Profitable mean reversion after large price drops: A story of day and night in the S&P 500, 400 MidCap and 600 SmallCap Indices

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Abstract

The motivation for this article is to show the usefulness of the information contained in the open-to-close (day) and close-to-open (night) periods compared to the more frequently used close-to-close period. To show this we construct two versions of a contrarian strategy, where the worst performing shares during the day (resp. night) are bought and held during the night (resp. day). We show that the strategies presented here generate a significant α and their returns cannot be solely explained by the factors derived from Fama and French (1993) 3-factor model and a modified 5-factor model introduced by Carhart (1997). Even after we account for the bid-ask bounce effect, the returns generated are significant and

consistent. The information ratios of the two strategies mentioned for the entire period 2000–2010 vary between 1.59 and 6.70 depending on the capitalization of stocks. Overall, we show that opening prices contain information that is not generally fully utilized yet. The strategy proposed uses this information to add value and extract a significant α, which cannot be explained by market factors.

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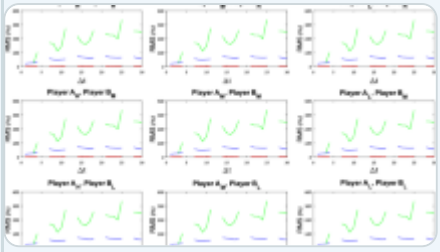

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Notes

1. In this article, the information ratio is calculated as the ratio of annualized return to annualized standard deviation, see Appendix A.

2. For instance, see interactivebrokers.com/en/p.php?f=commission&ib_entity=llc where the fee is USD 0.0035 per share, which amounts to 0.05 per cent if the nominal value of share is USD 7. Note that the fee decreases proportionally as the nominal value of the share increases.

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Appendices

Appendix A

Table A1

Table A1 Calculation of the trading statistics

Appendix B

Table B1. Version 1 of the strategy applied to the constituent stocks of the S&P 400 MidCap Index. Decision period is from today's close to the next day's open and holding period from the next day's open to the next day's close. The results are divided into deciles. The first decile contains the worst performing shares during the decision period, the tenth decile the best ones.

Table B1 Application of Version 1 of the strategy to constituents of the S&P 400 MidCap

Appendix C

Table C1. Version 2 of the strategy applied to the constituent stocks of the S&P 400 MidCap Index. Decision period is from today's open to today's close and holding period is from today's close to the next day's open. The results are divided into deciles. The first decile contains the worst performing shares during the decision period, the tenth decile the best ones.

Table C1 Application of Version 2 of the strategy to constituents of the S&P 400 MidCap

Appendix D

Table D1. Version 1 of the strategy applied to the constituent stocks of the S&P 500 Index. Decision period is from today's close to the next day's open and holding period from the next day's open to the next day's close. The results are divided into deciles. The first decile contains the worst performing shares during the decision period, the tenth decile the best ones.

Table D1 Application of Version 1 of the strategy to constituents of the S&P 500 Index

Appendix E

Table E1. Version 2 of the strategy applied to the constituent stocks of the S&P 400 MidCap Index. Decision period is from today's open to today's close and holding period is from today's close to the next day's open. The results are divided into deciles. The first decile contains the worst performing shares during the decision period, the tenth decile the best ones.

Table E1 Application of Version 2 of the strategy to constituents of the S&P 500 Index

Appendix F

Table F1

Table F1 Three different factor models applied to the returns generated by the Version 1 of the strategy applied to the constituent stocks of the S&P 400 MidCap Index. The regressions were only applied to the first decile stocks

Appendix G

Table G1

Table G1 Three different factor models applied to the returns generated by the Version 2 of the strategy applied to the constituent stocks of the S&P 400 MidCap Index. The regressions were only applied to the first decile stocks

Appendix H

Table H1

Table H1 Three different factor models applied to the returns generated by the Version 1 of the strategy applied to the constituent stocks of the S&P 500 Index. The regressions were only applied to the first decile stocks

Appendix I

Table I1

Table I1 Three different factor models applied to the returns generated by the Version 2 of the strategy applied to the constituent stocks of the S&P 500 Index. The regressions were only applied to the first decile stocks

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