis. Compared to the far longer and stronger upswings experienced in the monetary union on the other side of the Atlantic, the euro union is hampered by a deflationary fiscal bias – stuck in permanent austerity (except for brief moments of luck or emergency). Public investment has declined to levels that are counter-productive and outright irresponsible regarding both present and future generations. Persistently aiming at balanced budgets has not reduced public debt, but public investment and public services instead.

Third, pairing a biased monetary policy with a biased fiscal stance, it is obvious and therefore warrants no further discussion here that the macro policy mix in the euro area has been persistently sub-optimal.

Last, but not least, the infamous 'bank-sovereign doom loop' was a display of the hazardous state of affairs created by the peculiar 'monetary-fiscal divorce' that Charles Goodhart identified in 1998. The divorce between the monetary and fiscal authorities in the euro area, the disconnect between monetary and fiscal policies, has proved to be the euro's Achilles heel at times of crisis.

The euro's ordoliberal designers considered it a unique strength that no euro government or euro treasury could mess with or challenge the ECB. Dreaming neoliberal pipedreams and celebrating CBI and fiscal discipline as solutions to the alleged time-inconsistency problem and perceived threats of fiscal dominance, mainstream macroeconomists widely shared these illusions. Some were even celebrating the arrival of the Hayekian dream of the euro as a 'denationalized' currency.

How very misguided they all were! In truth, euro member countries have not only lost their monetary sovereignty, which they agreed to share under the euro, but *de facto* also their fiscal sovereignty (Godley 1992). The monetary–fiscal divorce is not a source of special strength but a handicap that weakens all players involved. Lacking a central-bank partner, the national treasuries are subject to default and, hence, runs. Lacking a 'Euro Treasury' partner and common debt that would also be the common safe asset held by euro area banks, the ECB is weakened and subject to legal challenges of its quasi-fiscal policies as applied to national debts (Bibow 2013).

5 TODAY'S EURO IRONIES SEEN BY DAYLIGHT

Time to spell out some stark ironies that mark 20 years of euro disillusion.

First, the jury is in on asymmetry as the outstanding feature of the euro regime: the '1970s stagflation war' was turned on its head. For the past ten years Europe's supposed 'island of stability' has faced the opposite kind of a threat, namely slow growth if not protracted stagnation with an acute risk of succumbing to deflation; call it 'stagdeflation.' Following decades of structural reform designed to shift the balance of power in employers' favor, employees do not dare to ask for their fair share any more but have gotten used to asking for too little. Meanwhile, governments continue their relentless squeeze of social spending and persistently underinvest too. Unsurprisingly, these behaviors and policies have been 'crowding in' corporate underinvestment. Productivity growth has come to a crawl while poverty and inequality are on the rise.

Second, Germany's 'euro trilemma' is coming home to roost. Persistently underinvesting at home, while running up huge foreign exposures, Germany has put itself at risk of a euro transfer union through the back door. A *de facto* euro transfer union can either arise promptly through widespread bankruptcies, debtor defaults, and write-offs on foreign claims, or gradually and in smaller doses.

Until now the ECB has acted as the final buffer between Germany and a full-blown euro transfer union that is the legacy of Germany's own folly, namely its unwarranted internal devaluation (1996–2011). Cherishing its über-competitiveness and refusing symmetric rebalancing, Germany is choosing to endure slow-motion stress in its financial structure over 'cold turkey' ruin among euro debtors, which would promptly bust its own finances as well. Cutting interest rates to very low levels has made excessive debt burdens bearable and prevented or delayed defaults for now – only to see the German body politic and public complain about expropriation of German savers.

It appears, then, that Germany no longer appreciates its safe-haven status and the privilege of 'paying' the lowest (that is, most negative) interest rates in the euro area. Obviously, the German finance minister could easily use public savings on interest service to compensate Germany's savers, were it not for Germany's 'black zero' fetish standing in the way of doing anything reasonable and constructive.

Third, on a more positive note, the Draghi ECB has come to understand the euro's inbuilt 'asymmetry problem.' The ECB is today emphasizing the symmetry of its price stability mandate, explains transparently that it administers negative interest rates in line with the 'stagdeflationary' environment, while highlighting that a more constructive fiscal stance would make that unnecessary.

This enlightened new understanding of the ECB's role has not reached all independent European central bankers though. An alarming kind of cannibalism among central bankers followed the ECB's latest easing initiative of September 2019. As Mario Draghi led the ECB to buy the political authorities some more time for marshalling fiscal support, former ECB chief economist Otmar Issing launched an attack in Germany's influential FAZ on 4 October while Bundesbank president Jens Weidmann, in a crassly inappropriate way, reneged on his responsibility as an unelected euro area official (see Wiebe/Narat 2019). He thereby made it clear that he was still playing for the domestic German audience, feasting on the Bundesbank's independent ECB brainchild to guard the Bundesbank's own standing at home. It appears Germany may never emerge from its peculiar ordoliberal 'parallel universe' that former finance minister Wolfgang Schäuble (2010; 2011) so ably described in his *Financial Times* op-eds at the time.

Let me add some personal reminiscences here that, in retrospect, may seem like the 'croakings of a Cassandra.'

My research interest in European integration started in 1996 when I delivered my first lecture course on the subject at Cambridge University. Following my PhD research on Keynes's liquidity preference theory, I quickly got excited about the subject, as a German feeling strongly about Europe's unity. I started presenting my first paper on the subject, eventually published in 2001 in *IRAE* titled 'Making EMU work: some lessons from the 1990s,' at conferences in 1998.

As a (post-) Keynesian I obviously emphasized the vital role of proper demand management and the need for establishing a sound policy mix in the euro monetary union. But I also warned that: 'Thirty years of monetary integration directed at controlling the threat of competitive exchange devaluation should not be jeopardized by beggar-thy-neighbor policies through competitive wage depreciation' (Bibow 2001: 251).

It soon became clear that this warning would not be heeded. Starting in 2003, I highlighted the issue of soaring intra-regional divergences and imbalances at many conferences across Europe, arguing that these trends could not last but were bound to end in crisis at some point (Bibow 2006). The standard response I heard from mainstream economists was that balance-of-payments constraints would no longer be relevant inside a currency union and that all that the euro area really needed was 'structural reform' enhancing (labor) market flexibility.

The remarkable blindness shared by mainstream economists and Europe's officialdom was perhaps best summed up by EU Commissioner for Economic and Monetary Affairs Joaquín Almunia in a foreword to the official 'euro@10' success story volume:

EMU and the euro are a major success. For its member countries, EMU has anchored macroeconomic stability For the EU as a whole, the euro is a keystone of further economic integration and a potent symbol of our growing political unity. And for the world, the euro is ... a pole of stability for the global economy. (Almunia 2008: iii)

Add here only Otmar Issing's (2005b) declaration of faith, making the connection between the supposed euro success and OCA theory: 'Today, in light of the evidence gathered so far in the euro area, I am more confident in saying: "One size does fit all!"

The euro has caught up with reality soon enough. How is it possible that the euro's deficiencies seemed obvious to so many post-Keynesians, like myself (see Bibow/Terzi 2007), but not to those trained in modern macroeconomics? For (post-) Keynesians, reality can be very sobering though: you can be consistently right but get constantly ignored. On the other hand, in Germany at least, you may be a mediocre economist and a poor central banker too, but 'heroes of ordo' are heroes forever, enjoying a standing podium for peddling denial and delusion. Max Planck's dictum that 'science advances one funeral at a time' may be too optimistic regarding economics and Germany's escape from the 'parallel universe' that is – at enormous cost to Europe – keeping the euro entrapped until today (Bibow/Flassbeck 2018).

6 CONCLUDING OBSERVATIONS

At Maastricht two formative intellectual currents converged to shape the design and reception of the euro regime: ordoliberalism and neoliberalism. Germany's ordoliberalism inspired and shaped the euro regime design. Neoliberalism fashioned the reception of what was agreed at Maastricht under the influence of Bundesbank dogma and power. Mainstream macroeconomics had essentially converged to the very same (German) ideas. As a product of the zeitgeist, Europe got stuck with a deeply flawed euro regime. The Maastricht Treaty institutionalized an asymmetric (growth-unfriendly) policy regime. This suited the macroeconomic mainstream well, fighting the '1970s stagflation war' for the past 40 years. Twenty years of euro disillusion have produced the exact opposite: 'stagdeflation.'

I am happy to report progress at one front: under the presidency of Mario Draghi the ECB has learned and matured. It is vital that the ECB firmly anchors its new-found symmetric mindset and monetary policy approach.

Outside the Euro Tower, 'denial and delusion' remains the only game in town. There has been no progress regarding the two most urgent euro reforms. The euro is still lacking both a symmetric and effective 'Macroeconomic Imbalance Procedure' that deserves the title as well as a common fiscal capacity to counter symmetric shocks and crises. In future the euro area must prevent internal divergences and imbalances that have left it extremely

vulnerable and highly likely to experience asymmetric outcomes when common shocks hit. It needs to overcome the monetary–fiscal 'divorce' and establish a central monetary– fiscal axis of power instead. My 'Euro Treasury' proposal (Bibow 2013; 2014; 2015; 2019a; 2019b) provides a straightforward solution to the latter systemic deficiency.

Meanwhile, the mainstream and EU officialdom keep on barking up the wrong tree and remain preoccupied with asymmetric shocks and structural reform, while Germany's heroes of ordo would at best tolerate tinkering with the 'incomplete' euro regime (Bénassy-Quéré et al. 2018). As the global environment is no longer benign but increasingly hostile, the euro's foundations remain shaky and its future uncertain.

REFERENCES

- Almunia, J. (2008): Foreword, in: European Commission (ed.), *EMU@10: Successes and Challenges* After Ten Years of Economic and Monetary Union, Brussels: European Commission, iii.
- Asdrubali, P., Sorensen, B.E., Yosha, O. (1996): Channels of interstate risk sharing: United States 1963–1990, in: *The Quarterly Journal of Economics*, 111(4), 1081–1110.
- Barro, R.J., Gordon, D.B. (1983): Rules, discretion and reputation in a model of monetary policy, in: *Journal of Monetary Economics*, 12, 101–121.
- Bénassy-Quéré, A., Brunnermeier, M.K., Enderlein, H., Farhi, E., Fratzscher, M., Fuest, C., Gourinchas, P.-O., Martin, Ph., Pisani, F., Rey, H., Véron, N., Weder di Mauro, B., Zettelmeyer, J. (2018): Reconciling risk sharing with market discipline: a constructive approach to euro area reform, CEPR Policy Insight No 91.
- Bibow, J. (2001): Making EMU work: some lessons from the 1990s, in: International Review of Applied Economics, 15(3), 233-259.
- Bibow, J. (2004): Reflections on the current fashion for central bank independence, in: Cambridge Journal of Economics, 28(4), 549–576.
- Bibow, J. (2006): The euro area drifting apart: does reform of labor markets deliver competitive stability or competitive divergence?, in: European Trade Union Confederation (ed.): *Structural Reforms and Macro-Economic Policy*, Brussels: ETUC, 76–86.
- Bibow, J. (2009): On the origin and rise of central bank independence in West Germany, in: European Journal of the History of Economic Thought, 16(1), 155–190.
- Bibow, J. (2012): The Euroland crisis and Germany's euro trilemma, in: *International Review of Applied Economics*, 27(3), 360–385.
- Bibow, J. (2013): Lost at sea: the euro needs a Euro Treasury, IMK Study 35, URL: http://www.boeckler.de/pdf/p_imk_study_35_2013.
- Bibow, J. (2014): The Euro treasury plan, Public Policy Brief 135, Annandale-on-Hudson, NY: The Levy Economics Institute.
- Bibow, J. (2015): Making the euro viable: the euro treasury plan, Working Paper 842, Annandaleon-Hudson, NY: The Levy Economics Institute.
- Bibow, J. (2017): How Germany's anti-Keynesianism has brought Europe to its knees, Working Paper 886, Annandale-on-Hudson, NY: The Levy Economics Institute.
- Bibow, J. (2019a): New rules for fiscal policy in the euro area, in: Watt, A., Herr, H., Priewe, J. (eds), *Still Time to Save the Euro*, Berlin: Social Europe Publishing, 123–144.
- Bibow, J. (2019b): How to redesign the fiscal regime of the Eurozone: an alternative take on lessons from US and Eurozone experiences, Working Paper No 2019.02, 29 January, Brussels: European Trade Union Institute (ETUI).
- Bibow, J., Flassbeck, H. (2018): Das Euro-Desaster: Wie deutsche Wirtschaftspolitik die Eurozone in den Abgrund treibt, Berlin: Westend.
- Bibow, J., Terzi, A. (2007): Euroland and the World Economy: Global Player or Global Drag?, Basingstoke, UK: Palgrave Macmillan.
- Blyth, M. (2013): Austerity: The History of a Dangerous Idea, Oxford: Oxford University Press.
- Bofinger, P. (2016): German macroeconomics: the long shadow of Walter Eucken, in: Bratsiotis, G., Cobham, D. (eds): German Macro: How It's Different and Why That Matters, Publication 6497,

April, Brussels: European Policy Center, URL: http://www.epc.eu/pub_details.php? pub_id=6497.

- Dyson, K., Featherstone, K. (1999): The Road to Maastricht: Negotiating EMU, Oxford: Oxford University Press.
- Fatás, A. (1998): Does EMU need a fiscal federation?, in: Economic Policy, 13(26), 164-203.
- Feld, L.P., Köhler, E.A., Nientiedt, D. (2015): Ordoliberalism, pragmatism and the Eurozone crisis: how the German tradition shaped economic policy in Europe, Discussion Paper No 15/04, Freiburg im Breisgau: Walter Eucken Institut.
- Friedman, M. (1960): A Program for Monetary Stability, New York: Fordham University Press.
- Friedman, M. (1962 [1969]): Should there be an independent monetary authority?, in: Friedman, M., Dollars and Deficits, Chicago: Aldine, 219–243.
- Friedman, M. (1968): The role of monetary policy, in: The American Economic Review, 58(1), 1-17.
- Giersch, H., Paque, K.-H., Schmieding, H. (1992): *The Fading Miracle: Four Decades of Market Economy in Germany*, Cambridge, UK: Cambridge University Press.
- Godley, W. (1992): Maastricht and all that: letter from Europe, in: *London Review of Books*, 14(19), 3–4.
- Goodhart, C.A.E. (1998): The two concepts of money: implications for the analysis of optimal currency areas, in: *European Journal of Political Economy*, 14, 407–432.
- Helmstädter, E. (1988): The irrelevance of Keynes to German economic policy and to international economic co-operation in the 1980s, in: Eltis, W., Sinclair, P. (eds), *Keynes and Economic Policy: The Relevance of the General Theory After Fifty Years*, London: Macmillan, 411–427.
- Hölscher, J. (1994): Entwicklungsmodell Westdeutschland: Aspekte der Akkumulation in der Geldwirtschaft, Berlin: Duncker & Humblot.
- Holtfrerich, C.-L. (2008): Monetary policy in Germany since 1948: national tradition, international best practice or ideology?, in: Touffut, J.P. (ed.), *Central Banks as Economic Institutions*, Cheltenham, UK and Northampton, MA: Edward Elgar Publishing, 22–51.
- Issing, O. (1997): Monetary targeting in Germany: the stability of monetary policy and of the monetary system, in: *Journal of Monetary Economics*, 39, 67–79.
- Issing, O. (1999): The ECB and its watchers, Speech, Frankfurt, 17 June, EZB, URL: https://www.ecb.europa.eu/press/key/date/1999/html/sp990617.en.html.
- Issing, O. (2000): Walter Eucken: vom Primat der Währungspolitik, Vortrag, Freiburg: Walter-Eucken-Institut, 17 March, URL: https://www.ecb.europa.eu/press/key/date/2000/html/ sp000317_2.de.html.
- Issing, O. (2005a): Why did the Great Inflation not happen in Germany?, in: Federal Reserve Bank of St Louis Review, 87(2), 329–336.
- Issing, O. (2005b): One size fits all! A single monetary policy for the Euro area, Speech given in Frankfurt, Germany, 20 May, URL: http://www.ecb.int/press/key/date/2005/html/sp050520. en.html.
- Issing, O. (2006): Central bank independence: economic and political dimensions, National Institute Economic Review, 196, 66–76.
- James, H. (2012): *Making the European Monetary Union*, Cambridge, MA: Harvard University Press.
- Kenen, P.B. (1969): The theory of optimum currency areas: an eclectic view, in: Mundell, R.A., Swoboda, A.K. (eds), *Monetary Problems of the International Economy*, Chicago: The University of Chicago Press, 41–60.
- Kydland, F., Prescott, E. (1977): Rules rather than discretion: the inconsistency of optimal plans, in: *Journal of Political Economy*, 85, 473–490.
- Kydland, F., Prescott, E. (1982): Time to build and aggregate fluctuations, in: *Econometrica*, 50, 1345–1371.
- Lucas, R. (1972): Expectations and the neutrality of money, in: *Journal of Economic Theory*, 4, 103–124.
- MacDougall Report (1977): Commission of the European Communities (1977): Report of the Study Group on the Role of Public Finance in European Integration, Volume I and II, Brussels: Commission of the European Communities, URL: https://ec.europa.eu/archives/emu_history/documentation/ chapter8/19770401en73macdougallrepvol1.pdf.

- Mundell, R.A. (1961): A theory of optimum currency areas, in: *The American Economic Review*, 51, 657–675.
- Mundell, R.A. (1973): A plan for a European currency, in: Johnson, H., Swoboda, A. (eds): *The Economics of Common Currencies*, London: Allen & Unwin, 143–173.
- Mee, S. (2019): Central Bank Independence and the Legacy of the German Past, Cambridge, UK: Cambridge University Press.
- Rieter, H., Schmolz, M. (1993): The ideas of German ordoliberalism 1938-45: pointing the way to a new economic order, in: European Journal of the History of Economic Thought, 1, 87-114.
- Rogoff, K. (1985): The optimal degree of commitment to an intermediate monetary target, in: Quarterly Journal of Economics, 100, 1169–1189.
- Sargent, T., Wallace, N. (1981): Some unpleasant monetarist arithmetic, in: Federal Reserve Bank of Minneapolis Quarterly Review, Fall, 1–17.
- Schäuble, W. (2010): Maligned Germany is right to cut spending, in: Financial Times, 23 June.
- Schäuble, W. (2011): Why austerity is only cure for the Eurozone, in: Financial Times, 5 September.
- Tietmeyer, H. (1991): The role of an independent central bank in Europe, in: Downes, P., Vaez-Zadeh, R. (eds), *The Evolving Role of Central Banks*, Washington, DC: International Monetary Fund, 176–189.
- Werner Report (1970): Report to the Council and the Commission on the Realisation by Stages of Economic and Monetary Union in the Community, 8 October, Luxembourg: Commission of the European Communities.
- Wiebe, F., Narat, I. (2019): EZB verstößt vollkommen offensichtlich gegen ihr Mandat: Professoren wettern gegen Draghi, in: *Handelsblatt*, 31 October.