Do changes in earnings signal future prospects after the global financial crisis and emergence of COVID-19? Evidence from Kazakhstan

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Abstract: This study presents an attempt to examine the reaction of stock prices of selected Kazakhstani firms to the announcement of quarterly earnings increase or decrease between 2012 and 2020 which includes the year of the post-global financial crisis as well as the year marked by the emergence of the virus which hit economies around the world. The event study methodology was applied to seven firms listed on KASE, with estimation and post-estimation windows of 200 and 40 days, respectively between 2012 and 2020. OLS regression was utilised to test the relationship between earnings announcements and stock returns. The findings of this study demonstrate a positive statistically significant price reaction on the next day following the announcement event when considering aggregate returns for a total of 50 earnings events of the sample period. Though, the magnitude and direction of average abnormal returns (AARs) vary when each year is considered separately.

Keywords: AAR; earnings; announcement; event; stock prices; Kazakhstan.

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1 Introduction

The importance of earnings information to investment decisions cannot be underestimated. The earnings figure presents the main number in financial statements which grasp investors' attention as argued by Beaver (1968). The focus on this bottom-line figure is so strong, that other indicators of operating performance could be overlooked by investors (Chan et al., 2006). Earnings are believed to tell a story regarding the current state of the financial health of a firm, as well as about the firm's prospects for earnings and dividends. Not surprisingly, investors' interest in earnings information intensifies around the date of the publication of accounting numbers (Panagiotis and Asteriou, 2009). There is documented unprecedented growth on the internet searches for announcements beginning two weeks before the event, peaking on the day of the announcement, and continuing at high levels for some time afterwards (Drake et al., 2012). The effect of the earnings release could be a shift in investors' perceptions and decisions, which in turn causes movement in stock prices (Lonie and Abeyratna, 1996).

The impact of company announcements on stock prices has drawn considerable researchers' attention. Prior literature examined the magnitude of market reactions and speed of price adjustment to positive and negative earnings surprises on firms, used samples of firms of different sizes and applied statistical techniques on both developed and developing markets, reporting mixed results. Increased transparency of accounting disclosure was argued to weaken the link between earnings and stock prices, due to the higher predictability of earnings (He and Hu, 2014). In addition, post-announcement drift occurs when stock prices follow the direction of earnings change after the announcement was documented (Ball and Brown, 1968). Among the reasons for delayed market reaction to earnings, announcements were named investor inattention and earnings management (Louis and Sun, 2010).

This study is aimed to examine whether earnings announcements carry any value to investment decisions based on the Kazakhstani stock market. While evidence from developed countries is overwhelming, developing and emerging countries which are characterised by less organised and weaker developed capital markets, present an interesting case for research. In particular, Kazakhstan, a country with a land area equal to that of Western Europe, and a holder of a strategically important position between the world's largest and fastest-growing economies of Russia and China bears an investment potential that has not been realised to date. As reported by World Bank, in less than two decades, the country experienced a transition from lower- to upper-middle-class, showing sixfold GDP growth and a sharp decrease in poverty. However, high control of the state,

low transparency, poorly developed capital market and weak corporate governance decrease the country's investment attractiveness. Still, with reforms targeted at transforming government-owned firms taking place, research on transitional economies possesses an uncovered value (Kato and Long, 2004). Furthermore, understanding the efficiency of firms in these economies is a key to understanding these economies as a whole (Commander and Svejnar, 2011).

The COVID-19 pandemic had a devastating effect on the global economy, changing the way businesses operate in the modern world. Kazakhstani economy experienced a double hit from the pandemic itself, in addition to the decrease in oil prices. The future country's economic outlook remains vague due to the uncertainty over the virus's effects and fluctuations in oil prices. In such an environment of liquidity shortages and constrained financial resources of Kazakhstani firms, the necessity for a securities market grows (Omarkhanova et al., 2016). In addition, when direct lending to the real sector by financial institutions is restricted, the securities market presents an alternative to obtaining funds for operations (He and Hu, 2014). Thus, an analysis of the Kazakhstani stock market presents an interesting theme in the modern environment. The scope of this study captures the first year of the pandemic, as well as the post-2008 global financial crisis period, allowing us to deeper understand the effects of economic downturns on the stock performance of this transitional economy.

The findings of this study demonstrate a positive statistically significant price reaction on the next day following the announcement event when considering aggregate returns for a total of 50 earnings events of the sample period. When each year is considered separately, the magnitude and direction of average abnormal returns (AARs) vary. In the most recent year to the period of this study, the sample reported positive AARs, replying to the upward earnings change for selected firms, though the result is statistically insignificant. Finally, reaction to good and bad news was examined, finding overreaction to the positive event before the announcement day as indicated by statistically significant AAR on Day 5 before the event. In case of a negative event, delayed market reaction is observed, showing a significant drop of AAR four days after the earnings announcement. Observing statistically significant AARs around the announcement day implies that investors perceive earnings announcements as signals of prospects.

The study contributes to the literature in the following ways. Firstly, the study enchases an understanding of the vital role of the securities market in the country's economy, which is particularly felt in periods of economic downturn, characterised by restricted direct lending and scarce firms' resources. Secondly, the study emphasises the role of earnings disclosure for investment decisions, thereby contributing to transparency and accountability of reporting practices. Finally, the study contributes to the financial literature on Kazakhstan, a transitional economy that possesses uncovered and growing investment potential. The study has implications for firm management and policymakers by providing insights into the role of earnings announcements in the value of Kazakhstani firms and broadens general understating of the importance of such announcements.

2   Literature review

The reaction of stock prices to earnings announcements has received significant consideration from the side of accounting and finance literature. Ball and Brown (1968)

were among the pioneers who investigated a link between earnings announcements and capital market behaviour. Based on 261 firms covering nine years, they documented a phenomenon known as post-earnings announcement drift, when stock prices after the earnings announcement follow the same direction as year-to-year earnings change. The study observed that a significant part of stock price adjustment occurs well before the earnings announcement, implying that the market builds anticipations regarding information to be released, with the remaining price adjustment noticed after the actual announcement. This study raised several issues, opening a curtain for further research.

The speed of the market reaction to announced information is commonly viewed under the prism of the efficient market hypothesis. According to Fama (1970), three strengths of market efficiency can be distinguished: weak, semi-strong and strong forms. Under weak-form market efficiency, past stock prices are poor predictors of future price movement, and excess returns from analysing historical prices cannot be achieved. A semi-strong form of market efficiency implies that all relevant publicly available information is quickly grasped by stock prices, causing a shift of stock price to a new equilibrium level, thereby reflecting the change in supply and demand driven by the announcement of new information. Excess returns cannot be generated by acting on publicly available information as the price is an unbiased predictor of fair value. Finally, a strong form of market efficiency assumes that all information, whether publicly available or not, is timely and accurately reflected in stock price.

Jordan (1973) investigated the reaction of stock prices to the release of quarterly earnings and obtained results consistent with the semi-strong form of market efficiency. The study provided evidence of varying reactions of stock prices in different quarters, with particular movements starting from the third quarter. Year-end adjustments contained in the annual report, as well as the third-quarter earnings report which acts as a harbinger of annual earnings, were suggested among the reasons for such capital market behaviour. In addition, the author observed that patterns of stock price adjustment to earnings information differ for high, medium and low-growth firms. The consistent results in support of the semi-strong form of market efficiency were obtained by Jones and Bacon (2007) who examined the impact of the third-quarter announcement of earnings surprises on risk-adjusted stock returns of 50 randomly selected stocks. The findings revealed that a significant positive market reaction occurs before the announcement of positive earnings surprises, which is perceived by investors as a positive signal regarding the firm's profitability and cash flow prospects.

Statistically significant abnormal returns following earnings announcements were documented by Foster et al. (1984) for an earnings expectations model based on past quarterly earnings series. The study reported that the sign and magnitude of unexpected earnings change can explain around 80 % of the variation in CAARss, with smaller-size firms experiencing the more prominent effect. Though, no systematic post-announcement drift was observed for the price-based earnings expectations model-based. Similarly, Syed and Bajwa (2017) found significant abnormal returns around the day of the quarterly earnings release, followed by post-announcement drift on the example of the Saudi Arabia stock market. Negative earnings surprises were shown to receive a longer investor response, implying that stock prices underreact to new information.

Different stock price reaction to losses perceived by investors as either temporary or permanent was distinguished by Martikainen (1998) based on the Finnish stock market. The results of the study suggested that permanent earnings losses, or the ones to continue in the future, involve higher information content, thereby causing a substantial downward

adjustment in stock prices, compared to temporary losses which are less valued by investors. Also, positive earnings were found to lead to significant price reactions. The study by Laidroo and Joost (2018) also examined reactions to the sign of announced news. Based on the Baltic stock market, authors reported that earnings announcement lags in response to bad news are longer compared to good ones. In addition, firms tended to schedule earnings announcements, especially during periods of low market sentiment. Vamossy (2021) took a sample from NASDAQ/NYSE through StockTwits and found that investors are typically excited about firms that end up exceeding expectations, yet their enthusiasm results in lower announcement returns. Adams and Neururer (2020) provided additional evidence of the importance of the timing of the earnings announcements, as demonstrated by higher volatility and uncertainty of risk premiums for firms reported later in the quarter. Dreassi et al. (2017) compared the reaction of stock prices to the release of quarterly and annual reports based on the European Insurance market and observed that the latter result in more persistent impacts, whereas quarterly reports have a short-term reaction effect.

Kong and Taghavi (2006) examined the effect of annual earnings announcements on the Chinese stock market and observed market overreaction occurring four to six days before the announcement, following correction after the announcement event. The study attributed such behaviour to the collusion of bankers and listed companies, with the former taking advantage of information asymmetry. In addition, the study revealed higher stock market fluctuations to good news, compared to bad ones and concluded that semi-strong form efficiency does not hold for this market. Similarly, Dangol and Bhandari (2019) concluded that the Nepal stock market is inefficient at a semi-strong level, with no significant effect of quarterly earnings announcements on stock prices. Friedman and Zheng (2021) conducted a study for US retail investors and argued that retail activity is linked with more volatile returns during the earnings announcement window, which contribute to a larger bid-ask spread and may also slow the incorporation of public information.

But this observation is not necessarily held in other emerging countries, as demonstrated by the contrary finding of informational efficiency and the immediate reaction of stock prices to earnings announcements reported in the study by Sharma and Chander (2009) based on the Indian stock market. Drawing on a dataset from Chinese stock markets, Gao et al. (2021) found that outsiders rely more on earnings announcements from firms that are receiving more subsidies and cause stronger market reactions. Additional analysis also showed that this positive effect is more pronounced when firms have greater information asymmetry and poorer corporate governance.

While evidence of positive relation between earnings changes and stock prices on the firm level is well documented, on the aggregate level findings are inconclusive. For example, Kothari et al. (2006) found a negative relationship between market returns and aggregate earnings changes based on the US market. Such a link could be explained by aggregate earnings having a low firm-specific component and high correlation with macroeconomic indicators. However, a similar study based on non-US markets by He and Hu (2014) reported contrasting results, showing a positive relationship between market returns and aggregate earnings changes in 23 countries. The authors concluded that international markets have attributes of earnings persistence and current earnings containing information about future earnings. Though, the link between earnings and returns weakens in countries with higher transparency of accounting disclosure due to increased earnings predictability. Wong et al. (2021) examined the joint effect of

reporting time and trade volume on earnings-announcement premiums. They found that the high trading volume effect adds to the early announcement effect but not vice versa.

Several reasons were suggested in previous research to explain the phenomenon of delayed market reaction to earnings news. Investor inattention is one of the common explanations presented in the literature, which suggests that investors have cognitive and attention limits, thereby leading to delayed replies to the released information (Hong and Stein, 1999; Louis and Sun, 2010). Earnings management undertaken by the firm to smooth unexpected earnings shocks was also argued to cause investors to incorrectly value abnormal accruals. Because accruals represent a major element in earnings, management can undertake actions in the opposite direction to earnings change, thereby misleading investors regarding the actual earnings profile (Collins and Hribar, 2000).

To conclude, prior literature generally agrees that earnings announcement results in post-announcement drift in stock prices, and the information content of the announcement also matters. However, the effect varies among different markets under examination, with a weaker link noticed between earnings announcements and stock prices for higher accounting transparency markets. The delayed response of investors to earnings announcements could be a result of investor inattention or earnings management.

3 Data and methodology

The event study methodology is a common technique used in prior literature which examined the reaction of stock prices around the day of earnings announcements. The study adopts the methodology documented in the study by Sharma and Chander (2009) who investigated the price-announcements link based on the Indian market. Daily historical return series for 7 firms covering eight years from 2012-2020 was obtained from Refinitiv-Eikon program software. The selected sample period presents an interesting case, as it includes the years after the global financial crisis as well as the most recent year when the global economy was hit by COVID-19. The initial sample under examination consisted of 30 firms with the highest market capitalisation presented on Kazakhstan Stock Exchange (KASE), due to the assumption that information disclosure increases with size and more data are available for this study. Still, historical stock prices and announcement news covering the study period were found available only for seven firms, forming the sample for examination.

The date of third-quarter earnings announcements was selected as an event day, arising in one event in a year for each firm. Third-quarter announcements were argued to play an important role in forming the investment strategies by investors, by acting as a harbinger of annual earnings. Kazakhstani firms usually release third-quarter earnings announcements in the month of November. However, on a few occasions, where particularly third quarter announcements were not available, half-or-end-year announcements were utilised. The date of the quarterly earnings announcement was found in the news published on KASE for each security. 200 days were selected before the event and 40 days after the event, which represents the 'estimation window' and 'post-event window', respectively. The chosen window is considered to be large enough to assume zero expected disturbance of the error term (Syed and Bajwa, 2017). This study focuses on earnings per share announcements, similar to other related works.

The estimation window model is applied to measure stock's return under ordinary circumstances, employing regression analysis using ordinary least squares (OLS). Abnormal return for the firms was identified, which is the difference between its actual earnings in that year and the predicted earnings (MacKinley, 1997):

$$AR_{it} = R_{it} - E(R_{it})$$

where *AR* stands for abnormal return, *R* and *E(R)* represent actual and expected returns, respectively for period t and stock *i*.

In order to estimate the expected return, the estimated market model (Sharpe, 1964) is applied, using KASE daily index for the same period as a proxy for the market portfolio:

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

where *R(E)* represents expected return on stock *i* and time *t*, α_i is an intercept of a straight line for stock *i*, β_i is a slope coefficient of stock *i*, R_{mt} is the actual return on market portfolio at time *t* and ε_{it} is an error term.

The average deviation of expected returns from their expected values is measured by AAR calculated as follows for n given events:

$$AAR_{it} = \frac{1}{n}\sum_{i=1}^{n} AR_{it}$$

The expected return is measured for all data points, while the abnormal return is calculated for the period of the event.

Cumulative abnormal return (CAAR) is measured as the sum of AAR over the event window:

$$CAAR_k = \sum_{k} AAR_{it}$$

where *k* takes values from –10 to +10 days

The study tests the hypotheses stated below:

H0 Good or bad earnings news will result in stock price adjustment not significantly different from zero.

H1 Good or bad earnings news will result in stock price adjustment significantly different from zero.

4   Findings

The summary description of the sample under examination is presented in Table 1. Data is collected for seven firms from different sectors of the Kazakhstani economy, particularly telecommunications (2), natural resources processing (3), utilities (1) and banking (1). The average arithmetic return for the sample period covering 240 days around the announcement event in each year totals 0.063%, with the highest return of 0.228% and the lowest return of -0.156% occurring in 2016 and 2014, respectively. Interestingly, in 2020 which is the most recent year to the period of this study marked by global economic recession due to the ongoing impact of COVID-19, average arithmetic

returns are positive. This could be attributed to the nature of the industries presented in the sample, as some of them benefited from population lockdown. For example, telecommunications experienced tremendous growth in the usage of mobile and internet services in response to the shift to distance work and education.

Table 1 Summary statistics

Year	Mean	Max	Min	St. dev.	N of positive events	N of negative events	Total N of events	N of observations
2020	0106%	2,148%	–3,637%	0.763%	7	0	7	1680
2019	0.017%	2,013%	–3,078%	0.733%	4	2	6	1440
2018	0.002%	1,881%	–3,322%	0.737%	5	1	6	1440
2017	0.223%	2,559%	–2,236%	0.802%	4	2	6	1440
2016	0.228%	3,437%	–2,751%	1,006%	4	2	6	1440
2015	–0.047%	4,303%	–3,991%	1,166%	2	4	6	1440
2014	–0.156%	3,751%	–7,145%	1,451%	2	3	5	1200
2013	0.123%	3,153%	–4,165%	1,003%	1	4	5	1200
2012	0.075%	7,782%	–11,507%	1,280%	2	1	3	720
Total	0.063%	3,447%	–4,648%	0.994%	31	19	50	12000

Notes: The table presents the summary description of mean, maximum, minimum values and standard deviation based on simple average daily returns.

The study is based on 50 earnings announcement events for the years 2012–2020. Events were divided into positive and negative based on the sign of quarterly earnings growth compared to the similar period in the previous year. An increase or decrease in earnings, disregarding the magnitude of earnings change, is considered good or bad news, respectively. Dates of the third quarter announcement commonly occurred around the month of November. In a few cases where third-quarter earnings announcements were not available, dates of half or end-year announcements were obtained, thereby extending the range to the months of September-December. The total number of observations for the eight-year daily examination period is 12,000. Collected data is unbalanced due to the problem of missing historical returns on some occasions. The number of observations obtained for each year is summarised in Table 1.

4.1 AAR for the total period and by year

Table 2 presents the results for discrete and logged AARs and CAARs for a total of 50 quarterly earnings announcements, 10 days before and after the event, documented from 2012 to 2020. The immediate price reaction on the next day following the event is observed with a level of significance of 10%. This finding is consistent with Foster et al. (1984) who observed statistically significant abnormal returns following earnings announcements based on past quarterly earnings series. In addition, on Day 5 following and 9 days before the announcement event, a drop significantly at 1% and 10% levels, respectively, is reported. In the estimation window, fluctuation in AARs is higher than in the post-event window, as shown in Figure 1. Though in the latter window, the magnitude of changes increases, similarly to observation by Sharma and Chander (2009).

CAARs in both discrete and logged forms for the –10 to +10 event window lack statistical significance.

Table 2   AARs and CAARs for 2012–2020

Event window	AAR discrete	t-value	CAAR discrete	AAR logged	t-value	CAAR logged
–10	0.036%	0.127	0.036%	0.087%	0.261	0.087%
–9	–0.517%**	–1,815	–0.481%	–0.560%**	–1,687	–0.473%
–8	–0.218%	–0.766	–0.699%	–0.227%	–0.685	–0.701%
–7	0.100%	0.352	–0.599%	0.076%	0.230	–0.624%
–6	–0.226%	–0.794	–0.825%	–0.252%	–0.758	–0.876%
–5	0.299%	1,050	–0.526%	0.322%	0.970	–0.554%
–4	–0.298%	–1,045	–0.824%	–0.326%	–0.981	–0.880%
–3	0.141%	0.496	–0.682%	0.124%	0.372	–0.756%
–2	–0.271%	–0.949	–0.953%	–0.315%	–0.950	–1,072%
–1	–0.021%	–0.072	–0.973%	–0.077%	–0.232	–1,149%
0	–0.147%	–0.517	–1,121%	–0.160%	–0.483	–1,309%
1	0.552%**	1,937	–0.569%	0.635%	1,913	–0.674%
2	0.021%	0.072	–0.548%	0.034%	0.103	–0.640%
3	0.105%	0.370	–0.443%	0.047%	0.142	–0.593%
4	0.147%	0.514	–0.296%	0.190%	0.572	–0.403%
5	–0.947%*	–3,322	–1,243%	–1,102%*	–3,319	–1,505%
6	0.380%	1,333	–0.863%	0.422%	1,270	–1,083%
7	–0.074%	–0.259	–0.937%	–0.125%	–0.375	–1,208%
8	0.170%	0.596	–0.767%	0.181%	0,546	–1,026%
9	0.009%	0.030	–0.759%	0.002%	0.005	–1,025%
10	–0.375%	–1,316	–1,134%	–0.435%	–1,310	–1,460%

Note: * and ** indicate significance at 1% and 10% levels, respectively.

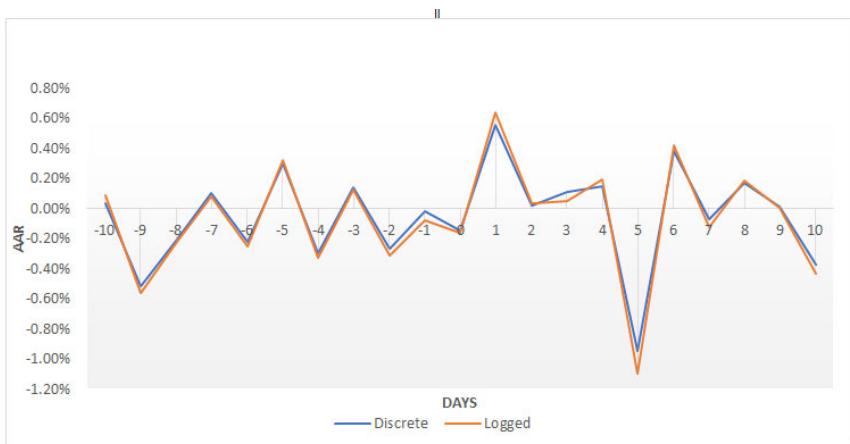**Figure 1**   Discrete and logged AARS for 2012–2020 (see online version for colours)

Table 3 Discrete AARs by year in 2019–2020

	Days	2020	2019	2018	2017	2016	2015	2014	2013	2012
Estimation window	−10	0.184%	−0.877%	−0.259%	0.230%	0.075%	−0.737%	0.649%	0.189%	0.783%
	−9	0.089%	−0.571%	−1,515%***	−1,546%***	−0.264%	0.758%	−1,200%	−0.298%	−0.220%
	−8	−0.661%	−1,087%	0.063%	−0.741%	0.002%	0.128%	0.037%	0.145%	0.217%
	−7	0.338%	0.136%	−1,149%**	−0.848%	0.798%	−0.113%	1,685%**	0.909%	−1,050%
	−6	−1,075%	−0.107%	−0.841%	0.329%	−0.571%	0.014%	0.023%	−0.471%	0.878%
	−5	1,457%***	0.296%	0.340%	0.295%	−0.736%	0.856%	0.105%	0.298%	−0.375%
	−4	0.184%	−0.442%	0.128%	−1,113%	−0.355%	−1,007%	−1,029%	0.607%	0.148%
	−3	0.906%	−0.422%	−0.001%	−0.063%	−0.772%	0.507%	1,229%	0.442%	−0.685%
	−2	−0.756%	0.118%	0.671%	−0.655%	−1,956%***	−0.553%	−0.888%	−0.030%	1,678%
	−1	0.435%	0.187%	0.391%	1,065%	−0.131%	−0.476%	−2,104%***	0.561%	−0.235%
Event	0	0.604%	0.039%	−0.802%	0.429%	0.156%	−2,243%**	−1,367%	1,084%	0.373%
Post-event window	1	−0.465%	−0.024%	−0.414%	1,097%	0.325%	1,306%	1,672%**	0.684%	0.942%
	2	0.689%	0.233%	−0.520%	−0.060%	−0.516%	−0.392%	−0.188%	−0.025%	0.888%
	3	−0.003%	1,618%***	−0.998%	1,213%**	0.146%	−0.611%	−0.355%	0.242%	−0.296%
	4	0.039%	0.465%	0.483%	−1,523%***	0.437%	1,365%	−0.676%	0.388%	0.350%
	5	−0.059%	−0.465%	−1,800%*	−0.124%	−0.940%	−1,171%	−3,148%*	−0.284%	−0.751%
	6	0.716%	0.537%	1,448%***	−0.780%	−0.276%	0.775%	0.925%	0.606%	−0.618%
	7	−0.218%	1,508%***	0.513%	−1,007%	−1,005%	0.172%	−0.330%	0.068%	−0.354%
	8	−0.090%	0.770%	−0.131%	−0.137%	0.579%	−0.291%	−0.296%	0.651%	0.461%
	9	0.235%	0.351%	1,849%*	−1,045%	0.256%	−3,049%***	1,090%	−0.297%	0.439%
	10	0.410%	0.517%	−0.410%	0.792%	−0.456%	0.305%	−4,016%*	−0.329%	−0.307%

Note: *, ** and *** indicate significance at 1%, 10% and 5% levels, respectively.

## 4.2   AARs in post-global financial crisis years

Table 3 presents AARs for each year in the period 2012–2020. Significant negative AAR on the day of the event was observed only in 2015, while AARs on the event day in other years lack statistical significance. Interestingly, statistically significant AARs were reported in the years only starting from 2013, attributing this trend to a gradual recovery from the 2008 financial crisis and increased investor trust. In 2014–2020 statistically significant AARs of different sizes and magnitudes were registered in both estimation and post-event windows, implying that earnings announcements contain some information content for investors.

4.2.1   AARs in a 'year like no other'

The year 2020 of this study presents a special case, deserving individual consideration. During this year, the global economy faced a deep recession due to the emergence of COVID-19 which has been changing the way businesses operate. Countries' response to the virus was different, shaped by the uncertainty virus has brought to the world. Negative consequences included but were not limited to, increased unemployment, economic recession, growing inequality, and digitalisation of education and work.

   AARs for 2020 are presented in Table 3. Interestingly, in the third quarter of 2020, all seven firms included in the sample reported increases in earnings. For example, the firm in the telecommunications industry, an increase in earnings per share of 257% was reported, explained by the growth in the utilisation of internet and phone services as a result of population lockdown and shift to working and studying from home. Significant positive AAR is seen 5 days before the announcement event. On the day of the actual announcement, upward movement is observed, though, on the next day AAR is negative. Both results lack statistical significance. Figure 2 presents the comparison of AARs in 2020 and average AARs for the whole period. In the estimation window, AARs for 2020 have higher magnitudes and higher fluctuations compared to the total period AARs. In addition, overreaction to positive earnings announcements on Day 5 in 2020 is depicted. However, after the actual announcement event, AARs lack statistical significance.

Figure 2   Discrete AARS for 2020 and 2012–2020 (see online version for colours)
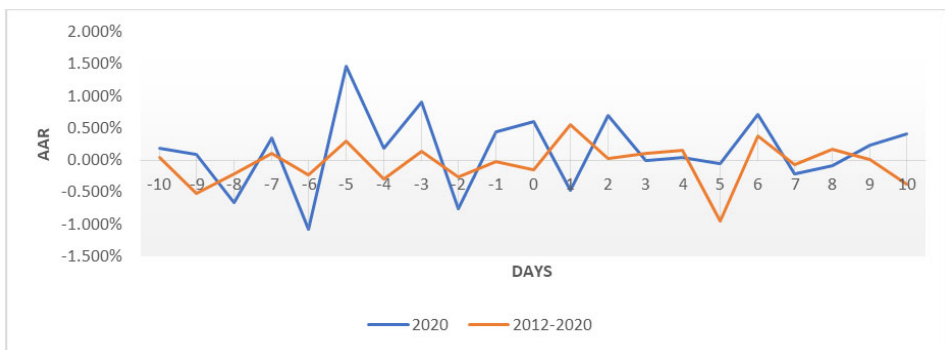
4.3 Reaction to the good news

Figure 3 presents the behaviour of discrete and logged AARs in response to the good news. Upward movement of AAR is observed 5 days before the announcement, with a level of significance of 10%, in line with Kong and Taghavi (2006) who documented market overreaction of the Chinese stock market occurring four to six days before the announcement. On the first day after the earnings news, a positive market reaction is observed, as seen from the upward shift from Day 0, though the result lacks statistical significance. This observation is consistent with the study by Sharma and Chander (2009), where AAR following the announcement event was found insignificant. Though authors also reported insignificant AARs for the whole event window under examination. On Day 2, AAR experienced a drop, showing subsequent unstable behaviour evidenced in both positive and negative directions, with a statistically significant decrease in AARs on Day 5 of the post-event window.

Figure 3   Discrete and logged AARS for good news in 2012–2020 (see online version for colours)
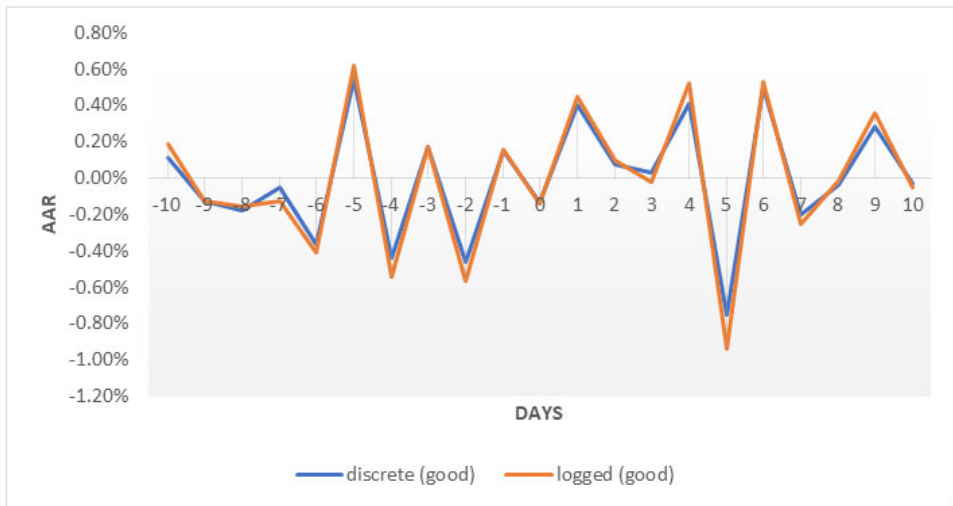

4.4 Reaction to bad news

Figure 4 depicts the behaviour of AARs in response to earnings drop. On Day 9 of the estimation window, AARs experience an increase, following downward movement starting from Day 7, which reaches its bottom on the day of the announcement event. However, on Day 1 in the post-event window, AARs show a sharp increase, holding at this level till Day 4, following statistically significant negative change documented on Day 5. The results of the AARs significance test are shown in Table 4.

Table 4   Statistical significance of AARs to good and bad news in 2012–2020

Days	Good news		Bad news	
	AAR discrete	*T-value*	*AAR discrete*	*T-value*
–10	0.109%	0.345	0.22%	0.435
–9	–0.127%	–0.401	–0.40%	–0.779
–8	–0.177%	–0.560	0.02%	0.040
–7	–0.049%	–0.156	0.48%	0.942
–6	–0.364%	–1,152	0.12%	0.230
–5	0.544%**	1,722	–0.19%	–0.366
–4	–0.443%	–1,402	–0.33%	–0.643
–3	0.167%	0.530	0.22%	0.441
–2	–0.462%	–1,460	–0.37%	–0.726
–1	0.146%	0.463	0.03%	0.053
0	–0.135%	–0.428	–0.62%	–1,222
1	0.405%	1,281	0.46%	0.903
2	0.074%	0.233	0.25%	0.486
3	0.027%	0.086	0.47%	0.920
4	0.412%	1,303	0.41%	0.804
5	–0.750%***	–2,372	–0.95%**	–1,868
6	0.500%	1,583	0.24%	0.473
7	–0.198%	–0.627	–0.03%	–0.060
8	–0.039%	–0.125	0.51%	1,008
9	0.282%	0.891	–0.57%	–1,110
10	–0.033%	–0.106	0.00%	–0.009

Notes: *, ** and *** indicate significance at 1%, 10% and 5% levels, respectively. AARs
       are presented in discrete form.

Figure 4   Discrete and logged AARS for bad news in 2012–2020
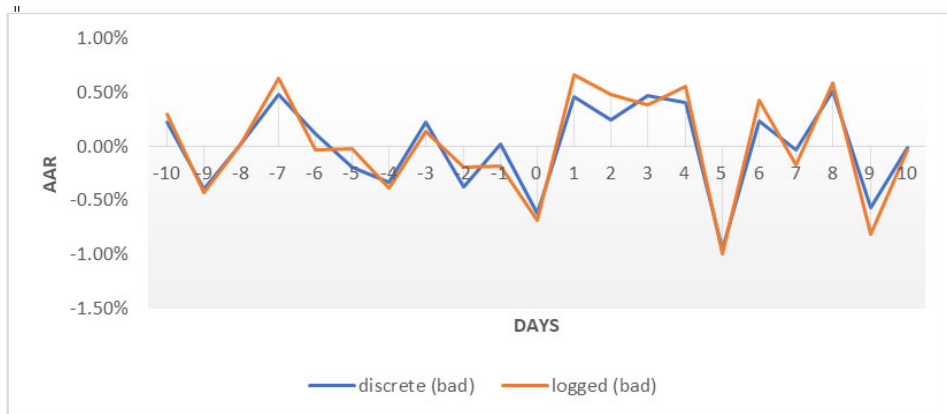
5 Conclusions

This study presents an attempt to examine the reaction of stock prices of selected Kazakhstani firms to the firm's announcements of quarterly earnings for the period 2012–2020. The findings of this study demonstrate several observations. Firstly, an immediate positive statistically significant price reaction on the next day following the announcement is observed when considering aggregate returns for the total 50 earnings events of the sample period. This could be attributed to the earnings premium phenomenon when stocks generate higher returns around announcement dates, well documented in prior literature (Choi, 2014). In addition, a statistically significant reaction is observed on Day 9 before the actual announcement event, implying some information asymmetry exists in the stock market. Thus, the hypothesis of insignificant AARs around the event date is rejected.

Secondly, AARs in different years have varying magnitudes and sign directions, gaining significance after the first two years of the sample period. This trend could represent a gradual recovery from the 2008 financial crisis and increased investment and business activity. Interestingly, in 2020, 'a year like no other' as described in the annual International Monetary Fund (IMF) report, the sample reported positive AARs, replying to the upward earnings change for selected firms, which represent industries that benefited from population lockdown such as telecommunications. Though, this observation is not statistically significant.

Thirdly, the study examined the behaviour of AARs in response to good and bad news individually. Statistically significant AAR was observed on Day 5 before the positive earnings event, consistently with Kong and Taghavi (2006) who showed market overreaction of the Chinese stock market occurring four to six days before the announcement. In addition, five days following the event, significant AAR is documented. In case of bad earnings announcements, delayed market reaction is observed, showing a significant drop on Day 5. In addition, a downward trend is observed from Day 7 before the announcement event, reaching its bottom on the day of the negative announcement. Finding statistically significant AARs around the announcement day implies that investors perceive earnings announcements as signals of prospects.

The study has several limitations. Due to the low availability of historical data on daily stock prices and event announcements, the initial sample was decreased to a small set of firms. Further research could overcome this limitation by increasing the sample and investigating the impact of earnings announcements on a larger number of firms. Also, only one quarterly earnings event in each year is considered in the study, while adding all four quarters could provide more insight into the reaction of stock prices to the earnings announcement. Still, the study could be of interest to managers and policymakers by presenting the assessment of the importance of public announcements as well as earnings information, thereby contributing to increased information disclosure, transparency and attractiveness of the Kazakhstani stock market. In addition, the study is aimed to contribute to the growing body of financial and accounting literature on the Kazakhstani market, by presenting additional evidence in the framework of the event study.

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