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Currency Disintegration: Two Scenarios of Withdrawal

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Abstract

The article deals with a member's exit from the Eurozone to solve internal problems with the existing currency union. Taking Greece and Germany as examples, this paper examines the advantages and disadvantages, the process itself, and the consequences of withdrawal for both the exiting member and the monetary union as a whole. Additionally, the concept of parallel currencies (a national currency alongside the Euro) is outlined to address costs and related issues.

Keywords: *currency withdrawal, Euro disintegration, disintegration inflation, European government debt crisis, parallel currency*

JEL Classifications: E42, E59, F34

1. Introduction

A country's withdrawal from the European Monetary Union (EMU) suggests an effort to increase its political and economic sovereignty. *In political terms*, this may be an expression of rising nationalism given that a national currency–like a national flag or a national anthem–is a traditional symbol of national independence.[1] *In economic terms*, withdrawal diminishes the pressure to act as a net payer for the difficulties of single countries within the Eurozone. Furthermore, it avoids cost externalities such as the inflation tax as well as the spillover and crowding-out effects of national fiscal policies. Moreover, a country facing financial difficulties may be interested in an exit as a means of solving problems without the pressure of the community.[2] External sanctions for aid violations can thus also be avoided. Often

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1 Cf. Muth (1997), p. 109.

2 Regarding Iceland and Hungary, it is evident that the common currency cannot be blamed as solely responsible for the crisis. Nevertheless, it aggravates existing problems due to the lack of exchange rate adjustments and blocked access of national central banks to money and credit supply.

such countries face problems of acceptance in the general population concerning sanctions that are not decided upon at the national level but simply imposed from outside. The vehement resistance and unrest in Greece as well as the almost inexplicably counterproductive reactions of the citizens illustrate this problem. In the short run, a country's exit from the monetary union creates tremendous costs for that country. These include blocked access to bailout packages, insolvency issues, as well as a risk of collapse in the banking and enterprise sector.

By reintroducing its own currency, a highly stability-oriented country has the prospect of an internationally recognized, transaction-oriented investment and reserve currency status, such that withdrawal would be associated with a significant increase in central bank profits (seigniorage).[3] Generally, a separation from the monetary union makes it possible for countries to implement an independent monetary policy that is not bound to compromises. They could, for example, choose to orient themselves towards optimal national inflation rates, which would be determined according to historically known or current exchange rate expectations.[4]

In the following, two exit scenarios will be presented illustrating the withdrawal of Greece and Germany and the related problems and consequences.

2. The Withdrawal of Greece from the Eurozone

2.1 A Sustainable Decision for a Bumpy Road

A withdrawal combined with the introduction of a *Neä Drachmä* (ND) would imply a gain of sovereignty for Greece in both political and economic terms. The country was under Turkish dominion for about four centuries and was also subject to international financial control under German leadership for many years starting in 1898. Furthermore, the regime that occupied Greece during the World War II starting in 1941 intensified the historical impact on Greece. All of these issues have led to an enduring skepticism among the Greek population towards the influence of the EU in general and Germany in particular. They also resulted in economic framework conditions that destroyed the industrial base and have impaired the international competitiveness of the country for decades. The market liberalization of 1981, which was linked to the entry into the EU, led to a migration of production abroad. The reasons for this were the failure to reduce anticompetitive protections for certain sectors and guild-like structures. Foreign companies' production sites founded to overcome customs and trade barriers became pure sales sites. After the opening of Europe's eastern borders, new industrial bases developed outside the Union, competing with the Greek locations. Greece's political and economic struc-

[3] See Muth (1997), pp. 17 ff.; also Sinn and Feist (1997), p. 13.

[4] See Ohr (1993), p. 36.

tures have been deeply shaped by these experiences and might therefore also be resistant to rapid changes.[5]

In comparison with a sovereign default, the bailout packages cannot offer a sustainable solution to the crisis. In contrast, the packages are often used to pay off old debts and can thereby only be assessed positively from a foreign creditor's point of view. The savings measures led to recession, and the reform requirements are overcharging Greek society. Given the circumstances of rigid product and labor markets, the only way to improve the struggling country's competitiveness is by reintroducing Greece's former national currency and not by remaining in the Eurozone.

One could argue that a Greek exit would result in state bankruptcy due to exclusion from further bailout programs of the European Financial Stability Facility (EFSF)/European Stabilization Mechanism (ESM) and the European Central Bank (ECB). The capital market would remain closed. A bank run would ensue and the collapse of Greek financial institutions would plunge the country into chaos for a period of time. It would take years for the economy to pick up again, while an exit would also make reforms indispensable.

2.2 The Overcharge Hypothesis

The *overcharge hypothesis*[6] describes a country's flight from market-oriented fiscal discipline. In this scenario, when the perspectives for staying in the Eurozone are dismal, especially in the long run, a country will decide to readopt its old currency during a change of government. According to this idea, the reintroduction of the ND in Greece would be used by the Greek government to achieve a devaluation of government debt and a reduction of the money supply. However, in addition to staggered exchanges on a diminishing scale, this would result in unequal treatment of the owners of the receivables based on Euro-denominated debt.[7]

To the extent that they are able, holders of Euro-denominated debt would avoid changing to ND. Furthermore, expectations of devaluation would make the exchange unattractive. This would cause a low return of Euros to the Greek Central Bank. Consequently, the Greek Central Bank would be unable to repay its debts to the European System of Central Banks (ESCB). In this case, the ESCB might keep the Greek capital share and the currency reserves that were assigned to the ECB as collateral. Another consequence of the low return of Euros to the ESCB would be

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5 See in detail Knapp (2011).

6 Cf. Herdegen (1998), pp. 4 f.; see also Jaeger (2010) who reviews from the point of interest of the Member States an exclusion of Greece from the Eurozone as necessary as well as Rogoff (2011). Rogoff expresses itself in this interview for a time-limited exit from the Euro in connection with a plan for the re-entry for Greece and Portugal.

7 Progressively reduced exchange rates can serve in liquidity absorption and would amount to a capital levy. Similarly, state debt instruments could be given low exchange rates compared with cash and deposit money to increase the options for governmental action.

short-run inflation potential in the remaining countries of the monetary union. This is due to the difference between the alteration rate of the unions' social product (which declined with exit from the union) and the (lower) decline in the Euro money supply.[8] Especially in the border regions of the EU's neighboring countries, money holdings that have not been neutralized would lead to purchasing, which would in consequence raise the price of intangibles. The relatively small size of Greece–the country's gross domestic product (GDP) amounts to just over 2% of the EMU countries–makes the risk of *disintegration inflation* negligible. Besides, with a strict open market policy, the ECB could absorb surplus liquidity. In the case of the withdrawal of several Mediterranean countries, an injection of a new series of Euro banknotes into the Eurozone could become necessary so that this problem could be avoided in the event of a devaluation of the old Euro banknotes.[9]

The prospect of a *"disorderly"* withdrawal with its negative consequences for the rest of the union might lead Greece to seek an *"orderly"* and *consensual withdrawal* with transfers from the remaining members. Here, Greece would have to level the playing field by treating the different Euro claims equally. This would be necessary to prevent barriers in the exchange of the national Euro and the ND. In return, the members of the remaining union would use the EU's Structural Funds and/or a partial reduction of Greek national debts to offer Greece a one-time grant of financial assistance as a chance for a new beginning. Greece's exit could in turn facilitate the convergence of the remaining union. Regarding its fiscal indicators, failed debt sustainability, current account balance, inflexible labor market, and the shortcoming of reforms of its goods and services sector, Greece stands out from the rest of the currency union in numerous respects. Additionally, leaving aside possible short-term domino effects, a medium-term pullback of the rescue package and the ECB would be the result. By reducing these frictions, Greece's withdrawal could foster the *medium-term stabilization* of the union. On the other hand, Greece's withdrawal would also put increased adaptation pressure on the remaining Mediterranean countries due to increased competition from Greece, which could in turn cause more withdrawals.

The discussed aid packages would not create *legal* problems because only voluntary withdrawal entails the possibility of support in conformity with the Treaty. As the aid provided to Latvia, Hungary, and Romania show, EU members outside the Eurozone can receive loan assistance (Art. 123 f. Consolidated Version of the Treaty on the Functioning of the European Union, TFEU) and financial/monetary support (Art. 143 f. TFEU). Additionally, if Greece exited the union, International Monetary Fund (IMF) aid could not be denied because in this case, aid (i.e., mone-

[8] See also Muth (1997), pp. 120 ff.; Scott (1998), p. 221.

[9] In 1993 when the currency union between the Czech Republic and Slovakia was dissolved, a token was affixed to Czech banknotes to differentiate the Czech kronor from the incoming Slovakian banknotes. These tokens had been secretly produced in the UK in advance. See Born et al. (2012), pp. 49 f.

tary assistance) there would be aid provided between countries with different currencies.

Nevertheless, *several serious problems* might complicate the step of reintroducing a national currency for the Greek government. The prospect of a withdrawal alone will create *sales pressure* on Greek (government) bonds and cause a further rise in interest rates or a price decline for these papers. Initially, Greek commercial banks, which hold large quantities of Greek government securities, would be affected. Further depreciations would reduce their equity and would likely lead to the event of *over-indebtedness*. *Destabilizing speculation* on the currency of a small country is also not impossible. The financial markets would immediately rate the threat of state bankruptcy higher and impede future credit financing by the government.[10] In this concrete case, *liquidity disturbances* of the Greek commercial banking system would be likely. A bank run would be the consequence of the reduction of savings capital. Capital flight, which would already be underway, would then rise tremendously. These events could possibly spread to other endangered countries. Because foreign banks are owners of large amounts of government bonds, over-indebtedness of the merchant banking sector would be the consequence.

Moreover, a *national currency act* could replace the Euro with the ND as obligatory in contracts between residents.[11] In contrast, the denomination of contracts with foreign entities poses legal questions that would be very difficult to solve and that in many cases would remain ambiguous.[12] Even though the Greek currency statute (lex monetae) is in ND, the debt currency outside Greek jurisdiction would remain the Euro, since existing contracts refer to the Euro as the contractual currency under existing EU currency statutes. An exception would be made if both treaty partners were located in Greece during the switchover. This would be the case, for example, if a German car manufacturer had set up a foreign branch in Athens.

If Euro debt positions remained, Greek partners would have a high exchange rate risk. This would be the case in particular for the high share of approximately 80% of existing Greek foreign debt to other countries or the ECB.[13] In case of a discre-

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[10] Cf. also Bofinger (1998), pp. 31 ff.; Eichengreen (2007), pp. 7 f.; Belke (2010), p. 153 as well as Buiter and Rahbari (2011), pp. 30 f. The reverse effect was to be observed with the announcement of EMU. Similarly, the interest rates of long-term Greek government bonds sank from 8.5% (1998) and 6.1% (2000) to 3.6% (2005). See Institut der deutschen Wirtschaft (various years). See also Wagschal and Wenzelburger (2008), p. 140, who point to a similar trend for Italy.

[11] Concerning a changeover of credit contracts, the question arises whether interest could be adapted for credit contracts converted into ND. Here, coupling to the devaluation rate could help to prevent quasi-expropriations.

[12] Cf. Meyer (2012a).

[13] With an overall government debt of Greece of € 329 billion on December 12, 2010, the share of 76.0% is held by foreign debts. Currently, most of these bonds are in the stock of the ECB, the EFSF, or the ESM. Cf. Worldbank, http://ddp-ext.worldbank.org/ext/ddpreports/ViewSharedReport?&CF=&REPORT_ID=13523&REQUEST_TYPE=VIEWADVANCED as

pancy between the old Euro liabilities and their servicing by national ND revenues, Greek enterprises and insurance companies / financial institutes would encounter pecuniary difficulties.[14]

A *depreciation* of the ND could improve the competitiveness of domestic production and increase exports.[15] Nevertheless, in the case of Greece, export ability is weak due to the lack of an industrial base and a weak economic structure.[16] The expected devaluation requirements are estimated at between 40 – 50 %.[17] This would allow the labor cost disadvantage towards Turkey of about 200 % and towards Bulgaria of about 500 % to be partly absorbed. Opportunities for improving the balance of current accounts include, on the one hand, replacing imports with domestically produced foodstuffs, and on the other, increasing exports of agricultural products, simple goods (chemicals, minerals), as well as simple machinery. Some dismissed civil servants might also be able to find jobs in the resurgent tourist industry.

If a Greek withdrawal from the currency union is connected with an exit from the EU, the EU could raise punitive tariff duties equivalent to the devaluation rate, which would negate the currency advantage.[18] Likewise, the foreign debt would be transformed into foreign currency liabilities. A price increase for the repayment of Euro-denominated foreign debt in new domestic currency would be the consequence. After the introduction of the ND, this could lead to unforeseen difficulties

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well as Eurostat, Government Finance Statistics, http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-EK-10-001, accessed on April 19, 2013.

14 Cf. Buiter and Rahbari (2011), pp. 30 f.

15 In the short term, however, the J-curve effect of devaluation makes a deterioration of the balance of trade likely. Because most imports and exports closed months before by contract, a negative price effect of the imports occurs immediately, but the positive volume effect of the exports that is to be expected from the devaluation does not. Furthermore, the development of additional production capacities continues for a period of time for the exports and for the changeover of production to domestic import substitution. Cf. Krugman and Obstfeld (2009), pp. 583 f.
Furthermore, a deterioration of the balance of trade can also occur due to an inelastic volume reaction. The normal reaction assumes that the sum of the price elasticities of the demand of export and import goods is greater than 1 (Marshall-Lerner Condition). However, an equalized balance of trade in the initial state is assumed. Formulated differently, the value of the exports must rise more strongly than the value of the imports as a result of the devaluation-conditioned price increase in domestic currency. Cf. also Rose (1976), p. 57 f.; Krugman and Obstfeld (2009), p. 595 ff.

16 See in detail Schrader and Laaser (2010), pp. 541 ff. There is a lack of tradeables in Greece; an inefficient public sector with an expensive supply of non-tradeables dominates. Its industrial base (12 %) is insufficient. Important Greek industries include tourism and merchant shipping; each averages about 20 % of the GDP. See Eurostat, Government Finance Statistics, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=de&pcode=teina060, Accessed on June 15, 2010.

17 Cf. Born et al. (2012), pp. 21 ff.

18 Cf. Deo, Donovan and Hatheway (2011), pp. 9 f.

with high losses and liquidity problems for Greek banks and importers with Euro debts.[19] The same would apply to Euro-denominated government debts. This would likely bring about international repercussions on banks and companies, especially for those in the Eurozone, because of the integration of trade and finance. Overall, the depreciation of the ND would entail a high risk of *imported inflation* with second-round effects on wages, which in turn would impede the competitiveness of the Greek economy.[20] A lack of near-term success and an economy in decline could then lead to civil unrest and attacks on the political system.[21]

Perhaps a withdrawal would only be reasonable in connection with the declaration of *national bankruptcy* and a *rescheduling of government debt*, which would reduce the future interest burden drastically.[22] German banks and insurance companies, which own € 16 billion of Greek sovereign debt after the first debt cut,[23] would be affected by debt rescheduling as well. The Greek government would therefore have to balance a short-term advantage of non-serviced debts including a simultaneous (partial) debt relief with the linkage to the long-term costs of a reputation loss as well as reduced access to international bond markets.[24] The example of Argentina clearly reveals the risk that this approach entails: in the long term, it could result in isolation from the free capital market. Furthermore, if the new currency were met with low acceptance from the Greek population, the Euro would continue to exist as an (illegal) parallel currency. With successful remediation, a Greek re-entry into the Eurozone would be possible, conditional on compliance with the formalities of the membership procedures.

A *tax on foreign assets* of Greek citizens and companies could also contribute to the reorganization and reduction of old national debts. Because the flight of capital is almost impossible to differentiate from the account inventories from commercial

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19 Cf. Donovan, Hatheway, Deo and Constable (2010), p. 11; also Deo, Donovan and Hatheway (2011), pp. 7 f. See Bofinger (1998), pp. 30 f. Whereas the creditor bears the devaluation risk of the adjustment of the exchange rates in a fixed exchange rate system, this risk passes over on the debtor by introducing a new weak currency.

20 See also Eichengreen (2007), pp. 7 ff. Just small countries with naturally high foreign-trade integration as well as countries like Greece with strong union influence would be affected by this. Bootle (2012), p. 58 estimates the Greek inflation to be around 10% and Portuguese inflation around 15%.

21 Cf. Deo, Donovan and Hatheway (2011), p. 10.

22 Cf. Smeets (2010); Münchau and Mundschenk (2009), pp. 7 ff. as well as Schnellenbach (2010), p. 3. Since independence, Greece has been affected five times by payment defaults or debt rescheduling. Measured in years, the country found itself in debt crises or debt rescheduling phases for 50.6% of the time since 1829. Cf. Reinhart and Rogoff (2010), pp. 168 f.

23 According to the Bank for International Settlements (BIS) (2012).

24 For the possible option of a state payment refusal cf. Grossman and van Huyck (1988) as well as Reinhart and Rogoff (2010), pp. 104 ff. Cf. the advice of Kerber (2005), p. 16, on scientific findings of the Public Choice School, that the request to open bankruptcy proceedings must go hand in hand with the aim of politicians in the government of retaining power. This would explain the high discount rate calculated into the decision.

transactions, all available foreign assets would have to be taxed. Within the scope of cooperation among national tax authorities at European and non-European levels, the Greek tax authority could receive notice about bank balances, life insurance policies, real estate, and company property / company headquarters through mandatory reporting. This information should be provided in obligatory bank and insurance company registers, land registers, as well as in chamber of industry and commerce records, company records, or in the already existing records of the tax authorities. In order to minimize evasion, not only current data should be collected but for comparative reasons, also the year-end data from the previous year. The tax could be introduced as a one-off capital levy or as a periodic property tax. Simultaneously, this would offer the basis for taxation of revenues of the estimated 10 million Greeks living abroad. However, without assistance of tax inspectors delegated by foreign countries–for example, the delegation already provided by the German Minister of Finance–this measure would hardly be feasible.

Meanwhile, the case of *Turkey* shows how a national currency with a flexible exchange rate increases the adaptability of the economy and encourages prosperous development.[25] While the nominal unit labor costs rose in Germany by about 6% and in Greece by 35% in the period between 1999 and 2009, the increase in Turkey amounted to about 170%.[26] With the common currency, the competitiveness of the Greek economy deteriorated rapidly compared to that of the more stable Euro member states. In contrast, Turkey was able to improve the global market position of Turkish exports by devaluing the Turkish Lira by about approximately 390% despite a substantial wage increase. As a result, the current account deficit remained nearly the same, at 2 to 3%, while the Greek deficit tripled in this period from 3.6% to 11.1%. Likewise, the average economic growth of Greece fell to half of its prior rate, from 4.3% (1999–2004) to 2.0% (2005–2009). In Turkey, these figures remained nearly constant at 3.0% and 3.2%, respectively. Also the Greek ratio of national debt / GDP developed negatively from 94% to 126.8%, whereas the Turkish ratio fell by half to 45.4%.

3. A German Exit from the Eurozone

3.1 In Favor of a New Policy of Stability in Germany

The sovereign debt crisis and the ECB's crisis policy have resulted in failure to meet the stability goals stipulated in EU monetary and fiscal policy. This was because of the financial rescue packages and their enduring existence in the form of the European Stabilization Mechanism (ESM), which implies that the EU may be-

[25] This regional proximity to Greece has positively influenced the relative competitiveness of Turkey with adaptable exchange rates. Cf. Donovan, Hatheway, Deo and Constable (2010), p. 11.

[26] For the data used in the following, see OECD Economic Outlook and Eurostat.

come a *transfer union*, which would cause incalculable added expenses in cases of further emergency assistance. In addition, the ECB moving away from its principle of price stability and independence. Gradually adopting an expansive monetary policy after the end of the economic crisis would be convenient for those countries that are interested in debt reduction. For this reason, inflationary monetary policy provides an incentive especially for those countries that are characterized by a long-term average debt maturity, a high level of national debt/GDP, and a low economic growth rate.[27] Greece, Portugal, Italy, and Ireland fulfill these criteria. Beyond that, countries with excessive deficit procedures are pursuing consolidation in order to reduce their structural deficits in accordance of their Memorandum of Understanding (MoU), but the measures are insufficient. Consequently, the Stability and Growth Pact (SGP), which is supposed to close the "open flank" of the monetary union by providing debt rules to compensate for a lack of European fiscal unity, is called into question as the foundation of the monetary union. In similar manner, the provision of the ESM with a bank license or the introduction of Euro-bonds with joint and several liabilities would infringe on the procedural basis of the EMU. A withdrawal would be justified by the Maastricht decision of the Federal Constitutional Court (FCC, Bundesverfassungsgericht).[28]

By introducing the *Neue Deutsche Mark* (NDM), Germany could avoid further costs of bailout packages. An autonomous stability-oriented monetary policy would also be in line with the interests of German citizens. Also, the new currency could be given the status of an international transaction currency. There is a chance that further members of the monetary union such as the Netherlands, Austria, and Luxemburg would join the new currency and form a *North-Euro*. However, for historical reasons, Germany's withdrawal would likely be very difficult to achieve politically. There is also a risk that a partnership between Germany and France as joint promoters of European unification would dissolve in the long run.

3.2 The Frustration Hypothesis

According to the *frustration hypothesis*[29] the withdrawal of Germany as a relatively reliable member of the EMU would be the result of a failure to achieve the

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27 Cf. Junius and Tödtmann (2010), who wrote in detail about the conditions that would make an inflationary monetary policy advantageous in the short and long run. Since the expected future rate of inflation is already included, when it comes to the issue of bonds, the benefits of this strategy decline in the long run.

28 "This conception of a monetary union as a stability community is the basis and reason for German parliamentary approval. If a monetary union is unable to continuously develop the stability attained by the start of the third stage, it would abandon this contractual concept according to the agreed stability mandate." Federal Constitutional Court decision, BVerfGE 89, 155 (205); author's translation.

29 Cf. Herdegen (1998), p. 4. See also Plickert (2010), who describes a hypothetical withdrawal of Germany on the basis of the current crisis in an essay. Cf. Meyer (2010, 2009a, 2009b).

goal of long-term stability, which would mean a significant decline in the internal and possibly the external value of the Euro due to inflation and devaluation. In Germany, the prospect of *unusually high inflation* in the Eurozone conjures up memories of the two currency reforms and arouses widespread fear. For Germany, the costs of inflation would also be reflected in the depreciation of its *net creditor position* (in Euros). This might cause an aggravation of the *terms of trade* compared to the non-Eurozone, which would lead to a loss of purchasing power of exports.[30] Capital market tensions, caused by excessive budget deficits of several EMU members and growing uncertainty about the stability of the Eurozone, would cause an increase in interest rates.[31] This, despite successful medium-term fiscal discipline by the German authorities, would become an increasing burden on the public debt service. It would also increasingly divert capital to the deficit countries (*interest rate spillover*)[32] and suppress private investments in Germany (*interest rate crowding-out*). The rest of the world would benefit from *high leakages* of increased credit-financed spending in the deficit countries. Due to the regulations for the ESCB, Germany would also profit at a relatively low level from seigniorage caused by inflation.[33] *Diminished growth* would be accompanied by the prospect of increasing net payments into the EU budget to relieve other states of their difficulties.

After several unsuccessful attempts to exert influence, the German government would assume that it has no chance of having its interests considered adequately. It would use a new proceeding before the Federal Constitutional Court (FCC) as an opportunity to initiate an exit from the EMU.[34] To preserve the peace, measures would be taken to allow Germany's exit by consensus of the remaining members (Art. 48 para. 2 sentence 2 in conjunction with para. 4 sentence 2 TEU). In order to achieve this intention, the German parliament would then decide to retransfer monetary sovereignty to the German Federal Bank / Deutsche Bundesbank (Art. 88 sentence 2 GG) in a Currency Act. This would regulate the modalities of the changeover, such as the exchange rate for the new currency, the Euro holders who are legitimized for the exchange, and the conversion of existing contracts into the new cur-

30 The real exchange relationship (terms of trade) describes the relative prices between exports and imports expressed in the same currency. The terms of trade worsen if the domestic demand for imported goods and the demand from abroad for export goods are relatively inelastic in relation to the elasticities of the supply of export and import goods. Cf. Rose (1976), p. 78.

31 The current low interest rates for government bonds seem to provide evidence to the contrary. However they result from the monetary arrangements of the ECB in interaction with the high demands for safe assets on the part of institutional investors and the lack of alternatives. In contrast, the bonuses of credit default swaps (CDS) for government bonds are already increasing. Through the introduction of Euro-bonds, bonuses / interest would increase even more strongly.

32 This explains the intermittent request of Denmark, but especially of Hungary, for an early entry into the Euro-zone, with the hope to lower their lending rates.

33 Cf. Meyer (2010), pp. 55 ff. for a detailed explanation.

34 Cf. Meyer (2012b), pp. 64 ff., who creates a road map of a withdrawal.

rency.[35] In principle, the exchange rate could be set at any agreed level, but there should be no differentiation on the type and amount of Euro claims in order to counteract expropriation and manipulation. To avoid changing prices and product labeling, a 1:1 adjustment could be advantageous. An announcement would be made within twelve months at the latest as to when the NDM cash would be issued.[36]

In terms of the expectation of hard currency, holders of foreign Euro financial assets (bonds and stocks), especially foreign holders of Euro money (cash and deposits), would try to bring these assets into the area of application of the new German currency. Accordingly, the bond price of German securities, especially those of the German government bonds, would rise.[37] Local Mediterranean commercial banks could face liquidity problems due to capital flight. To avoid possible *speculation* and the *influx of "non-resident" Euros* from the rest of the EMU, the announcement of the currency reform should be made on short notice, if possible on a weekend. A short registration period for cash holdings would be preferable. It could be limited to two consecutive bank holidays, which could be used by financial institutions to make the preparations for the changeover of administrative accounting and deposit and the payment transactions. Due to the short-term unavailability of the NDM, the procedure of conversion would initially be restricted to the registration of monetary asset holdings (cash, current accounts, and savings deposits) to ensure a proper future exchange. The book money could be transformed immediately or any time later at the statutory rate of exchange into the NDM. Thereafter, the presented banknotes could be stamped for legal identification in case of a later conversion.[38]

Appreciation expectations would be reflected very quickly in a price increase of German assets, for example government bonds. For that reason, an (illegal) exchange of Euro banknotes and coins would be more preferable for foreigners than buying the already more expensive assets. Even being located within Germany would not be enough to protect commercial banks and the Federal Bank from for-

35 It is expected that a conversion of all contracts between residents would occur. However, the denomination of contracts between residents and foreigners is subject to special regulations.

36 By this time, it is possible that an accession of other Euro Members such as Austria, Finland, and the Benelux states and the establishment of a common northern currency (North-Euro) will already be planned and under consideration by the respective institutions. See also Plickert (2010) as well as Taylor (2010).

37 The revaluation expectation regarding to the new currency and the resulting buyers' rush for German bonds could lead to high price increases and thus to negative market interest rates. The German Minister of Finance could use this window of opportunity to secure favorable conditions for debt rescheduling in a long-term view.

38 The marked Euro notes thus already set the NDM at the statutory exchange rate. If the German Federal Bank decides for early convertibility, exchange rate changes would take place in the foreign exchange market and the stamped "NDM-Euro notes" and the unstamped Euro notes would no longer be exchanged at a ratio of 1:1. By the time the NDM notes became available, the holders of the marked Euro notes could change them at the exchange rate guaranteed by law (recurrent connection).

eign Euro inflows.[39] The introduction of temporary controls on capital movements would also be worth considering. In a globalized economy with free movement of goods and services this would only have limited effects.[40] In the *short term,* the higher NDM monetary basis and the resulting disappointed expectations of appreciation could cause excessive peaks in the money, capital, and currency markets. In the *medium term,* a monetary policy announced by the German Federal Bank could mitigate these effects. If the new currency acted as a transaction currency or a parallel currency in the Eurozone, the German Federal Bank could increase its profits in the long run through the additionally resulting *seigniorage*.

Especially for the remaining Union, this raises the general question of how the German Federal Bank would use the inventories of exchanged Euros. In order not to jeopardize the achieved common market, the German Federal Republic would be interested in an exit that is as conflict-free as possible. Therefore, the German Federal Bank would initially dissolve the domestic liabilities to the ESCB with *the return of Euro*. For this purpose it would be necessary for the German Federal Bank to destroy or return to the ECB the same number of banknotes that were designated as a liability in the German Federal Bank's balance sheet.[41] In return, the German Federal Bank would get back its capital share and its share of reserves and other assets. Further obligations for the adoption of Euro notes do not exist. After having fulfilled these conditions, the German Federal Bank could deny a further withdrawal of banknotes. Under this premise and in case of cash inflows from abroad and the exchange of this Euro money, Euros that have been submitted by German citizens would, according to the principle of "first come, first served," no longer be accepted. From that time on, these Euro holdings could only be traded on the foreign exchange market at a lower exchange rate.

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39 German "straw men" or resident aliens, for example, could transfer bank funds to Germany on behalf of Greek ship owners based in London. Especially people from countries with an increased risk of payment default would be interested in taking their financial assets outside their country. In addition, it should be noted that approximately 50% of Greeks are living outside Greece, especially in the USA, Australia, and other European countries.

40 Because domestic-based subsidiaries of foreign companies have access to the German commercial banking system and are counted as residents in the national accounts, they would be entitled to exchange. In business with their foreign parent company and other affiliates, very short-term manipulations might result. This would be induced by the temporary shift between the receipt of wholesale services/inputs and the payments on supplier credits und supplier receivables as well as the payments on the basis of unrealistic transfer prices.

41 In the balance of the German Federal Bank, Euro notes are currently at 27.14%, in proportion to the total amount of money in circulation by the level of its capital interest in the ECB. Because one-half of the capital share is calculated according to the economic strength and to the percentage of population, a divergence of the circulation of banknotes and the economic strength would be conceivable. Nevertheless, given Germany's 26.8% share of the Eurozone's GDP, this difference is negligible. Cf. Art. 29 Protocol (No. 4) on the Statute of the European System of Central Banks and of the European Central Bank.

Should the German Federal Bank decide, on the other hand, to accept and exchange all their submitted Euro notes, there would be at least three alternative uses for the *remaining Euro inventories* of the German Federal Bank:[42] Firstly, they could be transferred to the ECB in a one-sided fashion. This would lead to seigniorage by the ECB at the expense of Germany, similar to the case of foreign currency profits realized by the ECB. Secondly, leaving the funds in the ESCB for the indefinite future would be possible in exchange for an acquisition of a debt claim by the German Federal Bank. The third and worst option for the remainder of the Union due to the short-term inflationary effects would be an asset on the free capital market or a foreign currency exchange.[43] As a result of the depreciating Euro, this neutralization would lead to substantial monetary losses for the German Federal Bank.

Leaving the common currency would lead to considerable *real economic consequences*, which would affect the production structure asymmetrically. For Germany as an emerging surplus country, the existing structural aberration in the Eurozone would make adjustments for its export-intensive industries such as engineering or the chemical industry necessary. These sectors have so far benefited from the effects of the real devaluation inside the Eurozone. At least in the short term, overcapacities would be imminent as a result of the appreciating new currency.[44] Then, export-dependent companies could encounter difficulties in the repayment of their credits to domestic banks. While loans are being converted into NDM, the companies would refinance through exports in a devaluated Euro.[45] When examining this scenario in more detail, these assumed negative effects are relativized substantially:

- Export-intensive industries, especially those with high intermediate/input imports such as automotive engineering, would profit from the lower purchase prices. The same advantages would apply to other energy-intensive and electronic components requiring production. On average, German exports comprise about 40% of intermediate/input imports.
- In addition, the volume effects of the adjusted exchange rates depend heavily on the price elasticity of the export demands of goods.[46] Imported mass consumption goods, substantial amounts of raw materials, and intermediate goods are, due to the intense competition, more price-elastic than the exported semi-finished products, industrial goods, and capital goods. The high degree of innovation, quality, and specialization of the product characteristics would create market leadership for some manufacturers, such that price sensitivity would be correspondingly low.

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42 Cf. Muth (1997), pp. 120 ff.

43 Thus, the long-term equilibrium between GDP and money supply in the rest of the Eurozone would be restored.

44 Münchau & Mundschenk (2009), p. 15, even see the danger of a recession caused by appreciation.

45 Cf. Deo, Donovan and Hatheway (2011), p. 12.

46 Cf. Kullas (2011).

- Import-substituting sectors such as agriculture, mining, textiles, and shipbuilding have enjoyed quasi-import-protection up to now, which has delayed the necessary structural changes, and would now be under intense competitive pressure. Conversely, the competitiveness of these sectors would increase in the remaining Euro member states.
- Consumers would benefit from cheaper imported goods. The variety of products and the real purchasing power would also increase. This would also lead to higher competitive pressure on domestic producers in terms of innovative and cost-effective products.
- Export surpluses in Germany are reflected in the import surpluses especially of the Mediterranean crisis states, accompanied by a creditor position of Germany. The settlement of these debts seems questionable due to the situation of the debtors. The export surpluses would be given away when the debtor faces significant financial difficulties or default.[47]
- National savings finance investments, state deficits, and net exports. A decline in the foreign contribution can thus be used for additional domestic investment when savings remain constant. This means that the savings can be used for profitable investments in Germany to increase employment instead of financing the Greek government and private consumption.
- Furthermore, a declining domestic interest rate and the resulting reversal of capital flows should boost investments and economic growth in Germany in the long term.
- In contrast to unilateral withdrawal, a coordinated exit with other EU-countries with strong exports would be advantageous. If, in this case, there were no decision for a new common currency, the new currencies of these countries would also increase in value and show similar characteristics in a free trade area.[48]

Assuming that delivery contracts or service and credit agreements between residents are converted into NDM, future exchange rate alterations would have no impact on the performance of these contracts. On the other hand, the appreciation of

[47] Much of Germany's foreign trade surplus to the Mediterranean countries since 2008 was financed not by the usual acquisition of capital assets, such as corporate property or other marketable securities, but mainly by money creation via TARGET credits. Since these claims are forwarded to the ECB and the financial loss risks are distributed to all solvent Euro countries, the Bundesbank is responsible with its interest of 27.14%. With a breakup of the Eurozone, these claims would be completely worthless and 100% of these would be treated as a loss to the Federal Bank. A recapitalization of the Central Bank would give away the export surplus to these countries at the expense of the German taxpayers. See also Bogenberger Erklärung (2011).

[48] See also Dumas (2012), p. 43, who describes a withdrawal of the Netherlands in coordination with Germany as advantageous.

the NDM would devalue the Euro-denominated foreign debts and would make it easier to pay these back. Accordingly, foreign assets by residents lead to significant *asset losses* due to the *high net creditor position of Germany*. With net foreign assets of € 1,013 billion (as of September 30, 2012)[49] and an expected average rate of appreciation against foreign currencies (Euro and US dollars) of 15 to 25%, this would mean a loss of between € 150 and € 250 billion.[50]

A closer analysis of the net asset status reveals interesting *differences*[51] in the balance spreads on banks and insurances (€ 8 billion), companies and private households (€ 1,187 billion), general government (€ -1,062 billion) as well as the Federal Central Bank (€ 879 billion, of it € 203 billion in foreign currency reserves). Consequently, according to an assumed rate of revaluation at the level of 15 to 25%, the private sector would suffer losses of € 180 to 300 billion. In contrast, the state and the central bank would profit, with a net debt position ranging from € -183 billion to as high as € 20 to 45 billion. A differentiation according to divers foreign currencies shows that the Federal Republic has a Euro denominated net debt balance of € -46 billion. The positive asset status results largely from (other) foreign currencies in the amount of € 1,059 billion. With net Euro-denominated debts of € 417 billion, the state sector including the central bank would obtain a revaluation advantage, while the private sector with a net Euro-denominated surplus of assets of € 371 billion would suffer a revaluation disadvantage. With the net asset status being on (other) foreign currencies, the private sector would experience a revaluation loss of around € 825 billion and the state around € 234 billion.

Occasionally, financial problems may occur to domestic companies and banks with close economic linkages to foreign countries.[52] While for residents, all assets and liabilities and also all contracts would be changed to the NDM, this may not apply to Euro-denominated cross-border transactions. Investments abroad and claims against foreigners would decline in value with the NDM's appreciation. The same applies to export deliveries under existing contracts, which would therefore continue to be billed at former Euro prices. This could cause financial imbalances resulting from the currency changes as long as there are no considerable foreign Euro liabilities or deliveries of inputs from abroad. For these cases, governments could provide loan assistance and recapitalize banks up to a certain limit. If this causes other serious problems, it may be worth considering controlled appreciation in several steps.

The crisis in the Euro area, particularly the withdrawal of the largest and most stability-oriented member, which was previously also the most important net contributor to the EU, might strengthen the devaluation pressure on the Euro. Of interest

49 Cf. Deutsche Bundesbank (2013), pp. 98 f.

50 Here, the Euro would depreciate at a higher rate than the US dollar.

51 Cf. Deutsche Bundesbank (2013), pp. 98 f.

52 Cf. Deo, Donovan and Hatheway (2011), pp. 11 f.

in this context is *Starbatty's thesis* that the Eurozone would only be subject to processes of fundamental change in the case of an exit of Germany or France.[53] In the case of a French exit, the *German culture of stability* would be likely to prevail. In contrast, in the case of a withdrawal of Germany from the Eurozone, a new hard currency zone could develop as a *Northern European Monetary Union* (NEMU), which would compete with a more activist-oriented Eurozone. In this case, the risks of an inflation spiral as well as the speculation on a breakdown of the EMU would increase the chances of a self-reinforcing *"exit race"* among the remaining members.

4. Potential Risks of Disintegration Inflation

Since the Euro would continue to be used as a means of payment by the remaining EMU members, the future of the Euro-denominated monetary holdings of the departing country would be of great interest to these countries.[54] The ECB's monetary base includes foreign currency reserves, receivables from loans and other debt issues of the state sector, receivables from debt issues of the private sector and other assets. In order to ensure that the exit has no effects on the inflation rate in the remaining member states, the money supply must be reduced by returning Euros to the ECB at the same rate as the Union's national product decreases.[55] A structural problem would arise from the fact that 50% of the ECB capital shares held by the members depend on the country's share in the Union's national product and 50% on its percentage of the population (Art. 29 of the Protocol (No. 4) on the Statute of the European System of Central Banks and the European Central Bank.). If the departing country's share in the supply of money in circulation within the Union is higher than the share of its debt in ECB receivables, the national central bank of the departing country will continue to have a stock of Euro-money in spite of the repayment of all debts to the ECB once the exchange process has been completed. This stock of Euro-money would pose an *inflation risk* to the remaining members of the Union.[56] It depends on how this money is used whether, for example, merchandise imports from the remaining EMU members increase the level of prices in these countries (*disintegration inflation*) or whether a deposit at the ECB allows the European Central Bank to gradually adjust its money supply. Especially the uncontrolled usage of the Union's currency by the exiting country would lead to disintegration inflation in the remaining countries and to goods selling out in border regions. For this reason, disintegration is generally facilitated by the balanced partici-

53 Cf. Starbatty (2006), pp. 23 ff.

54 See also Abrams and Cortés-Douglas (1993), pp. 25 f.

55 This is based on the assumption that there is a constant velocity of circulation as well as a constant ratio between monetary base and money supply, e.g. M3. See also Muth (1997), pp. 120 ff.

56 A deflation potential arises in the opposite situation.

pation of EMU members in the ECB's lending policy as well as a long-term balance of payments adjustment between the participants.

Disintegration inflation may also take place if there are *high devaluation expectations* vis-à-vis the new currency or if a two-tier exchange rate renders the exchange of the complete Euro-denominated money stock unattractive in the departing country. A similar effect is produced by a strict limitation of the amount of money that may be exchanged with the aim of reducing the inflation potential in the departing country.[57] Privately owned Euro-denominated monetary holdings can be used to import goods from the Eurozone, thereby increase the inflation in these countries. Although a ban on the import of the Union's currency, restrictions on the export of goods, or even a closing of the borders are all imaginable, they clash with the fundamental principles of the common market. Moreover, the effectiveness of such actions is debatable in view of globalized economic relations. Alternatively the remaining Union members could put *a new series of Euro banknotes* into circulation and cancel the old Euro banknotes at the same time. Thereby, the danger from the "non-resident" Euro would be averted.

However, new currencies faced with *revaluation expectations* and the inflow of "non-resident" Euros would trigger a short-term money overhang in the exiting country. The subsequent important question concerns the use made of this surplus money, which will continue to exist even after the return of the Euro banknotes to the ECB and the release of the currency reserves to the exiting country. Their return via the currency markets could lead, at least in the short term, to a devaluation of the Euro and to an imported inflation in the remaining Euro member states.[58] Therefore the danger of disintegration inflation is existent in both cases.

5. The Race between Remaining Members to Exit the Union

An increase in the inflation rate or a currency depreciation in the rest of the union and/or the exiting region, the diminished network externalities of a large common currency, as well as the prospect of further countries exiting the union will generate further instability. In particular, the expectation of a "disorderly" exit of one of the larger member states that refuses to return the Euro in exchange for the debt titles or that is hindered from doing so due to capital flight might trigger an *exit race*.[59] The competitive position of the remaining Euro crisis countries would worsen with each

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57 Cf. Muth (1997), p. 124 and pp. 127 ff.

58 Nevertheless, in the long term, merely the former balance between money supply and the GDP is restored in the rest of the Eurozone with the return of the surplus Euro stocks. As a result of the devaluing Euro, this neutralization would also result in considerable currency losses for the central bank.

59 See the experiences with the decay of the Kroner-zone as well as the Rouble-zone. CF. Muth (1997), pp. 143 ff. and pp. 173 ff.

withdrawal of another crisis state because with a common currency no external devaluation is possible. However, if a big, still stable country like Germany would leave the Eurozone, an important pillar of the stability mechanism would disappear. The potential for future assistance would be uncertain, and this would thereby further destabilize the rest of the monetary union.

6. Conclusion

Besides the danger of a chaotic collapse of the Eurozone, there is the realistic possibility that individual countries would withdraw from the union to introduce their own national currencies. This would lead irreversibly to the idea of creating a single currency in a hierarchically centralized, top-down manner. A decentralized bottom-up process organized in a federative manner would emerge with the exit of a country from the third level of the monetary union; this would correspond to the idea of a "multi-speed" Europe. In this case, the European institutions would inevitably find themselves in the position of *passive spectators*.

Particularly for some crisis countries that have undergone periods of (military) dictatorship, *political instabilities* cannot be excluded. There exists the huge danger for the European Community that the economic weaknesses of some members–in connection with controls of capital transactions–would damage the *principles of the single market* in the long run. Protectionism by some countries could hardly be prevented effectively by the institutions of the European Union. The collapse of the common currency would be followed by an economic disintegration that would ultimately call the political integration of Europe into question. The conclusion could be drawn that *Europe needs the Euro*.

At the same time, the sovereign debt crisis has also shown that shock divergences in connection with fixed labor markets and product markets have led to problems in the peripheral Euro-countries. *Domino effects* and a policy of bailout packages that up to now have led nowhere endanger the stability of the entire Eurozone.

One possibility for solving this dilemma is the authorization of *parallel currencies*. Two options are conceivable. First, through a change of Article 128 TFEU, each country would have the opportunity to introduce a national currency alongside the Euro. In this way, the national central bank would consist of two sections, one as a member of the European System of Central Banks (ESCB) and the other as bank of issue of the national currency. The monopoly of the Euro-currency would be eliminated and people would have the free choice of the contractual currency. This would be accompanied by an increase in security and a stabilization of financial markets.

Secondly, in the case of severe violations of fiscal rules of the TFEU, the country in question would have to leave the third level of the monetary union (Eurozone). Greece would introduce the ND but could–in consultation with the EU–also be al-

lowed to keep the Euro as an instrument of payment. Greece's access to bailout funds as well as to the monetary aids from the ECB would be prevented. The Eurozone would be relieved from the internal pressure of the emergency aid. However, the EU could, in accordance with the treaty, decide to provide financial assistance (Art. 123 f. TFEU) or monetary support (Art. 143 f. TFEU). The aid provided by the IMF would no longer be controversial because in such a case assistance could be provided between countries with different currencies, that is, there would be a mechanism available for financial assistance. In case of successful rehabilitation, it would generally be possible for Greece to reenter the Eurozone provided that they meet the accession criteria.

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