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The New Solutions to Imbalanced
Regressions and Their Applications to
Several Puzzles in International
Finance

In this paper, we derive several simple estimations, namely the GCO-AR class estimations for the
imbalanced regression where we allow the orders of the right hand side and the left hand side of the
regression to be I(0), I(1) or I(d) processes (long memory processes) while unequal to each other. Based on
our new estimator for the imbalanced regression cases analyzed by Baillie and Bollerslev (2000), our results
show that a convergent usual t-statistic can be constructed. The implementation of our estimators is easy
since it avoids the estimation of long-run variance. The usefulness of our methodology also has been
demonstrated by multiple simulations. After this, we used our new estimation to re-examine two popular
finance issues: the forward discount anomaly and equity premium puzzle. The results of our methodology
provide striking evidence contradicting the typical findings of existing literature: the results showed
(i) the forward rate unbiasedness hypothesis (FRUH) is valid within some countries such as France, Japan, Great
Britain and Italy; (ii) several commonly used predictive variables exhibit substantial out-of-sample
forecasting power for excess equity returns, including the earnings price ratio (E/P), the dividend payout
ratio (D/E), the inflation rate (INFL), the book-to-market ratio (B/M), the unemployment rate (UME), the
treasury bill rate (TBL), the net equity expansion (NTIS), the long term yield (LTY), the industrial production
(IP), the stock variance (SVAR), the term spread (TMS) and the money supply (M2).