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Essays on Foreign Exchange Rate Predictability

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ABSTRACT

This dissertation consists of three interconnected essays on currency return predictability. The first essay investigates whether momentum or reversal is the dominant phenomenon in weekly currency returns. Using a broad basket of 63 emerging and developed market currencies in 16 short-term (1- to 4-week) look-back and holding period strategies, I find strong evidence in favour of cross-sectional momentum rather than reversal in weekly currency returns. Short-term momentum returns are statistically significant and are over 8% p.a. Moreover, the returns increase with an increase in the look-back period. I show these returns are higher in the earlier sub-period but they still exist in the most recent sub-period. Breakeven transaction costs range from 2 to 97 basis points. Furthermore, I find that short-term currency momentum returns are higher during business cycle expansions and during periods of depreciation of a basket of currencies versus the USD. Finally, robustness checks and regression analysis show that currency momentum returns are not linked to carry trade returns and are reduced by rising volatility in the foreign exchange market.

The second essay examines the profitability of the 52-Week high momentum strategy proposed by George and Hwang (2004) in the foreign exchange market. I show this strategy, which is more profitable than price momentum in stocks, is not profitable in the foreign exchange market using a large basket of 63 currencies. The related 52-week low and the 52-week high minus low strategies also fail to generate significantly positive returns. On further exploration of the causes of low returns to these strategies, I find the presence of non-independently floating currencies in long and short portfolios is a

contributing factor. Excluding these actively managed currencies helps in improving 52-week high strategy returns. Moreover, shortening the length of the strategy look-back period to 4- and 12-week also leads to minor improvement in returns, however, the improvement is not significant. Furthermore, I show that accounting for the timing of the 52-week high event also results in minor improvements in 52-week high strategy returns. Finally, I find that the 52-week high currency strategy does not generate positive returns in any phase of the business cycle and during UP or DOWN state of the FX market.

The third essay studies the profitability of currency value strategies by running a horse race of four measures of currency value including real exchange rate levels, 5-year change in the real exchange rate, the Purchasing Power Parity and the Big Mac Index. I find the real exchange rate level based strategies outperform all other strategies at shorter holding periods by generating annualized excess returns of up to 7% and the real exchange rate change strategies perform the best at longer (1- to 12-month) holding horizons. I show that a composite strategy which is based on all four value measures is highly profitable and yields average excess returns over all horizons up to 10% p.a. Furthermore, the returns to value strategies significantly improve when only non-independently floating currencies are used. I find that high yielding currency value strategies have considerably higher breakeven transaction costs starting from 58.5 basis points per one way trade due to low annual portfolio turnover. Moreover, the results indicate that real exchange rate levels and real exchange rate change strategies generate higher returns during expansionary phase of the US business cycle and during times of US dollar depreciation. Finally, detailed regression analysis shows that currency value returns exist independently of the currency carry trade returns and are not explained by a broad list of key macroeconomic variables.

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Read! In the Name of your Lord, Who has created (all that exists)

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LIST OF ABBREVIATIONS

| | |
|----------------|--|
| OECD | Organisation for Economic Co-operation and Development |
| PPP | Purchasing Power Parity |
| NBER | National Bureau of Economic Research |
| GFD | Global Financial Data |
| CPI | Consumer Price Index |
| IP | Industrial Production |
| CIP | Covered Interest Rate Parity |
| RER | Real Exchange Rate |
| FX | Foreign Exchange |
| US | United States |
| USD | United States Dollar |
| MOM | Momentum |
| VOL | Volatility |
| HML | High minus Low |
| Fig | Figure |
| HAC | Heteroscedasticity and Autocorrelation Consistent |
| <i>t</i> -stat | <i>t</i> -statistics |
| DB | Deutsche Bank |
| Min | Minimum |
| Max | Maximum |
| S.D | Standard Deviation |
| p.a. | Per annum |
| Ln | Natural Logarithm |
| Log | Logarithm |
| NDF | Non Deliverable Forward |