

Sauer, Ingo

**Article**

## The Dissolving Asset Backing of the Euro

CESifo Forum

**Provided in Cooperation with:**

Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

*Suggested Citation:* Sauer, Ingo (2012) : The Dissolving Asset Backing of the Euro, CESifo Forum, ISSN 2190-717X, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol. 13, Iss. Special Issue, pp. 63-72

This Version is available at:

<https://hdl.handle.net/10419/166514>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

## THE DISSOLVING ASSET BACKING OF THE EURO

INGO SAUER\*

In the course of the debate on the Target credits of the Eurosystem it has become evident in recent months that an increasingly large share of the credit-created money supply (as much as two-thirds by the end of 2010) was actually issued in the GIPS countries (Greece, Ireland, Portugal and Spain). In this regard, the fear held by numerous Germans when the euro was introduced – that at some point they would be carrying southern European bank notes in their wallets – has largely become reality. But does it matter where the money supply was issued and what the purchase of government bonds by the central banks of the Eurosystem implies about the stability of the currency? This paper will try to answer these questions.

We shall focus on the relationship (or disparity) between the central bank money supply (M0) and the securities of the central banks activated at issue. When we refer to money supply or money we always mean central bank money (M0). It consists of the currency and deposits of the commercial banks at the central bank.<sup>1</sup>

### The institutional framework: the ECB<sup>2</sup> – only the torso of a central bank

Of course, the countries participating in the euro have not created the first currency union in history. Even if

conditions change and historical comparisons are only relevant to a limited extent, experience and insight may still be derived from history. Some scholars, who have dealt extensively with the history of currencies, recognized with frightening clarity from the beginning the construction flaws of the ESCB or the Eurosystem that are becoming visible now (Heinsohn and Steiger 2002). Since apparently economics is not (sufficiently) willing to delve into history, it is dammed to relive it anew.

Heinsohn and Steiger (2002) noted already a decade ago that the ECB is only the torso of a central bank and that its lacking competencies are not widely understood. Most (German) economists saw the ECB as a copy of the former Bundesbank or its predecessor, the Bank Deutscher Länder,<sup>3</sup> and were apparently not aware of the high degree of decentralization in the Eurosystem. However: “[t]he ECB and the euro area NCBs [national central banks] jointly contribute strategically and operationally, to attending the common goals of the Eurosystem, with due respect to the *principle of decentralization* in accordance with the Statute of the ESCB” (European Central Bank 2011, 191, emphasis added).

Criticism must especially be levied at the lack of control on the part of the ECB over the national central banks’ issuance of currency.

### *A wish: a true central bank*

Based on the experience gained from the Latin and Scandinavian monetary unions Erik Lindahl has propagated a central bank which truly stands above the national central banks for monetary unions of various nation states. While national central banks would still issue the notes for domestic purposes, for



\* Johann Wolfgang Goethe University, Frankfurt am Main.

<sup>1</sup> “Nowadays the cash base (monetary base) mostly consists of the liabilities of the central bank, primary notes, but also bankers’ balances at the central bank which the bankers can, if they wish, withdraw in note form to add to their own cash holdings” (Goodhart 1987). Setting deposits equal to notes is questionable in the Eurosystem, however. In contrast to the old Bundesbank and the Fed, in the Eurosystem there is no longer a uniform character of central bank money (notes equal deposits at the central bank), as one of the main characteristics of genuine money, lack of income, is no longer given for deposits. The deposits of commercial banks at their national central banks are interest bearing and treated just like demand deposits at a commercial bank. Correspondingly, the deposits at the national central banks in the Eurosystem should be defined as claims to central bank money and no longer as central bank money *per se* (see Heinsohn and Steiger 2008, 140).

<sup>2</sup> In accordance with Article 282(1) of the Treaty on European Union, the European Central Bank (ECB) and the national central banks constitute the European System of Central Banks (ESBC). The ECB and the national central banks of the Member States whose currency is the euro constitute the Eurosystem.

<sup>3</sup> The Bank Deutscher Länder (BdL), 1948 to 1958, was more decentralized in its decision-making than the Bundesbank. The Council of Governors consisted of the eleven presidents of the state central banks (Landeszentralbanken) and the six Executive Directors of the BdL, but the BdL Directors had decision-making powers without waiting for the Council’s consent. In addition, the BdL had the monopoly of issuing notes. The ECB is therefore not at all comparable to the old BdL.

cross-border transactions they would have to obtain 'international currency' from this central bank of central banks (the 'Main Central Bank' – see also Steiger 2002, 3) – in the same manner that commercial banks refinance with their central bank (Lindahl 1930, 170).

A similar – and still more far-reaching – proposal for a central bank of the national central banks, which carries the submitted good securities of national central banks and thereby strictly controls the issue of notes, has in fact been made for the euro. Here the national central banks could not issue euros independently, but would have to obtain them against their good securities. Carlo Ciampi, the then Italian central bank president, campaigned for such an institution in 1988: “to bring the creation of ECUs [euros] under strict control, the central monetary institution should be given the power to grant member central banks discretionary credit in ECUs, in the same way as a central bank refinances commercial banks through open market or rediscount operations” (Heinson and Steiger 2002, 6).

If such a structure is not given, other measures must be taken to prevent an excessive issue of poorly secured notes by individual central banks (Target problem). A regular settlement of claims and liabilities like that in the Federal Reserve System (see Sinn and Wollmershäuser 2011, 48–50) or an agency that keeps an eye on the respective sums would have been an advantage. The problem that claims and liabilities between note-issuing banks are created – and then the excessive, poorly secured issuance of individual note-issuing banks puts other note-issuing banks at risk – is not really new. The private note-issuing banks of England in the 18th century created the institution of a *clearing house* in 1773 to oversee these amounts. This case is only partly comparable, however, as at the time excessive issuing could result in discounts on the issued notes, whereas today the central banks belonging to the Eurosystem must accept the Greek ‘Y euros’<sup>4</sup> (meant are the Target claims) without any discount.

*The facts (1): the ECB – a central bank without notes*

“A first glance at its [the ECB’s] balance sheet immediately reveals [...] that this bank is in no way whatsoever a ‘bank of issue’. [...] The ECB balance sheet as at 31 December 2000 does neither have lending to

financial sector nor central bank money. Thus, the ECB is clearly *not* a bank of issue, *i.e.* it is excluded from the main refinancing operations of the Eurosystem. To have an independent balance sheet, which the ECB indeed has, is not sufficient to meet the requirements of a bank of issue” (Heinsohn and Steiger 2002, 8).

The aforementioned statement refers to the balance sheet of the ECB of December 31, 2001, *i.e.* before the balance sheet of January, 1 2002 for the first time carried the position ‘lending to financial sector’ (asset side) or ‘banknotes in circulation’ (liability side). To be sure, this applies only to the negligible 8 percent of the entire position ‘banknotes in circulation’ in the consolidated balance sheet of the Eurosystem. Furthermore, these notes (the aforementioned 8 percent) also continue to be issued by the national central banks and are only booked in the balance sheet of the ECB as ECB notes. The ECB can also issue money itself by means of permitted operations, for example intervening in the foreign currency market. However, the most important monetary policy operations, repurchase agreements and longer-term refinancing operations, are not transacted by the ECB but by the national central banks (European Central Bank 2000, 15; Steiger 2002, 22).

*The facts (2): the lack of power of the Executive Board*

The members of the Executive Board have only six of 23 votes in the Governing Council and the Executive Board is therefore in no way comparable to the powerful directorate of the former Bundesbank.

In Article 12 Section 1 of the Statute of the European System of Central Banks and the European Central Bank the most important component of the division of tasks between the Governing Council and the Executive Board is laid down: “the Governing Council shall formulate the monetary policy of the Union including, as appropriate, decisions relating to intermediate monetary objectives, key interest rates and the supply of reserves in the ESCB, and shall establish the necessary guidelines for their implementation. The Executive Board shall implement monetary policy in accordance with the guidelines and decisions laid down by the Governing Council”.

It is evident that the *decision powers* of the Executive Board are essentially limited to its share of votes (about one quarter). In its Annual Report, the ECB logically notes as a main responsibility of the

<sup>4</sup> The various euro notes can be identified by a letter in front of the serial number as to which central bank of the Eurosystem issued it. Y stands for the Greek central bank, whereas X, for example, identifies the Bundesbank.

Executive Board ‘to prepare the meetings of the Governing Council’ (European Central Bank 2011, 194). Besides the above-mentioned implementation of monetary policy, the Directorate also manages the current business of the ECB and may assume ‘certain powers delegated to it by the *Governing Council*, including some of a regulatory nature’ (European Central Bank 2011, 194, emphasis added).

It is therefore the Governing Council, in which – in addition to the six members of the Executive Board – each country has an equal vote regardless of its national income or its equity share in the capital of the ECB,<sup>5</sup> which decides on monetary policy and hence the fate of the euro.

#### *The Bundesbank has no choice*

Maintaining the banking rules, i.e. the requirement of appropriate collateral, does not protect the Bundesbank in the Eurosystem from having to enter risky claims against other central banks or the ECB into its books. If the claim is risky, the Bundesbank has to suffer a write-down of its assets. This problem was again alluded to by Heinsohn and Steiger (Heinsohn and Steiger 2003, 12) in their paper under the heading *Virtuousness is no protection* way before this became an issue of concern. But from 2007 on the “Bundesbank was involved inasmuch as most of the money freshly ‘printed’ in the GIPS flowed into its jurisdiction and crowded out its refinancing operations one to one. [...] As a compensation for the credits it could have given to the German commercial banks [...] the Bundesbank did acquire a corresponding claim on the Eurosystem” (Sinn and Wollmershäuser 2011, 3). For the Bundesbank therefore, a (possible and probable) claim on German commercial banks, which would likely have been based on sufficient collateral, changed into a claim<sup>6</sup> against the ECB. To the extent of the additional risk of this claim German taxpayers’ property was destroyed.

#### *Divergence of decision and liability*

Many economic problems and questions, from environmental damage to major causes of the recent financial crisis, may be described by the simple formula of diver-

gence of decision and liability. Whereas the excessive pollutant emission may be traced to the insufficient impact of the individual on environmental damage, the banks have used the low equity ratios (recoverable assets) ‘before’ the crisis to socialize the risk of loss (divided between creditor and taxpayer). It is these externalities – that the damage must be borne not only by the acting party but also by other people – that lead to dysfunctional markets. Functioning markets (without externalities) are merciless and beneficial at the same time. Misconduct of the individual actor is punished mercilessly, which, however, leads to a social optimum as no one has to pay for the costs caused by someone else without being compensated (without compensation money flowing over the market). Important here is not only protection against damage but that – only *via* the market mechanism, as it considers all preferences and brings them into balance – the optimum of the total use of resources or means is achieved. The liability of the individual for his conduct is the most important prerequisite for this system to work.

*In the Eurosystem, however, liability is largely socialized:* “pursuant to Article 32.4 of the ESCB Statute, all risks from these operations, provided they materialise (sic), are shared among the Eurosystem national central banks in proportion to the prevailing ECB capital shares”.<sup>7</sup> This fact refers to the two major risk-relevant positions in the balance sheet of the central banks, lending to euro area credit institutions (main refinancing operations, longer-term refinancing operations) and securities that have been purchased as part of the Security Market Program (SMP).

Although decisions on collateral requirements and the purchase of securities are made jointly in the Governing Council, the hoped-for benefit is not shared equally among the electorate. Whereas some understandably worry about the refinancing of their commercial banks and governments and push for a reduction of the quality standards of collateral as well as the purchase of securities (SMP and CBPP<sup>8</sup>), others must assume liability for these measures.

<sup>7</sup> Bundesbank (2011, 167/168). According to Article 32.4 of the Statute of the European System of Central Banks and the European Central Bank, the ECB Council can decide that the national central banks are compensated for costs connected to the issuance of notes or under extraordinary circumstances for specific losses from monetary policy operations undertaken for the ESCB (Official Journal of the European Union C 115/243, 9 May 2008).

<sup>8</sup> In addition to the Security Market Program (SMP) the Governing Council has established another program, the Covered Bond Purchase Program (CBPP). As part of this program the ECB and the national central banks have purchased covered bank bonds totaling 60 billion euros on the primary and secondary markets in the course of one year. See *The Impact of the Eurosystem’s Covered Bond Purchase Programme on the Primary and Secondary Markets*, Occasional Paper 122, January 2011.

<sup>5</sup> There are several exceptions. According to Article 10, Section 3 of the Statute of the European System of Central Banks and the European Central Bank, all votes on decisions regarding articles 28, 29, 30, 32 and 33 are weighted with the shares of the national central banks in the capital of the ECB, whereas the votes of the Executive Board are weighted with zero. The articles concerned contain no rules on monetary policy (see Official Journal of the European Union C115/234, 9 May 2008).

<sup>6</sup> However, if one of the Target debtor countries defaults, the claim must only be borne by the Bundesbank according to its share in the Eurosystem.

*The rescue funds set up by the present governments stand in the tradition of socializing the liability by the central bank system.* Germany has now officially (and in large volume) agreed to assume liability for other sovereign debts. The major problem from a pan-European point of view – as noted – does not consist in the transfer of creditworthiness or capital in itself, but in the disincentives for the excessive incurrence of debt by the recipients.

### Imperative asset backing of the currency

Do existing risk positions in the balance sheet of the ECB and balance sheets of the national central banks constitute a problem for the stability of the currency, even if the monetary base is not to be expanded?

At first this question may seem trivial, as the incurred risk should have a negative effect on the stability of the currency. In most textbooks, however, the key words ‘causes of inflation’ do not apply to risky positions in the assets of the central bank (see e.g. Issing 1998, 200–216). Further, write-downs or losses of the central bank are not cited as possible causes of inflation or a devaluation of the currency in standard textbooks.<sup>9</sup>

#### *The issuer’s power to sterilize the outstanding money supply*

Although the asset backing of issued notes, i.e. securing their back flow, is hardly ever found in current textbooks, it played an important role in the *banking-currency debate*. Whereas *currency theoreticians* insisted on the complete metal backing of the notes beyond a given unchangeable amount, perhaps the most important argument of the *Banking School* was the *Real Bills Doctrine* that postulated “that bank notes, which are lend in exchange for *real bills*, i.e. titles to real value or value in the process, cannot be issued in excess” (Green 1987). The argument of the *Banking School* becomes even clearer in the term of the ‘*law of reflux*’, coined by Tooke and Fullarton as a modification of the *Real Bills Doctrine*. Tooke referred to the fact that an excessive issuance of notes was impossible if the issuance of notes is done on the basis of sufficient collateral (see Rieter 1971, 138), as this would guarantee the back flow of the notes.<sup>10</sup> According to

‘the law of reflux [...] overissue was possible only for limited periods because notes would immediately return to the issuer for repayment of loans’ (Schwartz 2008). Therefore, what is decisive is the power of the issuer – to sterilize the issued notes again – and not the form of the assets behind that power, whether these be physical assets (e.g. gold) or pure legal claims (e.g. promissory notes).

#### *Money as (implicit) claim against the assets of the issuer*

As a result of the elimination of the exchange obligation and metal backing of currencies – the Australian central bank maintains no precious metals among its assets – the idea of an entirely unsecured paper currency which is accepted as medium of exchange only because of social convention has been put forward by many economists. For example, in one of the most used macroeconomic textbook for beginning students, Mankiw, its author, states: “finally the gold backing becomes irrelevant. If no one ever bothers to redeem the bills for gold, no one cares if the option is abandoned. As long as everyone continues to accept the paper bills in exchange, they will have value and serve as money. ... [In] the end, the use of money in exchange is a social convention: everyone values fiat money because they expect everyone else to value it” (Mankiw 2002, 79).

The money supply issued by modern central banks continues, of course, to be backed by the assets of the central bank, even though physical stocks (precious metals) increasingly had to make way for non-physical assets (claims, foreign exchange or securities). Further, the redeemability continues to be available. In contrast to the early central banks (in the USA even up to 1971), not every note holder has a legal right to redemption, but redemption continues, of course, to take place. It is limited, however, to commercial banks that have been authorized as central bank counterparties. For example, at the end of a security repurchase agreement, the central bank not only has to cancel the claim against the commercial bank that returns notes but, of course, must also return the previously submitted asset (the security). The outright sale of central bank assets (like gold, foreign exchange or government bonds) has the same effect as a redemption, where again only central bank

<sup>9</sup> In many standard economic books the capital of the central bank is not even mentioned, see e.g. Bofinger (2001) and Blanchard (2003), or it is defined – as by Krugman and Obstfeld (2003, 486f.) or Mishkin (2001, 214–215, 392–394) – as negligible and only relevant for commercial banks.

<sup>10</sup> Tooke is mentioned here because in contrast to the *anti-bullionists* he not only considers trade bills to be sufficient collateral but any kind of security that is solid enough to warrant the reflux of notes (see Rieter 1971, 138).



counterparties have the right to purchase, i.e. to redeem the notes (Heinsohn and Steiger 2008, 150). *Regardless of the limitation of the specific business partners and points in time, the central bank never redeems money (diminishes M0) without, in return, transferring an asset to the submitter of the notes.* Thus money not only has value because it is a social convention but also because it is constantly needed to repay debts to the central bank, to retrieve deposited collateral, and to purchase assets from the central bank. Declaring a currency as legal tender<sup>11</sup> and collecting taxes in this currency does not suffice for acceptance by the public. Therefore it is the power of sterilization of the money supply, the backing of the notes, that leads to its acceptance – and thus the stability of the currency. Totally inconvertible fiduciary money, which no one would need to repay loans at the central bank or to redeem his collateral, and for which no one could hope that the central bank would confer assets (gold, foreign exchange, securities) in return for submitting notes – because the central bank, due to the lack of collateralized currency, does not have any – can never attain the acceptance of money that is backed by the assets of the issuer. For money is a legal right to a creditor's assets (Heinsohn and Steiger 2006, 182) or an implicit claim against the assets of the issuer.<sup>12</sup>

We now have the opportunity to finally understand this, as in the course of the disequilibria between the central banks of the Eurosystem economists have noted that in the central banks' balance sheets the money supply is entered as a liability. The Target debt of a country corresponds to the share of its issued notes that are circulating abroad. These represent a claim against the assets of the central bank (the issuer). If the issuer is subject to an exchange obligation, the claim against the issuer is of a real nature; if there is no exchange obligation, the notes only imply such a claim against its assets (nonetheless *via* this implicit claim the notes gain value). The US Treasury describes money as follows: "Federal Reserve notes are claims on the assets of the issuing Federal Reserve bank".<sup>13</sup> This claim is concrete only for other US Federal Reserve Banks during the annual settlement

in April when each of the twelve Federal Reserve Banks must repay its liabilities (notes issued that are held by one of the other Federal Reserve Banks) with specified marketable assets (see Sinn and Wollmershäuser 2011, 41). For all other holders of the notes the claim against the assets of the issuer is only implicit.

It is important to understand that a central bank, at least if it is subject to a legal exchange obligation (obligation of redemption), cannot avoid insolvency by issuing additional notes, as it creates new claims against itself with these notes.<sup>14</sup>

An attempt to dispel this recurring misunderstanding of how a *note-issuing* bank can ever become insolvent was made by James Steuart as early as two and a half centuries ago: "I have dwelt the longer upon this circumstance, because many, who are unacquainted with the nature of banks, have a difficulty to comprehend how they should ever be at a loss of money, as they have a mint of their own, which requires nothing but paper and ink to create millions. But if they consider the principles of banking, they will find that every note issued for value consumed, in place of value received and preserved, is neither more or less, than a partial spending, either of their capital [equity], or profits of the bank" (Steuart 1767 (1993), 151).

But even if the central bank is not subject to a legal exchange obligation (obligation of redemption), it is nevertheless essential that in creating money it effects an implicit safeguarding of its reflux (= activating a valuable asset on the asset side of its balance sheet). A central bank's capability to act is based on these assets. If a central bank, for example, wants to prop up the value of the currency, it is forced to sell assets or foreign exchange. In case of speculation against its currency, the central bank must be able to sterilize the currency sold by the speculators by outright sales of assets or foreign exchange.

If, however, the power of the central bank to sterilize the issued money supply is necessary for the stabilization of the currency, then the loss of this power (= a loss in value of the central bank's assets) implies a destabilization of the currency – in this case the euro. If the later to be derived risks in the central banks bal-

<sup>11</sup> The so-called acceptance obligation applies only to cash. Accordingly, a creditor or business partner need not accept payment in foreign currency or claim transfer if this was not legally agreed in the contract. In EMU, euro cash has been the exclusive legal tender (there are restrictions for coins) since 1 January 2002 (see Article 14 Section 1 p. 2 Bundesbank Act).

<sup>12</sup> Such purely inconvertible fiduciary money existed and still exists in socialistic societies. There the notes do not represent a claim against the issuer, but only a 'coupon for merchandise redemption' guaranteed by the state. See the differentiation between 'creditor's money' and 'debtor's money' described in the following. On money in no-property-owning societies see also Stadermann and Steiger (2001).

<sup>13</sup> US Treasury (2005), quoted from Heinsohn and Steiger (2008, 120).

<sup>14</sup> It is this mechanism that is not understood by Buiter when, in a criticism of Sinn and Wollmershäuser (2011), he refers to the fact that each Fed branch can procure the needed assets for the annual settlement by additionally issued notes (see Sinn and Wollmershäuser 2011, 44–54).

ance sheets of the Eurosystem become overwhelming, the losses must be written down in the banks' capital. If the capital is exhausted or even becomes negative, the countries, as Charles Goodhart emphasized, must as a last resort stand behind the liabilities of the central banks, transfer assets (normally debt certificates) to the central banks and thereby restore the central banks' capability to act and to retire notes in the required and necessary volume.<sup>15</sup> If the states are incapable of doing that because they cannot incur additional debt in the amount needed, the euro will lose acceptance and – with inflationary implications – must depreciate. If the central banks were to suffer massive losses, it remains to be seen whether the aging people of Europe (especially including Germans) would obtain loans from private capital providers to offset the write-downs in the central banks' balance sheets. Of course, the risk is extremely high that if it is difficult to raise loans and/or interest rates are high, the prohibition of monetary financing of the public sector is circumvented and the central banks grant loans directly to the governments. This would surely be *the start* of a more severe inflationary period.

*Capitalization of an asset enabling the issuer to sterilize the money supply*

Decisive when considering money creation is not only the quantity of money issued but also, and arguably more important, the way it is created. The difference in money creation becomes especially evident with the outright purchase of government bonds. Serious central banks are not allowed to grant credit directly to the government (prohibition of monetary financing of the public sector),<sup>16</sup> but they may purchase government bonds on the *secondary market*. With the purchase of bonds on the *secondary market* the government can only incur debt if the investors believe it will honor its obligations. Government bonds thus have a value that is verified by the market at a particular point in time. If, however, the central bank monetized the government debt by acquiring government bonds directly from the state and at a price that private investors would never pay, it issues, according to the terminology of ownership economics, unsecured 'debtor's money'.<sup>17</sup> In this case, the central bank is unable to sterilize the created money (to the full amount) by selling the bonds. It is this trivial differ-

ence of how money is created that is ignored by many economists when they simply speak about 'printing money'. But in creating money the question arises whether the central bank activates a valuable asset that enables it to sterilize the money supply again (termed 'creditor's money'<sup>18</sup>) or whether it does not activate an asset enabling it to sterilize the money supply (termed 'debtor money'). In connection with the rule that all liquidity creating operations of the Eurosystem must be based on collateral,<sup>19</sup> the prohibition of monetary financing and the privileged access by public institutions<sup>20</sup> guarantees as a basic principle the issue of 'creditor's money'.

The various instruments of money creation differ, however, depending on their design, in the solidity of the backing of the money supply issued. With the (normal) issuance of credit-created money, the accepted asset (the collateral) becomes relevant to the central bank only in a second stage, as initially a claim exists against the commercial bank.

With the outright purchase of assets this claim against the commercial bank does not exist and the central bank bears the full risk of market valuation. Thus the central bank incurs high risks with an outright purchase of assets. The central bank should therefore limit the quantity of the positions of outright purchased assets and acquire only such assets that have a low valuation risk.

In perpetuating the purchase of government bonds, there is in principle the problem that the central bank enables the state to have a higher or respectively cheaper debt and market verification of the value is rendered less effective. Once the purchases of the central bank are perpetuated, private investors (commercial banks) are willing to pay higher prices for government bonds as they can expect the central bank to buy (some of) these bonds from them and thereby to stabilize their value. This mechanism, which renders the market correction ineffective, comes close to monetary financing or a decoupling of money from property liability and has been accurately described in 1994 as a central bank deficiency<sup>21</sup> (Stadermann 1994, 202).

<sup>18</sup> Property economics uses the term 'creditor's money'. The creditor is namely liable with his property for the issued notes as they imply a right to his property (see Heinsohn and Steiger 2008).

<sup>19</sup> Article 18 of the Statute of the European System of Central Banks and of the European Central Bank (Official Journal of the European Union C 115/238, 9 May 2008).

<sup>20</sup> Article 123 Section 1 of the Treaty on the Functioning of the European Union (Official Journal of the European Union C 115/99, 9 May 2008).

<sup>21</sup> Original: 'Zentralbankdefekt'.

<sup>15</sup> See Goodhart (2002, 234): "what stands behind the liabilities of the CB [central bank] is not the capital of the CB but the strength and taxing power of the State".

<sup>16</sup> See Article 123, Section 1 of the Treaty on the Functioning of the European Union (Official Journal of the European Union C 115/99, 9 May 2008).

<sup>17</sup> See e.g. Stadermann and Steiger (2001, 32).

The central banks of the Eurosystem therefore massively jeopardize the value of the currency, according to the decisions of the Governing Council, by lowering the standards<sup>22</sup> for central bank eligible collateral and by conducting the outright purchase of risky assets. Not (only) the mere quantity of money issue is important for the stability of the currency, but also the backing of the notes issued, i.e. the risk position of the assets of the central bank balance sheets.<sup>23</sup>

When the European Central Bank justified the purchase of bonds of highly indebted states with the argument that it would withdraw the same amount of liquidity from the market elsewhere in the system and therefore the stability of the currency would not be jeopardized, there was massive criticism, but many economists agreed with this purely quantitative logic.<sup>24</sup> On the intervention of the ECB, Trichet emphasized constantly that there would be no quantitative easing in the Eurosystem, in contrast to what the Fed and the Bank of England have done. The liquidity provided through the Security Market Program would be absorbed by collections of fixed-term deposits.<sup>25</sup>

These liquidity operations however, absorb only money in circulation but do not diminish the money supply M0. Even if the risks of bond purchasing are entirely obvious – and cannot be avoided by (weekly) collections of fixed-term deposits – many economists seem to have a preponderantly mechanical understanding of the value of money. But it is not the quantity of the money *in circulation* that is (or would be) worrisome, but the backing accompanying the money supply (M0).

#### How bad is the asset backing of the euro?<sup>26</sup>

The two – before mentioned – positions in the central bank balance sheets of the Eurosystem – ‘lending to

euro area credit institutions’ and ‘securities of euro area residents’ – are cause for concern.

The ‘lending to euro area credit institutions’ (main refinancing operations, longer-term refinancing operations, etc.) are troubling because they are distributed in an increasingly asymmetrical manner to the national central banks of the monetary union (Target problem). By the end of 2010, two-thirds of the entire credit-created money supply of the Eurosystem was created by the GIPS central banks (see Sinn and Wollmershäuser 2011, 3) and secured by the activated claims and accepted collateral. In the annual balance sheet of the Bank of Greece, for example, the position ‘lending to euro area credit institutions’ increased twentyfold from 4.8 billion euros (2006) to 97.7 billion euros (2010).<sup>27</sup> These amounts reflect the Target claims of the ‘Target creditors’. Whether the Target claims will be met depends on the solidity of the claims of the Greek central bank, i.e. the solvency of its debtors and the accepted collateral, as the power of the Greek central bank to offset losses, its reserves and its equity has not been able to keep up with the expansion of its entire balance sheet. While the total assets increased from 34.9 billion euros (2006) to 138.6 billion euros (2010), the reserves increased only to a total of 2.4 billion euros.<sup>28</sup> If the reserves for personnel are deducted,<sup>29</sup> however, only 921 million euros remain. With this amount and its equity of 815 million euros (Bank of Greece 2011a, 59) the Greek central bank has to vouch for possible losses from the above-mentioned loans amounting to 97 billion euros and possible losses from securities held-to-maturity (23.9 billion euros).<sup>30</sup> Because the Greek government, as is well known, could not offset any deficits, the losses of the Greek central bank are inevitably transferred to the central banks of the Eurosystem holding the 87 billion Target claims against the Bank of Greece. This explains the central bankers’ fear of a default on the part of the Greek government and thus probably also of a majority of Greek banks including its central bank.

As the probability of a repayment of the Greek Target debt depends in the final analysis on the solvency of the Greek commercial banks and the solidity of the collateral deposited at the central bank, it is disquieting to read that, according to an estimate by

<sup>22</sup> The ECB decided on 6 May – after collateral requirements had been considerably eased – that in the future the commercial banks of the Eurosystem could offer Greek government bonds as collateral at the central bank, no matter how far the credit rating of the Greek state might fall (Official Journal of the European Union L 117, 11 May 2010).

<sup>23</sup> These risk positions include the claims against commercial banks, and if the commercial bank assumes greater risks – because, for example, the procurement of money at the central bank is simplified – the quality of the backing of the notes issued by the central bank will fall.

<sup>24</sup> See Weber (2010), Interview in *Börsenzeitung* of 1 June 2010; and also Häring (2010) reporting that the President of the Deutsche Bundesbank and hence a member of the ECB Council vehemently voiced his criticism of the purchases, however, among monetary experts outside the ECB Weber found little agreement.

<sup>25</sup> See Trichet (2010, 27).

<sup>26</sup> If not stated otherwise, all figures refer to the financial accounts of 31 December 2010. If an annual date is mentioned, the figures refer to the financial accounts of that year.

<sup>27</sup> See Bank of Greece (2008, 54) and (2011a, 58).

<sup>28</sup> See Bank of Greece (2008, 54) and (2011a, 58–59).

<sup>29</sup> In the summary of the Annual Report 2010 of the Bank of Greece, published in English, the position of provisions is not broken down any further. But in the Greek version the position provisions is broken down. See Bank of Greece (2011b, 33 (appendix)).

<sup>30</sup> See Bank of Greece (2011a, 58).



J.P. Morgan, the share of the government bonds in this collateral is expected to amount to 33 percent and the share of government-backed bank bonds to 38 percent (see Sinn and Wollmershäuser 2011, 24–25). Neither is it any comfort to read that almost two-thirds of the government debt of Greece, Ireland and Portugal are held by the banks of each country (Storbeck, Detering und Slodczyk 2011), as in these other ‘Target debtor countries’ a similar situation must be expected. The Target claims against the GIPS countries, which already amounted to 340 billion euros at the end of 2010, are not just a technicality, but a massive, hardly insurmountable risk for the asset backing of the euro.

The securities held are the second position of concern in the balance sheets of the central banks, which are mainly combined in the entry: ‘securities of euro area residents denominated in euros’. In the consolidated balance sheet of the Eurosystem (not to be confused with the balance sheet of the ECB that in 2010 accounted to only 8 percent of this consolidated balance sheet of all participating central banks) this position surged from 77 billion euros (2006) to 457 billion euros (2010).<sup>31</sup> This sum not only includes government bonds belonging to countries with a risk of default but also other securities. The entire position of government bonds held in the Eurosystem is, however, considerable bigger than the sum of the securities acquired as part of the Security Market Program (SMP), which is published weekly by the ECB and is always critically reviewed by the media (at the end of 2010: 73 billion euros). Thus, the Greek central bank holds 4.3 billion euros of *Greek* government bonds and 8 billion euros of other countries’ government bonds in addition to the position of the SMP (3.3 billion euros).<sup>32</sup> The government bonds of the SMP are, of course, not only held by the ECB, but also by national central banks. Thus, at the end of 2010, the ECB held government bonds amounting to 13.1 billion euros (European Central Bank 2011, 223), and the Bundesbank held 15.6 billion euros (Bundesbank 2011, 168). The Bundesbank must therefore also enter the risky positions in its balance sheet, the amount of which is determined by the Governing Council.<sup>33</sup> The default risks of these positions have, however, been socialized in the Eurosystem.

<sup>31</sup> European Central Bank (2011, 242).

<sup>32</sup> This information, too, is not found in the English summary of the Annual Report of the Bank of Greece, but it is in the Greek version of the appendix. See Bank of Greece (2011b, 19–21 (appendix)).

<sup>33</sup> ECB Press release of 10 May 2010 on the introduction of the SMP (excerpt): “the scope of the interventions will be determined by the Governing Council”.

It is also strange that in its Annual Report 2009 the ECB reported with respect to the government bonds (SMP) and the covered bonds (CBPP): “as at 31 December 2009 there was no objective evidence that these assets were impaired” (European Central Bank 2010, 211). In the Annual Report 2010 it states: “as a result of the impairment tests conducted as at 31 December 2010, no impairments *were recorded* for these securities” (European Central Bank 2011, 223, emphasis added). A look at the auditor’s report on the Annual Report 2010 shows that the accounting rules were changed by a decision of the Governing Council of 11 November 2010. Accounting is no longer performed according to the decision ECB/2006/17, but according to ECB/2010/21. Whereas in the earlier decision the accounting rule simply refers to the ‘market price at year-end’,<sup>34</sup> the new valuation principles for securities held-to-maturity (for monetary policy purposes) states: ‘cost subject to impairment (cost when the impairment is covered by a provision under liability item 13(b) ‘Provisions’)’.<sup>35</sup> Although these details seem technical and tedious, they would be of immediate interest if the losses were made public. The ECB traders would have been very lucky if they had not realized marked losses from purchasing securities with default risk in 2010 when these securities were under extreme pressure. It seems the Greek central bankers were that lucky, as the Financial Report of 2010 says: “marketable securities classified as held-to-maturity and non-marketable securities are valued at amortized cost subject to impairment. In financial year 2010 no impairment losses occurred” (Bank of Greece 2011a, 59). This is *unbelievably surprising* as at the end of 2010 the Bank of Greece held total government bonds classified as held-to-maturity of more than 15 billion euros, of which 4.3 billion euros were *Greek* government bonds.<sup>36</sup>

Of the balance sheet a total of 2,000 billion euros of the Eurosystem’s consolidated balance sheet approximately more than 600 billion euros are not solidly backed (Target problem and risky outright purchased securities). It is hard to say what share of this sum could wind up as loss at the central banks of the Eurosystem and how likely it is for this to happen. That is why these risks should not be assumed. It is a fact, however, that in case of default the citizens will bear the expense. Either the central bank losses will be offset by the governments, which have to incur new debt, or the euro loses accep-

<sup>34</sup> ECB/2006/17, Official Journal of the European Union L 348/43, 11 December 2006.

<sup>35</sup> ECB/2006/21, Official Journal of the European Union L 35/7, 2 February 2011.

<sup>36</sup> The individual positions: 3.3 billion euros (SMP), 4.3 billion euros Greek government bonds and 8 billion euros other government bonds. See Bank of Greece (2011b, 19–21 (appendix)).

tance (not only due to image damage) and depreciates – with inflationary consequences.

A default by Greece would lead to massive write-downs in the balance sheets of the Eurosystem, as the facts about the balance sheets show. It is understandable that the ECB fears this scenario. Thus Mr. Trichet, in an interview shortly before the crisis meeting of the heads of state at the end of July 2011, warned of possible losses that the central banks could incur: ‘if the decision leads to a partial default of Greece or insolvency – of which we, as mentioned, warn loudly and clearly – the governments would have to make sure that the Eurosystem is given collateral it can accept’.<sup>37</sup> It is indeed ironic that he, as speaker of the Governing Council, has now pointed to a risk that the Council took on of its own accord and described as ‘moderate’ (to continue to accept Greek government bonds as collateral despite the poorest ranking).

To be sure, politics has responded to the warnings by establishing a new rescue fund and in the process shifted the risks to the public budgets; but because it is not really effective, the Governing Council has again had to decide to purchase additional government bonds in order to defend the artificially high level of these securities. The basic problem of the risky positions in the balance sheets of the central banks was thus further exacerbated. But as Friedrich Schiller once pointed out: ‘this is the curse of an evil deed, that it incites and must bring forth more evil’.

### Conclusion: it is already five minutes past midnight

Credit is a magical instrument that makes tomorrow available today. It is only credit that allows us to live beyond our means. The availability, which is shifted from the future to the present, ought to be utilized today in order to warrant repayment plus interest tomorrow.

The risk that credits are not serviced is an intrinsic part of risk, as the future cannot be predicted. Private creditors always try to minimize this risk by granting credits only to trustworthy debtors who they deem capable of repayment plus interest and usually by requiring solid collateral. Because the debtor, if he is unable to repay his debt, fears recourse to his proper-

ty, he will do his best to make the payments. *This compatibility of inducement minimizes excessive granting of credit and ensures that it is employed for real and promising investments.* Of course debtors may err with respect to their investments and creditors may err regarding their debtors, but their motivation implies an efficient use of the credit.

Central bankers, however, are not private creditors who are limited in their actions by purely egoistic considerations such as maintaining and increasing their capital. Social and cyclical reasons can also play in central bankers’ decisions and they can waive interest payments or lower the requirements on collateral. There is disagreement on what restrictions are optimal for lenders especially during a crisis (the central bank’s function of the lender of last resort). Too generous lending bears enormous risks, i.e. that the funds will not be implemented in a way that guarantees later repayment and that the need for write-downs will increase.

At the outbreak of the financial crisis the ECB Governing Council – like many other central banks – acted fast and decisively, largely dispensing with interest payments and also increasingly lowering the requirements on collateral. Whether this step was necessary and correct is arguable, even though, once instituted, it is always difficult to abandon such a policy.

It is gradually becoming apparent that the measures of the Governing Council – flanked by the governmental guarantee programs – have degenerated to an attempt to stabilize asset prices (government bonds) at the wrong level. Acquisition of government bonds and other assets by commercial banks induced, caused and accounted for by the policies of the ECB Governing Council and the guarantees of the (somewhat) more solvent countries – which, however, suffer from the problems of ageing societies – have not led to real investments that will ensure repayment.

The inflated positions in the balance sheets of commercial and central banks (government bonds) must be written down. The write-down may be postponed or rebooked (from the financial sector to the public budgets), but not avoided. The fight against market equilibrium is – as we have learned, for example, from the history of artificially upheld exchange rates – a hopeless fight.

The hidden credits of the Eurosystem (Target balances), which were made possible by its construction flaws add to the other risky positions (government

<sup>37</sup> Original: “falls die Entscheidung zu einem teilweisen Zahlungsausfall [Griechenlands] oder einem Zahlungsausfall führt – vor dem wir, wie gesagt, laut und deutlich warnen –, müssten die Regierungen dafür sorgen, dass dem Euro-System Sicherheiten bereitgestellt werden, die es akzeptieren kann” (Trichet 2011).

bonds) and are almost perfectly correlated with these. The well-founded fear of politicians that the GIPS countries may default – the write-down in the financial sector would be massive for commercial and central banks – drives them to ever new measures and thus to a worsening of the problem.

A solution can now neither be expected from a refusal of guarantees and rescue packages combined with a restrictive monetary policy nor from the offer of additional measures. A look at the debt clock it tells us that for European countries with their ageing population it is already five past midnight.

Even if the delay in filing insolvency by Greece and Portugal is maintained for a few years or forever, the clock cannot be turned back. Because numerous other candidates have to face the dilemma in the medium term of (a) no longer being able to service their debt or (b) attempting to inflate the currency.

It is illusionary to expect the Target balances to be offset again, not only against this background. Whether the euro will break apart in an inescapable financial and government debt crisis or degenerate to a soft currency – perhaps by circumventing the prohibition of monetary financing – remains to be seen.

Greece, for which the unavoidable default manifests itself most clearly, is known for founding our civilization (*pólis*) and the development of the first monetary economy in antiquity. It would thus also be a worthy grave for the euro.

## References

- Bank of Greece (2008), *Annual Report 2007* (Summary), Athens.
- Bank of Greece (2009), *Annual Report 2008*, Athens.
- Bank of Greece (2011a), *Annual Report 2010* (Summary), Athens.
- Bank of Greece (2011b), *Annual Report 2010* (Greek Version), Athens.
- Blanchard, O. (2003), *Macroeconomics*, Upper Saddle River, NJ: Prentice Hall.
- Bofinger, P. (2001), *Monetary Policy: Goals, Institutions, Strategies, and Instruments*, Oxford: Oxford University Press.
- Bundesbank (2011), *Annual Report 2010*, Frankfurt am Main.
- European Central Bank (2000), *Die gemeinsame Geldpolitik in Stufe 3: Allgemeine Regelungen für die geldpolitischen Instrumente und Verfahren des Eurosystems*, Frankfurt am Main.
- European Central Bank (2008), *Durchführung der Geldpolitik im Euro-Währungsgebiet*, Frankfurt am Main.
- European Central Bank (2010), *Annual Report 2009*, Frankfurt am Main.
- European Central Bank (2011), *Annual Report 2010*, Frankfurt am Main.
- Goodhart, C.A.E. (1987), "Monetary Base", in: Eatwell, J., M. Milgate and P. Newman (eds.), *The New Palgrave: A Dictionary of Economics*, 5<sup>th</sup> edition, Palgrave Macmillan.
- Goodhart, C.A.E. (2002), "Myths about the Lender of Last Resort", in: Goodhart, C.A.E. and G. Illing (eds.), *Financial Crises, Contagion, and the Lender of Last Resort: A Reader*, Oxford University Press, Oxford, 227–245.
- Green, R. (2008), "Real Bills Doctrine", in: Durlauf, S.N. and L.E. Blume (eds.), *The New Palgrave: A Dictionary of Economics*, 2<sup>nd</sup> edition, Palgrave Macmillan.
- Häring, N. (2010), "Rückenwind für Präsident Trichet", *Handelsblatt*, 7 June.
- Heinsohn, G. and O. Steiger (2002), *The European Central Bank and the Eurosystem: An Analysis of the Missing Central Monetary Institution in the European Monetary Union*, Center for European Integration Studies, University of Bonn.
- Heinsohn, G. and O. Steiger (2003), "Des Eurokaisers neue Kleider: Ein Märchen über das Notenbankkostüm der Europäischen Zentralbank", in: Hankel, W., K.A. Schatzschneider and J. Starbatty (eds.), *Der Ökonom als Politiker – Europa, Geld und die soziale Frage: Festschrift für Wilhelm Nölling*, Stuttgart: Lucius & Lucius.
- Heinsohn, G. and O. Steiger (2006), *Eigentum, Zins und Geld: Ungelöste Rätsel der Wirtschaftswissenschaft*, Marburg: Metropolis.
- Heinsohn, G. and O. Steiger (2008), *Eigentumsökonomik*, Marburg: Metropolis.
- Issing, O. (1998), *Einführung in die Geldtheorie*, Munich: Verlag Franz Wahlen.
- Krugman P. and M. Obstfeld (2003), *International Economics: Theory and Policy*, Boston: Addison Wesley.
- Lindahl E. (1930), *Penningpolitikens medel (The means of monetary policy)*, Lund: C.W.K. Gleerup; (abbreviated translation) "The Rate of Interest and the Price Level", in: Lindahl, E. (1939), *Studies in the Theory of Money and Capital*, London: George Allen & Unwin, 139–268.
- Mankiw, N.G. (2002), *Macroeconomics*, 5<sup>th</sup> edition, New York: Worth Publishers.
- Mishkin, F. (2001), *The Economics of Money, Banking, and Financial Markets*, Boston: Addison Wesley.
- Rieter, H. (1971), *Die Gegenwärtige Inflationstheorie und ihre Ansätze im Werk von Thomas Tooke*, Berlin: Walter de Gruyter.
- Schwartz, A.J. (2008), "Banking School, Currency School, Free Banking School", in: Durlauf, N.J. and L.E. Blume (eds.), *The New Palgrave: A Dictionary of Economics*, 2<sup>nd</sup> edition, Palgrave Macmillan.
- Sinn, H-W. and T. Wollmershäuser (2011), "Target Loans, Current Account Balances and Capital Flows: The ECB's Rescue Facility", *CESifo Working Paper* No. 3500.
- Stadermann, H.-J. (1994), *Geldwirtschaft und Geldpolitik: Einführung in die Grundlagen*, Wiesbaden: Gabler.
- Stadermann, H.-J. und O. Steiger (2001), *Schulökonomik: Allgemeine Theorie der Wirtschaft*, Tübingen: Mohr Siebeck.
- Steiger, O. (2002), *Der Staat als Lender of Last Resort oder: Die Achillesferse des Eurosystems*, Center for European Integration Studies, University of Bonn.
- Steuart, J. (1767, 1993), *An Inquiry into the Principles of Political Oeconomy: Being an Essay on the Science of Domestic Policy in Free Nations*, London: A. Millar & Daddell; London; (reprint) Düsseldorf: Verlag Wirtschaft und Finanzen.
- Storbeck, O., M. Detering und K. Slodczyk (2011), "Die versteckte Gefahr", *Handelsblatt*, 18 July.
- Trichet, J.-C. (2011). "Wir bleiben der Euroanker", Interview in the *Financial Times Deutschland*, 18 July.
- Wicksell, K. (1922), *Vorlesungen über Nationalökonomie auf Grundlage des Marginalprinzips, Volume II: Geld und Kredit*, Jena.