

Would it be possible for Greece to introduce the New Drachma for current transactions (wage contracts and price contracts for currently produced goods and services), while keeping the euro as the numeraire, store of value and means of payment for financial transactions? Those who favour such as solution point to the example of the former East Germany. Following unification with West Germany in 1990, East German wage and price contracts were converted into DM at an exchange rate of 2 East German Marks for 1 DM, but savings and deposit account balances were, up to some limit, converted at an exchange rate of 1 East Mark for 1 DM.

The reason this worked for East Germany was that this was a former communist economy with only a rudimentary financial sector. The only financial instruments of any significance open to households were deposit accounts and saving accounts.

Greece, on the other hand, is a developed capitalist economy where there would be an unlimited supply of talent for transforming current transactions into financial transactions or vice versa. Those familiar with leads and lags in import and export receipts as means for avoiding capital controls will recognise the avoidance and evasion possibilities created by multiple currencies for different types of transactions. Is a wage contract with a one-year duration a current transaction or a sequence of a monthly contract for the spot delivery of labour services and 11 monthly forward contracts for the future delivery of labour services? It simply would not work.

4.4.1.7 Introducing the New Drachma as a complementary or parallel currency while remaining a euro area member

If the aim was to devalue the currency while remaining a member of the EA, there are ways to introduce a national currency as a numeraire, unit of account or invoicing currency for new contracts, while maintaining the euro as the sole legal tender

A euro area member state (Greece again, for illustrative purposes) that wishes to devalue or depreciate its currency while remaining a member of the Euro area could achieve both objectives if it were to introduce its own currency (the New Drachma) as the numeraire, unit of account or invoicing currency for all new contracts under Greek law, including new bank deposits, new financial instruments and new wage and price contracts, while maintaining the euro (that is, euro notes and coins) as the sole legal tender. All pre-existing euro-denominated contracts and financial instruments under Greek law would be grandfathered, but all new contracts and financial instruments under Greek law would have to be denominated in New Drachma. Payments could be made with grandfathered euro-denominated deposits or with new deposits denominated in New Drachma or in euro notes – which would remain legal tender. There would be no New Drachma-denominated notes and coins, so as not to violate the Treaty-assigned monopoly role of euro notes as legal tender in EA member states.

Monetary policy in Greece could be conducted either through the New Drachma refi rate (the short risk-free nominal New Drachma interest rate) or by managing the exchange rate of the New Drachma vis-a-vis the euro. Clearly, with Greece remaining a member of the euro area, there could be no restrictions on capital flows between Greece and the rest of the euro area. With reasonably technically efficient financial markets, the standard 'no-arbitrage' and other equilibrium conditions will link euro interest rates (set in Frankfurt at the very short end), New Drachma interest rates (set in Athens if the Greek monetary authorities pursue an interest rate management policy with a market-determined interest rate), the spot exchange rate, forward exchange rate and expected future spot exchange rate between the euro and the New Drachma.

The one-period interest rate on euro-denominated risk-free bonds $i_{t,t+1}^{\text{€}}$, the one-period interest rate on New Drachma-denominated risk-free bonds, $i_{t,t+1}$, the spot exchange rate S_t (number of New Drachma per euro) and the one-period forward exchange rate $F_{t,t+1}$ would be related through the familiar covered interest parity relationship:

$$1 + i_{t,t+1}^{\text{€}} = \frac{S_t}{F_{t,t+1}} (1 + i_{t,t+1}) \quad (1)$$

If $E_t S_{t+1}$ is the expectation this period of next period's spot exchange rate and $\pi_{t,t+1}$ reflects the exchange rate risk premium, then

$$F_{t,t+1} = E_t S_{t+1} + \pi_{t,t+1} \quad (2)$$

where (2) is non-vacuous only if we have some theory of the risk-premium and an independent way of measuring it – otherwise (2) simply is the *definition* of the risk premium. Assume for simplicity of exposition that the risk premium is exogenous and constant. In that case (1) and (2) imply

$$S_t = \left(\frac{1 + i_{t,t+1}^*}{1 + i_{t,t+1}} \right) E_t S_{t+1} + \left(\frac{1 + i_{t,t+1}^*}{1 + i_{t,t+1}} \right) \pi_{t,t+1} \quad (3)$$

Note that a *higher* value of S_t means a weaker New Drachma relative to the euro. Equation (3) says that the current level of the spot exchange rate of the New Drachma depends, other things being equal, positively on the currently expected value of next period's spot exchange rate, positively on difference between the current euro interest rate and the current New Drachma interest rate, and positively on the risk premium. Iterating the relationship in (3) forward repeatedly, we find that the New Drachma's current external value will be weaker the higher the expected cumulative differential between euro and New Drachma interest rates, the weaker the expected long-run value of the currency (the New Drachma) $E_t S_{\infty}$ and the higher the cumulative expected risk premia.

If the policy makers in Greece and the markets expect that, at some future point, $t + W$, the New Drachma will be locked again into an irrevocably fixed parity with the euro, \bar{S} , then $E_t S_{t+i} = \bar{S}$ for all $i \geq W$. By reducing the sequence of current and future expected interest rates between t and $t + W$ relative to the sequence of euro interest rates, the Greek authorities can reduce the external value of the New Drachma. Indeed, since there is no New Drachma coin and currency, there is no zero lower bound on New Drachma nominal interest rates. It would be possible to weaken the New Drachma substantially.

A proposal along these lines has been made by Schuster and Kennedy (2011). The logic and formal structure of their proposal is identical to the one used by Buiter (2005, 2007, 2009, 2010a) in a number of studies about ways to unbundle the numéraire and medium of exchange/means of payment functions of money. In this approach either the monetary authorities manage the exchange rate between the numéraire (here the New Drachma) and the ultimate means of payment/legal tender (here the euro), or this exchange rate can be market-determined. The short risk-free

nominal interest rate on New Drachma bonds (or the New Drachma refi rate) can then be used to target stability for the New Drachma price level or some other notion of macroeconomic stability. The focus of Buiter's papers is quite different from that of Schuster and Kennedy – it concerns ways of eliminating the zero lower bound on the short nominal rate of interest, something that adds to the proposal of Schuster and Kennedy, but is not central to it.

The Greek central bank (the Bank of Greece) would, as part of the Eurosystem, have euro denominated liabilities (mainly euro notes and euro-denominated bank reserves (current account deposits with the central bank held by eligible counterparties) and euro-denominated assets. The Central Bank of Greece would also have, for its own account, that is, not for the account of the Eurosystem, New Drachma denominated liabilities (New Drachma-denominated current account deposits of commercial banks (reserves) held with the central bank) and New Drachma-denominated assets. The New Drachma-denominated part of the Bank of Greece's balance sheet would look rather like the current emergency liquidity assistance facility or ELA (except for the current ELA being denominated in euro).

One potential weakness in the Schuster-Kennedy and Buiter approaches is the assumption (implicit in Schuster-Kennedy and explicit in Buiter), that the authorities in Greece can determine what the numeraire used in wage and price contracts is. If despite the introduction of the New Drachma for bank accounts and other financial instruments, workers and firms continue to bargain over and set wages and prices of goods and services in terms of euro rather than New Drachma, the parallel currency is irrelevant to the performance of the Greek economy.

Historically, the numeraire, unit of account or invoicing currency is the outcome of decentralised collective choice processes. The authorities may determine what legal tender is, but firms, households and workers jointly evolve the numeraire or numeraires used in price and wage setting. The authorities can certainly encourage the use of the New Drachma rather than the euro as numeraire. (Remember, euro notes remain the sole legal tender and a retail means of payment and store of value). They could require tax returns to be submitted in New Drachma and encourage the payment of taxes using New Drachma accounts. They could demand that all government contracts be invoiced in New Drachma. They could even legislate that new contracts under Greek law can only be legally enforced if they are invoiced in New Drachma.

Historically, with rather few esoteric exceptions, the unit of account has also been the unit of the dominant means of payment and of the legal tender. The Schuster-Kennedy and Buiter proposals unbundle the numeraire and the means of payment. It could work, but there is very little historical experience to draw on.

Finally, even if the complementary or parallel currency approach is both compatible with the Treaty and workable, in the sense that new Greek wage and price contracts are specified in terms of New Drachma, this would only give the Greek authorities a handle on the *nominal* exchange rate. Competitiveness is about *real* exchange rates, that is, nominal exchange rates adjusted for or corrected for differences in domestic and foreign relative price levels or relative unit labour costs. Even if, empirically, real and nominal exchange rates often move together for long periods of time, one ignores the difference between the two at one's peril. Using the nominal exchange rate as an instrument to pursue a lasting competitive advantage is bound to end in tears. We elaborate on this in the next subsection.

The competitiveness argument for EA exit by an uncompetitive EA member rests on two misconceptions

The first is that a (large) nominal depreciation of the currency will necessarily result in a persistent improvement in competitiveness

The second is that a market-determined exchange rate in a world with a high degree of international capital mobility will behave like a policy instrument wielded by an omniscient and benevolent central planner

4.4.2. Exit from the Euro area, competitiveness and the two Keynesian fallacies

One common strand in the argument that a breakup of the Euro area is likely and indeed desirable for the periphery countries rests on the simple Keynesian fallacy that a sharp depreciation or devaluation of the external value of the currency is a necessary and perhaps even a sufficient condition for achieving a transformation from a low productivity, inefficient, internationally uncompetitive economy to a productive, efficient and internationally competitive economy.

This fallacy rests on two deeper misconceptions. The first is the elementary confusion of real and nominal exchange rates, or of real and nominal wages. The second is the belief that a market-determined exchange rate in a world with a high degree of international capital mobility will behave like a policy instrument wielded by an omniscient and benevolent central planner.

4.4.2.1. Nominal exchange rate depreciation and real competitiveness gains

As regards the likelihood that a sharp depreciation (if the exchange rate is market-driven) or devaluation (if the exchange rate is managed) of the New Drachma would result in a significant and persistent improvement in real competitiveness we can be brief. There is no evidence we are aware of that Greek wage setting and/or the determination of Greek nominal non-wage input costs is characterised by significant and persistent nominal rigidities. There are parables of the usefulness of the nominal exchange rate as a coordination device for decentralised wage bargaining. For instance, in a world where relative wages matter in addition to the level of real wages, and where there is a medium-sized number oligopolistic labour unions, each individual union may be reluctant to agree to cut its contract wage to achieve a cut in the real wage of its members, even if every union agrees this makes sense if everyone were to do so. Not wanting their members to lose out relative to members of other unions, each union will accept a cut in money wages only if it can be sure that the others will follow suit. A depreciation/devaluation of the nominal exchange rate and an associated increase in the general price level, may be a useful coordinating device under such circumstances, as it would cut real wages all round with each union holding its nominal contract wage constant. This coordination story does not seem relevant to Greece. Effectively, Greece has two large unions, one for the private sector (GSEE) and one for the public sector (ADEDY). Coordination is but a phone call, SMS or Tweet away.

It is our view that, without simultaneous deep structural changes in the legal (sometimes constitutional) and regulatory determinants of the balance of bargaining power in labour and product markets, without the removal of barriers to entry in the private service sectors and without the privatisation of a vast array of inefficient (majority) state-owned enterprises, a sharp depreciation/devaluation of the New Drachma would go through the nominal wage and other nominal domestic cost structure like a dose of salts. Following a sharp bout of inflation, the same uncompetitive real equilibrium would be restored.

Often in emerging market crises since World War II, a collapse of the nominal value of the currency and a sharp depreciation of the real exchange rate have been part of the restoration of economic health following years, sometimes decades of accretion of uncompetitive practices, products, processes and procedures. The nominal and real exchange rate depreciations come about following often severe fiscal, banking and exchange rate crises during and following which the balance of political and economic power shifted dramatically. To attribute the improvement in competitiveness at the end of these traumatic economic, political and social

upheavals is to confuse the tail and the dog. The nominal exchange rate level had become unsustainable and had to be corrected. The real exchange rate/relative unit labour cost position had become unsustainable and had to change. To conclude from this that a sharp nominal depreciation is necessary or even necessary and sufficient to achieve a lasting competitive improvement for the Greek economy, when the deep structural reforms and the collapse of the political and social arrangements that support the widespread uncompetitive, inefficient and unproductive practices have barely begun is to mis-identify the causal mechanisms involved. The examples of Germany during the first decade of this century and of Latvia since 2008 demonstrate at the very least that nominal exchange rate depreciation is not necessary for achieving a significant and lasting improvement in relative productivity and efficiency, that is, in real competitiveness.

If the aggressive use of nominal exchange rate depreciation were an effective means to achieve an improvement in a country's international competitive position, Zimbabwe in the years just before its de-facto dollarisation would have been the most competitive economy in the world.

4.4.2.2. The exchange rate is neither a useful policy instrument nor a macroeconomic stability enhancing part of the transmission mechanism

The argument that a country that has its own currency has an important advantage in addressing major structural imbalances is even more implausible than the argument that national monetary sovereignty provides a nation with a useful cyclical stabilization tool – an effective instrument for addressing transitory asymmetric shocks. Even the desirability of monetary sovereignty and exchange rate flexibility for cyclical stabilisation purposes is, in our view, at least overstated and probably completely incorrect. We have argued before that a small open economy with a floating exchange rate and a very high degree of international capital mobility is better off as a member of a larger currency union, even if it is faced with asymmetric shocks (Buiter 1999a, b, 2000, 2008a).

There is no evidence to support the view that a floating exchange rate under conditions of high international capital mobility is an effective shock-absorber or a buffer that permits necessary changes in international relative costs and prices to be achieved through costless changes in the nominal exchange rate rather than through painful changes in relative domestic and foreign nominal costs and prices.

Quite the contrary. Even when domestic money costs and prices are sticky, a floating exchange rate is, when capital is highly mobile, more likely to be a source of extraneous noise, excess short-term volatility and persistent medium-term misalignments of competitiveness than a means to achieve necessary international relative cost and price changes at minimal cost. The reason is that, far from being set at a level that puts international relative prices of goods, services and factors of production at their fundamental values, the exchange rate is determined/set proximately in asset markets. Like most other financial markets, the market for foreign exchange is - even when it is technically efficient in the sense of characterised by low transactions costs and few opportunities for profitable arbitrage - a highly inefficient pricing mechanism from the perspective of allocative efficiency. It reflects not just fundamentals (or people's view of fundamentals) but also the fears, phobias, hopes, moods and impulses that can drive foreign exchange traders and their principals. Like most markets, bubbles, sudden mood swings from euphoria to despondency, from irrational exuberance to unwarranted depression, herding behaviour and bandwagon effects are the rule, not the exception. Safe haven demands for Swiss currency have rendered much of Swiss production of tradable goods and services uncompetitive, in the end forcing the

authorities to introduce a highly unconventional cap on the external value of the Swiss Franc relative to the euro, enforced through open-ended uncapped euro purchases if necessary. Risk-on/risk-off swings can cause persistent misalignments between the US dollar, the Swiss franc and the Yen on the one hand and a range of emerging market currencies on the other hand.

Thus, a floating exchange rate under high international capital mobility is far from performing like an automatic stabilizer. It is even further from being an effective policy instrument. It is an outcome of uncontrolled and uncontrollable processes, many of which we do not understand and cannot predict. Even in a rather closed continent-sized economy like the United States or the Euro area, monetary policy works with lags that are often long and always variable and uncertain. In a small open economy like Greece, where much of the transmission of monetary policy would be through the exchange rate if it were to leave the Euro area and adopt its own currency, the uncertainty about the timing, the magnitude and sometimes even the direction of the effects of monetary policy and other shocks on the exchange rate and other variables of interest is such that independent monetary policy is likely to be a curse, not a blessing. By remaining in a larger monetary union and thus reducing the exposure of the real economy to the vagaries of the foreign exchange market, the macroeconomic stability of the Greek economy will be enhanced.

In our view, the cost-benefit analysis of exiting the Euro area for Greece is unambiguous: leaving would be disastrous for Greece. If the social choice mechanism of Greece produces rational results, Greece would remain a member of the Euro area. Collective choice is not always rational, however, and it is certainly possible to visualise circumstances under which an extreme nationalist and populist Greek government could cut off its nose to spite its face by leaving the euro area and the EU in a red haze. We do consider such an outcome to be highly unlikely, however. Also, if one or more of the fiscally and competitively weak countries in the Euro area periphery were to leave the Euro area, this would not threaten the continued existence of the euro. Indeed, the euro would be likely to strengthen following the exit of one or more of the weaker member states.

4.5. Costs and Exit by a fiscally and competitively strong member state

Exit by one or more fiscally and competitively strong member of the EA would also be costly both for the exiting country and those remaining in the EA

Costs for the exiting country involve one-off set-up costs, losses from a less competitive exchange rate and losses on holdings of euro-denominated assets in the countries remaining in the EA

Why would a fiscally and competitively strong member state, Germany, say, wish to leave the Euro area? The only reason would be an attempt by the rest of the Euro area (or the EU) to establish an open-ended, uncapped Transfer Europe 'through the back door'. A Transfer Europe of any kind (with or without a quid-pro-quo as regards the surrender of fiscal sovereignty by the financial beneficiaries) could not happen against Germany's wishes through a Treaty revision, as this requires the unanimous approval by all EU member states.

If Germany were to exit, it probably would not exit alone. The cost to Germany would depend on how many existing Euro area and EU member states would join it in a new monetary union. If more of the existing Euro area and EU member states exit with Germany and recreate the EU and the Euro area with a new currency, the Thaler, say, the lower the financial disruption for all concerned.

If Germany were to leave the Euro area, even if it took most of the existing Euro area member states with it (weighted by population and GDP), the leavers would in all likelihood have to leave the name and the other attributes of the euro behind. This could be awkward, as the ECB is headquartered in Germany, but no doubt a solution would be found.