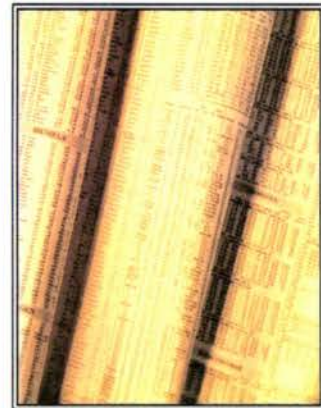


Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

An Empirical Analysis of the Market Response to Earnings Warning Announcements



A research **Thesis** report for partial fulfilment of the requirements for the degree of
Master of Business Studies in Finance at Massey University

Clayton Adams
2001

MASSEY UNIVERSITY



1061481652

Abstract

A review of the recent literature surrounding market efficiency identifies two families of pervasive regularities: the underreaction of stock prices to new information events, such as earnings announcements or warnings, and the overreaction of stock prices to a series of negative or positive news. This study provides an empirical analysis of the market's stock price response to earnings warning announcements. Traditional event study methodology is employed to examine the stock price response of a sample of 372 companies issuing earnings warning announcements over a two-year period (1998 to 1999). The study finds evidence of a systematic stock price underreaction to the news content of an earnings warning announcement resulting in negative post-event 'drift' over the short to medium term for the majority of companies in the sample. The exception to this general finding is the group of stocks that have experienced the worst performance in the year leading up to the earnings warning announcement. This group of stocks displays post-event returns significantly higher than the rest of the sample, possibly as a correction of previous overreaction to a series of negative news events.

Acknowledgements

I would like to thank my supervisor, Chris Malone, and advisor, J.G Chen, from the Department of Finance, Banking and Property at Massey University for providing advice and guidance in the choice of topic and development of this research over the past year.

I would also like to thank my fiancée, Lynda, for her enduring patience and unfaltering support, which has enabled me to remain focused through the course of my postgraduate study, and for which I am eternally grateful.

Table of Contents

Abstract	2
Acknowledgements	3
Table of Contents	4
List of Tables	6
List of Figures	8
Introduction	11

PART ONE: LITERATURE REVIEW

1.1 Market Efficiency	16
1.2 Market Overreaction to New Information	17
1.3 Market Underreaction to New Information	18
1.4 Earnings Announcements and Post-Event Drift	19
1.5 Earnings Warnings and other Negative News	21
1.6 Literature Review Conclusions	22

PART TWO: DATA & METHODOLOGY

2.1 Primary and Secondary Data	23
2.2 Sample Population	24
2.3 Methodology	30

PART THREE: HYPOTHESES & RESULTS

3.1	Preliminary Analysis.....	41
3.1.1	The Pre-Event Period	44
3.1.2	The Event Window	51
3.1.3	The Post-Event Period	54
3.2	Comparison of Exchange (NYSE v NASDAQ)	62
3.3	Effect of Market Capitalisation.....	65
3.4	The Price/Earnings Effect	71
3.5	Market to Book ratio.....	75
3.6	Size of Earnings Warning	81
3.7	Relationship between Pre-, and Post-Event Returns	91
3.8	Conclusions	99
	Appendix 1: The Negative P/E Portfolio	105
	References	109

List of Tables

Table 2.2 :	Summary of warnings discounted from sample	28
Table 3.1:	Cumulative Average Abnormal Returns for full sample	42
Table 3.1.1:	CAAR for 50-day sub-periods	45
Table 3.1.2:	Daily Average Abnormal Returns over the extended event window $t-10$ to $t+10$	51
	5	
Table 3.1.3:	Five Phases of post-event drift	52
Table 3.2:	NYSE v NASDAQ Cumulative Average Abnormal Returns for event period $t-250$ to $t+250$	63
Table 3.2a:	Post-event Analysis of Variance	64
Table 3.3:	Cumulative Average Abnormal Returns for High and Low Capitalisation stocks	66
Table 3.3a:	Analysis of Variance High v Low Capitalisation stocks	67
Table 3.4:	Cumulative Average Abnormal Returns for High and Low P/E stocks	71
Table 3.5:	Cumulative Average Abnormal Returns for High and Low Market to Book stocks	76
Table 3.5a:	Analysis of Variance High v Low Market to Book stocks	77
Table 3.6:	Cumulative Average Abnormal Returns for the period $t-250$ to $t+250$ – Small v Large warning stocks	82
Table 3.6a:	Analysis of Variance Small v Large warning stocks – Event window	82
Table 3.6b:	Analysis of Variance Small v Large warning stocks – Post-event	84
Table 3.6c:	Cumulative Average Abnormal Returns for the event period – grouped by warning size	85

Table 3.6d:	Analysis of Variance Small v Large warning stocks by Quartile (Event window)	86
Table 3.6e:	Analysis of Variance Small v Large warning stocks by Quartile (Event window)	88
Table 3.7:	Cumulative Average Abnormal Returns – Highest v Lowest pre-event CAAR's	92
Table 3.7a:	Analysis of Variance High v Low pre-event return stocks.....	94
Table 3.7b:	Cumulative Average Abnormal Returns for the event period – grouped by pre-event CAAR	95
Table 3.7c:	Analysis of Variance High v Low pre-event return stocks – by Quartile (Event window).....	96
Table 3.7d:	Analysis of Variance High v Low pre-event return stocks – by Quartile (Post-event)	97
Table A.1:	Cumulative Average Abnormal Returns Negative P/E Portfolio v Full Sample 94	105

List of Figures

Figure 2.2 : NADAQ and NYSE performance 1997 – 200	26
Figure 3.1: Cumulative Average Abnormal Return for the full sample	42
Figure 3.1.1: CAAR of full sample for pre-event period ($t-250$ to $t-1$).....	45
Figure 3.1.1a: CAAR for 50-day sub-event periods.....	45
Figure 3.1.1b: Regression of Daily Average Abnormal Return and log of no# of days prior to an earnings warning announcement	47
Figure 3.1.1c: Time series relationship between Daily Average Abnormal Return and event date	47
Figure 3.1.1d: Relationship between Daily Average Abnormal Returns and time over the period $t-50$ to $t-1$	48
Figure 3.1.2: Daily Average Abnormal Returns over the extended event window $t-10$ to $t+10$	52
Figure 3.1.2a: Daily Average Abnormal Returns over the extended event window $t-10$ to $t+10$	53
Figure 3.1.3: Cumulative Average Abnormal Returns over the post-event period ($t+1$ to $t+251$)	56
Figure 3.1.3a: Cumulative Average Abnormal Return for the post-event period $t+2$ to $t+22$	56
Figure 3.1.3b: Cumulative Average Abnormal Return for the post-event period $t+23$ to $t+61$	57
Figure 3.1.3c: Cumulative Average Abnormal Return for the post-event period $t+23$ to $t+61$	58
Figure 3.1.3d: Cumulative Average Abnormal Return for the post-event period $t+2$ to $t+80$	61
Figure 3.1.3e: Cumulative Average Abnormal Return for the post-event period $t+2$ to $t+250$	62

Figure 3.2:	NYSE v NASDAQ Cumulative Average Abnormal Returns for event period t_{-250} to t_{+250}	63
Figure 3.3:	Cumulative Average Abnormal Returns for High and Low Capitalisation stocks	66
Figure 3.3a:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – High v Low Capitalisation stocks	68
Figure 3.3b:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+81} – High v Low Capitalisation stocks.....	68
Figure 3.4:	Cumulative Average Abnormal Returns for High and Low P/E stocks.....	71
Figure 3.4a:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – High v Low P/E stocks.....	72
Figure 3.4b:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – grouped by P/E ratio	73
Figure 3.5:	Cumulative Average Abnormal Returns for High and Low Market to Book stocks	76
Figure 3.5a:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – High v Low P/E stocks.....	78
Figure 3.5b:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – grouped by market to book ratio	78
Figure 3.6:	Cumulative Average Abnormal Returns for the period t_{-250} to t_{+251} – Small v Large warning stocks.....	81
Figure 3.6a:	Cumulative Average Abnormal Returns for the period t_{+2} to t_{+251} – small v large warnings	83
Figure 3.6b:	Cumulative Average Abnormal Returns for the event period – grouped by warning size	85
Figure 3.6c:	Cumulative Average Abnormal Returns for the event period – grouped by warning size	87
Figure 3.7:	Cumulative Average Abnormal Returns – Highest v Lowest pre-event CAAR's.....	92

Figure 3.7a:	Cumulative Average Abnormal Returns for the period $t+2$ to $t+251$ – Lowest v Highest pre-event CAAR stocks	93
Figure 3.7b:	Cumulative Average Abnormal Returns for the event period – grouped by pre-event CAAR	95
Figure 3.7c:	Cumulative Average Abnormal Returns for the post-event period – grouped by pre-event CAAR	97
Figure A.1:	Cumulative Average Abnormal Returns Negative P/E Portfolio v Full Sample.....	105
Figure A.2:	Polynomial equations for Negative P/E Portfolio versus Full Sample	107