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The EURO – What's in the Future?

Preface to the Special Issue of European Journal of Finance

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Preface

This special issue collects some of the relevant papers presented at the International Joint Meeting ***"The EURO – What's in the Future?"*** held in Venice on 8-9 June 2000 and jointly organised by the Venetian research centre GRETA and the Banca Commerciale Italiana, now IntesaBCI.

At the time of the meeting, the vast majority of analysts were surprised by the decline of the euro. From a value of $1.17 per euro at its inception on January 1, 1999, it fell to a low of $0.93 at the end of May 2000. The subsequent rebound in early June 2000 was a good omen for the Venetian Meeting, nonetheless all the participants perceived the unsteadiness of the euro's favourable period.

Ex-post, at the time of issuing this special edition, the former doubts about the magnificent future of the euro have been confirmed: the euro has further depreciated its value against the remaining major currencies, in particular it has especially depreciated against the dollar up to 30 percent between the beginning of January 1999 and the end of October 2000.

Some observers are now speaking about "The Mystery of the Weak Euro"[1] or "The Euro Puzzle"[2]. The reason for this lies in the lack of evidence of most conventional explanations used by economists, including the link between the euro/dollar exchange rate and "relevant" fundamentals. Borrowing the inspired title of the Alberola, Cervero, Lopez and Ubide paper, published here, we can ask: *Quo vadis euro?*

This special issue gives a good contribution to finding an answer to this question. We believe that the explanation of the euro behaviour cannot be concluded simply from a glance at the co-movements of exchange rate and fundamentals series. In this respect, a better device, given by reliable econometric models, could cast some light on the deeper relationships between euro/dollar and other economic variables, avoiding the too common way of seeking one-cause for one-effect.

Beside fundamentals, econometric models take into account possible effects of the interventions of institutional authorities and, moreover, they mix these ingredients, not remaining within the simplest correlation structures but also considering theoretical constraints, nonlinearities in behaviours, structural breaks, etc. If all this is hard to handle, with high chances of introducing errors, nonetheless this does not prove econometric models to be useless. Rather, the simplest tools could be used as good benchmarks for more complex approaches rather than (too elementary) evidence against the lack of dependence.

When attempts at explanation are given without an econometric model (and the economic theory to which it refers), the conclusions could be somewhat curious. For example, the apparent irrelevance of fundamentals has even led some authors to reverse the direction of causality: it is not the euro/dollar rate which is

driven by the fundamentals, but rather it is the movements in the exchange rate that indicate which fundamentals are relevant. When sustained in one or the other direction, this movement sets in motion a search for fundamental variables, including unobservable ones, that will validate it, and the analysts will select good news supporting it, disregarding the bad news[3].

For all the papers included here, econometric models play a central role and pivot the fundamentals and interventions insofar as they are suitable. In the first paper, mentioned above, Alberola *et al.* decompose the multilateral real exchange rate into two fundamental components, related to the external and internal balances of the economy respectively. The former conveys the balance of payments approach and the latter the evolution of productivity in the economy. In that way, the authors are able to take into account both the sustainability of the external position of a country and the relative profitability of its capital which are, in turn, the fundamentals underlying capital flows. For that reason the explanation of the major downward pressure on the euro is given by the steady outflow of capital toward the U.S., in search of more profitable mergers and acquisitions (foreign direct investment), and portfolio investment opportunities.

As a main result they find that euro is the only currency that shows a substantial undervaluation (around 12 percent), largely accounted for by the overvaluation of the dollar (about 8 percent) and the pound (about 12 percent). Thus, in the period considered, the situation is more a reflection of euro weakness than of dollar, yen or pound strength.

The Sgherri paper focuses on policy interventions and studies the interaction of fiscal and monetary policy within the Economic and Monetary Union (EMU). There are competing theories which explain this interaction and the role of the Stability and Growth Pact (SGP), none of which is conclusive. Therefore, performing an empirical analysis appears very useful to a better understanding of how links between monetary and fiscal policy feature. In the Sgherri paper this is done through simulation of a neo-classical highly non-Ricardian multi-country model.

The results obtained suggest that, in the global economy described in the econometric model, the primary source of cross-country heterogeneity in response to a common monetary shock is in actual fact the difference in the budgetary positions of national economies. Centralising money supply seems to induce long-term cross-country wealth redistribution in response to a common monetary shock, unless accompanied by offsetting country-specific corrections in debt stocks.

Although institutional arrangements such as the SGP might not be necessary to ensure fiscal sustainability, its strict enforcement is shown to be associated with overall ever-lasting benefits. Transition to the new steady state appears, however, remarkably costly for high-debt EMU countries. Furthermore, different degrees of rigidity in national labour markets crucially determine the size and speed of adjustments to a common monetary shock. On the contrary, different

degrees of efficiency characterising European credit markets are *per se* unlikely to play a major role in explaining asymmetric responses.

The following two papers are relevant as they discuss the behaviour of the two pillars assigned as targets to the European Central Bank: inflation and monetary aggregate levels. The paper by Espasa *et al.* considers the inflation in the EMU which is directly measured, among other alternatives, by the Harmonised Indices of Consumer Prices (HICP). The authors argue that in the short-term analysis of inflation it is essential to have good forecasts as a basis for possible policy recommendations. For this purpose, they develop final form econometric models built exclusively on price data, but making use of the fact that different prices do not behave in a similar fashion.

The starting point of their analysis is to study the question of whether prices in different markets follow a single common trend or not. A disaggregation of the price indicator into different components, by market sectors and by countries, is performed and it is shown that the different price components are cointegrated but not fully so[4]. The absence of full cointegration indicates that there is no full convergence between the different prices, thus disaggregation is important in order to understand the medium-term behaviour of the aggregate price index.

Following theoretical considerations about the differences in supply and demand, the HICP is broken down by market sectors. In this way forecasts with smaller bias and variance are generated. The above results, and the fact that HICP by countries are not fully cointegrated, suggest that a breakdown of the European HICP applying both sector and country criteria is effective in forecasting improvements.

The Golinelli and Pastorello paper deals with the monetary aggregate level, which is another target assigned to the European Central Bank. They argue that modelling the monetary transmission is central to understanding the role of monetary policy in the Euro area, and money demand is commonly seen as a link in that transmission mechanism. They analyse the main econometric features of a simple M3 money demand at Euro area and single country levels, comparing the two sets of results.

In more detail, they find a simple and stable log-linear relationship between money, income and long-term interest rate without the inclusion of *ad hoc* deterministic components, such as dummy variables or segmented trends. To assess the robustness of single-country results, they test for panel cointegration. Furthermore, the authors analyse the outcomes of poolability tests of the long-run money demand parameters in alternative subgroups of Euro area countries in order to evaluate the statistical admissibility of pooling the national parameters.

The comparison between the results focused on the analysis of the area-wide money demand, and those centred on national money demands, shows how the former is substantially more smooth and less subject to shocks than the

latter. Both the diagnostic specification tests and the precision of the estimates improve significantly when shifting from a national to an aggregate specification.

Forecasting can improve if the source of nonlinearity in the euro/dollar exchange rate is better caught by econometric models. Both the last two papers challenge the well-known difficulty of beating a naive model[5]. The Jamaleh paper considers a behavioural linear ECM model, in which the long-term dynamics of the euro/dollar exchange rate is found to be driven by the short interest rate differentials, the expected GDP growth differentials and the inflation rate differentials, on the grounds of empirical evidence.

The threshold regression model proposed allows the possibility of considering asymmetric responses of the euro/dollar exchange rate to similar impulses, depending on some "state" conditions being in place. The better in-sample fitting and out-of-sample forecast performance exhibited relative to the linear model seems to confirm this hypothesis, showing that, for instance i) monetary policy interventions may make sense only when a significant degree of undervaluation of the euro, which puts at risk the inflation stability condition, is underway, while the same consideration does not necessarily hold in the opposite case, ii) the euro seems to be more vulnerable when GDP growth differentials are unfavourable while, in the opposite situation, positive factors may amplify their upward influence by reinforcing their cross effects, iii) extraordinarily positive stock market performances may temporarily decouple exchange rate dynamics from macroeconomic fundamentals. Evidence of these general findings is present in the actual behaviour of the euro/dollar exchange rate already during its first one and a half years of life.

Other sources of nonlinearity are structural breaks. In the paper by Sartore *et al.* this relevant aspect is examined within a model which is built considering the simultaneous equilibrium of exchange, money and goods markets, therefore taking into account the joint behaviour of bilateral exchange rate, interest rate and growth rate differentials.

As in the paper by Alberola *et al.*, the real rather than the nominal exchange rate is considered given the failure (on empirical grounds) of the purchasing power parity (PPP) relationship. Unlike the above-mentioned paper, here the equilibrium exchange rate is not explained in the line of the internal/external equilibrium framework, but follows the so-called Behavioural Equilibrium Exchange Rate (BEER) approach[6].

Despite the general use of a single-equation specification, the authors use the BEER approach on a simultaneous three-equation system built in a Vector Error Correction Mechanism (VECM) form. Its admissibility is achieved by using cointegration tests in the presence of structural breaks. The existence of different deterministic trends in the two sub-sample periods (before and after the crisis of EMU in September 1992) is accepted and three long-run relationships are obtained. The paper concludes showing satisfactory forecasting performances of euro/dollar exchange rate with respect to the competing random walk model as benchmark.

After this presentation, we hope that readers will be more inspired to discover further results through the direct reading of each paper. We have confined our insight to essential elements necessary to show, as has already been mentioned, the importance of econometric models to discern among apparently too numerous causal explanations, none of which are satisfactory in isolation.

The continuing depreciation of the euro up to this second quarter of 2001 increases the difficulties in accepting a simple story as reasonable. A new structural event, which will be influential against the weakness of euro, is the introduction of euro cash at the start of 2002. This favours the euro as an international currency, which means a possible expansion of its role in the private sector as: i) *invoicing currency* for trade and financial transactions, ii) *vehicle currency* in foreign exchange markets and iii) *investment and financing currency*. Also the public sector will enforce the euro in its functions of: i) *anchor currency* for exchange regimes, ii) foreign exchange *reserve currency*.

But after all, from now on "***The EURO – What's in the Future?".***

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[1] *Corsetti G(2001) The Mystery of the Weak Euro, Newsweek, Atlantic Edition, Business, June 11, 20-21.*

[2] *Koen V, Boone L, de Serres A & Fuchs N(2001) Tracking the Euro, Economic Department WP No. 298, OCDE, Paris.*

[3] *De Grauwe P(2000) The Euro-Dollar Exchange Rate in Search of Fundamentals, mimeo, June, (http://www.econ.kuleuven.ac.be/ew/academic/intecon/staff/PaulDeGrauwe/PDG-papers/Eurodollar2000.pdf).*

[4] *In the sense that the n different price components are linked by some, but not by a possible number (n-1) of cointegration relationships. This implies that the n trends in the component time series are generated by more than one common factor.*

[5] *We refer to the so called Meese&Rogoff critique (see Meese R A & Rogoff K(1983) The Out-of-Sample Failure of Empirical Exchange Rate Models: Sampling Error or Misspecification?, in "Exchange Rates and International Macroeconomics" edited by A Frenkel, Chicago, University of Chicago Press) concerning the capacity of macroeconomic models to forecast the movements of exchange rates. On the basis of empirical results, Meese and Rogoff show the superiority of the linear out-of-sample forecast obtained through a random walk model compared with the forecast based on models which include information from economic theory and therefore use a wider set of economic variables as regressors.*

[6] *In the economic literature it is well known "the Fundamental Equilibrium Exchange Rate model (FEER), in which the equilibrium exchange rate jointly ensures internal (saving/investment balance) and external (current account) equilibrium. An alternative though related empirical approach, referred to as the Behavioural Equilibrium Exchange Rate (BEER), also acknowledges the influence of macro imbalances in the determination of the real exchange rate in the long run. However, it takes a more agnostic view of the specific value that is needed to simultaneously ensure internal and external equilibrium. In addition, the BEER approach is more encompassing and allows for the inclusion of other variables, which may impact on a country's terms of trade, such as oil and/or other commodity prices" (see Koen et al. paper, pg.24, cfr. the note 2 above).*