

IAE GUSTAVE EIFFEL

MASTER II PORTFOLIO MANAGEMENT

2014-2015

MASTER THESIS

Presented by

Thomas BAÏO

The momentum effect on French and European markets

Abstract, Table of Contents and References

ABSTRACT

The purpose of this paper is to determine if a momentum strategy is efficient enough to be used on French and European markets, using risk-adjusted measures. A traditional momentum strategy is then tested on the S&P 500 and compared to the SBF 120 and the STOXX 600, using a set of data from June 2005 to June 2015. The results show that this strategy is short-term effective only and not exclusively restricted to the US markets, as the STOXX 600 portfolio has outperformed the two others; an additional analysis based on the Jensen's Alpha will confirm these results. To conclude, there is evidence that such strategy significantly relies on the Fama and French Efficient Market Hypothesis.

Table of contents

1	INTRODUCTION	6
2	LITERATURE REVIEW.....	7
2.1	EFFICIENT MARKET HYPOTHESIS	7
2.1.1	<i>Market anomalies.....</i>	8
2.2	THE MOMENTUM STRATEGY.....	9
2.2.1	<i>Brief description.....</i>	9
2.2.2	<i>Momentum strategies</i>	12
2.3	THE PROFITABILITY OF MOMENTUM STRATEGIES.....	14
2.3.1	<i>Momentum returns on European markets</i>	15
2.4	SOURCES OF MOMENTUM PROFITS	17
2.4.1	<i>Momentum returns rational and behavioral explanation</i>	18
2.5	SOME FINANCIAL INDICATOR OF INTEREST: RISK ADJUSTED MEASURES.....	19
2.5.1	<i>The Treynor Ratio</i>	19
2.5.2	<i>The Jensen's Alpha.....</i>	21
2.5.3	<i>The Sharpe Ratio.....</i>	21
3	DATA AND METHODOLOGY	22
3.1	DATA.....	22
3.2	METHODOLOGY.....	22
3.2.1	<i>Analysis software used</i>	22
4	RESULTS	23
4.1	PERFORMANCE GAP ANALYSIS.....	23
4.1.1	<i>S&P 500 Index.....</i>	23
4.1.2	<i>SBF 120 Index.....</i>	24
4.1.3	<i>STOXX 600 Index.....</i>	25
4.1.4	<i>Performance comparison between the three indexes</i>	27
4.2	ADDITIONAL ANALYSES.....	30
5	CONCLUSION AND DISCUSSION.....	32
	REFERENCES.....	33
	WEBSITES.....	35
	APPENDIX	36

List of tables

Table 1: Two-way Sort of Momentum and Volume	10
Table 2: Number of observations, February 1987 – June 1999.....	16
Table 3: Returns on Momentum Styled Portfolios	16
Table 4: Number of winning and losing firms on the S&P 500 Index.....	23
Table 5: Performance gap and average on the S&P 500 Index	24
Table 6: Number of winning and losing firms on the SBF 120 Index.....	24
Table 7: Performance gap and average on the SBF 120 Index	25
Table 8: Number of winning and losing firms on the STOXX 600 Index	26
Table 9: Performance gap and average on the STOXX 600 Index	26
Table 10: Comparison between the performances of three selected indexes	27
Table 11: Comparison between the number of winning and losing firms	28

List of figures

Graph 1: Momentum indicator	12
Graph 2: Treynor Ratios and Jensen's Alphas for two portfolios with different betas	20
Graph 3: S&P 500	28
Graph 4: SBF 120	29
Graph 5: STOXX 600	29
Graph 6: Comparison of momentum	30

REFERENCES

- Ackert Lucy and Deaves Richard, 2009. *Behavioral Finance: Psychology, Decision-Making, and Markets*, Cengage Learning, Mason (USA), 432 p.
- Asness C. S., 1994. *Variables that Explain Stock Returns*, Ph.D. Dissertation, University of Chicago.
- Asness C. S., 1997. "The Interaction Between Value and Momentum Strategies", *Financial Analysts Journal*.
- Asness C.S., Moskowitz T.J., and Pedersen L.H., 2009. "Value and Momentum Everywhere", *National Bureau of Economic Research Working Paper*.
- Brad Zigler, 2007. "No pain, No gain", [Online], <http://wealthmanagement.com/practice-management/no-pain-no-gain>, last consulted 23/05/2015.
- Boons M. F., 2012, "Investing in Relative Strength: Momentum Strategies Applied to Euronext Stocks", *International Business Administration*, 26 p.
- Chan Louis K. C., Jegadeesh N., and Lakonishok J., 1996. "Momentum strategies", *Journal of Finance*, Vol. 51, Issue n°5, December, pp. 1681-1713
- Evensky H., Horan S., Robinson T., 2011. *The New Wealth Management: The Financial Advisors Guide to Managing and Investing Client Assets*, John Wiley & Son, 480 p.
- Fama E.F., French K.R., 2008. "Dissecting anomalies", *Journal of Finance*, n°63.
- Griffin J., Ji S. and Martin S., 2005. "Global Momentum Strategies: A Portfolio Perspective", *Journal of Portfolio Management*.
- Grundy B. F., Martin S.R., 2001. "Understanding the Nature of the Risks and the Source of the Rewards to Momentum Investing", *Review of Financial Studies*, n°14.
- Houdou Basse Mama, 2010. *Information Dissemination, Market Efficiency and the Joint Test Issue*, BoD – Books on Demand, 412 p.
- Jegadeesh N., Titman S., 1993. "Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency", *The Journal of Finance*, Vol. 48, No. 1, pp. 65-91.
- Jegadeesh N., Titman S., 2001. "Profitability of Momentum Strategies: An Evaluation of Alternative Explanations", *Journal of Finance*, n°56.

- Jellema Willem, 2013. *Stratégies de Momentum: la nouvelle règle du jeu ?*, [Online], Robeco, the investment engineers, February 27th, <http://www.robeco.fr/actualites/2013/strategies-momentum.jsp>, last consulted 29/05/2015.
- Latif Madiha, Arshad Shanza, and al., 2011. "Market Efficiency, Market Anomalies, Causes, Evidences, and Some Behavioral Aspects of Market Anomalies", *Research Journal of Finance and Accounting*, Vol. 2, n° 9/10, pp. 1-13
- Lee C., Swaminathan B., 2000. "Price momentum and trading volume", *Journal of Finance*, n° 55, pp. 2017–69.
- Lee N. R., Liu J. F. & Lin, W. Y., 2014. "Default probability anomalies in the momentum strategies". *Applied Economics Letters*, Vol. 21, n°17, pp. 1206-1209.
- Lumby Stephen and Jones Chris, 2003. *Corporate Finance: Theory & Practice*, Cengage Learning EMEA, 796 p.
- Malkiel Burton, 2004. "The Efficient Market Hypothesis and Its Critics", *CEPS Working Paper*, n°91, pp. 1-47
- Management Association, 2014. *Banking, Finance, and Accounting: Concepts, Methodologies, Tools, and Applications*, Information Resources IGI Global, 1593 p.
- Mangot Mickaël, 2008. *Psychologie de l'investisseur et des marchés financiers*, Dunod, 2^{ème} édition, Paris, 304 p.
- Neuberg S. Albert, 2014. *Indexing for Maximum Investment Results*, Routledge, New York, 398 p.
- Novy-Marx R., 2012. "Is momentum really momentum?", *Journal of Financial Economics*, Vol. 103, n°3, pp. 429-453
- Odean T., 1998. "Are Investors Reluctant to Realize Their Losses?", *Journal of Finance*, Vol. 58.
- Rouwenhorst K.G., 1998. "International Momentum Strategies", *Journal of Finance*, n°53.
- Shunway T., and Wu G., 2006. "Does Disposition Drive Momentum", University of Michigan.
- Snopek Lukasz, 2012. *The Complete Guide to Portfolio Construction and Management*, John Wiley & Sons, 288 p.
- Van Dijk Ronald, Huibers Fred, 2002. "European Price momentum and analyst behavior", *AIMR*, Research foundation workshop, pp. 96-105.