



Announcement Effect of Monthly Revenue Hit Record-High for Taiwan-Listed Companies

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Keywords

Monthly revenue hit record-high; Announcement effect; Stock return; Event study

Abstract

This study takes Taiwan-listed common stocks with monthly revenue hit record-high from January 2013 to December 2021 as a sample. The event study method is used to test the announcement effect. The results show that stock prices have significant positive abnormal reactions around the revenue announcement date. That is, stock prices have a significant positive announcement effect on news of monthly revenue hitting a record high. Additionally, there is a positive relationship between the announcement effect and its ratio of monthly revenue to the historically highest monthly revenue and a negative relationship between the announcement effect and its monthly revenue size.

1. Introduction

On the 10th day of every month, Taiwan-listed companies announce their previous month's revenue. In addition to summarizing monthly revenue, financial magazines and websites highlight companies with monthly revenue that hit record highs. It serves as crucial information for investors in their stock selection process, emphasizing the significance of monthly revenue announcements. It also underscores the importance of record-high revenues in conveying information content about stock prices. In addition to disclosing financial statements in annual and quarterly reports, Taiwan-listed companies are different from foreign companies in announcing the previous month's revenue before the 10th of each month. The frequency and timeliness of monthly revenue information releases is much higher than that of quarterly and annual reports. Investors can keep track of the company's latest developments through monthly revenue fluctuations. Ku (2011) shows that monthly revenue information can help predict changes in future earnings and convey information about the sustainability of future earnings growth. Especially in information gaps regarding earnings, revenue information can promptly fill in investors' need for earnings information.

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According to previous domestic and foreign literature, revenue announcements have significant information content for stock prices; that is, stock prices react positively to good news, and stock prices react negatively to bad news. In Taiwan, some studies, such as Chien (1998) and Liu and Tsai (2006), explore the informational content of monthly revenue announcements. Recently, Ku (2017) reexamined the informational content of monthly revenue announcements using event study methodology. The results showed a significant positive relationship between unexpected revenue and cumulative abnormal returns, which supports informational content in monthly revenue announcements. In foreign countries, due to the lack of a monthly revenue announcement system, quarterly revenues are announced along with quarterly earnings reports, and revenue plays a secondary role. Therefore, most focus on the role of revenue announced simultaneously with earnings in earnings announcements. For example, Ertimur et al. (2003) and Jegadeesh and Livnat (2006) found that both earnings and revenue announcements in the U.S. stock market have informational content, but the ability of earnings announcements to explain returns is higher than that of revenue. Kama (2009) also found that for companies with R&D-intensive or oligopolistic competition, their revenue announcements have a higher impact on stock prices than earnings. However, none of the above studies investigate the informational content of monthly revenue hit record-high in Taiwan, so this is the primary motivation of this study.

This aspect enhances our understanding of revenue announcement effects by providing timely, specific information that complements quarterly or annual earnings announcements. Such announcements fill an information gap by offering immediate insights into a company's revenue performance before comprehensive financial reports are available. Additionally, by focusing on record-high revenues, we capture a more nuanced view of investor sentiment and market reactions, allowing us to assess better how extraordinary revenue performance drives abnormal returns. This approach enriches the literature by showing that record-high monthly revenues provide unique, positive signals beyond those conveyed by regular earnings announcements. The investigation into monthly record-high revenues enhances the literature on revenue announcement effects by providing more granular, frequent data that fills gaps left by other financial reports and offers new insights into investor behavior. The focus on record-high revenues introduces a new perspective on how extreme positive signals can affect stock prices, and it helps explore whether these announcements hold predictive power for future earnings performance and stock price momentum. This novel focus provides value not only to academics but also to practitioners in regions with similar reporting practices.

This study uses the event study method to examine Taiwan-listed companies with monthly revenue that hit record highs, investigating whether average abnormal returns significantly differ from zero in the ten trading days before and after the revenue announcement. The results show that the stock price of companies with monthly revenue hitting record highs has significantly positive average abnormal returns around the revenue announcement date; that is, the stock price has a significant positive reaction to the news of record-high revenue. Furthermore, this study measured the degree of revenue record high by using the ratio of monthly revenue to the historically highest monthly revenue. As expected, there is a positive relationship between the announcement effect and the degree of revenue record highs. However, there is a negative relationship between the announcement effect and the monthly revenue size.

The rest of the paper is organized as follows. Section 2 describes the data and methodology, Section 3 presents the analysis of research results, and Section 4 concludes the study.

2. Data and Methodology

This study focuses on companies listed on the Taiwan Stock Exchange (TWSE) or the Taipei Exchange (TPEX) that achieved record-high monthly revenues from January 2013 to December 2021. The financial report data and stock trading information needed for this study are sourced from the Taiwan Economic Journal (TEJ) database. The historical highest monthly revenue is recorded from the TEJ database, starting when the data is available but excluding the revenue for the current month. Moreover, this study uses the event study method to investigate the price behavior of sample companies in the ten trading days before and after the monthly revenue announcement. Therefore, the companies in the sample should include complete data on stock returns, the number of outstanding shares, closing prices, and common stockholder equity for the ten trading days around the monthly revenue announcement date. Based on these selection criteria, there are 10,764 valid samples, of which 5,813 are listed on the TWSE, and 4,951 are listed on the TPEX. The number of companies with monthly revenue hit record highs varied each month, with the highest being 202 companies in December 2014 and the lowest being only seven companies in February 2019.

This study uses the event study method to examine whether there are significant average abnormal returns or cumulative average abnormal returns in the ten trading days before and after the monthly revenue announcement for Taiwan-listed companies that achieved record-high monthly revenues. The formulas for calculating average abnormal returns (AR) and Cumulative average abnormal returns (CAR) are as follows:

$$AR_{P,T} = \frac{1}{N} \sum_{i=1}^N [R_{i,T} - E(R_{i,T})] \quad (2.1)$$

$$CAR_{P,a,b} = \sum_{T=a}^b AR_{P,T} \quad (2.2)$$

Where $AR_{P,T}$ is the average abnormal return of portfolio P on day T, N is the number of record-high revenue samples included in the portfolio, $R_{i,T}$ is the return of stock i achieving record-high revenue on day T, $E(R_{i,T})$ is the expected return of stock i achieving record-high revenue on day T, and $CAR_{P,a,b}$ is the cumulative average abnormal return of portfolio P from day a to b. To capture potential price reactions in advance and to comprehensively track the price adjustment process, this study sets the event period from 10 trading days before the event day to 10 trading days after the event day ($T = -10 \sim 10$). A relatively extended event period allows a better understanding of the event's impact on stock prices.

This study refers to the methods of Ertimur et al. (2003), Jegadeesh and Livnat (2006), and Kama (2009) and uses the reference portfolio approach to estimate expected returns. The reference portfolio formation method is that all listed common stocks are divided into three portfolios at the end of each month based on the firm size or book-to-price order. The intersection of these three sizes and three book-to-price portfolios results in 9 (3×3) size/book-to-price portfolios. Next, the daily equal-weighted returns for each portfolio in the subsequent

month are calculated. The expected return for sample stocks is the return of their respective size/book-to-price portfolio in the same period. Firm size is determined by multiplying the outstanding shares of common stock at the end of the month by the closing price on the last trading day of that month. Book-to-price is calculated by dividing the common stockholder's equity in the most recent quarterly report by the common stock's market value at the month's end.

3. Research Results

3.1 Full sample

The average abnormal returns and cumulative average abnormal returns of full sample during the event period are listed in Table 1, and the trend charts are plotted in Figures 1 and 2, respectively. The average abnormal returns for all 21 trading days within the event period are positive. Except for $T = 7$, the average abnormal returns for all other trading days are significantly greater than zero. The average abnormal return on $T = 1$ is the highest, with a value of 1.5233% and a t-statistic exceeding 48. The second highest value on the announcement day ($T = 0$) is 0.4316%, with a t-statistic above 17. Days around the announcement day, such as $T = -1$, $T = -3$, and $T = 2$, also show relatively higher average abnormal returns ranging from 0.2085% to 0.2354%. However, the trading days from $T = 3$ to 10 show comparatively lower average abnormal returns. This pattern of average abnormal returns can be observed through the trend chart in Figure 1. There is a significant surge on the announcement day ($T = 0$), reaching its peak on the following day ($T = 1$), followed by a decline until $T = 2$. From $T = 3$ to 10, average abnormal returns fluctuate around 0.07%.

Further observing the results of the cumulative average abnormal return in Table 1, as expected, the cumulative average abnormal returns incrementally increase from the 10th day before the announcement ($T = -10$) to a maximum value of 4.181% on the 10th day after the announcement ($T = 10$). All 21 trading days within the event period show cumulative average abnormal returns statistically significantly greater than zero. Additionally, the cumulative average abnormal return from $T = 0$ to 10 is significantly greater than zero, with a value of 2.6829%, and is significantly greater than the cumulative average abnormal return from $T = -10$ to -1. The trend chart of cumulative average abnormal returns in Figure 2 illustrates a consistent upward trend from day 10th before the announcement ($T = -10$), especially between $T = -1$ and $T = 2$, followed by a more gradual increase. The sustained increase in CAR leading up to and after the announcement date suggests that investors gradually incorporate record-high revenue announcements into their decision-making, indicating a significant and positive reassessment of the firm's prospects. This upward trend in CAR can be interpreted as a reflection of investor confidence in the company's ability to maintain or improve performance following record-high revenues.

In summary, the comprehensive analysis results show that the stock price of Taiwan-listed companies with monthly revenue hit record-high have a significant positive abnormal reaction before and after the announcement date, that is, a significant positive announcement effect on stock prices in response to the news of achieving record-high monthly revenues.

Table 1 *Average Abnormal Returns (AR, %) and Cumulative Average Abnormal Returns (CAR, %): Full Sample*

T	AR	t(AR)	CAR	t(CAR)
-10	0.1021	4.693*	0.1021	4.693*
-9	0.1039	4.666*	0.2060	6.515*
-8	0.1394	6.245*	0.3454	8.797*
-7	0.0660	3.033*	0.4115	9.106*
-6	0.1436	6.465*	0.5551	10.906*
-5	0.1554	7.007*	0.7105	12.640*
-4	0.1863	8.313*	0.8968	14.736*
-3	0.2085	9.223*	1.1053	16.903*
-2	0.1574	6.982*	1.2627	18.008*
-1	0.2354	10.438*	1.4981	20.167*
0	0.4316	17.770*	1.9297	24.566*
1	1.5233	48.201*	3.4531	41.990*
2	0.2118	8.145*	3.6648	41.514*
3	0.0716	2.868*	3.7364	40.209*
4	0.0597	2.490#	3.7961	38.926*
5	0.0912	3.868*	3.8874	37.851*
6	0.0749	3.258*	3.9622	37.062*
7	0.0246	1.088	3.9869	36.410*
8	0.0781	3.386*	4.0650	35.926*
9	0.0746	3.322*	4.1396	35.455*
10	0.0414	1.809+	4.1810	34.893*
(0~10)			2.6829	29.537*
(0~10)-				
(-10~1)			1.1848	10.320*

Note: *, #, and + indicate that the average abnormal returns (AR, %) or cumulative average abnormal returns (CAR, %) significantly differ from zero at the 1%, 5%, and 10% significance levels, respectively.

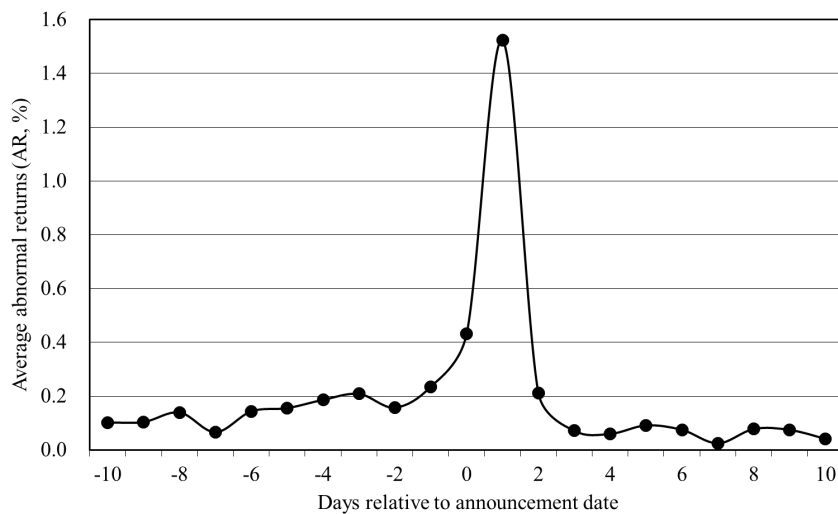


Fig. 1 *Average Abnormal Returns (AR, %): Full Sample*

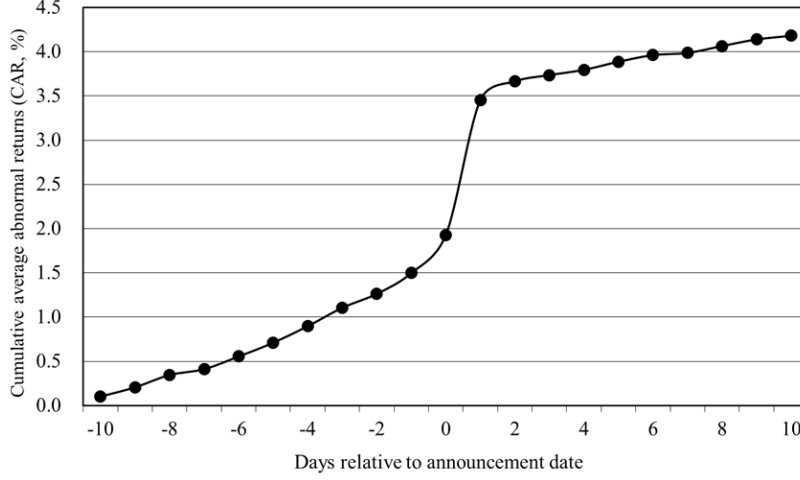


Fig. 2 *Cumulative Average Abnormal Returns (CAR, %): Full Sample*

3.2. The Ratio of Monthly Revenue to the Historically Highest Monthly Revenue

This study explores the impact of the degree of record-high monthly revenue on the announcement effect. Each month, the sample is divided into four equal parts based on the ratio of monthly revenue to the historically highest monthly revenue, forming four subsamples with record-high revenue levels ranging from lowest to highest. This ratio allows us to gauge the degree of this record by comparing it to the highest previous record. The numerator represents the current month's record-high revenue, and the denominator is the previously recorded highest monthly revenue. The purpose of this ratio is to quantify the magnitude of the new revenue record relative to past performances, thus allowing us to measure how much higher the current revenue is compared to historical records. This variable is critical in assessing the degree of market reaction to monthly revenue announcements. By analyzing this ratio, we intend to demonstrate that larger deviations from the previous revenue records generate stronger positive abnormal returns, reflecting investor optimism regarding the company's potential for sustained growth. The average abnormal returns and cumulative average abnormal returns for these four subsamples are presented in Tables 2 and 3, and trend charts are depicted in Figures 3 and 4, respectively.

Firstly, the average abnormal returns for the four subsamples are compared in Table 2. Similar to the results for full sample in Table 1, except for a few trading days with insignificant negative values, the average abnormal returns for the remaining trading days are positive, and most of them are significantly greater than zero. Similarly, the four subsamples exhibit the highest average abnormal returns on the day after the announcement ($T = 1$). The 4th (highest) subsample has the highest value of 2.2913% with a t-statistic of 30.374, and the 3rd (second highest) is 1.6039% with a t-statistic of 26.118. The 2nd (second lowest) subsample is 1.1883% with a t-statistic of 21.05, and the 1st (lowest) subsample has the lowest value of 1.0105% with a t-statistic of 18.510. The average abnormal returns on the announcement day ($T = 0$) are second-highest for the four subsamples, and these values increase monotonically with the ratio of monthly revenue to the historically highest monthly revenue. The average abnormal returns for days $T = 3$ to 10 are relatively lower for the four subsamples.

Table 2 *Average Abnormal Returns (AR, %): The Ratio of Monthly Revenue to the Historically Highest Monthly Revenue*

T	1 (Lowest)		2		3		4 (Highest)	
	AR	t(AR)	AR	t(AR)	AR	t(AR)	AR	t(AR)
-10	0.0470	1.171	0.0403	0.953	0.1431	3.273*	0.1782	3.750*
-9	0.0689	1.677+	0.0881	2.025#	0.1459	3.272*	0.1127	2.319#
-8	0.0086	0.206	0.1461	3.401*	0.2026	4.490*	0.2003	4.119*
-7	0.0001	0.002	0.0400	0.964	0.0342	0.796	0.1897	4.005*
-6	0.1072	2.508#	0.1381	3.283*	0.0896	2.119#	0.2395	4.781*
-5	0.0969	2.298#	0.1238	2.904*	0.1851	4.106*	0.2161	4.559*
-4	0.0884	2.090#	0.1774	4.233*	0.2216	4.932*	0.2577	5.188*
-3	0.1576	3.738*	0.0797	1.866+	0.2698	5.847*	0.3273	6.633*
-2	0.0761	1.830+	0.1615	3.790*	0.1713	3.691*	0.2204	4.472*
-1	0.1681	4.046*	0.2391	5.500*	0.2245	4.862*	0.3097	6.341*
0	0.2690	5.884*	0.4364	9.246*	0.4358	9.343*	0.5852	10.810*
1	1.0105	18.510*	1.1883	21.057*	1.6039	26.118*	2.2913	30.374*
2	0.1272	2.760*	0.0853	1.869+	0.1428	2.836*	0.4921	7.741*
3	0.0177	0.389	0.0466	1.018	0.1327	2.700*	0.0894	1.533
4	-0.0332	-0.762	0.0379	0.862	0.1092	2.324#	0.1249	2.224#
5	0.0818	1.839+	0.0933	2.081#	0.0973	2.147#	0.0925	1.730+
6	-0.0003	-0.008	0.0567	1.324	0.1146	2.465#	0.1286	2.491#
7	0.0812	1.936+	0.0234	0.556	0.0502	1.184	-0.0562	-1.050
8	0.0504	1.196	0.0442	1.029	0.1413	3.086*	0.0765	1.449
9	0.0135	0.318	0.0663	1.569	0.1386	3.211*	0.0801	1.561
10	0.0299	0.690	-0.0533	-1.248	0.0813	1.802+	0.1081	2.103#

Note: *, #, and + indicate that the average abnormal returns (AR, %) significantly differ from zero at the 1%, 5%, and 10% significance levels, respectively.

Table 3 *Cumulative Average Abnormal Returns (CAR, %):
The Ratio of Monthly Revenue to the Historically Highest Monthly Revenue*

T	1 (Lowest)		2		3		4 (Highest)	
	CAR	t(CAR)	CAR	t(CAR)	CAR	t(CAR)	CAR	t(CAR)
-10	0.0470	1.171	0.0403	0.953	0.1431	3.273*	0.1782	3.750*
-9	0.1159	1.979#	0.1284	2.066#	0.2889	4.567*	0.2909	4.249*
-8	0.1245	1.768+	0.2745	3.589*	0.4916	6.076*	0.4912	5.755*
-7	0.1246	1.535	0.3146	3.554*	0.5258	5.811*	0.6810	6.808*
-6	0.2318	2.536#	0.4527	4.656*	0.6154	6.056*	0.9205	8.001*
-5	0.3287	3.198*	0.5765	5.480*	0.8005	7.049*	1.1366	9.007*
-4	0.4171	3.784*	0.7539	6.678*	1.0221	8.366*	1.3943	10.043*
-3	0.5747	4.718*	0.8335	6.945*	1.2919	9.983*	1.7215	11.560*
-2	0.6508	5.092*	0.9951	7.575*	1.4633	10.463*	1.9419	12.237*
-1	0.8189	6.074*	1.2342	8.776*	1.6878	11.415*	2.2516	13.437*
0	1.0879	7.525*	1.6706	11.167*	2.1236	13.772*	2.8368	16.087*
1	2.0984	14.060*	2.8589	18.207*	3.7275	23.485*	5.1281	27.719*
2	2.2256	14.001*	2.9442	17.493*	3.8703	23.336*	5.6202	27.680*
3	2.2433	13.341*	2.9908	17.223*	4.0031	23.086*	5.7096	26.280*
4	2.2101	12.668*	3.0287	16.613*	4.1123	22.577*	5.8345	25.432*
5	2.2919	12.459*	3.1219	16.290*	4.2096	22.072*	5.9270	24.375*
6	2.2915	11.974*	3.1786	15.978*	4.3242	21.981*	6.0556	23.736*
7	2.3727	12.030*	3.2021	15.828*	4.3744	21.594*	5.9994	22.958*
8	2.4231	11.885*	3.2463	15.475*	4.5157	21.458*	6.0760	22.609*
9	2.4366	11.673*	3.3126	15.246*	4.6543	21.444*	6.1561	22.135*
10	2.4665	11.478*	3.2593	14.738*	4.7356	21.280*	6.2642	21.867*
(0~10)	1.6475	10.392*	2.0251	12.515*	3.0478	18.034*	4.0126	17.782*
(0~10)- (-10~-1)	0.8286	4.119*	0.7909	3.814*	1.3600	6.003*	1.7609	6.390*

Note: *, #, and + indicate that the cumulative average abnormal returns (CAR, %) significantly differ from zero at the 1%, 5%, and 10% significance levels, respectively.

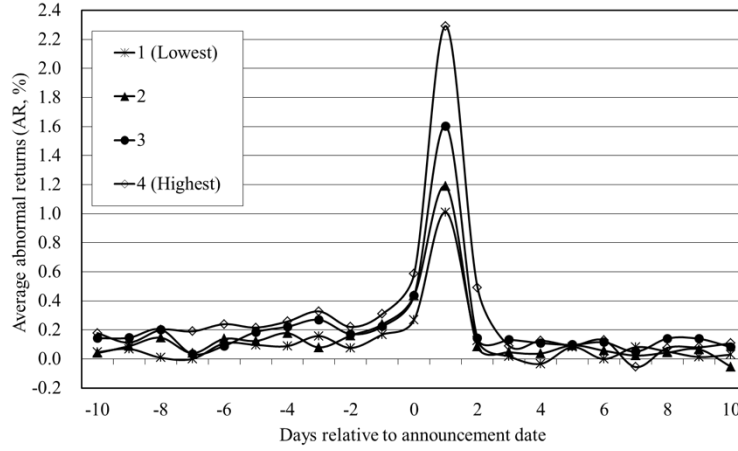


Fig. 3 Average Abnormal Returns (AR, %): The Ratio of Monthly Revenue to the Historically Highest Monthly Revenue

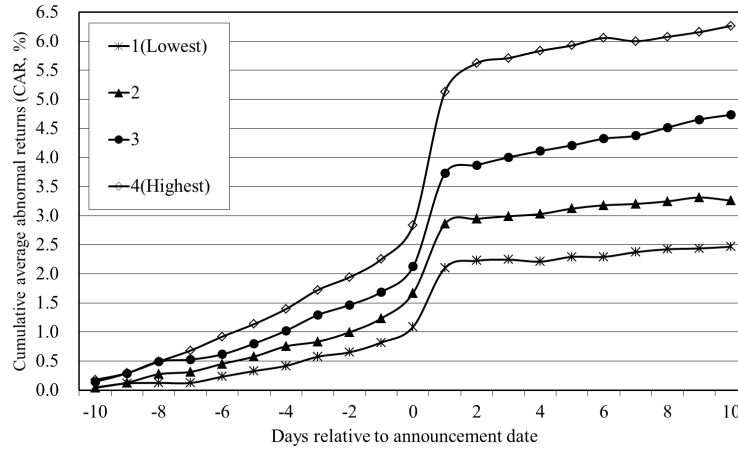


Fig. 4 Cumulative Average Abnormal Returns (CAR, %):
The Ratio of Monthly Revenue to the Historical Highest Monthly Revenue

Further comparing the average abnormal returns on each trading day of the four subsamples, the 4th (highest) subsample has the highest average abnormal return on most trading days, the 3rd (second highest) subsample has the second highest average abnormal return on most trading days, and the 1st (lowest) subsample has the lowest average abnormal returns on most trading days. These results can be observed from Figure 3. The 1st (lowest) subsample has the lowest average abnormal return, and the 4th (highest) subsample has the highest average abnormal return on most trading days. Especially on the day after the announcement ($T = 1$), the 4th (highest) subsample exhibits the highest average abnormal return, significantly higher than the average abnormal returns of the other three subsamples.

Then, compare the cumulative average abnormal returns in Table 3, similar to the results for full sample in Table 1, the cumulative average abnormal returns increase gradually from $T = -10$ to $T = 10$. Except for the 1st (lowest) subsample on $T = -10, -7$, and the 2nd (second

lowest) subsample on $T = -10$ being insignificant positive values, the cumulative average abnormal returns for all other trading days are significantly greater than zero. The cumulative average abnormal returns of the four subsamples on days $T = 0$ to 10 are significantly greater than zero, and they are significantly larger than the cumulative average abnormal returns on days $T = -10$ to -1. The comparison suggests that the cumulative average abnormal returns increase monotonically with the ratio of monthly revenue to the historically highest monthly revenue. This pattern is also evident in the trend lines in Figure 4. The curves for the cumulative average abnormal returns for the four subsamples are arranged from top to bottom, with the 4th (highest) subsample at the top, followed by the 3rd (second highest) and the 2nd (second lowest) subsamples, and the 1st (lowest) subsample at the bottom.

In summary, the results for the four subsamples with different degrees of record-high monthly revenue are consistent with those for full sample. The stock prices exhibit a significant positive abnormal response to the announcement of record-high monthly revenue. Moreover, the record-high monthly revenue degree affects the announcement effect's magnitude, indicating a positive relationship between the stock price's response to the announcement and the ratio of monthly revenue to the highest historically monthly revenue.

3.3 The Monthly Revenue Size

This section examines the impact of the monthly revenue size on the announcement effect. The sample is divided into four subsamples based on the monthly revenue size sort. The monthly revenue size refers to the absolute monetary value of the revenue achieved in the month under study. For example, if a company generated NT\$1 billion in monthly revenue. By examining revenue size, we aim to understand how the absolute scale of revenue, as opposed to the relative growth, impacts abnormal returns. This analysis allows us to assess whether large companies with high revenue bases experience different announcement effects compared to smaller companies, thereby adding another dimension to our understanding of the announcement effect.

The analysis explores whether there are abnormal price changes before and after the announcement day for each of these subsamples. Tables 4 and 5 present the average abnormal returns and cumulative average abnormal returns for these four subsamples, and Figures 5 and 6 depict their respective trends.

Comparing the average abnormal returns of the four subsamples in Table 4, similar to the results of full sample in Table 1, except for a few trading days where the 4th (largest) subsample has insignificantly negative abnormal returns, the rest are positive. Except for the 4th (largest) subsample, which has average abnormal returns that are not significantly different from zero on trading days between $T = 2 \sim 10$, the average abnormal returns for the other three subsamples on most trading days are significantly greater than zero. Similarly, the average abnormal returns on the day after the announcement ($T = 1$) are relatively the highest for all subsamples. Specifically, the 1st (smallest) subsample reaches a maximum of 1.9896% with a t-statistic of 28.308, the 2nd (second smallest) subsample is 1.8100% with a t-statistic of 26.746, the third (second largest) subsample is 1.3882% with a t-statistic of 22.999, and the 4th (largest) subsample is lowest at 0.9056% with a t-statistic of 17.889. Furthermore, all four subsamples exhibit lower average abnormal returns on trading days from $T = 3$ to 10.

Further comparing the average abnormal returns of each trading day for the four subsamples, it can be observed that the 1st (smallest) and the 2nd (second smallest) subsamples have relatively higher average abnormal returns on most trading days. The 3rd (second largest) subsample has relatively the second-highest average abnormal returns on most trading days. The 4th (largest) sub-sample exhibits the lowest average abnormal returns on most trading days. These results can be observed in Figure 5, where the curve for the 4th (largest) subsample consistently stays at the bottom on most trading days, and the 1st (smallest) subsample and the 2nd (second smallest) subsample consistently stay at the top on most trading days. Especially on the day after the announcement ($T = 1$), the 1st (smallest) subsample has the highest average abnormal return.

Table 4 *Average Abnormal Returns (AR, %): The Monthly Revenue Size*

T	1 (Smallest)		2		3		4 (Largest)	
	AR	t(AR)	AR	t(AR)	AR	t(AR)	AR	t(AR)
-10	0.1192	2.400#	0.0737	1.678+	0.0950	2.319#	0.1204	3.114*
-9	0.1027	2.077#	0.1264	2.786*	0.1131	2.682*	0.0733	1.805+
-8	0.2130	4.326*	0.1140	2.550#	0.0123	0.297	0.2185	5.101*
-7	0.0411	0.841	0.0895	2.066#	0.0905	2.202#	0.0430	1.066
-6	0.1689	3.354*	0.0981	2.189#	0.1336	3.187*	0.1740	4.352*
-5	0.1621	3.291*	0.1497	3.369*	0.1548	3.669*	0.1552	3.767*
-4	0.2621	5.073*	0.1620	3.686*	0.1435	3.371*	0.1776	4.411*
-3	0.2524	4.982*	0.2046	4.601*	0.1943	4.452*	0.1827	4.394*
-2	0.0994	1.990#	0.2247	4.922*	0.2162	4.983*	0.0892	2.187#
-1	0.1862	3.749*	0.2659	5.695*	0.2708	6.359*	0.2187	5.341*
0	0.4529	8.618*	0.5198	10.230*	0.4504	9.535*	0.3035	7.039*
1	1.9896	28.308*	1.8100	26.746*	1.3882	22.999*	0.9056	17.889*
2	0.3221	5.310*	0.3105	5.715*	0.1567	3.328*	0.0578	1.308
3	0.1186	2.050#	0.0819	1.598	0.0375	0.809	0.0484	1.125
4	0.1026	1.884+	0.0961	1.972#	0.0750	1.648+	-0.0348	-0.823
5	0.1096	2.064#	0.1567	3.166*	0.0813	1.844+	0.0173	0.421
6	0.0012	0.023	0.1769	3.589*	0.0583	1.368	0.0631	1.587
7	0.0030	0.060	0.0655	1.385	0.0481	1.108	-0.0181	-0.448
8	0.0238	0.471	0.1029	2.125#	0.1247	2.829*	0.0608	1.491
9	0.0459	0.930	0.1754	3.724*	0.0571	1.332	0.0201	0.506
10	0.0250	0.503	0.1071	2.181#	0.0767	1.774+	-0.0432	-1.070

Note: *, #, and + indicate that the average abnormal returns (AR) significantly differ from zero at the 1%, 5%, and 10% significance levels, respectively.

Table 5 *Cumulative Average Abnormal Returns (CAR, %): The Monthly Revenue Size*

T	1 (Smallest)		2		3		4 (Largest)	
	CAR	t(CAR)	CAR	t(CAR)	CAR	t(CAR)	CAR	t(CAR)
-10	0.1192	2.400#	0.0737	1.678+	0.0950	2.319#	0.1204	3.114*
-9	0.2220	3.084*	0.2001	3.164*	0.2081	3.440*	0.1938	3.449*
-8	0.4349	4.755*	0.3141	3.994*	0.2204	3.020*	0.4122	5.956*
-7	0.4761	4.585*	0.4037	4.442*	0.3109	3.619*	0.4552	5.756*
-6	0.6449	5.502*	0.5018	4.889*	0.4445	4.717*	0.6292	6.907*
-5	0.8070	6.279*	0.6515	5.807*	0.5992	5.719*	0.7845	7.664*
-4	1.0691	7.594*	0.8135	6.844*	0.7427	6.484*	0.9620	8.714*
-3	1.3215	8.758*	1.0180	8.014*	0.9370	7.543*	1.1447	9.649*
-2	1.4209	8.754*	1.2427	9.122*	1.1532	8.582*	1.2340	9.844*
-1	1.6071	9.257*	1.5086	10.467*	1.4240	9.992*	1.4527	11.113*
0	2.0600	11.213*	2.0283	13.182*	1.8744	12.452*	1.7561	12.861*
1	4.0496	21.070*	3.8384	23.873*	3.2626	20.417*	2.6617	19.075*
2	4.3717	21.157*	4.1489	23.833*	3.4193	19.922*	2.7195	18.487*
3	4.4903	20.772*	4.2307	22.782*	3.4568	19.058*	2.7679	18.093*
4	4.5929	20.301*	4.3268	21.951*	3.5318	18.758*	2.7331	16.971*
5	4.7025	19.717*	4.4835	21.424*	3.6131	18.498*	2.7504	16.123*
6	4.7037	18.964*	4.6604	21.217*	3.6714	18.202*	2.8135	15.836*
7	4.7067	18.578*	4.7259	20.975*	3.7195	18.088*	2.7954	15.224*
8	4.7305	18.122*	4.8288	20.599*	3.8443	18.041*	2.8562	15.169*
9	4.7764	17.722*	5.0042	20.666*	3.9014	17.741*	2.8764	14.854*
10	4.8014	17.305*	5.1113	20.506*	3.9781	17.639*	2.8332	14.409*
(0~10)	3.1943	15.387*	3.6028	18.314*	2.5541	15.268*	1.3805	9.477*
(0~10)- (-10~-1)	1.5871	6.021*	2.0942	8.786*	1.1301	5.285*	-0.0722	-0.370

Note: *, #, and + indicate that the cumulative average abnormal returns (CAR) significantly differ from zero at the 1%, 5%, and 10% significance levels, respectively.

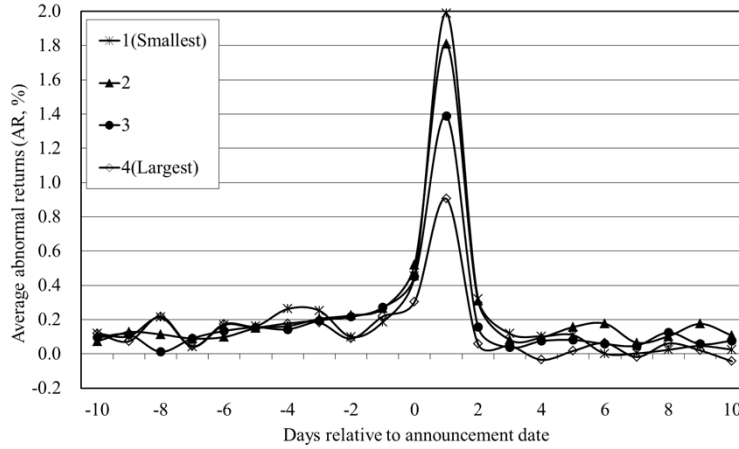


Fig. 5 Average Abnormal Returns (AR, %): The Monthly Revenue Size

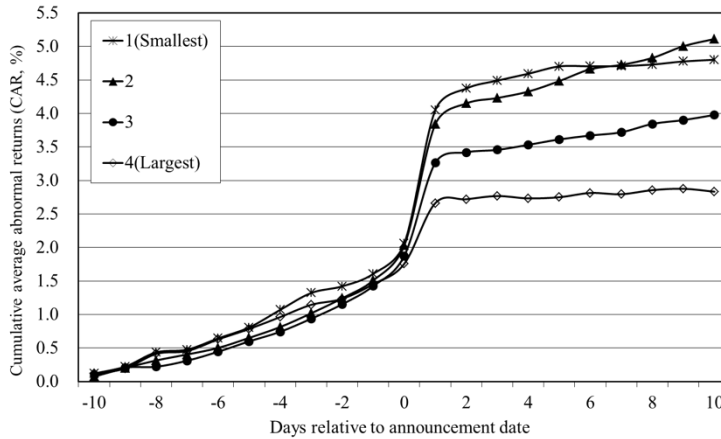


Fig. 6 Cumulative Average Abnormal Returns (CAR, %): The Monthly Revenue Size

Regarding the cumulative abnormal returns shown in Table 5, similar to full sample in Table 1, the cumulative abnormal returns for all four subsamples increase day by day from 10th days before the announcement ($T = -10$) to reach the maximum value 10th days after the announcement ($T = 10$). All trading days for the four subsamples have cumulative abnormal returns significantly greater than zero. Similarly, the cumulative average abnormal returns of the four subsamples on days $T = 0$ to 10 are significantly greater than zero, and they are significantly larger than the cumulative average abnormal returns on days $T = -10$ to -1. Through comparison, it is evident that the cumulative abnormal returns for $T = 0$ to 10 days for all four subsamples decrease as the size of monthly revenue increases. This trend is shown in Figure 6, where the curves for the 1st (smallest) and the 2nd (second smallest) subsamples are consistently at the top, followed by the 3rd (second largest) subsample, and the curve for the 4th (largest) subsample is consistently at the bottom.

In summary, the results for the four subsamples, ranging from the smallest to largest monthly revenue size, are consistent with the results of full sample. The stock prices exhibit significant positive abnormal reactions before and after the revenue announcement date,

indicating a significant positive announcement effect. However, the monthly revenue size affects the announcement effect's magnitude, suggesting a negative relationship between the reaction of stock prices to the news of achieving record-high monthly revenues and the monthly revenue size.

4. Conclusion

This study focuses on common stocks of companies listed on the Taiwan Stock Exchange (TWSE) and the Taipei Exchange (TPEX), with monthly revenue hitting record-high from January 2013 to December 2021. It employs the event study method to test whether there are significant abnormal returns before and after the revenue announcement date, thereby investigating the announcement effect of achieving a record high in monthly revenue. Furthermore, this study explores the influence of the degree of record-high monthly revenue and revenue size on the announcement effect.

The stock prices of Taiwan-listed companies that achieved record-high monthly revenue exhibit a significant positive average abnormal return before and after the revenue announcement date. The average abnormal return is highest on the day after the announcement date and second highest on the announcement date. As expected, the cumulative average abnormal returns incrementally increase from the 10th day before the announcement to a maximum value on the 10th day after the announcement. The cumulative average abnormal returns are significantly greater than zero for all trading days within the event period.

Regarding the degree of record-high monthly revenue, the four subsamples, arranged from the lowest to highest, exhibit significant positive average abnormal returns for most trading days, except for a few days where average abnormal returns are insignificantly negative for the 1st (lowest) subsample. The average abnormal returns are highest for all subsamples on the day after the announcement. When comparing the subsamples, the 4th (highest) subsample consistently exhibits the highest average abnormal returns, while the 1st (lowest) subsample exhibits the lowest average abnormal returns for most trading days. The cumulative average abnormal returns for all subsamples increase monotonically with the ratios of monthly revenue to the historically highest monthly revenue.

The four subsamples are arranged from the smallest to largest in monthly revenue size. Comparisons reveal that the 1st (smallest) and the 2nd (second smallest) subsamples exhibit the highest average abnormal returns for most trading days, followed by the 3rd (second largest) subsample, and the 4th (largest) subsample, which exhibits the lowest average abnormal returns for most trading days. The cumulative average abnormal returns for the days after the announcement decrease as the monthly revenue size increases. However, there is little difference in the cumulative average abnormal returns for the days before the announcement.

The negative relationship between the announcement effect and monthly revenue size suggests that smaller companies experience more pronounced market reactions to record-high revenues than larger firms. For smaller companies, a record-high revenue announcement may signal a significant improvement in performance, as smaller firms tend to have more volatile earnings and revenue streams. Therefore, investors may interpret these announcements as indicators of future growth potential, leading to stronger abnormal returns. In contrast, for larger companies, which tend to have more stable revenue patterns, the achievement of a record-

high revenue may not be as surprising or impactful. Investors might already expect consistent performance from larger firms, so the announcement of record-high revenues may not significantly alter their valuation of the company.

In sum, stock prices exhibit significant positive average abnormal reactions before and after the revenue announcement date for full sample and the subsamples by the degree of record-high monthly revenue and the monthly revenue size. That is, stock prices have a significant positive announcement effect on news of monthly revenue hitting a record high. The findings demonstrate that record-high revenue announcements serve as a positive signal to investors, leading to significant abnormal returns. This indicates that investors view these announcements as predictors of future earnings potential and sustained company performance. However, the degree of record-high monthly revenue and the monthly revenue size affect the announcement effect of achieved record-high monthly revenue. The degree of stock price reaction to this information is positively related to the ratio of monthly revenue growth to the highest historically monthly revenue and negatively related to the monthly revenue size. Investors should note these factors when using the announcement effect of achieving record-high monthly revenue as a basis for investment decisions.

For investors, particularly active traders, the results suggest that paying attention to monthly revenue announcements, especially those that hit record highs, can offer profitable trading opportunities. The significant abnormal returns observed around these announcements provide evidence that the market reacts positively to such news, making these events a potential signal for buying opportunities. For corporate managers, understanding the market's response to record-high revenue announcements can be strategically important. Companies may choose to emphasize or time these announcements to maximize their impact on stock prices, particularly during periods when investor sentiment may be more volatile. By aligning these announcements with broader financial communication strategies, companies can more effectively manage market expectations and investor confidence.

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