3

Birth of the Euro

At the onset of the euro crisis in 2008, I was still at the World Bank in Washington. I followed through the media the collapse of the US financial services firm Lehman Brothers on September 15. At the time, I was working mostly on regulatory reform in Egypt and Colombia, and the fall of Lehman Brothers did not appear to hold much importance for the rest of the world. Soon, however, Iceland's banks collapsed. In late September, the Icelandic government assumed a 75 percent stake in the country's third largest bank, Glitnir. A week later, the same thing happened to the second largest bank, Landsbanki. And yet these events seemed to be connected to the subprime crisis in the United States, with hardly any relevance for Europe.

On September 22, 2008, the ministers of finance and central bank governors of the G-7 countries vowed to protect the global financial system. Their declaration read: "We reaffirm our strong and shared commitment to protect the integrity of the international financial system and facilitate liquid, smooth functioning markets, which are essential for supporting the health of the world economy." They went on to say, "We are ready to take whatever actions may be necessary, individually and collectively, to ensure the stability of the international financial system."

Apparently, though, such a declaration was not enough. Trade credit rapidly dried up, and international trade drew to a halt. On September 26, 2008, the US Federal Reserve, the Bank of England, the European Central Bank (ECB), and the Swiss National Bank announced the introduction of operations to provide US dollar liquidity with a one-week maturity. The ECB also provided US dollar one-week funding to Eurosystem counterparties against Eurosystem-eligible collateral, with an initial volume of $35 billion.

On September 29, the ECB conducted a special-term refinancing operation in order to improve the overall liquidity position of the eurozone banking system. The same day, in response to continued strains in short-term funding markets, the Federal Reserve and the ECB doubled their reciprocal currency arrangements (swap lines) from $120 billion to $240 billion. These larger facilities expanded the provision of US dollar liquidity in the eurozone.

The Euro Crisis Starts in Iceland

On October 8, 2008, Iceland seized control of its biggest bank, Kaupthing. This takeover was in response to the decision by British prime minister Gordon Brown to use antiterrorism legislation to freeze the bank's UK-based assets. The liquidity squeeze in European banks then worsened. The ECB decided to carry out weekly refinancing operations with a fixed-rate tender procedure with full allotment, which meant that the interest rate was set in advance and the ECB provided as much liquidity as the banks requested.

On the same day, the ECB lowered its lending rates by 50 basis points. It also reduced the difference between interest rates on marginal lending and on deposit facilities from 200 to 100 basis points. But the financial markets found the measure insufficient, and trade continued to suffer. Noneurozone countries such as Denmark and Sweden had special troubles because they were not benefitting from the ECB actions. To the contrary, the assistance that the eurozone banks were receiving was making liquidity a bigger problem in Denmark and Sweden, and they had to resort to raising interest rates. This in turn affected the three Baltic countries negatively because the banking systems in Estonia, Latvia, and Lithuania were dominated by Swedish banks.

On October 15, 2008, the European Commission proposed increasing the minimum protection for bank deposits to €100,000 ($140,000) to maintain the confidence of all depositors in the financial safety net. This had a calming effect on small depositors until March 2013, when the Cypriot government decided to impose losses in Cyprus on these depositors as well.

The collapse of the Icelandic banks and the ensuing financial crisis became the first serious test of the eurozone. Prior to that it had enjoyed a decade of stability. At its inception in 1999, the euro traded at $1.174. It then fell to $0.825 in October 2000, and gradually appreciated to $1.567 in July 2008, just prior to the crisis (figure 3.1). Adoption of the euro was accompanied by promises of structural reforms and increased competitiveness.

Early Skeptics of the Euro

> After entry into the euro area, the Bank of Greece will be implementing the single monetary policy decided by the Governing Council of the European Central Bank and it will certainly be impossible to improve the economy's international competitiveness by changing the exchange rate of our new currency, the euro. The objectives of higher employment and output growth will therefore have to be pursued through structural reforms and fiscal measures aimed at enhancing international competitiveness by increasing productivity, improving the quality of Greek goods and services and securing price stability.

Figure 3.1 Euro-dollar foreign exchange spot rate, January 1999–January 2014

Source: WM/Reuters, Datastream (accessed on February 27, 2014).

These are the words of Lucas Papademos, Greece's central bank governor, spoken at the ceremony commemorating the introduction of the euro to Greece in 2001. Ten years later, Papademos would become the prime minister of a caretaker government charged with preventing Greece from having to exit the eurozone.

From the very start, many economists were skeptical about the euro. Their main concern was the lack of flexibility in the economies of potential members and, as a consequence, in the future monetary union. On February 9, 1998, 155 German academic economists published an open letter entitled "The Euro Is Coming Too Early." In it, they cited the lack of reforms in labor markets and insufficient progress in consolidating public finance for many would-be members of the eurozone (Issing 2008). In 2013 some of these academics would start a new political party, Alternative für Deutschland, which would barely miss the 5 percent target for entering the German Parliament. The party's main platform was stopping bailout support for undisciplined southern eurozone members.

In the United States, economists were just as skeptical, with some such as Milton Friedman and Maurice Obstfeld predicting an ignominious end to the euro adventure. Others had their doubts as well. Initially, Sweden wanted to fix a one-to-one conversion rate of the Swedish krona to the euro and wanted to continue to use both currencies. The country would return to the national currency only in the event of an "emergency." Eventually, however, it backed out of the euro completely: In 2003 Swedish voters rejected the euro in a referendum.

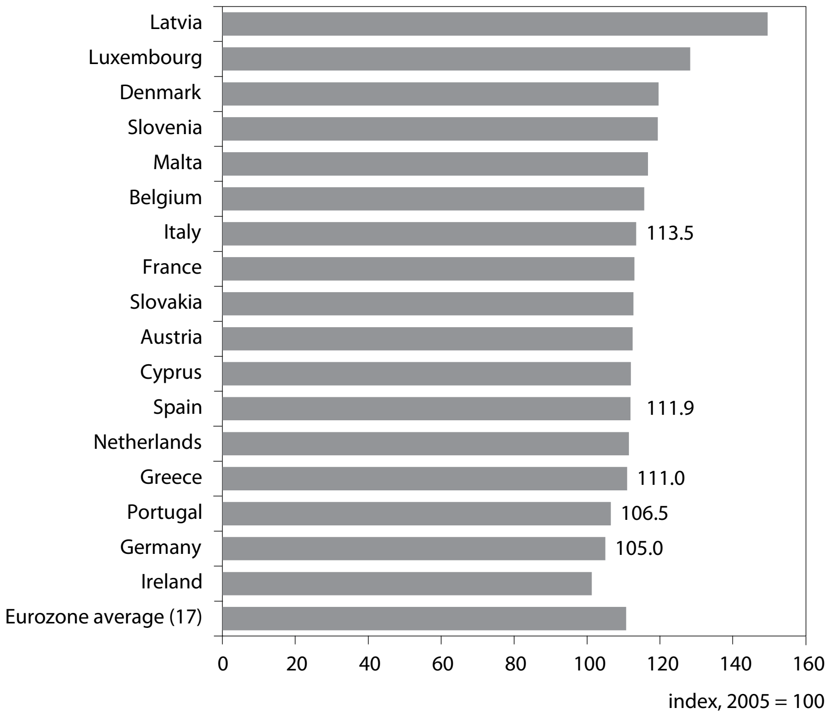
When the European Economic Community (EEC) was established in 1957, its members focused on building a common market for trade. Over time, however, it became clear that a common currency would bolster the internal market, and in 1991 the Maastricht Treaty was signed, ushering in the euro. In 1999 the euro was introduced for accounting and settlement purposes. In January 2002, euro banknotes and coins entered circulation in 12 European countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, and Spain. A year earlier, in 2001, Greece had entered the eurozone so that it could be among the first wave of countries adopting the euro banknotes and coins. It was joined in 2007 by Slovenia, followed by Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, and Latvia in 2014.

This movement was a gradual one. Things deteriorated, however, when private capital flows from the core to the periphery came to a sudden stop in 2008. This development left the southern rim economies with prices and unit labor costs that were well out of line with those in the core. For example, in early 2013 the ECB published a survey on new wealth in the eurozone. The main finding was that net wealth was much lower in northern Europe relative to the southern rim. The average German family had net assets of under €200,000 ($277,000), while Spanish families had net assets of €300,000 ($416,000) on average, and those in Cyprus €670,000 ($929,000). Why? Because since the launch of the eurozone wages and consumer prices in Germany had stayed roughly constant. But in Greece, Italy, and Spain they had increased tremendously (figure 3.2). The result was that an apartment in Milan or Larnaka was much more expensive than one in Munich or Hamburg. Matching housing prices with the incomes of households in southern Europe would require another decade of declining values.

This was the problem that Milton Friedman had warned about earlier, and it would be very difficult to solve without a currency devaluation. Restoring competitiveness through wage cuts was proving extremely hard, even in countries with flexible labor markets such as Ireland. Hourly labor costs in the Irish business sector recorded a measly 2 percent decline between 2008 and 2011—and this was despite rapidly rising unemployment. In Greece, nominal wages have fallen by 20 percent so far, but it has taken six years, five finance ministers, and three prime ministers to get here. And there is a still a long way to go. Latvia, by contrast, did it in three years after the onset of the crisis, and by 2012 it was enjoying rising employment (Åslund 2010).

During an informal Ecofin meeting in Nicosia in September 2012, there was a discussion about whether the euro could have been conceived differently. And whether, in particular, southern rim countries could have waited to enter it. "No" was the answer by policymakers such as Luxembourg prime minister Jean-Claude Juncker who were involved in the birth of the euro: "European

Figure 3.2 Nominal unit labor costs in the eurozone, 2011



Source: Eurostat, http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database (accessed on February 27, 2014).

integration was the main motivation, and it was felt that whatever difficulties emerged would be dealt with in transit." In all likelihood, though, expectations did not include anything on the scale of the 2008 crisis. I hasten to note, however, that even in the most trying periods of the euro crisis, such as in the fall of 2011, Juncker remained confident the eurozone would leave these troubles behind and be stronger for it.

Origins of the Euro

Difficult decisions—that was what I expected coming into my first Ecofin meetings. At the time, no one expected the crisis to last long. The European Commission was forecasting an economic recovery by late 2011. But the more seasoned politicians were cautioning against such forecasts. As Jean-Claude Juncker observed when we first met in October 2009, "Finance ministers are always reviled for not giving enough money. But your time in government will be especially difficult." In retrospect, this statement defined my government career in Bulgaria. There was never enough money, and I was always blamed for it. The euro crisis affected Bulgaria through falling investments and trade with Europe and troubles with Greek banks. But it also affected me by turning nearly everyone against the finance minister. Few of my fellow ministers understood the situation, but they helped me as much as they could. So did the prime minister, most of the time. That said, I could count my supporters on two hands.

To feel comfortable in the discussions in the Ecofin, I had to meet the main characters. I knew some of the finance ministers from my time at the World Bank—for example, Polish finance minister Jan Vincent-Rostowski, Swedish finance minister Anders Borg, and the French minister, Christine Lagarde. And I had read a lot about the longest-serving European prime minister, Jean-Claude Juncker. At the first Ecofin meeting, he was the person I wanted to meet the most. I asked him how best to understand the current troubles in the eurozone. "Read about Jean Monnet" was his answer. In other words, to understand the creation of the eurozone, one had to understand how the EEC came about. And, indeed, history is perhaps best understood from the insider's point of view. Although Monnet never occupied public office, in 1955 he founded the Action Committee for the United States of Europe to encourage European integration. The Action Committee brought political parties and European trade unions together and laid the foundation for the EEC, later to become the European Union. After Jean Monnet's memoirs, I delved into Pierre Werner's and Jacques Delors's writings. Werner was prime minister of Luxembourg from 1959 to 1974 and from 1979 to 1984. In 1970 he was given the mandate by the heads of the EEC governments to draft a plan for an economic and monetary union within the Community. The "Werner Plan" was later extended by Jacques Delors, a French socialist who served as the eighth president of the European Commission from January 1985 to December 1994. Together, these men contributed the most to what is now the eurozone.

The road to the eurozone can be divided into three steps. The first was the creation of the European Monetary Mechanism in 1979. Its origin lies in the turmoil in the international currency markets in 1968–69 that threatened the common agricultural policy, a main pillar of the EEC. In response, Europe's leaders set up a group led by Pierre Werner, prime minister and finance minister of Luxembourg at the time, to propose how a monetary union could be achieved by 1980.

The Werner group developed a process to create a monetary union within 10 years, including the possibility of a single currency. An agreement was signed in 1971, and member states began to narrow the fluctuations between their currencies. When in the late 1970s the United States went on an inflation binge under President Jimmy Carter, German chancellor Helmut Schmidt and French president Valéry Giscard d'Estaing pushed for the creation of the European Monetary System. Schmidt was concerned that the German mark would appreciate against the dollar and some other European currencies and would hurt German exports. Giscard d'Estaing did not want France to rejoin the "currency snake" because it functioned asymmetrically.

After tough negotiations between France and Germany, and over the strong objections of Denmark and the United Kingdom, the Bremen summit in July 1978 accepted the idea of a "zone of monetary stability" (Ludlow 1982). In 1979 it became a reality. It was advocated as a more flexible version of the Bretton Woods system that had governed global foreign exchange arrangements until 1973. This comparison is increasingly used by academics in proposing solutions for the euro ills. Polish economist Leszek Balcerowicz made the point the most clearly: The euro should be viewed as a successor of other fixed exchange rate regimes such as the gold standard—with all their downsides.

With the blossoming of Reaganomics and with the soaring US dollar in the early 1980s, enthusiasm for exchange rate stability subsided. But with German unification and the weak dollar in the late 1980s, it gathered speed again. And from it arose the Maastricht Treaty, which represents the second step toward the eurozone. This new Treaty on European Union, which contained the provisions needed to implement the monetary union, was approved at the meeting of the European Council held in Maastricht, the Netherlands, in December 1991. The Council also agreed on the five Maastricht convergence criteria that each member state would have to meet to participate in the eurozone:

1. HICP (Harmonized Index of Consumer Prices) inflation (12-month average of yearly rates) must be no more than 1.5 percent higher than the arithmetic average of the HICP inflation rates in the three EU member states with the lowest HICP inflation. EU member states with an HICP rate significantly below the comparable rates in other member states do not qualify as a benchmark country for the reference value and are ignored.
2. The ratio of the annual general government deficit to GDP at market prices must not exceed 3 percent. Deficits "slightly above the limit" are not accepted unless it can be established that either the deficit ratio has declined substantially and continuously before reaching the level close to the 3 percent limit or the small deficit ratio excess above the 3 percent limit was caused by exceptional circumstances and is temporary in nature.
3. The ratio of gross government debt relative to GDP at market prices must not exceed 60 percent. Or if the debt-to-GDP ratio exceeds the 60 percent limit, the ratio shall at least be found to have sufficiently diminished and be approaching the reference value at a satisfactory pace.
4. Countries must have joined Exchange Rate Mechanism II (ERM II) under the European Monetary System for two consecutive years.
5. Long-term interest rates (average yields for 10-year government bonds in the past year) must be no more than 2 percent higher than the arithmetic average of the similar 10-year government bond yields in the three EU member states with the lowest HICP inflation. If any of the three EU member states of concern are suffering from interest rates significantly higher than the GDP-weighted eurozone average interest rate, then such a country will not qualify as a benchmark country for the reference value.

The Stability and Growth Pact in which these rules were laid out imposed financial fines for breaches of the criteria. It was hoped, however, that these sanctions would never be used. And yet in 2002 the excessive deficit procedure had already been initiated for France, Germany, and Portugal. This was at the insistence of Dutch finance minister Gerrit Zalm, who wanted the largest eurozone countries to be penalized just as small ones had been. After that, Germany ceased to be a strong backer of the Stability and Growth Pact, and its position changed only after the current crisis began.

A significant point of contention was the circumstances under which a deficit above 3 percent was not considered excessive. After several Ecofins devoted to this issue, a compromise was reached on December 13, 1996, in parallel sessions of Ecofin and the European Council in Dublin. It stated that a recession of less than 0.75 percent "as a rule" did not qualify as exceptional, whereas a recession of over 2 percent automatically did. If the recession was in between these two figures, Ecofin would determine whether the recession was exceptional. The result was a rule that could be overturned by an Ecofin minority of at least 26 out of 87 weighted votes or covering at least six member states if they refused to label a budgetary deficit of over 3 percent as "excessive."

The third step was the euro launch on January 1, 1999. At the same time, the eurozone came into operation, and monetary policy passed to the ECB, which had been established a few months earlier—June 1, 1998—in preparation for the third stage of the monetary union. After three years of working with the euro as "book money" alongside national currencies, the ECB placed euro banknotes and coins in circulation on January 1, 2002.

Early Troubles

Yves Thibault de Silguy, who was Europe's monetary affairs commissioner in 1998, argued in a 2012 interview that "without the euro at that time, the common market would have been finished. Without the euro tomorrow the common market will disappear rapidly."[1] Many disagreed, however.

Documents from 1994 to 1998 on the introduction of the euro suggest that the German government had deep misgivings about the date of the euro launch and especially about including Italy in it.[2] According to these documents, which were featured in a May 2012 article in the German newspaper *Der Spiegel*, the decision to invite Italy was based exclusively on political considerations. It also created a precedent for a similar decision two years later: to accept Greece into the eurozone. Instead of waiting until the economic requirements for a common currency were met, Chancellor Helmut Kohl wanted to demonstrate that Germany, even after its reunification, had a European orientation.

1. James Melik, "Euro in Crisis: Founders Reflect on Its Origins," BBC, June 13, 2012.

2. Sven Böll, Christian Reiermann, Michael Sauga, and Klaus Wiegrefe, "Operation Self-Deceit: New Documents Shine Light on Euro Birth Defects," *Der Spiegel*, May 8, 2012.

Although Kohl pushed through the common currency, Gerhard Schröder, the center-left Social Democratic Party candidate for the Chancellery at the time, was skeptical.

In February 1997, following a German-Italian summit, one German ministry of finance official noted that the government in Rome had suddenly claimed that its budget deficit was smaller than indicated by the International Monetary Fund. A few months later, Jürgen Stark, then state secretary in the German finance ministry, reported that the governments of Italy and Belgium had exerted pressure on their central bank heads. The top bankers were supposed to ensure that budget auditors would "not take such a critical approach" to the debt levels of the two countries. In early 1998, the Italian treasury published surprisingly positive figures on the country's financial development.

A bigger problem was neglected as well. In Maastricht, European leaders had agreed that the total debt of a euro candidate could be no more than 60 percent of its annual economic output, unless the ratio was declining sufficiently and rapidly approaching the reference value. Italy's debt level was twice that percentage, and between 1994 and 1997 its debt ratio declined by only 3 percentage points. "A debt level of 120 percent meant that this convergence criterion could not be satisfied," said Jürgen Stark in 2012. "But the politically relevant question was: Can founding members of the European Economic Community be left out?"

Government experts had known the answer for a long time. "Until well into 1997, we at the Finance Ministry did not believe that Italy would be able to satisfy the convergence criteria," said Klaus Regling, who at the time was the director for European and International Financial Relations at the German finance ministry. Regling now is the chief executive of the euro bailout fund, the European Stability Mechanism (ESM).

That skepticism is reflected in the German documents. On February 3, 1997, the German finance ministry noted that in Rome "important structural cost-saving measures were almost completely omitted, out of consideration for the social consensus." On April 22, speaker's notes for the chancellor stated that there was "almost no chance that Italy will fulfill the criteria." And on June 5, the economics department of the Chancellery reported that Italy's growth outlook was moderate and that progress on consolidation was overrated.[3]

Helmut Kohl was determined to finalize the monetary union before the 1998 parliamentary elections. But Germany had a problem of its own. The country's sovereign debt level was above the 60 percent mark. Even worse, Germany's total debt was not declining as the treaty required, but growing. Chancellor Kohl was aware of the problem. "In contrast to Belgium and Italy, the German debt level has risen since 1994," his staff wrote in a March 24, 1998, memo. "In our view, there is a legal problem in Germany's case, because the

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3. Ibid.

Maastricht Treaty only provides for an exception if the debt level is declining," the memo continues.

Kohl and his finance minister, Theo Waigel, claimed mitigating circumstances. Without German reunification, they argued, the debt ratio would only be 45 percent. The reasoning was accepted by both the European Commission and partner countries. Kurt Biedenkopf, who was at the time prime minister of the state of Saxony, was the only member of the Bundesrat, the legislative body that represents the German states, to vote against the monetary union. "Europe wasn't ready for that epochal step," said Biedenkopf to *Der Spiegel*. "Most politicians in Germany thought that the euro would function even without common institutions and without financial transfers. That was naïve."[4]

Danish citizens thought so, too. Denmark is the only country to twice reject euro entry: first in 1992 when Denmark voted in a referendum on the Maastricht Treaty, and second in 2000 when a referendum on introducing the euro yielded 46.8 percent voting yes and 53.2 percent voting no. In 2008 the newly elected government again raised the prospect of a euro referendum, but the ensuing financial crisis got in the way.[5]

The biggest skeptics about the euro have been the British (Begg 2009). In 1997 the UK government announced that any move toward the euro would depend on meeting five economic tests:

1. *Convergence of business cycles.* Business cycles in the eurozone and the United Kingdom must be compatible. The assessment depends on indicators such as inflation, interest rates, the output gap, and the real effective exchange rate with a view toward long-term convergence.
2. *Flexibility.* The UK economy must be flexible enough to ensure that any asymmetrical shocks can be absorbed by, for example, labor market flexibility and mobility and fiscal policy.
3. *Investment.* UK participation in the single currency must promote investment (foreign or domestic) in the long term.
4. *Financial services.* The eurozone must improve the competitive position of the United Kingdom's financial services industry, particularly in London.
5. *Growth, stability, and jobs.* Entry into the eurozone must have positive effects on employment and growth, measured by the impact on UK foreign trade, price differentials, and macroeconomic stability.

A first assessment of the tests by the treasury was carried out in June 2003. It found that the Chancellor of the Exchequer could not definitively conclude that convergence would be sustainable and that the economy was flexible

4. Ibid.

5. Marcus Walker, "Denmark Pushes for Vote to Adopt the Euro," *Financial Times*, November 5, 2008.

enough to cope with any difficulties with the eurozone. Therefore, a decision to adopt the euro was not in the national interest of the United Kingdom.

Even where the euro was welcome, it did not produce the expected result. A case in point was Portugal. It saw a sharp increase in capital inflows from 2000 on, but, whereas these led to a boom elsewhere, in Portugal they triggered a slump. Two factors were at work. First, underdeveloped credit markets in Portugal implied that most of the capital inflows went to fund the nontradable sectors—for example, the construction of municipal roads. As a result, productivity fell and the real exchange rate appreciated. Meanwhile, resources were taken away from the tradable sectors. Second, because of generous past promises on old-age pensions, the Portuguese government continually raised taxes between 2000 and 2007. The tax hikes discouraged work and, combined with the misallocation of resources, produced a slump. Some of the capital was used to sustain an increase in consumption over output. Productivity in the tradable sectors then suffered because of reduced learning by doing (more and more low-cost goods were being imported from low-wage countries such as China).

It was not surprising, then, that in June 2013 a book calling for withdrawal from the euro and a return to the escudo topped the bestseller list in Portugal. *Porque Debemos Sair do Euro* (*Why We Should Leave the Euro*) was written by Professor João Ferreira do Amaral from the Insituto Superior de Economia e Gestão. He began by saying, "In 1581 Portugal surrendered to Spain. In 1992 it laid itself at the feet of a European Commission increasingly answering to Germany's tune. There was no referendum, the voters were never consulted. The Portuguese elites, who hoped to benefit richly from European Structural Funds, cavalierly handed over our currency—and with it our monetary sovereignty. The rest is history" (p. 7).

Theory behind the Euro

The supporters of the euro had misgivings, too. The best description of these misgivings was voiced by Mario Draghi, president of the ECB: "The euro is like a bumblebee. This is a mystery of nature because it shouldn't fly but instead it does. So the euro was a bumblebee that flew very well for several years. And now—and I think people ask 'how come?'—probably there was something in the atmosphere, in the air, that made the bumblebee fly. Now something must have changed in the air, and we know what after the financial crisis. The bumblebee would have to graduate to a real bee. And that's what it's doing."[6]

The creation of the euro was based on economic theory—that of the optimal currency area. An optimal currency area is the geographic area in which a single currency would create the largest economic benefit. Work by Robert Mundell in the 1960s suggested that countries that share strong economic ties might benefit from a common currency. It would facilitate trade and allow for closer integration of capital markets.

6. Introductory remarks by Mario Draghi, president of the European Central Bank, at the Global Investment Conference, London, July 26, 2012.

Proponents pointed to the economies of scale in the creation of a currency area. First, there would be an economy in policymaking. When a small country fixes its currency to that of a larger country, it sets the course for the rest of its macroeconomic policies. Thus when in the 1970s Milton Friedman advised Yugoslavia to fix its dinar to the German mark, he based his advice on the argument that Germany had a better monetary policy than Yugoslavia. Second, a currency area is better insurance against external shocks. The more countries join a currency area, the smaller the proportion of any external disturbance to their output.

Much of the economics profession disagreed with Mundell's theory. James Meade, Mundell's teacher at the London School of Economics, was a strong believer in flexible exchange rates. He had suggested that the signers of the Treaty of Rome achieve balance of payments equilibrium by letting exchange rates float. Milton Friedman, like Meade, championed flexible exchange rates, but for different reasons. Meade saw flexible exchange rates as a tool for achieving external balance while freeing policy options for the implementation of national growth policies. Friedman, by contrast, saw flexible exchange rates as a way of getting rid of exchange and trade controls. Both economists saw flexible exchange rates as a means of altering real wages when wage rigidities would otherwise cause unemployment.

To his credit, Mundell also thought currency areas were not for everyone, and in a 1968 article he listed the reasons why a country might not join a currency area (Mundell 1968). Among these reasons were the following: if a country wants a rate of inflation different from the currency area inflation rate; if a country wants to use the exchange rate as an instrument of employment policy to lower or raise wages; if a country wants to use seigniorage as a source of hidden or off-budget funding for personal use by members of a corrupt dictatorship or naïve democratic government; if the political authorities cannot achieve a balanced budget or establish confidence in the permanence of budgetary equilibrium or the viability of fixed exchange rates; and if a country does not want to accept the degree of integration implied by joining, such as common standards or immigration, labor, or tax legislation.[7]

The European countries were a good match with Mundell's criteria for an optimal currency area (Mundell 1960, 227–57; 1961c, 509–17). In 1998–99, statistical work by Professor Andrew Rose at the University of California at Berkeley suggested that a common European currency might produce an increase in intra-European trade, perhaps as much as three times the previous trade volumes (Rose 2000, 9–45). That "fact" was critical in convincing politicians of the virtue of the euro. However, it turned out to be wrong, or at least significantly exaggerated. But European politicians wanted to believe it, and it continues to be used in policy discussions today, even though a large empirical literature points to much smaller effects.

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7. Robert Mundell, "A Plan for a World Currency," Joint Economic Committee, Hearings before [Reuss] Subcommittee on International Exchange and Payments, September 9, 1968.

How the Facts Differed from Theory

Since the creation of the eurozone, the statistical data accumulated have revealed rather modest gains in trade. Researchers have found that trade between pairs of the original 12 eurozone members increased by 15 percent from 1999 to 2002 beyond what could be explained by other factors. The estimates of the euro effect in a larger set of 22 industrialized countries ranged from 6 to 26 percent for the same period, depending on the type of estimation. More recently, Jeffrey Frankel analyzed different samples and found a similar effect: The euro led to a 15 percent increase in bilateral trade over the decade after its introduction (Frankel 2009). Another study found that countries sharing the euro experienced a boost in bilateral trade of between 9 and 14 percent over the period 1998–2005, depending on country size because smaller countries gain more (Chintrakarn 2008, 186–98). But all was far from the original promise.

At the very outset of the creation of the eurozone, two conditions were described as necessary for its success. First, there should be labor mobility so that workers can move from adversely affected areas to ones enjoying economic growth. This was already acknowledged by Mundell as a major condition for an optimal currency area (Mundell 1961a, 509–17; 1961b, 154–72).

Second, as advocated by US economist Peter Kenen, spending at the country or within-country regional level should have a large federal component to help in dealing with asymmetric shocks (Kenen 1969, 1995). Only a large enough transfer would keep people in the poorer regions from flocking to the richer ones. Such a mechanism was indeed created, the so-called structural funds. But because the European Union's budget is less than 1 percent of Europe's GDP, it would prove insufficient. The US federal budget is, by contrast, 24 percent of GDP.

Even without these two necessary conditions, entering the eurozone is problematic. But even with them, problems exist. The main disadvantage of entering the eurozone is the loss of flexibility. Changes in relative prices and wages are easily implemented through currency depreciation. It is a lot more difficult to do so by negotiating with labor unions or renegotiating individual contracts. Most European constitutions prohibit reductions in social guarantees.

In early 2010, in a single effort Iceland achieved a 30 percent fall in wages relative to the European core by depreciating the krona. Latvia and Romania tried to induce reductions in the pensions of public servants, only to see these policies reversed by the constitutional court. They then had to resort to steep cuts in the public administration and in public sector salaries. Cyprus, Greece, and Spain need at least a comparable adjustment. But it requires several years of wage reductions in the face of high unemployment. Greece is a testimony to this gradual approach. In Portugal, the constitutional court made it illegal to reduce the salaries of public officials. The government of Pedro Passos Coelho was then left scrambling to find a further €4 billion ($5.5 billion) in budget cuts to keep the 2013 budget on track. The result was the resignation two months later of the able finance minister, Vítor Gaspar.