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BY INVITATION

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Lately, voices have been echoed in the press, and in legal circles, that the parallel or black market for foreign exchange in Lebanon suffers from criminal and destabilizing speculation, fomented by the reckless and ill-intentioned behavior of exchange dealers. The blame is, as usual, directed to innocent culprits, although they are not totally innocent. Dealers seem to believe that future demand will be higher in the event that current demand is satisfied, because of dollar hoarding by the public, and they resort to credit rationing, producing an unwillingness to sell dollars, and a shortage of supply. The question to be asked is the following: Is the dollar in the black market a reflection of fundamentals, or does it act as a bubble, or even a casino, or a game of chance? An additional question naturally arises: Who is accountable for the collapse of the pound, and who bears the guilt? The purpose of this note is purely academic, and it is not to point out mischievousness and responsibilities, but to argue that, in line with the prescription of the International Monetary Fund (IMF), the black dollar is realistic, and can be depended on up to certain limits. There is mounting evidence that the level of the US dollar is unfortunately reasonable given the situation. This note serves to dispel the notion of a possible conspiracy. It is a second attempt by the author to present the view that the dollar is not entirely dictated by human hands and minds, but is a mirror image of the debacle.¹ Thus the dollar is as much the cause of the misery as it is the symptom, and indicator of the inherent malady.

The initial procedure is to estimate an import demand function. The variables that were chosen to explain imports (IM) are: the coincident indicator of the Banque du Liban (CI), measuring the real scale effect; the average euro/dollar rate (€), which is the medium of exchange; the first lag of the

¹ Azar, S. (2020) "Forecasting the Foreign Exchange Rate of the US Dollar against the Lebanese Pound", Lebanon Brief, BLOMINVEST, 25 September 2020.

dollar loan interest rate (*iusd*), a price effect; the portion of the (log of the) money supply *M1* that is cyclical ($[(\ln M1)^c]$),² a real balance effect; and the first and second lags of the dependent variable (*IM*), for dynamic effects. These variables are standard ones in demand theory. All variables are in logs except the interest rate which is in change of logs. The estimated regression is:³

$$\ln(IM) = 0.3714 + 0.8187 \ln(CI) + 0.3120 \ln(\text{€}) + 0.1063 [(\ln M1)^c - \ln M1] - 1.1870 \Delta \ln(iusd(-1)) + 0.2673 \ln(IM(-1)) + 0.3012 \ln(IM(-2))$$

The lowest Student t-statistic is 2.0513, and the highest is 6.4087. The adjusted R^2 is 0.9187, which means that 91.87% of the variation in (the log of) imports is explained by the six independent variables, a high figure for a monthly sample. This regression is estimated for the period between 1995.04 till 2019.09 on a monthly basis, with 294 observations. From this regression one can calculate the fitted value of imports (\overline{IM}) for the out-of-sample period from 2019.10 till 2020.10, based on the subsequent evolution of the six independent variables. This fitted value (\overline{IM}) is the estimate of the level of imports if the euro rate is kept the same. The actual level of imports is obviously the estimate of imports when all variables are changed, including the euro rate. Therefore the ratio of actual to fit is an estimate of the euro rate. Hence, by using this ratio, divided by 0.3120, which is the coefficient on the euro variable in the above regression, and this for the same out-of-sample period 2019.10 2020.10, and by multiplying the result by 1507.50, the pegged price of the dollar before the October 2019 revolution, one gets the following rounded estimates of the US dollar rate versus the Lebanese pound in column 2:

² Cyclical $\ln M1$ i. e. $[(\ln M1)^c]$ is obtained through a Hodrick-Prescott filter applied on the log of *M1*.

³ The actual regression included a GARCH(1,1) specification of the conditional variance.

date	Estimated US dollar exchange rate	Actual foreign exchange rate of the US dollar at month-end
2019M10	4,560	1,700
2019M11	4,430	1,800
2019M12	5,320	2,150
2020M01	4,620	2,130
2020M02	3,880	2,150
2020M03	3,660	2,470
2020M04	4,190	2,820
2020M05	4,020	4,150
2020M06	6,900	8,600
2020M07	6,900	7,800
2020M08	8,930	7,200
2020M09	9,760	8,300
2020M10	12,170	6,800
Average	6,100	4,470

Source: lirate; own calculations

It is noticeable from the table that the dollar is estimated to be pricier than actual, or the Lebanese pound to be cheaper than actual: 10 of the 13 observations in the above table have a lower actual rate versus fit. The implication is that the pound has been *overvalued, but is definitely not undervalued*. If so, and if the actual dollar price is true, the overvaluation can be due to four factors. First, some imports are being financed with subsidized dollar rates, reducing the demand for dollars in the parallel foreign exchange market. Second, the actual volume of trading in the parallel market is rationed, and has experienced deficient, or shortage of supply, or excess demand, and the pound is below the equilibrium price that clears the market. Third, there is the presence of noise, assumed to be zero on average. Noise can be eliminated if one takes averages of the variables. The average difference between actual and fit is 1,630. A more sophisticated approach, which relies on regression analysis, leads to an estimate for this difference to be 2,775. In short, if the actual dollar price is false, and if the fundamental value of the US dollar is true, and is significantly higher than actual, the Lebanese pound is expected to depreciate further in the future to align both rates. Fourth, the overvaluation can also give an indication of market speculation. If there is speculation, it is certainly not destabilizing. Quite to the contrary. It is surmised that speculation has not been directed against the Lebanese pound, but in support to it! Hence, whether the dollar has been priced efficiently or inefficiently, being true or false depends on the perspective. One cannot ignore the possibility that the actual rate may be the correct rate, and that the dollar is true. Otherwise, one can believe that the fundamental rate is unbiased, and that the dollar is false. In this respect, there is independent evidence that the fundamental rate is roughly around

4,500,⁴ commensurate with the average of the actual rate, which is 4,470 in the table above, and the dollar is thus true.

⁴ See Bolbol, A. (2021). "Trade Deficits, Net Foreign Assets, and Exchange Rates: A Note on Lebanon", *Lebanon Brief*, BLOMINVEST, 19 March 2021.

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