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***EMPIRICAL EVIDENCE ON PREDICTABILITY OF EXPECTED
RETURNS: CONTRARIAN STRATEGY, DOLLAR COST
AVERAGING AND TACTICAL ASSET ALLOCATION BASED ON
THICK MODELLING STRATEGY***

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Introduction

The hypothesis that stock returns are predictable at long horizons has been called a new fact in finance (Cochrane 1999). That the predictability of stock returns is now widely accepted by financial economists is remarkable given the long tradition of the random walk model of stock prices.

In the last 30 years a lot of practitioners and financial economists debated on the performance of various asset allocation strategies convinced that history phenomena such as mean reversion or complex and structured models can help them to obtain the perfect forecasts and then derive profits from them.

This thesis is focused on empirical evidence of predictability of excess returns. In the first chapter, I investigate the profitability of contrarian strategy in the Italian Stock Market. However empirical research has shown that asset returns tend to exhibit some form of negative autocorrelation in the short term and mean-reversion over long horizons. Contrarian strategy is used to take advantage of serial correlation in stock price returns, such that selling winners and buying losers generates abnormal profits. I investigate the presence of abnormal returns in Borsa Italiana through the use of a simple trading strategy that exploit the predictability of short term stock price movements. In this way, I test the null hypothesis of weak form stock market efficiency that states that time series return are independent over any time period. The paper decomposes short term contrarian profit, firstly to sources similar to the ones in the Fama and French (1996) three factor model and successively augmented with a momentum factor (Carhart 1977).

On the second chapter¹ the analyse is focused in another classic portfolio strategy called Dollar Cost Averaging (DCA). Dollar Cost Averaging refers to an investment methodology in which a set dollar amount is invested in a risky asset at equal intervals over a holding period. The paper compares the advantages and risk of this strategy from the point of view of a saver, because normally he is not only interested in the final result but also in the quantity of risk he has to bear during the entire investment period. Many theories focused on the inefficiency of this strategy in terms of performance compared to the lump sum even if DCA is often used in the real world for its straightforwardness. Besides we offer a comparison of DCA based on the risk the investor bears during the entire investment horizon and not only at the end of the period. The analysis reveals that DCA reduces this kind of risk either for high or low volatile asset and the results does not depend on the length of the investment horizon. This risk in the within horizon is measured in particular with First Passage Time Probability and Expected Minimum Portfolio Value applied to portfolios simulated with Monte Carlo and different types of Bootstrap (block, stationary and residual sampling).

Financial economist know that there is deep empirical evidence that security returns are predictable and profits are evident in particular for istitutional investor who has downsized transaction costs. Supposing to be an istitutional investor who has a large number of information and forecasts, I tried to understand how using all them he decide with dispatch how to allocate the portfolio fund. When a wide set of forecasts of some future economic events are available, decision makers usually attempt to discover which is the best forecast, but in

¹The work made in collaboration with Francesca Pampurini

almost all cases a decision maker cannot identify ex ante the true process. This observation has led researchers to introduce several sources of uncertainty in forecasting exercises. The paper proposes a novel approaches to transform predicted returns into portfolio asset allocations, and their relative performances. First of all dealing with model uncertainty, as Pesaran and Timmerman (1996), I consider a richer parametrization for the forecasting model to find that the predictive power of various economic and financial factors over excess returns change through time. I consider "thick" model averaging as a risk diversification strategy. Moreover, applying a "recursive modelling approach" I have the opportunity to consider at each point in time all the possible forecasting models. To compute the weight for the model average I take into account model selection criteria as the Akaike Information Criterion (AIC) and the Square Forecast Errors (SFE). Finally, the decision on portfolio allocation is then completely determined by a logit approach applied at the forecast of excess returns on Euro stock. I studied a tactical asset allocation capable of transforming predictable returns into superior performances. Firstly, the paper analyses the various econometrics techniques that have been proposed to assess their relative forecasting abilities using a set of macro explanatory variables that appear to perform best. Finally, the paper proposes the efficiency of a strong tactical asset allocation who requires unconditional decision.