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Investors' Attentiveness, Price Impact and Regulatory Change at Lockup Expiry

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ABSTRACT

This paper explores the attentiveness of retail investors, and examines share price impact and change in regulation at the expiration of lockup period. Quantitative research method using both primary and secondary data is employed, respectively. The explorative study is derived from a self-administered survey questionnaire using 157 respondents who are clients of the stock broking companies in Malaysia. The survey is conducted in the northern states of Malaysia based on purposive sampling technique. Results show that more than seventy percent of the respondents neither use prospectus as a guide in understanding share lockup and its provisions nor paying close attention to IPO lockup expiration dates when investing in IPOs. Hence, the findings suggest that retail investors are not attentive to IPO lockup in terms of its provisions and expirations. In addition, 292 IPO firms for the period 2003-2012 involving two lockup regimes is examined. Using the market model and market adjusted return model of event study method, the results show the existence of a significant negative abnormal return at the expiration of the lockup period. Therefore, the study provides contradicting evidence of the semi-strong from of efficient market hypothesis. On the other hand, lockup regulatory changes do not have an impact in reducing the negative abnormal returns at its expiration period.

Keywords: Retail investors, initial public offering, lockup period.

1. INTRODUCTION

Lockup period is an important element of the initial public offering (IPO) during which the insiders[1] are prohibited from disposing their shareholdings after the IPO listing. Once the period expires, these

[1] Insiders include founding members, owners, directors and officers.

insiders are open to liquidate their locked-up shares. This could lead to a significant impact on the stock market because the availability of shares increases extensively. In relation to this, Field and Hanka (2001) indicate that the lockup expiration dates are discussed extensively in The Wall Street Journal and even posted on several websites for the upcoming expiry dates. Moreover, many IPO prospectuses warn of the possibility that insiders would flood the market with large sell orders and share price could plunge dramatically. Thus, market participants are paying close attention to the event. In contrast, the unlock dates are not widely discussed in the media nor extensively warned in the prospectuses in the Malaysian market. Thus, it is appealing to explore the attentiveness of market participants to lockup expiration as the ones in the US.

Lockup, lock-in and share moratorium are the terms used in the US, the UK and Malaysia, respectively which have similar implication. However, mandatory lockup is regulated by the regulator in the country, whereas voluntary lockup is an agreement between IPO firms and their underwriters. Different lockup provisions indicate that there may be some unique features in each country that might affect the trading behavior by insiders and price reaction at the lockup expirations. Given the dissimilar regulations and variation on lockup contracts, would the expiration of lockup period in Malaysian IPOs differ from those observed in the international markets?

The effects of lockup periods are fueled primarily by the observation of the market reaction at the expiration of the lockup period. The pioneering work on lockup expirations is found in well-known studies originated from the US (e.g., Ofek & Richardson, 2000; Brav & Gompers, 2000; Field & Hanka, 2001; Bradley *et. al.*, 2001), and the UK (e.g. Espenlaub *et. al.*, 2001). However, since Brav and Gompers (2003) appeal for more research that exploits the variation in global lockup options, studies from the international equity markets began to emerge. In this context, after an extensive search, it is observed that not many has been done in the Malaysian market involving IPO lockup. Zameni and Yong (2016) explore the trading volume changes around lockup expiration, Che-Yahya et. al., (2015) investigate the impact of lockup provision on two IPO anomalies in the immediate aftermarket, Mohd-Rashid et. al., (2014) examine the influence of lockup provisions on IPO initial returns, and Che-Yahya et. al., (2013) explore the influence of lockup provisions on flipping activity.

In essence, this study aims to investigate the expiration of the lockup period by exploring attentiveness of retail investors and impact on share price in Malaysian market. Since empirical studies in the international equity markets have reported mixed evidence in terms of supporting or contradicting the semi-strong form of the EMH, thus inducing further examination. Moreover, there have been regulation changes pertaining to lockup provision since it started to be effective on 3 May 1999. The revision in 2009, which is the current lockup provision, is evidently the most restrictive and vigilant where all IPO firms are subjected to lockup period. Such action can be regarded as a concern on the part of the regulators. Therefore, impact of changes in lockup regulation is incorporated in this study focusing on the possible price impact of the first stage lockup expiration.

The rest of the paper proceeds as follows. Section 2 reviews prior literature in relation to market reaction at lockup expiration in terms of share price. Section 3 describes the data and research methods used in this study. Empirical results are discussed in Section 4, while Section 5 concludes.

2. LITERATURE REVIEW

Impact of lockup period is motivated primarily by the examination of the market reaction at its expiry. Pioneering work on lockup expirations is found in renowned studies originated from the US (e.g., Ofek & Richardson, 2000; Brav & Gompers, 2000 & 2003; Field & Hanka, 2001; Bradley et. al., 2001; Brau et. al., 2004). These studies show the existence of significant negative abnormal returns. Other US studies are reported by Gao (2005) and Yung and Zender (2010) where they also provide similar results of significant negative abnormal returns. Moreover, Chen et. al., (2012) examine long run returns subsequent to lockup expiration and find that returns are negatively associated with abnormal selling by senior executives while unrelated to selling are by other insiders.

However, since Brav and Gompers (2003) appeal for more research using the variation in global lockup requirements, studies from international share markets began to surface. Studies outside the US such as the UK, Europe and Asia have reported mostly insignificant negative abnormal returns at the expiration of the lockup periods. Espenlaub et. al., (2001) observe statistically insignificant negative abnormal returns while Hogue (2011) finds significant negative abnormal returns UK IPOs. In Germany, Nowak (2004) finds significant negative abnormal returns while Goergen et. al., (2006) show insignificant negative abnormal returns for both France and Germany. In Italy IPOs, Boreiko and Lombardo (2013) also do not find any significant abnormal returns. Over in Asia, few studies are conducted in relation to IPO lockup expiration on share price. Chen et. al., (2005) find insignificant negative abnormal returns at lockup expiry in Taiwanese IPO whereas in Hong Kong, Goergen et. al., (2010) also find insignificant change in share price. Similarly, Mahajan and Singh (2011) examine 165 lockup period expirations in India where the results show insignificant share price reaction. In other countries, Kryzanowski and Liang (2008) examine Canadian IPOs while Hakim et. al., (2012) observe the IPOs in the Middle East and North Africa (MENA) region. Both studies provide mixed evidence where significant negative abnormal returns are reported only in MENA region.

In summary, overall US studies show significant negative abnormal returns at the expiration of the lockup period with larger sample sizes. However, studies conducted outside the US have reported mostly insignificant negative abnormal returns. Meanwhile, most of the studies employ either market model or market adjusted return model in relations to the abnormal returns.

3. DATA AND METHODOLOGY

This study employs quantitative research method using both the primary and secondary data. The first stage deals with the explorative study of the investors' attentiveness to lockup expiration involving the primary data. The sample of investor responses is drawn from the northern states of Malaysia using a self-administered survey questionnaire. Sekaran (2003) suggests that the major advantage of conducting a self-administered questionnaire is that researchers could collect all the completed responses within a short period of time. Purposive sampling technique is adopted for data collection. Purposive sampling is a non-probability sampling method and it occurs when "elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money", (Black, 2010). The sample consists of 157 respondents who are the clients of the stock broking companies in Malaysia.

For the second stage, secondary data used in this study are those IPO firms listed on Bursa Malaysia between 1 May 2003 and 31 December 2012. 1 May 2003 is chosen as an initial period since it represents the first regulatory change in relation to lockup period after it is made compulsory on 3 May 1999. Both databases of Bursa Malaysia website and DataStream are used as data sources. In addition, several data conditions are imposed in order to include in the final sample; an offering involving new ordinary shares only, the firms are subjected to lockup provisions and remained listed throughout the expiration of the lockup period, and must be incorporated in Malaysia. Furthermore, firms listed under Finance, Trust, REITs, and Closed-End Funds sectors are excluded due to different statutory requirements in preparing firms' annual reports. After imposing these selection criteria, only 292 IPO firms made up the final sample.

To examine the share price reaction to lockup expiration, event study method is employed. The market model and market adjusted return model are stated in equation (1) and (2), respectively.

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (1)$$

and

$$AR_{it} = R_{it} - R_{mt} \quad (2)$$

4. RESULTS AND DISCUSSION

The survey findings of the analysis of the respondents' demographic characteristics are presented in Table 1.

Table 1
Demographic characteristics of the sample (N = 157)

Variable	*Category*	*Frequency*	*Percentage*
Gender	Male	95	60.5
	Female	62	39.5
Age	18-25	3	1.9
	25-49	72	45.9
	50 or above	82	52.2
Education Level	Diploma	35	22.3
	Undergrade	42	26.8
	Postgrade	41	26.1
	Others	39	24.8
Race	Chinese	77	49.0
	Malay	63	40.1
	Indian	13	8.3
	Others	4	2.5
Year of Trading	> 5 years	37	23.6
	5-10 years	46	29.3
	> 10 years	74	47.1

Moreover, the main focus of the survey where respondents are asked about their attentiveness and awareness in connection to IPO share lockup is covered in Table 2. The results show that the majority of the respondents (70%) do not use IPO prospectus in guiding them to understand the share lockup and its provisions. At the same time, most respondents (87%) are unaware of changes in lockup regulation since it is made compulsory in Malaysian market by the Securities Commission. In addition, larger numbers of respondents (85%) do not pay close attention to lockup expiration dates when investing in IPOs. From the results, it is observed that the public or retail investors are not alert of the event date (lockup expiry) and not paying attention to the market trading activity surrounding the expiration period. They also do

not depend heavily and guided themselves to the information available in the prospectus associated with lockup period and its provisions when making IPO investment. Therefore, the finding suggested that retail investors in Malaysian market are not as attentive to lockup period and its expirations compared to the ones in the US market.

Table 2
Investors' attentiveness towards IPO lockup (N = 157)

Item	*Category*	*Frequency*	*Percentage*
IPO Prospectus guide	Yes	47	29.9
	No	110	70.1
IPO Lockup Regulations	Yes	20	12.7
	No	137	87.3
IPO Lockup Expirations	Yes	23	14.6
	No	134	85.4

Meanwhile, Table 3 shows the average abnormal returns (AARs) and cumulative average abnormal returns (CAARs) surrounding the lockup expiration over 21-day event window.

Table 3
AARs and CAARs using Market Model and Market Adjusted Returns Model

	Market Model (MM)			*Market Adjusted Returns (MAR)*		
Event Day	*AAR (%)*	*p-value*	*CAAR (%)*	*AAR (%)*	*p-value*	*CAAR (%)*
–10	–0.22	0.2931	–0.22	–0.32	0.1069	–0.32
–9	0.41	**0.0475	0.19	0.37	0.2423	0.05
–8	–0.06	0.7640	0.13	–0.14	0.4887	–0.09
–7	–0.62	***0.0030	–0.49	–0.64	**0.0384	–0.73
–6	0.23	0.2707	–0.26	0.16	0.3859	–0.57
–5	0.12	0.5765	–0.14	0.07	0.6937	–0.50
–4	–0.22	0.2808	–0.36	–0.31	0.1527	–0.81
–3	–0.14	0.4893	–0.51	–0.23	0.3129	–1.04
–2	–0.14	0.5096	–0.65	–0.24	0.1777	–1.27
–1	–0.30	0.1493	–0.94	–0.39	*0.0765	–1.67
0	0.43	**0.0376	–0.51	0.40	0.1951	–1.26
1	–0.59	***0.0048	–1.10	–0.67	**0.0411	–1.93
2	–0.21	0.3147	–1.31	–0.30	0.2389	–2.23
3	–0.16	0.4406	–1.47	–0.22	0.4233	–2.45
4	0.21	0.3217	–1.26	0.15	0.5867	–2.30
5	–0.04	0.8492	–1.30	–0.17	0.4866	–2.47
6	0.25	0.2357	–1.05	0.10	0.6384	–2.37
7	–0.31	0.1396	–1.36	–0.37	*0.0904	–2.74
8	–0.01	0.9540	–1.37	–0.10	0.6732	–2.84
9	0.19	0.3670	–1.19	0.05	0.7872	–2.79
10	0.00	0.9905	–1.19	–0.17	0.4446	–2.96

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

From Table 3 above, the daily average abnormal returns for market model are significantly negative at 1% level on day −7 and day +1 with returns of −0.62% and −0.59%, respectively. Conversely, on day −9 and day 0 the returns are significantly positive at 5% level with returns of 0.41% and 0.43%, respectively. For the closer period surrounding the unlock day, the AARs are negative on day −4 through day +3, except on day 0. The negative returns range from −0.14% on days −3 and −2 to −0.59% on day −1. Table 3 also tabulates the cumulative average abnormal returns (CAARs) around the expiration of the lockup. Practically, CAARs are found to be negative and appear to be quite small from day −7 to day −4. Nevertheless, from day −3 to day +10, the cumulative returns are larger where it peaks at −1.47% on day +3. For market adjusted returns model (MAR), results are qualitatively the same for AARs on day −7 and day +1 but significantly negative at 5% level. Conversely, for day −1 and day +7, abnormal returns are significantly negative at 10% level which does not take place when using the market model. In the meantime, the results for CAARs are qualitatively similar from day −7 through day +10 where negative returns are observed. In line with the market model, larger cumulative returns can be seen from day −3 to day +10 where its highest is at −2.96% on day +10.

Furthermore, the cumulative average abnormal returns over the 21 event days are illustrated graphically in Figure 1. Steeper fall is observed from day −4 to day −1, and day +1 to day +3. In general, both models show similar results and trends with MAR having slightly greater negative returns. The reason for the slightly different pattern of results between these two models may be due to the beta which is taken one in the case of market adjusted model. Similar results are reported by Mahajan and Singh (2011) when employing these two models. Hence, further discussions pertaining to the results of this study are presented based on the market model employed.

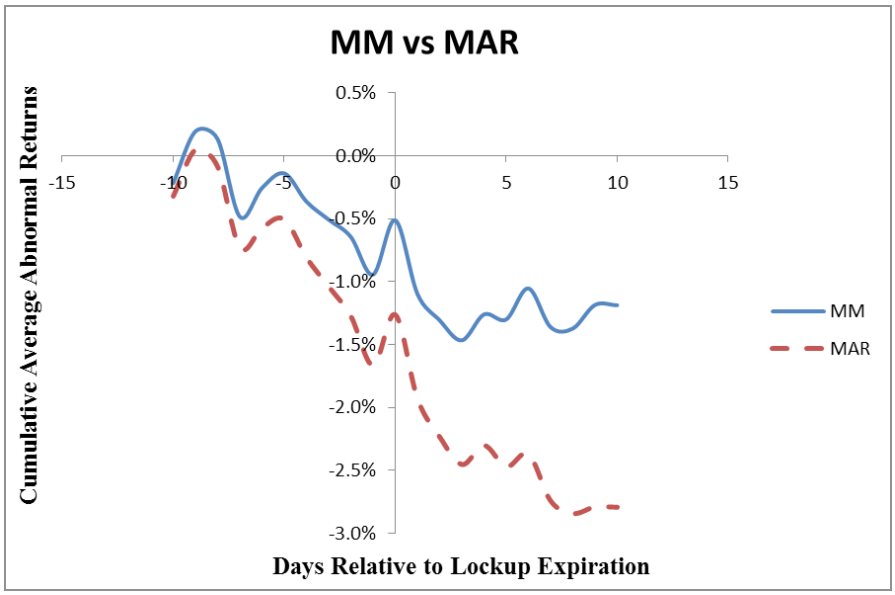

Figure 1: Cumulative average abnormal returns over 21 event days

Meanwhile, Table 4 shows the cumulative average abnormal returns for several event windows. Different results are observed for CAARs around the expiration date. Significant negative returns are recorded at smaller windows surrounding the event date for windows (−3, +3), (−2, +2) and (−1, +3). Only window (−3, +3) is significant at 5% level with return of −1.10%, whereas the other two windows

are observed to be significant at 10% level with returns of −0.80% and −0.82% for windows (−2, +2) and (−1, +3) respectively. For the five−day event window (−2, +2), the negative abnormal return is in line with the findings of Bradley et. al., (2001) with returns of −1.61%, being significant at 1% level. For the other 5−day event window (−1, +3), the significant return of −0.82% corresponds with Ofek and Richardson (2000) five-day cumulative abnormal return for window (−4, 0) amounting to −2.03%, which is significant at 1% level. Furthermore, event window of seven-day (−3, +3) is significantly negative at 5% level with CAAR of −1.10%. The significant negative return is corresponding with the CAAR of −1.9% as reported by Field and Hanka (2001) for seven−day window (−5, +1) with significant level of 1%.

Table 4
Cumulative average abnormal returns for various event windows

Event Window	*CAAR (%)*	*p-value*
(–10, +10)	–1.19	0.2117
(–10, –1)	–0.94	0.1504
(–5, +5)	–1.04	0.1294
(–5, –1)	–0.69	0.1384
(–3, +3)	–1.10	**0.0448
(–3, –1)	–0.58	0.1069
(–2, +2)	–0.80	*0.0853
(–1, +1)	–0.45	0.2077
(–1, +3)	–0.82	*0.0766
(–1, +5)	–0.66	0.2326
(–1, +10)	–0.54	0.4499

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

From the results, this study finds statistically significant negative abnormal returns at lockup expiry that is in line with the US studies. However, both the negative abnormal returns and the significant levels are slightly lower for this study with mandatory lockup provisions compared to those reported in the US through voluntary lockup agreements. In line with this, Hakim et. al., (2012) report that prices decline at lockup expiry for mandatory lockup in the MENA region much the same as in the US. Consistent with the study undertaken by Nowak (2004), the drop in share price is significantly larger for the expiration of voluntary lockup agreements than for mandatory provision of lockup period. The existence of the significant negative abnormal returns surrounding the lockup expiration further indicates the contradicting evidence of the EMH.

As indicated earlier, there are two lockup regimes involved in this study. Regime A represents the lockup provision with effect from 1 May 2003 while Regime B belongs to the present lockup provision beginning from 3 August 2009, arising from the new framework in Malaysian capital market. Hence, the impact of these regulation changes is further examined on the abnormal returns. To provide further insight, the independent samples *t*-test with unequal variances is conducted followed by the nonparametric test for independent samples using various event windows. The results of the statistical tests are presented in Table 5.

Table 5
Independent samples *t*-test and nonparametric test

Event Window	*Regime A (%)*	*Regime B (%)*	*p-value (Mean Difference)*	*p-value (Mann-Whitney)*
(–10, +10)	–4.343	–12.052	0.505	0.731
(–10, –1)	–4.199	–0.343	0.234	0.629
(–5, +5)	–4.250	–0.598	0.292	0.402
(–5, –1)	–3.920	–0.159	0.235	0.641
(–3, +3)	–4.210	–0.968	0.337	0.774
(–3, –1)	–3.709	–0.376	0.292	0.620
(–2, +2)	–3.704	–1.305	0.466	0.279
(–1, +1)	–0.313	–0.900	0.507	0.196
(–1, +3)	–0.693	–1.232	0.659	0.694
(–1, +5)	–0.522	–1.079	0.687	0.239
(–1, +10)	–0.336	–12.348	0.284	0.294

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

From Table 5, the *p*-value for mean difference shows statistical insignificant for all event windows of Regime A and Regime B. Correspondingly, no statistical significance is found for the *p*-value in the Mann-Whitney nonparametric test. Accordingly, the results indicate that there is insignificant difference in cumulative abnormal returns at the lockup expiration between Regime A and Regime B. As such, the results prove that the change in lockup regulation does not have an impact in reducing the abnormal returns at the lockup expiration.

5. CONCLUSION

The explorative study of the investors' attentiveness shows that retail investors in Malaysian market are not attentive to lockup period and its expirations compared to the ones in the US market. However, the findings of price impact at lockup expiry are consistent with previous evidence from the US, indicating that the Malaysian equity market is an inefficient in relation to the semi-strong form of EMH. This is due to the unique feature of mandatory lockup provisions where the regulation is imposed on both the percentage of shares locked and the lockup length. Since this study only focuses on the first stage of lockup expiry, there is insignificant difference in abnormal returns between Regime A and Regime B. Thus, the changes in lockup regimes do not have an impact in reducing the negative abnormal returns. Future study can be extended by including the multiple lockup expiration in the ACE Market. In addition, factors that influencing the abnormal returns should also be examined while the effect of financial literacy on retail investors as stock market participants in connection with the lockup expiry should also be explored.

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