Valuing the New Greek Drachma

By Michael Hart

- **We examine the hypothetical case of where a new Greek drachma would trade, should it be introduced. A first approximation reveals that Greece has diverged by 38% from eurozone (EZ) and by 62% from German unit labor cost (ULC) levels. Our analysis suggests that Greece could eliminate its current account deficit with an approximate devaluation by 50%, all else equal.**

- **However, markets have become less forgiving during this crisis and this will likely not do. Greece's imbalances have compounded for too long and entering a sustainable growth path now requires a flow as well as a stock adjustment. Under the assumption that investors require Greece to halve its negative net worth over two years (and other simplifying conditions), we find that the new drachma would need to be 120% weaker, in *real* terms.**

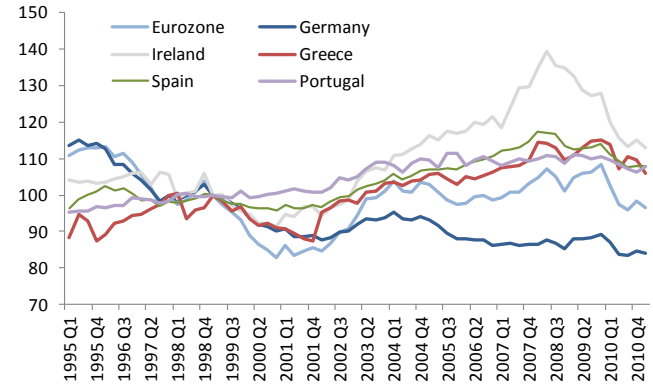
- **Such a maxi-devaluation would not be irrational or an overshoot. It would directly address the real and burdensome stock problem weighing on the Greek economy. Moreover, it represents a starting point only: It could easily be exceeded, should an acceleration in inflation erode the initial gains.**

At the risk of propagating a potentially self-fulfilling prophecy, we examine the outlook for the introduction of a new national currency in Greece, should it occur. We choose not to discuss the calamitous effects of a Greek exit from EMU on either Greece or the EZ, and ignore arguments over the merits of such a move. We simply pursue the hypothetical case of where such a currency could trade, should it come into existence.

Several issues are in play, divided mainly into arguments pertaining to Greece's fundamental or equilibrium exchange rate and those related to the initial market reaction and potential for a currency to "overshoot" beyond the equilibrium level. We address these in turn, focusing both on flow and stock issues.

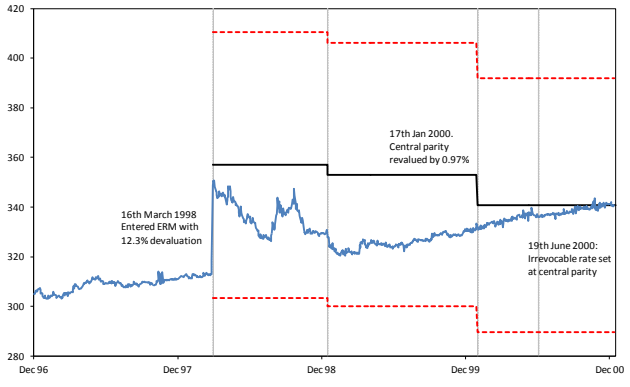
Beyond the pressing issue of debt refinancing and public insolvency, the wider Greek economy is also a similar problem as real currency appreciation over the past has made it deeply uncompetitive. This implies that even a default on market debt will be insufficient to restore the Greek business model as, in the absence of an improvement in competitiveness, reigniting growth will remain an elusive prospect. Furthermore, the likelihood of a default or forced restructuring will continue to prevent Greece from accessing capital markets and the necessary contraction in spending would further dampen activity.

Figure 1: Unit Labor Costs, Q1 1999 = 100



Source: ECB, Author

Figure 2: "Old" Greek Drachma and ERM Bands, EURGRD



Source: Bank of Greece, Bloomberg, Author

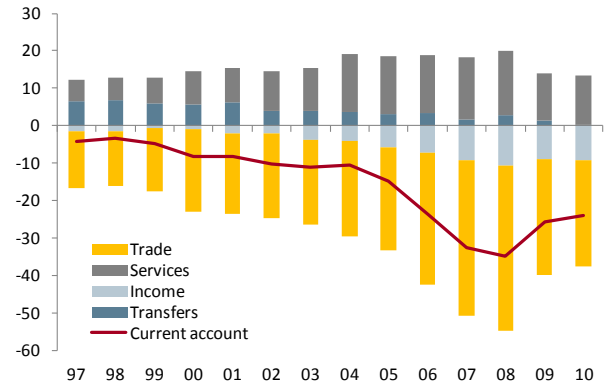
The Purist's View

With the nominal exchange rate "fixed," all the change in the real exchange rate stems from changes in relative prices. This can be easily illustrated by the now time-honed chart of ULCs across the EZ. Since adoption of the euro in 2000, the divergence in ULCs between Greece and its peers is in fact not that dramatic: Greece was far from having the worst performance in the EZ, with an increase in ULCs by 13%, compared with a 9% average for the EZ (and an 11% drop in Germany). However, as Figure 2 shows, Greece's experience in the two-year long Exchange Rate Mechanism was unusual: The drachma was devalued by more than 12% prior to entering, then strengthened, but ultimately weakened toward the central parity, which was itself revalued twice. This erratic pattern suggests that markets and policy makers alike had very uncertain views as to the appropriate exchange rate level and, as a result, that Greece may have entered the euro at too strong a level. Indeed, looking back five years further reveals an increase in Greek ULCs by 20%, compared with a *decline* in the EZ of 13% and in Germany of 26%. In other words, Greece's relative labor prices have deteriorated by 38% relative to the EZ and by 62% relative to Germany since 1995.

Some caveats apply: References to Germany are valid only if the German real exchange rate itself is near equilibrium. Yet, with its large current account surplus, Germany continues to contribute to the persistent global imbalances between creditor and debtor nations. Thus, the EZ, with its roughly balanced external position, may provide a better and less stringent benchmark. On the other hand, trade with the EZ represents only 50-60% of Greece's exports, with the remainder destined to lower-cost emerging and developing economies. This would add to the required cost/price deflation in Greece. It is also worth noting that competitiveness is not simply a matter of local cost: Infrastructure (transportation, customs clearing times), the cost and ease of doing business (licensing, red tape) and labor conditions (unionization, ability to hire and fire easily) all affect an economy's ability to trade and compete successfully. Finally, consider that the current account encompasses not just merchandise trade: While Greece's services surplus (tourism) has held up reasonably well so far, the income deficit has widened significantly and net transfers have shrunk dramatically (Figure 3). If these elements cannot be altered in the short run, the trade balance will have to adjust disproportionately.

The result of persistent and ever-widening current account deficits is a well-known increase in the economy's indebtedness. Accordingly, Greece's (negative) net international investment position tripled from less than €70 billion in 2001 to €214 billion in 2007, where it remains today. This is broadly consistent with the cumulative current account deficits incurred since 2000.

Figure 3: Main Current Account Components (€, bn)



Source: Haver, Author

Figure 4: Selected Indicators of Major FX Devaluations

	Date	FX peg-to-peak	CA in balance nr of qtrs*	CA peak surplus nr of qtrs*	CPI, % yoy 12m after break
Argentina	Jan 02 - Jun 02	280%	0	14	40
Brazil	Jan 99 - Mar 99	78%	14	29	9
Russia	Aug 98 - Mar 99	330%	0	6	121
Indonesia	Jul 97 - Jun 98	600%	1	13	69
Thailand	May 97 - Jan 98	110%	1	3	10
Mexico	Dec 94 - Mar 95	115%	2	3	52

* counted from 1st month of de-pegging

Source: Haver, Bloomberg, Author

Overshoot or a Rational Maxi-Deval?

A devaluation of a mere 50-60% would be unusual, judging by recent experience. Only Brazil's de-pegging in 1999 was of a similar magnitude, resulting in an initial decline of 78% (thanks to an environment of depressed domestic demand that kept inflationary pressures at bay). But the limited FX move meant that the economic adjustment was also particularly drawn out: Uniquely among its peers, Brazil's current account took over a year to reach balance and over two years to attain its peak surplus (Figure 4). However, over the next four years (in the run-up President Lula's election), the currency would weaken by a total of nearly 230%. Other de-pegging experiences in emerging markets typically took one to three quarters to fully play out and resulted in a loss of value of no less than 100%, commonly of around 300% and as high as 600%. Could Greece be looking at a similar future if it introduced a new national currency under current circumstances?

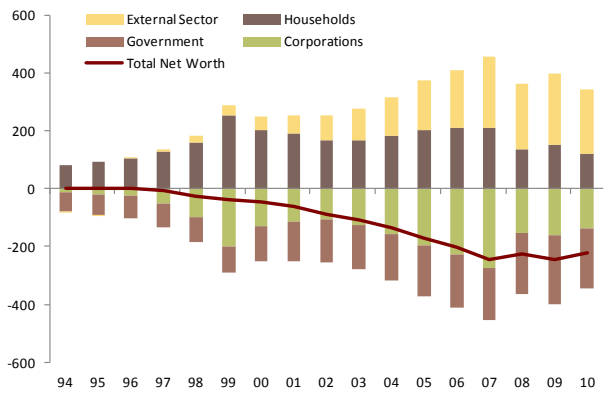
First, consider that 70% of Greece's trade deficit can be explained by changes in relative ULCs in a simple linear regression. The resulting coefficient suggests that a 46% improvement in Greece's relative ULC (i.e. its real exchange rate) can achieve a zero trade balance. But more importantly, consider Greece's national balance sheet (Figure 5): It is clear that the counterpart to Greece's large, and rising, external deficit is given by the dissavings of the corporate and government sectors, a development aggravated by the declining savings of the household sector. Turning the current account deficit—a flow—into surplus would halt this trend, but would be unlikely to materially affect these stocks for several years.

Indeed, given the current buyers' strike in financial markets, investors may require nothing less than a *stock adjustment* in order to provide renewed access to capital and, with it, a return to sustainable growth. History supports this interpretation: As Figure 4 shows, current account deficits were not exceedingly large in any of the listed cases and reverted to balance within the first few quarters after the devaluation. Nevertheless, FX adjustments were brutal, allowing countries to tackle not just their flow, but also their stock problem.

In Greece, a stock reduction on the sovereign side can be achieved via a restructuring, though it would need to achieve a greater face value/net present value reduction than the current plan, which is too generous to creditors. For the rest of the economy, it requires a sharp shift into surplus to quickly reduce the stock of debt incurred since 2000. By way of example, if markets required Greece's negative net worth of €220 billion to be halved over two years (not an unreasonable assumption considering the minimum 50% haircut expected by many observers for the sovereign), this would require a shift to a current account surplus of €55 billion per year. Assuming for simplicity that this takes place entirely through the trade balance, holding all else equal, such a shift implies that the "new drachma" would need to decline by 120% from EUR parity, i.e. to 2.2 per EUR.

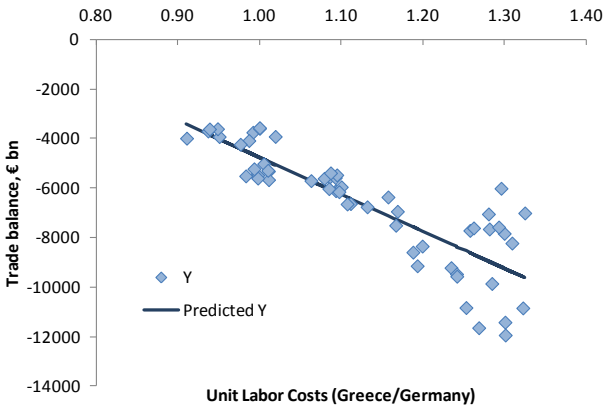
This represents a massive shift, though it still remains some distance from the "maxi-devaluations" examined previously. But recall that the key aspect of this exercise has been that it takes place in *real* terms. In our

Figure 5: National Balance Sheet, Stocks (€, bn)



Source: Haver, Author

Figure 6: Relationship between Trade Balance and ULCs



Source: Haver, Author

calculations, we have held the nominal exchange rate constant (as per EMU) and varied prices (ULCs). If Greece were to exit EMU, the nominal exchange rate would adjust, producing a short-term adjustment in competitiveness and lessening the need for cost and price inflation. But of course, such a ceteris paribus condition may not hold in practice; all the more in so disruptive a regime change. In all cases bar Brazil, in which the adjustment was particularly protracted, inflation accelerated significantly following the break of the peg. If this happens, the initial *real* depreciation is undone, triggering a larger nominal adjustment. In turn, such a sharp FX adjustment would feed into a prolonged wage/price spiral, even in a recessionary environment. The ultimate effect would depend on how long it takes the government or central bank to put a brake on the process through restrictive policy measures. We thus believe that a 120% decline represents a mere minimum for a newly introduced Greek currency, given reasonable assumptions.