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No. 2010-13

Series Editor: Dr. Alexandr Akimov

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Can Information Made Publicly Available Explain the Long Term Performance of New Economy Seasoned Equity Offers?

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Abstract

The last decade of the 20th century saw the rise of the new economy sector in Australia with an increasing number of new economy companies listing on the Australian Securities Exchange (ASX). These new economy companies engaged in seasoned equity offers (SEOs) soon after listing on the Securities Exchange. A plethora of information is made publicly available in relation to such offers with the aim of providing investors a sound basis for making investment decisions. But how value-relevant are these information in relation to the new economy companies? Given that research to date has not yet addressed this issue with respect to new economy SEOs, we therefore address this knowledge gap in the context of Australian capital markets. We found that, overall, publicly available information have the ability to explain long-term returns of new economy SEOs and should therefore be taken seriously by investors.

JEL classification: G12, G14, G19

Keywords: Seasoned equity offers; Long-term returns; New economy

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^Ω Authors wish to thank participants of seminars and workshops at Griffith University and Monash University for their helpful comments on this research. An earlier version of this paper has been presented at the Oxford Business and Economics Conference (University of Oxford, UK).

1.0 Introduction

Since the mid 1990s, there has been a rapid increase in the volume of new economy seasoned equity offers in Australia.¹ Australian companies usually raise equity in the form of a rights issue or a private placement, rather than through a public share offer. As in any other offering, a flow of information is made publicly available for the purpose of assisting potential investors to make a sound investment decision. However, there is no clarity as to what extent the available information serve their purpose. Some recent studies addressed the relevance of publicly available information, but these studies do not relate to the new economy seasoned equity offers (see, for example, Autore, Bray and Peterson, 2009; Daily, Certo and Dalton, 2005; Wyatt, 2008 and Core, Guay, and Buskirk, 2003). Thus, it is important to establish the extent of explanatory power of publicly available information about the returns subsequent to equity offers by new economy companies. If investors do not use the information from offer documents to value new economy equity issuing firms, the regulators would possibly need to modify the reporting requirements for equity issuing companies.

The growing importance of technology-intensive companies for product diversification and efficiency improvements in the economy, as well as investor and media attention for the new economy, warrant further research into this topic. Insight into share price performance and funding needs of new economy entities could assist optimal financing, growth, and regulation of this new sector of the global economy. Despite this, relatively little empirical research has been conducted on new economy stocks beyond the Initial Public Offer event.

In this paper, we address this knowledge gap. We investigate the ability of the following publicly available information to explain the long-term returns performance (that is, one-, two- and three-year returns after the offer announcement)² of new economy seasoned offers:

- Type of new economy industry³

1 New economy firms in this context are businesses with more than fifty percent of their activities in hi-tech sectors or biotechnology. Business activities were verified by consulting the FinAnalysis database and confirmed using information available from the Australian Securities Exchange (ASX).

2 We define long-term returns as a buy-and-hold strategy of acquiring shares in the issuing company at the closing share price on the SEO announcement day and holding them for one, two or three years. Thus, we ignore the announcement day returns in our calculations. In this fashion we wish to distinguish between any short-term returns and long-term share returns following the announcement of a seasoned equity offer.

3 We use the Global Industry Classification Standard (GICS) as an initial indicator of whether a company can be considered to belong to new economy (i.e. whether the company was classified by ASX in the following industries: Software and services; Technology hardware and equipment; Telecommunications; Healthcare equipment and services; or Pharmaceuticals and biotechnology). These companies were then further examined for whether the majority of their business activities were in new economy (using information available from FinAnalysis database and individual company websites). Note that GICS industry classification was implemented by ASX in July 2002. Therefore, additional companies were identified (which were not classified

- Whether the company has Internet related business activity
- Whether renounceable or non-renounceable rights are offered
- Whether the company is a Commitments Test Entity
- Whether the offer includes share options with ordinary shares (package offer)
- Offer price discount
- Offer size
- Time (and index adjusted return) between initial and seasoned offers
- Underwriting fee
- Use of offer proceeds

While short-term (announcement day) returns around the announcements of seasoned equity offers have implications for market efficiency, the long-term share price performance following the announcements of SEOs is an at least equally important issue. Post-equity offer underperformance for up to five years after the announcement has been well documented in the past (see, for example, Loughran and Ritter, 1995; Spiess and Affleck-Graves, 1995). However, there is currently no published research on the share returns' performance following the announcements of SEOs by new economy companies, as well as the driving forces determining these returns. In this research, we evaluate the effect of public information (contained in offer documents and company announcements to the Stock Exchange) on long-term returns following the SEO announcements by new economy firms.

Our results indicate that, overall, publicly available information has moderate ability to explain the post-SEO returns performance. Moreover, we find that new economy SEOs announced between January 1994 and December 1998 and offers announced between January 2002 and December 2004 provide superior long-term returns. In contrast, new economy SEO announced between January 1999 and December 2001 (during the new economy hot issue period and the period following the post-April 2000 high-technology stock crash) produce inferior long-term returns.

The remaining sections of this study are organised as follows. The next section presents an overview of previous research on the effect of public information in relation to equity offering firms. Section 3 discusses the sample, measurement of returns and the sources of data used in this study. Section 4 discusses the results while Section 5 provides the conclusion of the study.

2.0 Previous Studies

A large body of research has concentrated on Initial Public Offer (IPO) listing day and long-term returns. Substantial listing day returns have been explained as compensation to investors for the lack of publicly available information about the newly listed companies (see, for example, Welch, 1989,

in the above GICS industries at the time of the SEO), and were selected for this sample if they satisfied the substantial new economy related business activity test (these companies form the semi-new economy group).

1996; Rock, 1986; Allen and Faulhaber, 1989; and Grinblatt and Hwang, 1989 for theoretical explanations, and Ibbotson, Sindelar, and Ritter, 1988; Loughran, Ritter, and Rydqvist, 1994; and Loughran and Ritter, 2004 for empirical evidence). Publicly available information, such as the offer price and the proportion of equity retained by original investors, is predicted to signal the quality of the offer (and the company) (see Grinblatt and Hwang, 1989).

More recently, several studies concentrated on the importance of public information in IPO price formation (see, for example, Daily, Certo and Dalton, 2005; Wyatt, 2008 and Core, Guay, and Buskirk, 2003). Core et al. (2003) examined whether, and to what extent, traditional variables (such as book value of earnings, net income, research and development expenditure, advertising expenditure and sales growth) contained in offer prospectuses could explain the value of IPO companies during the new economy period between 1996 and 1999. Core et al. found that the proportion of firm value explained (approximated by the proportion of market value of equity explained by the book value of equity, earnings, and earnings growth proxies) has been decreasing during the whole sample period (for high technology and young firms' subsamples), but especially during the new economy period. In contrast, Daily et al. (2005) documented that public information from IPO prospectus (for example, retained ownership by CEOs, firm size, age, and profitability) does not have explanatory power of IPO offer price. Moreover, Wyatt (2008) found that those IPOs which disclosed the reasons for public listing and the purpose for the use of offer proceeds were less underpriced and had superior returns in the long run. Wyatt found that IPOs which provided voluntary information on intangible assets and intellectual property (such as patents, designs and trademarks) also offered equity at lower discounts and were expected to perform well in the long run.

In addition to the above studies, Autore et al. (2009) indicated that the use of offer proceeds has a material impact on the long-term returns after seasoned equity offerings. Autore et al. point that companies indicating that the SEO proceeds would be used for investment purposes do not underperform in the long run, while companies having no credible investment strategies (those using the offer proceeds for 'general corporate purposes' or to restructure their balance sheets) significantly underperform in the three years following the equity reissue.

None of the abovementioned research, however, has addressed the significance of publicly available information in explaining the long-term returns of new economy SEOs, particularly in the context of the Australian capital market. Thus, the present paper addresses this gap in the literature. The Australian economy and equity investors benefited from the ability to diversify into this new sector of the economy. Thus, we believe that insights into the determinants of the long-term returns of equity reissuers would provide valuable insights for the investors and the regulators.

3.0 Research Methods

In this section we describe the sample used in the study, how returns were calculated, the type of public information tested, and the statistical or econometric tests that were performed.

3.1 Sample

Seasoned equity offers in Australia are usually made in the form of rights offers and private placements of equity. Moreover, rights offers and private placements accounted for a substantial proportion of total equity capital raisings on the Australian Securities Exchange between 1993 and 2003. For example, rights offers and private placements accounted for 48.82 percent of total equity capital raisings in 2003 (ASX Fact File 2005). Rights offers involve a pro-rata issue of new shares to existing shareholders. Rights offers can be non-renounceable or renounceable (a right to subscribe for new shares can be sold before it is exercised). Private sale of equity involves selling a relatively large block of securities to a single or relatively small group of investors (Hunt and Terry, 2008).⁴

This study examines seasoned equity offers by companies with new economy business activities that listed on the Australian Securities Exchange between January 1994 and December 2004. Eligible seasoned equity offers are common share issues of new economy companies in a form of private placements and rights issues. We exclude public share offers, offers of convertible notes and other hybrid instruments, as well as stock option only issues and any seasoned equity offers coinciding with bonus issues, preference share' offers, and debt.

During the period between January 1994 and December 2004, 284 new economy IPOs listed on the ASX. Eligible new economy companies subsequently had 639 private placements of equity and 90 rights offers before December 2004 that satisfy the above sample conditions (see Table 1).

Table 1: New economy seasoned equity offer announcement year

Offer year ^a	Private Placements		Rights Offers	
	N	%	N	%
1994	0	0.00	1	1.11
1995	3	0.47	0	0.00
1996	7	1.10	0	0.00
1997	4	0.63	2	2.22
1998	13	2.03	4	4.44
1999	72	11.27	5	5.56
2000	173	27.07	11	12.22
2001	119	18.62	24	26.67
2002	81	12.68	17	18.89

⁴ ASX Listing Rule 7.1 restricts private placements (without the approval of ordinary shareholders) to an effective maximum of 15 percent of the number of fully paid ordinary securities on issue 12 months before the date of issue or agreement.

<http://www.asx.com.au/ListingRules/chapters/Chapter07.pdf> However, private placements in Australia are usually issued at less than ten percent of fully paid ordinary securities (Hunt and Terry, 2008).

In Australia since 1987, placements made directly with institutional investors or individuals who are brokers' clients, do not require a prospectus to be registered with ASIC. Instead, ASX accepts an information memorandum, which also needs to be distributed to all participants. Additionally, the minimum subscription should be no less than \$0.5 million and the placement can be divided between no more than 20 investors.

2003	120	18.78	18	20.00
2004	47	7.36	8	8.89
Total	639	100.00	90	100.00

Notes

N is the number of equity offers in each category; % is the number of offers in particular year as a proportion of total offers in each group; ^a Offer announcement year.

Around 71.83 percent of new economy IPOs that listed on the ASX between January 1994 and December 2004 had at least one SEO in the form of a private placement or a right issue before the end of the sample period. Within the SEO sample, about 53.25 percent of companies that announced a seasoned offer before July 2004 had their first SEO within one year after the IPO. New economy companies in Australia have their first SEO 1.87 (1.37) years after the IPO on average (median). This is similar when compared with US industrial firms, which waited an average (median) 1.43 (1.29) years to reissue equity (see Jegadeesh, Weinstein, and Welch, 1993, p. 161).

Table 1 indicates new economy SEOs were relatively infrequent until 1999 for placements and until 2000 for rights offers. The increase in the number of listed new economy companies since 1994 influenced the frequency of new economy SEOs. Moreover, clustering of IPOs in the hot issue period until April 2000 is reflected in the increased SEO frequency since 1999.

Based on previous research (for example, Lee, 2003; Tan et al., 2002) new economy rights offers and equity placements are expected to have different characteristics. Thus, the analysis and results will be presented separately for these two offer types. This separation will provide a more comprehensive insight into new economy seasoned equity offers, and will also enable comparisons to be drawn with existing research.

3.2 Measurement of Returns

Long-term returns following seasoned equity offers were examined up to three years and were calculated as an investment strategy where shares are bought at the closing price on the SEO announcement day and held until the end of the holding period. These holding period returns (adjusted for dividend reinvestments) were then compared with alternative measures of long-term returns. In particular, the cumulative average excess returns (CAERs), buy-and-hold returns (BHARs), and calendar time (CT) returns were employed to assess the robustness of our results.

3.3 Statistical Tests

In order to determine the effect of public information and market sentiment on long-term returns performance of new economy SEOs, we utilise both univariate and multivariate tests.⁵

⁵ These univariate statistical tests include (but are not restricted to) the non-parametric Mann-Whitney-Wilcoxon (MWW) test, or a Kruskal-Wallis test for dichotomous explanatory variables. As well as the Tukey's Honestly Significant Difference (HSD)

For the multivariate test, we perform a multiple regression analysis between post-SEO long-term returns and the different public information variables based on the following equation:

$$\text{Return}_{i,j} = \alpha + \sum_{j=1}^{7-1} \beta \text{IND}_{i,j} + \gamma_7 \text{OFFER_PROCEEDS(USE)}_i + \gamma_8 \text{SAMPLE PERIOD}_i + \gamma_9 \text{SEO_SEQUENCE}_i + \gamma_{10} \text{CTE}_i + \gamma_{11} \text{IPO_SEO_RETURN}_i + \gamma_{12} \text{DISCOUNT}_i + \gamma_{13} \text{IPO_SEO_TIME}_i + \gamma_{14} \text{OFFER_SIZE}_i + \gamma_{15} \text{PACKAGE}_i + \gamma_{16} \text{UW_FEE}_i + \gamma_{17} \text{INTERNET_BUSINESS}_i + \gamma_{18} \text{RENOUNCEABLE_RIGHT}_i + \varepsilon_i \quad (1)$$

where

α = intercept

ε_i = random error, and

post-hoc tests in relation to certain public information variable such as industry type. Finally, Pearson bivariate correlations are used to present the results for continuous explanatory variables' relationships with post-offer returns.

The dependent and explanatory variables are as follows:

<i>Return_{adj_i}</i>	One, two, and three-year stock returns for sample seasoned equity offers from SEO announcement day to the end of holding period.
<i>IND</i>	Industry dichotomous variables; healthcare equipment and services, pharmaceuticals and biotechnology, software and services, technology hardware and equipment, media, telecommunications, and semi-new economy company group.
<i>OFFER_PROCEEDS (USE)</i>	Dichotomous variables denoting the use of offer proceeds as stated in offer documents, such as; operating activities; investments in technology; acquisition of another entity; debt repayment or divestment of original shareholders
<i>SAMPLE_PERIOD</i>	Offer period dichotomous variable; for example, <i>hot issue</i> period, where share offers made between January 1999 and March 2000 get the value 1 and 0 otherwise.
<i>SEO_SEQUENCE</i>	Dichotomous variables denoting the sequence of a particular SEO after the IPO (first, second, third, fourth or subsequent SEO)
<i>CTE</i>	Commitments test entity dichotomous variable
<i>IPO_SEO_RETURN</i>	Index adjusted return (All Ordinaries or Small Ordinaries Index) between the IPO and the seasoned equity offer
<i>DISCOUNT</i>	Discount to the rights (or private placement) offer price
<i>IPO_SEO_TIME</i>	Time in days between the IPO and the seasoned equity offer
<i>OFFER_SIZE</i>	OFFER SIZE is the seasoned equity offer value (at offer price) as proportion of the market value one day before the offer announcement
<i>PACKAGE</i>	Dichotomous variable being unity if the share offer also includes share options (warrants) to purchase additional shares and zero otherwise
<i>UW_FEE</i>	underwriting fee as percent of offer value
<i>INTERNET_BUSINESS</i>	A dichotomous variable with unity representing new economy companies with Internet related business activities
<i>RENOUNCEABLE_RIGHT</i>	Denotes whether the rights in the rights offer are renounceable (saleable) or not

However, inclusion of all explanatory variables in a multiple regression model could result in multicollinearity between explanatory variables. Therefore, each regression model is constructed with independent variables that do not have substantial overlap with other independent variables. Thus, only variables with a tolerance level above 0.5 (Variance Inflation Factor less than 2) are included in regression models.

3.4 Sources of Data

Daily share prices, as well as ASX/S&P market and industry indexes were collected from the Datastream. Additionally, ASX company announcements and prospectuses of new economy companies that listed during the sample period were examined for financial data about the equity offer and company characteristics.

Where available, this information was obtained directly from offer documents. The Connect4 database was used, which contains most prospectuses of Australian companies since January 1994.

Prospectus information for some companies were obtained from other sources, such as various company' Internet sites and the Australian Securities and Investments Commission (ASIC).

4.0 Empirical Results

In this research, we investigate the returns performance of new economy stocks following seasoned equity offers announced between January 1994 and December 2004. New economy stocks in this sample underperform (compared to the market and relevant industry index returns) in the long run following seasoned equity offers. In particular, cumulated monthly returns indicate underperformance in the first three years following the announcements of private placements but not after announcements of rights offers (see Table 2). Moreover, buy-and-hold returns in Table 2 (measured using the wealth relatives)⁶ indicate that new economy stocks mainly underperform in the three years following seasoned equity offers. While buy-and-hold returns indicate somewhat different returns performance compared to cumulative returns, it is evident that private placements underperform more than rights offers in the long run. Thus, our results are consistent with findings of previous studies (see, for example, Loughran and Ritter, 1995; Spiess and Afleck-Graves, 1995).

Table 2: Long-term returns' performance of new economy private placements and rights offers between January 1994 and December 2004

Years of seasoning		One	Two	Three
CAR (raw)	PP	-32.38	-44.22	-46.88
	RI	9.23	25.91	58.73
CAER (small stocks)	PP	-37.05	-54.15	-65.76
	RI	2.99	9.23	30.88
CAER (market)	PP	-40.40	-57.82	-67.15
	RI	2.35	10.24	31.89
CAER (industry)	PP	-15.95	-11.46	-9.42
	RI	15.45	31.28	61.76
BHR (raw)	PP	0.8649	0.5428	0.4393
	RI	1.0365	0.7635	0.9416
BHAR (small stocks)	PP	0.8359	0.5283	0.4115
	RI	0.9819	0.7040	0.8469
BHAR (market)	PP	0.8114	0.4987	0.3863
	RI	0.9816	0.6972	0.7916
BHAR (industry)	PP	1.0145	0.7768	0.6929
	RI	1.0962	0.8816	1.1288

Notes

PP represents private placements; RI represents rights issues; CAR (CAER) is the event time cumulative average (excess) percent return; BHR (BHAR) is the buy-and-hold (abnormal) return; Industry index is the equivalent GICS industry group S&P/ASX 300 index return; Market index is the S&P/ASX All Ordinaries accumulated index return, while small stocks represents the S&P/ASX

⁶ Wealth relatives, which are buy-and-hold returns standardised with benchmark buy-and-hold returns, as implemented in Ritter (1991) and Loughran and Ritter (1995), are calculated using the following formula: $\frac{\sum(1+R_{i,T})}{\sum(1+R_{bench,T})}$ where $R_{i,T}$ is the buy-and-hold return on equity issuer i in period T and $R_{bench,T}$ is the buy-and-hold return on the benchmark index over the same period.

Small Ordinaries accumulated index return; First month returns exclude the announcement day returns; BHAR are the wealth relatives, calculated using the following formula: $\Sigma(1+R_{i,T}) / \Sigma(1+R_{bench,T})$ where $R_{i,T}$ is the buy-and-hold return on equity issuer i in period T and $R_{bench,T}$ is the buy-and-hold return on the benchmark index over the same period.

Finally, calendar time returns indicate that new economy companies announcing private placements and rights offers underperform compared to all benchmark index returns in the first three years after offer announcement (see Table 3).

Table 3: Calendar time returns after new economy private placements and rights offers between January 1994 and December 2004

Benchmark index		All Ordinaries	Small Ordinaries	Industry indexes
Private placements	standardised average	-17.27	-16.49	-15.05
	<i>t</i> -statistic	(-3.149)***	(-3.118)***	(2.566)**
	unadjusted average	-0.98	-0.84	-0.18
Rights issues	standardised average	-18.14	-11.32	-2.88
	<i>t</i> -statistic	(-1.056)	(0.815)	(-0.355)
	unadjusted average	1.51	1.72	2.20

Notes

Calendar months between January 1994 and December 2004 that include at least two events in the previous 36 calendar months are used to calculate portfolio returns, which is 81 months for rights issues and 104 months for private placements; Calendar time portfolios are rebalanced monthly; *t*-statistics reported in parenthesis test the significance of monthly excess returns for a portfolio of private placements or rights offers in calendar time, where monthly excess returns are divided by the standard deviation of portfolio monthly returns (see Jaffe, 1974); UNADJUSTED AVERAGE is the grand total (average) calendar time excess return; STANDARDISED AVERAGE is the standardised grand total calendar time excess return (the average of standardised monthly excess returns).

However, the underperformance is only significant following private placements. We examine the impact of public information on post announcement long-term returns within a multiple regression context presented in Table 4.

4.1 Overall Effect of Publicly Available Information

As indicated in Section 3.3, inclusion of all explanatory variables identified for the purpose of this study in regression models would result in multicollinearity. Therefore, only variables with a tolerance level above 0.5 (Variance Inflation Factor below 2) are included in regression models. From these models, reduced models with only significant variables are constructed to simplify the interpretation of results. These reduced models have similar explanatory power of SEO returns, and further reduce the potential problems with multicollinearity between the explanatory variables. In all reduced models the Tolerance statistic is greater than 0.8 (Variance Inflation Factor of 1.25 or less), indicating a low level of overlap between independent variables in their explanation of the dependent variable.⁷

⁷ Except the regression model VI, which has a minimum tolerance level of 0.62 (Variance Inflation Factor of 1.62).

While long-term returns variables have bell-shaped distributions, the residuals in some multiple regression models exhibit heteroskedasticity.⁸ Therefore, all regression models exhibiting heteroskedastic residuals have White (1980) heteroskedasticity consistent coefficients and standard errors. Moreover, multiple regression models' explanatory power and individual variable coefficients do not change substantially when raw returns are used as the dependent variable instead of composite index adjusted returns. Long-term returns of equity offering firms were evaluated against a composite benchmark based on the All Ordinaries and the Small Ordinaries indexes (referred to as the composite index in text below).⁹

Table 4 indicates that public information explains between 22.11 and 26.84 percent of the variability in the first year returns of new economy private placements and rights offers (adjusted R^2 in regression models I and II). Moreover, all regression models in Table 4 are highly significant, indicating that publicly available information has explanatory power of post-SEO long-term returns. However, significant intercepts in regression models for private placements (and three year returns for rights offers) indicate that additional variable(s) not included in this study could improve the explanatory power of long-term returns following the announcements of new economy SEOs.

In summary, Table 4 indicates that explanatory variables constructed from public information have moderate ability to explain new economy SEO long-term returns, with a higher proportion of returns explained for rights offers in each of the first three years after the event. Individual variables effects are described in the ensuing subsections.

⁸ Heteroskedasticity is initially identified from the residual plots and confirmed using the White's (1980) Heteroskedasticity Test.

⁹ Composite index was created based on company' market capitalisation one trading day before the equity offer announcement day. Companies with market value above \$100 million are benchmarked against the All Ordinaries Accumulated Index return in the corresponding period, while entities with pre-SEO announcement day market value below \$100 million have their returns benchmarked against the Small Ordinaries Accumulated Index return. The broad based All Ordinaries Index proxies for returns on all ASX listed companies, while the Small Ordinaries Accumulated Index returns proxy for returns on small market value stocks. Use of either index does not materially change the results or conclusions that follow.

Table 4: Multiple regression analyses of one-, two- and three-year returns of new economy private placements and rights offers between January 1994 and December 2004

Independent variable	First year returns		Two year returns		Three year returns	
	Regression I (PP)	Regression II (RI)	Regression III (PP)	Regression IV (RI)	Regression V (PP)	Regression VI (RI)
Intercept	0.770 (18.440)***	-0.580 (-1.307)	0.694 (19.481)***	-0.578 (-1.625)	0.637 (15.842)***	-1.267 (-2.149)**
CTE	-0.090 (-3.021)***		-0.100 (-3.290)***		-0.081 (-2.516)**	
IPO-SEO RETURN	-0.088 (5.103)***		-0.088 (-3.759)***	-0.236 (-2.458)**	-0.056 (-2.259)**	-0.289 (-1.794)*
DISCOUNT	0.074 (4.543)***		0.044 (3.451)***		0.075 (5.849)***	0.225 (2.444)**
OFFER PROCEEDS (WORK CAPITAL)	0.055 (2.048)**					
OFFER PROCEEDS (ACQUISITIONS)			-0.075 (-2.421)**		-0.061 (-1.871)*	
OFFER PROCEEDS (INVESTMENTS)		0.215 (2.116)**		0.163 (2.088)**		
EARLY DEVELOPMENT	-0.175 (-2.071)**	0.692 (2.944)***		0.573 (3.202)***		
POST CRASH	-0.135 (-5.126)***			-0.198 (-2.412)**	-0.077 (-2.301)**	
FIRST SEO	0.064 (2.118)**					
FOURTH OR SUBSEQUENT SEO DELAY	0.031 (2.328)**		-0.106 (-2.997)***		-0.090 (-2.164)**	
TELCO			-0.106 (-2.323)**		-0.140 (-3.047)***	
INTERNET BUSINESS	-0.108 (-4.171)***		-0.082 (-2.659)***			
TIME (IPO – SEO)		0.125 (2.010)*		0.147 (3.077)***		0.280 (3.192)***
OFFER SIZE						0.400 (2.804)***
PACKAGE OFFER		-0.199 (-1.903)*				
UW FEE		6.321 (2.575)**		5.351 (2.577)**		
Model F	14.498***	4.522***	10.891***	7.512***	12.102***	6.796***
Adjusted R ²	22.11	26.84	14.01	51.36	19.20	41.26

Notes

Odd numbered regressions are for private placements, while even numbered regression models are for rights offers; Cell values represent unstandardised regression coefficients for individual variables, with corresponding *t*-statistics in parenthesis; Regression model V has White (1980) heteroskedasticity consistent standard errors and *t*-values, while the remaining models have homogenous variance of residuals; Dependent variable in all models is the one, two or three year ordinary share return after the offer announcement date, adjusted for the composite index (All Ordinaries or Small Ordinaries Index) return during the equivalent period; explanatory variables are as indicated in section 3.3 above; *, **, *** significant at alpha 0.10, 0.05, respectively 0.01 level.

4.2 Industry Effects

We examine whether post-SEO returns differ between new economy industries. The frequency of seasoned equity offers varies substantially between industries (see Table 5) in the new economy sample. New economy SEOs are most frequently announced by companies in the software and services industry group (33.13 percent of private placements and 26.67 percent of rights offers). The

second largest group are the semi-new economy SEOs, which are companies classified in ‘conventional’ industries, but have substantial business activities in the new economy sector.¹⁰

Table 5: New economy SEOs stratified by industry groups

New economy industry (GICS industry group)	Private Placements		Rights Offers	
	N	Percent	N	Percent
Software and services	209	32.71	24	26.67
Semi-new economy	140	21.91	23	25.56
Pharmaceuticals and biotechnology	88	13.77	9	10.00
Telecommunications	65	10.17	9	10.00
Technology hardware and equipment	64	10.02	7	7.78
Media	38	5.95	12	13.33
Healthcare equipment and services	35	5.48	6	6.67
Total	639	100.00	90	100.00

Notes

GICS is the Global Industry Classification Standard. ASX listed new economy companies are classified into industry groups based on the Global Industry Classification Standard; Semi-new economy group represents entities with some business activities in the new economy sector, but not classified by the ASX in the GICS new economy industries; N is the number of companies; Percent is the number of companies in a particular industry group as a proportion of total placements or rights offers.

Private placements by new economy companies classified in the Global Industry Classification Standard (GICS) telecommunications sector have significantly lower two and three year composite index adjusted returns than other new economy placements (see Table 4).

4.3 Internet Related Offers

We examine whether sample companies with Internet related business activities have significantly different post-SEO returns than other sample companies. Almost half of all new economy SEOs are conducted by Internet Related New Economy (IRNE) companies. In particular, 49.14 percent of private placements and 42.22 percent of rights offers were made by new economy companies with Internet related business activities. Multiple regression models in Table 4 indicate that private placements by new economy companies with Internet related business activities have significantly lower returns in the first two years after the offer announcement. Moreover, no significant differences in long-term returns after the announcement of rights offers exist between Internet related and remaining new economy companies.

4.4 Renounceable or Non-renounceable Rights

New economy rights offers are more likely to have non-renounceable rights (68.82 percent in our sample). The renounceable rights offers are made by significantly larger market capitalisation companies. Conversely, the renounceable rights offers do not have significantly different returns than the non-renounceable rights offers within the first two years after the event.

¹⁰ For example, e-commerce, Internet service provision and infrastructure, high-technology research and development.

4.5 Commitments Test Entity

The majority of the new economy seasoned equity offers are conducted by companies classified by the Australian Securities Exchange as the Commitments Test Entities. Commitments Test Entities are those companies that do not satisfy the profits test listing rule and are listed under the assets test and have half or more of tangible assets in cash or other liquid assets. These new economy companies were initially listed conditional on commitments to spend the offer proceeds and were required to submit quarterly cash flows reports to the Exchange (usually for the first two years after listing if the company becomes profitable or as requested by the ASX).¹¹ In particular, 72.22 percent of rights issues and 54.62 percent of private placements in the new economy sample were made by Commitments Test Entities.

Table 4 indicates that private placements by Commitments Test Entities have significantly lower composite index (All Ordinaries or Small Ordinaries Index) adjusted returns in the first three years after the private placement' announcement. However, CTE variable has no significant effect on returns after rights issues.

4.6 Offer made at Discount or at Premium

Loderer and Zimmermann (1988) showed that offer price is positively correlated to announcement period returns in Swiss rights issues.¹² In this study, the pricing effect is examined using the discount (or premium) between offer price and market value of shares one day before the announcement.

Table 4 indicates that placements with higher subscription prices (as a proportion of market share value) have significantly higher returns in the first three years after the announcement (controlling for other public information).¹³ Thus, placing shares at a premium (usually to large institutional investors in this sample) or offering rights at lower discounts could be revealing favourable information about the new economy firms' prospects.

4.7 Offer Size

Seasoned offer size is measured as the offer price multiplied by the number of shares offered, as a proportion of the company market value one trading day before the announcement of the offer. Consistent with Brown, Gallery and Goei (2006), rights offers in this study are substantially larger in

11 Identification of Commitments Test Entities was made by examining the ASX company announcements for whether the new economy company lodged a Commitments Test Entity report with the Australian Stock Exchange (Appendix 4C, 'quarterly report for entities admitted on the basis of commitments').

12 Loderer and Zimmermann used the ratio of the offer price to market price to examine the two-month returns ending with the announcement month, and the four month period ending with the ex-rights date.

13 The result is confirmed for rights offers' three-year returns in regression model VI (Table 4).

size than private placements.¹⁴ Moreover, larger new economy seasoned equity offers have significantly higher long-term returns. Table 4 shows that rights offer size as a proportion of the company market capitalisation is significantly positively correlated with three-year returns (after controlling for other publicly available information), indicating that larger rights offers have superior long-term returns.

4.8 Underwriting Fee

Only a small minority of the new economy private placements (2.54 percent in our sample) are underwritten. This may be because many placements are agreed to in advance, precluding the need to underwrite the offer.¹⁵ Therefore, the underwriting fee variable will not be evaluated for new economy private placements. Conversely, 82.22 percent of new economy rights offers are underwritten, paying an average underwriting fee of 4.24 percent. Results in Table 4 indicate that new economy companies conducting rights offers that pay higher underwriting fees have significantly higher returns in the first two years after the rights offer announcement. Thus, the results suggest that higher underwriting fee offers are riskier.¹⁶ This is consistent with Welch's (1991) findings, where riskier offers have higher direct compensation (higher underwriting fees).

4.9 Package (share and option) offers

Table 4 indicates that package (share and share option) rights issues have significantly lower first year returns (although only at 10 percent level) than share only rights issues.

4.10 Use of Offer Proceeds

Company use of seasoned equity offer proceeds is divided into working capital; investments in growth (for example, research and development); capital restructure (such as debt repayment); and acquisitions of assets and other entities. Proceeds in most seasoned offers have the primary purpose of supplementing the company's working capital, which is supported by the evidence that less than

14 Brown et al. (2006) sample of SEOs in Australia consists predominantly of natural resource companies (58.77 percent), followed by industrial firms (16.13 percent) and technology companies (around 11.95 percent of their sample). In his sample of SEOs between 1976 and 1995 in Australia, Lee (2003, p. 108) also found that the median size of private placements (as a proportion of issued capital) is substantially smaller than rights offers.

15 Almost one third of new economy equity placements (29.59 percent) are announced after the completion of the share placement.

16 Higher fee paying rights offers are significantly younger, have significantly lower market capitalisation before the offer announcement, and have significantly larger offers as proportion of company size, providing evidence that higher underwriting fee offers are riskier equity issues.

ten percent of new economy companies in this sample have positive earnings before the seasoned equity offer announcement.¹⁷

New economy companies that use the placement proceeds for working capital purposes have significantly higher first year returns. In contrast, if the placement's proceeds are used for acquisition purposes, the new economy company suffers significantly lower two and three year returns. In comparison, rights offers using offer proceeds for investments have significantly higher returns in the first two years after the offer. This extends the evidence by Tan et al. (2002) who documented that rights offers (by companies listed on the Singapore Stock Exchange) that used offer proceeds for investments had significantly higher announcement time returns.

4.11 Time Between the Initial and Seasoned Offers

The time between the IPO and SEO is positively correlated with the first, second and third year returns of private placements, indicating that companies that wait longer to place shares have significantly higher long-term returns. Later rights issues also have significantly higher long-term returns, but only in the second year after the announcement. Thus, multiple regression models in Table 4 indicate that new economy companies that wait longer to issue seasoned equity in the form of rights offers have significantly higher returns in the first three years after the offer announcements (TIME IPO-SEO).

Furthermore, new economy companies with higher composite index adjusted returns between the IPO and the private placement have significantly lower returns in the first three years after the seasoned equity offer. Moreover, two and three year returns after the announcements of rights offers are also significantly negatively correlated with pre-SEO returns.¹⁸ Thus, the results indicate that seasoned equity offers are turning points in share returns performance of new economy companies.

4.12 Sequence of Seasoned Offer After IPO

Soucik and Allen (1999) documented that SEOs announced by the Australian Securities Exchange listed companies between 1984 and 1993 underperform in the long run. They concluded that this is not due to the SEO sequence. However, new economy SEOs in Australia may have different characteristics than SEOs made by industrial companies.

Table 1 indicates that the number of new economy seasoned equity offers varies substantially based on the offer announcement year. Chi-square tests confirm that there is significant clustering of

¹⁷ Note that the uses of offer proceeds variables are not mutually exclusive, and that most SEOs have multiple uses of offer proceeds. A new economy company may use the majority of SEO proceeds for working capital, while it allocates a substantial proportion of offer proceeds for investments in research and development.

¹⁸ Results not reported.

private placements based on the offer year, controlling for the placement sequence after the IPO, where only the third placements after the IPO are not clustered by offer year.

Results in Table 4 indicate that, if the placement is the first SEO after company listing, the first year returns are significantly higher than for other placements. However, the results indicate that while the first SEO is interpreted by the investors as a favourable signal of company prospects, frequent seasoned offers are not. That is, fourth and subsequent new economy private placements have significantly lower two and three year returns than earlier placements. The results are consistent with Soucik and Allen (1999) who documented that, while the first three SEOs announced by the ASX listed companies between 1984 and 1993 underperform, the returns underperformance is less pronounced for the first seasoned equity offer.

5.0 Conclusions

This study has addressed the gap in existing evidence on seasoned equity offers by exploring long-term returns after announcements of private placements and rights offers by new economy companies that listed on the Australian Securities Exchange between 1994 and 2004. New economy SEOs in this sample generally underperform compared to returns on the market and the small stocks in the first three years after the offer announcement. The regression analyses indicated that public information (representing offer and company characteristics, and market sentiment) have the ability to explain long-term returns of new economy firms during the sample period. Thus, continued high standard of information provision, required by the regulators and the Securities Exchange from equity issuing companies, is desirable. However, because the ability of public information to explain post-SEO returns is only moderate, further research into post-SEO returns performance of new economy stocks, for example by examining any effects of investor behaviour on returns, is warranted.

References

- Autore DM, Bray DE, Peterson DR (2009) Intended use of proceeds and the long-run performance of seasoned equity issuers, *Journal of Corporate Finance* 15:358-367
- ASX Fact File 2005 (Australian Securities Exchange). [Internet Document]:
<http://www.asx.com.au/shareholder/pdf/factfile2005.pdf>
- Brown P, Gallery G, Goei O (2006) Does market misvaluation help explain share market long-run underperformance following a seasoned equity issue, *Accounting and Finance* 46:191-219
- Chapple L, Clarkson PM, Peters CJ (2005) Impact of the Corporate Law Economics Reform Program Act 1999 on initial public offering prospectus earnings forecasts, *Accounting and Finance* 45:67-94
- Cooper MJ, Dimitrov O, Rau PR (2001) A rose.com by any other name, *Journal of Finance*, 56:2371-2388
- Core JE, Guay WR, Buskirk AV (2003) Market valuations in the New Economy: an investigation of what has changed, *Journal of Accounting and Economics*, 34:43-67
- Daily CM, Certo ST, Dalton CR (2005) Investment bankers and IPO pricing: does prospectus information matter?, *Journal of Business Venturing*, 20:93-111
- Hunt B, Terry C (2008) *Financial institutions and markets* (5th ed.), Nelson, Melbourne
- Ibbotson RG, Sindelar JL, Ritter JR (1988) Initial Public Offerings, *Journal of Applied Corporate Finance* 1:37-45
- Jegadeesh N, Weinstein M, Welch I (1993) An empirical investigation of IPO returns and subsequent equity offerings, *Journal of Financial Economics* 34:153-175
- Lee P (2003) Initial Public Offers in a Multiple Issue Framework: The Impact of Subsequent Equity Issues on Signalling by Underpricing and Retained Ownership, Unpublished Ph.D. thesis, The University of Sydney, Sydney, Australia
- Leone AJ, Rock K, Willenborg M (2003) Disclosure of intended use of proceeds and underpricing of Initial Public Offerings, Working Paper, Pennsylvania State University, University of Colorado at Boulder and University of Connecticut
- Loderer C, Zimmermann H (1988) Stock offerings in a different institutional setting; The Swiss case 1973-1983, *Journal of Banking and Finance* 12:353-378
- Loughran T, Ritter JR (1995) The New Issues Puzzle, *The Journal of Finance* 50:23-51

- Loughran T, Ritter JR, Rydqvist K (1994) Initial public offerings: International insights, *Pacific-Basin Finance Journal* 2:165-199
- Pagano M, Panetta F, Zingales, L. (1998) Why do companies go public? An empirical analysis, *Journal of Finance* 53:27-64
- Soucik V, Allen DE (1999) Long Run Underperformance of Seasoned Equity Offerings: Fact or an Illusion?, Working Paper, Edith Cowan University, Perth, Australia
- Spiess DK, Affleck-Graves J (1995) Underperformance in long-run stock returns following seasoned equity offerings, *Journal of Financial Economics* 38:243-267
- Tan RSK, Chng PL, Tong YH (2002) Private placements and rights issues in Singapore, *Pacific-Basin Finance Journal* 10:29-54
- Welch I (1991) An empirical examination of models of contract choice in initial public offerings, *Journal of Financial and Quantitative Analysis* 26:497-518
- White H (1980) A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity, *Econometrica* 48:817-38
- Wyatt A, (2008) Intended "use of proceeds" disclosures in IPO Prospectus, Working Paper, University of Technology Sydney, Australia.