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KOREAN MUSIC AWARDS AND ABNORMAL STOCK RETURNS

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JEL Classification: G11, G15, G41.

Abstract: The global success of the K-pop music industry impacts the investment climate of the entertainment industry in the South Korean stock market. One of the driving factors attracting investors is the awards obtained by the K-pop idols. Hence, this event study investigates whether idols’ receiving awards creates stock abnormal returns (ARs) and cumulative abnormal returns (CARs). We collected five-day stock price data surrounding the events from 2018 to 2019 for the four entertainment companies. Using mean difference tests, we analyzed the movements of the stock returns. Our results show the appearance of positive and negative ARs dan CARs, indicating that investors react differently to the information contained in award announcements. This implies a deviance from the efficient market hypothesis and that investors behave irrationally whom investment decision affects the market. For this reason, companies should select awards when involving their idols.
Introduction

Since its inception, Korean-pop (K-pop) has been one of the driving forces behind the Korean-Wave which is widely regarded as the revival of Korean culture (Shim, 2006). This global success is attributed to the efforts since the 1970s to gain international popularity (Parc & Kim, 2020). Other countries have made similar efforts to penetrate the US market, but with a different impact than K-pop (Parc & Kim, 2020). Community interest on K-pop is growing (Google trends, 2020) and reflected in 6.1B K-pop tweets worldwide (Mahnke & Tárnok, 2020). This popularity benefits South Korean music industry, as evidenced by the achievement of a US$564.24M export value (Waldeck, 2020). The rapid growth of K-pop and its global influence has attracted both domestic and foreign investors, who have begun investing in South Korean music agencies (Muamar, 2019).

Before investing, investors often market efficiency (Nikita & Soekarno, 2012). According to Fama (1970), an efficient market is indicated by stock prices that fully reflect the available information, and that information cannot be used to generate ARs (Fama, 1970) because the price of securities will be constantly re-evaluated in response to the emergence of new information (Sihombing & Sukmadilaga, 2018). The efficient market hypothesis (EMH) applies only if investors make decisions based on rational considerations (Semuel, Bassana & Budihargono, 2017). Rational investors will analyze information in order to reduce the uncertainty and risk associated with investment decisions (Ackert & Deaves, 2010). However, investors often behave irrationally (Semuel et al., 2017; Soni & Desai, 2021). This behavior occurs because of the influence of psychology, economy, and socio-cultural environmental factors in making a decision (Helanda & Suryani, 2020). Thus, the presence of irrational investors causes an inefficient market, thus allowing for ARs (Semuel et al., 2017).

In an inefficient market, investors use available information to predict stock prices to obtain ARs (Utami, 2009). In the entertainment industry, this information is related to idol activities (Permatasari, Supriyatna & Purnamasari, 2017). Issues and news about idols can impact the stock price of music companies, potentially resulting in ARs (Kadim, Suratman & Muis, 2019). One example of positive news about idols is related to the awards they get. Investors may consider the award information obtained by idols because these achievements can increase the popularity of idols and build a good image for the com-
pany (Linuwih & Nugrahanti, 2014; Pattipeilohy, 2015), which can be considered positive news that can result in ARs (Pattipeilohy, 2015). Therefore, the impact of award information on the occurrence of ARs in entertainment companies is important to study.

Research related to award information on ARs has been conducted. The results showed the emergence of positive ARs after the announcement of the award (Wardhani & Hamidah, 2019). This occurs as a result of the market’s interest in distributing information, resulting in a reaction that causes a positive AR (Ekawati, 2011). However, other studies indicate that there is no AR prior to or following the award announcement (Fala, Santoso & Amanda, 2018) because investors believe that the award does not contain beneficial information as it has nothing to do with the company’s profits (Fala et al., 2018). Award announcements can also result in negative ARs because of investors’ confidence made them sell their stocks to make profit, but simultaneous sales will push the price downwards, resulting in negative ARs (Nareswari, Balqista & Negoro, 2021). Differences in behavior and actions taken by investors in response to this information are one of the factors underlying the deviation of efficient market theory (Nurdina, Sidharta & Mochkla, 2021). Prior studies have investigated the impact of awards, but none is on awards in the entertainment industry. Therefore, further studies are needed to find out how investors react when they hear about award announcements in entertainment companies.

Awards can be used as a benchmark for investors to select companies that are regarded as having superior performance or possessing potential resources (idols), allowing investors to earn profits (Gemser & Wijnberg, 2002; Sung, Nam & Chung, 2010). The rapid development of K-pop and the growth of investors necessitate this research, as they must be aware of information closely related to entertainment companies, such as awards, when making investment decisions (Kong, 2016; Nareswari et al., 2021). This study uses information on award announcements in South Korean music industry to fill the existing literature gap regarding the impact of award announcements. Thus, this study aims to determine the presence of ARs in entertainment companies’ stocks as a result of award announcements to assist investors in making sound investment decisions.
Literature review

The EMH states that a market is efficient if the stock price reflects the available information fully and quickly (Fama, 1970). Fama (1970) classified market efficiency into three categories. In a weak form market, prices reflect historical data information, preventing investors from obtaining ARs based on available information. In reality, investors cannot rely on historical data to obtain ARs, as stock prices follow the random walk theory; are random and difficult to predict (Fama, 1970). In the semi-strong form of market efficiency, all public information, including historical data, is reflected in stock prices (Fama, 1970; Grendstad & Braa, 2020). In the strong form of market efficiency, no investor can earn ARs, because stock prices fully reflect all information, public or private (Fama, 1970). Thus, based on EMH, investors cannot obtain ARs by using historical, public, or private information (Fama, 1970).

Actual stock market conditions are not perfectly efficient, and hence, investors may earn more profits or incur unexpected losses (Nareswari et al., 2021). Behavioral finance makes reference to this deviation. Deviations can be attributed to market uncertainty, which results in an overreaction to new information (Ţiţan, 2015). This overreaction will trigger overbought or oversold securities, which will then be gradually corrected and returned to their intrinsic value (Hayes, 2021). This overreaction can also be caused by overconfident investors who receive information, leading them to expect a higher stock price (Daniel, Hirshleifer & Subrahmanyam, 2005). Award announcements are one example that can cause investors to overreact (Xia, Singhal & Zhang, 2015) and increase the value of the awardee’s stock (Syafrudin & Panjaitan, 2020). This instills confidence in investors when evaluating the award-winning company because they believe that this information can help increase the return of the security, resulting in a positive AR (Syafrudin & Panjaitan, 2020). In forming expectations of positive ARs, investors place too much emphasis on past performance, and far too little on the fact that performance tends to return to normal (Bouteska & Regaieg, 2020). These conditions ultimately have a negative impact on the value of the service industry stocks, resulting in negative ARs (Bouteska & Regaieg, 2020).

In the entertainment industry, awards are important indicators that show product quality (Gemser & Wijnberg, 2002; Sung et al., 2010). Previous research has established that the type of award has an effect on ARs both prior to and
following the announcement of the award (Jao & Jimmiawan, 2018). The stock price of the award-winning company increased following the announcement, indicating that investor confidence in the company may have increased as a result of the award (Sedianingsih, 2014). This trust develops because investors perceive that the award-winning company has good quality, which in this study is measured by its idol (Arthur & Cook, 2009). This positive effect was also shown in other studies, although with different awards (Goetzel, Fabius, Fabius, Roemer, Thornton, Kelly & Pelletier, 2016). No research has been conducted to date on the effect of awards on the occurrence of ARs in the entertainment or music industries. Additionally, there are inconsistencies in research results, implying that further studies are needed regarding the appreciation of ARs in music industry stocks. The following hypotheses were generated from the aforementioned explanation:

H1: The awards earned by idols can cause ARs in the entertainment industry.

**Research Method**

The award (see table 1) was determined by the amount of media coverage it got and the number of musicians from each participating music company. Using purposive sampling, we chose companies from media-entertainment industry (n = 111). We focused on music or audio publishing (n = 5). We selected companies that had been registered before 2018 (n = 4). These four companies were SM Entertainment Co. (SM), YG Entertainment Inc. (YG), JYP Entertainment Corp. (JYP), and Cube Entertainment (Cube). All of the companies participated in awards listed in table 1.

The data for this study were the daily stock price and the Korea composite stock price index from January 2018 to November 2019, collected from investing.com. Using a 100-day observation period (t = -11 to t1 = -110) and a five-day window period (Al-Shattarat, Atmeh & Al-Shattarat, 2013), this event study method was used to determine the market reaction (Otieno & Ochieng, 2015). The window period was chosen to minimize the possibility of ARs being influenced by factors unrelated to the event being studied (Lin & Su, 2013). Corporate actions obtained from the Osiris database were examined, and no action was taken by the sample companies during the estimation and window periods.
The expected return of each company \( E(R_{i,t}) \) is calculated using a market model (Henderson, 1990), which was chosen because it is more capable of detecting ARs for clustered event dates (Shin, 2021). The steps taken to identify the presence of ARs and CARs are provided in figure 1.

**Figure 1. Research Method**

<table>
<thead>
<tr>
<th>Estimation period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Calculate returns ( R_t = \ln \frac{P_{t+1}}{P_t} )</td>
</tr>
<tr>
<td>2. Theil estimation to estimate ( a ) and ( \beta )</td>
</tr>
<tr>
<td>2.1 sort ( R_t ) and ( R_{me} ) from smallest to largest</td>
</tr>
<tr>
<td>2.2 calculate ( \beta = \frac{1}{\sum_{t=1}^{n} \frac{1}{R_{me}}} )</td>
</tr>
<tr>
<td>2.3 sort the results of the slope parameter from the smallest to largest, using ( \beta ) which is the median of the slope</td>
</tr>
<tr>
<td>2.4 counting ( a ) for all data, using ( a ) which is the median of all ( a )</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Window period</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. ( E(R_{0,t}) = a + \beta R_{me} )</td>
</tr>
<tr>
<td>4. ( AR_t = R_{0,t} - E(R_{0,t}) )</td>
</tr>
<tr>
<td>5. ( CAR = \frac{\sum_{t=2}^{n} AR_t}{n} )</td>
</tr>
<tr>
<td>6. t-test and Wilcoxon Signed-Rank Test for AR and CAR</td>
</tr>
</tbody>
</table>


**RESULTS AND DISCUSSION**

Cube’s stock returns had different movements compared to three other music companies during the 2018 GDA (see figure 1). For example, at \( t-2 \), Cube’s return decreased, while other companies experienced an increase. This could be explained by the disparity in the number and popularity of the artists nominated for the award. At the 2018 GDA, JYP was represented by three artists, SM and YG by ten, and Cube by just two (Safitri, 2018). JYP and Cube both have a similar number of artists, but the JYP artists are more popular, as evidenced by their ability to place JYP as the second-largest K-pop agency (Herman, 2018b).

Cube’s stock return anomaly was also evident at the GCMA, where Cube’s return increased on \( t-3 \) and \( t+2 \), but decreased on other dates. This increase in returns could be a result of changes in GCMA policy in 2018, which recognized artists as well as the entire crew involved in the album’s production (Addini, 2017). This adaptation of the Grammy Award is a breakthrough in South Korean music awards, garnering positive responses from the public, including investors. Fluctuating movements in all stock returns of entertainment companies are seen in the AAA (see figure 1) that can be caused by uncertainty about the award’s winner because all of the artists in AAA are already popular with their own agencies, including Cube’s new girl group (Herman, 2018a).
At SMA 2019, the stock returns of all companies increased on the event day, but declining for two days following the event (see figure 2) as a result of investors' confidence in award-winning performances.

Source: own study.
At SMA 2019, the stock returns of all companies increased on the event day, but declined for two days following the event (see figure 2) as a result of investors’ confidence in award-winning idols. Investors believe that the company’s stock price that houses the idol will increase, resulting in a simultaneous and massive sale of stocks, causing the price to decline. In contrast, GCMA 2019 shows a decrease in return on the award date, but increases at t+1. This may be caused by GCMA event coinciding with SMA window period; hence, GCMA 2019 had the lowest average AR and CAR. At Soribada Awards, the stock return chart went down at t+1, then started to increase at t+2.

Figure 3. Stock returns movements 2019

Source: own study.
Table 1. AR and CAR Results

<table>
<thead>
<tr>
<th>Award</th>
<th>$t_0$</th>
<th>AR Mean/Med</th>
<th>test statistic</th>
<th>CAR Mean/Med</th>
<th>test statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDA-Golden Disc Awards</td>
<td>10-11/18</td>
<td>0.007</td>
<td>1,745</td>
<td>0.009</td>
<td>4,266*</td>
</tr>
<tr>
<td>SMAs (Seoul Music Awards)</td>
<td>25/1/18</td>
<td>0.004</td>
<td>1,288</td>
<td>0.002</td>
<td>1,246</td>
</tr>
<tr>
<td>GCMA-GAON Chart Music Awards</td>
<td>14/2/18</td>
<td>0.007</td>
<td>1,638</td>
<td>0.003</td>
<td>3,288*</td>
</tr>
<tr>
<td>Soribada Awards</td>
<td>14/2/18</td>
<td>0.014</td>
<td>3,588*</td>
<td>0.011</td>
<td>7,260*</td>
</tr>
<tr>
<td>AAA-Asia Artist Award</td>
<td>30/08/18</td>
<td>0.019</td>
<td>608</td>
<td>0.003</td>
<td>181</td>
</tr>
<tr>
<td>MBC Plus X Genie Music Awards</td>
<td>28/10/18</td>
<td>0.015</td>
<td>3,262*</td>
<td>0.011</td>
<td>3,106*</td>
</tr>
<tr>
<td>MMA-Melon Music Awards</td>
<td>6/11/18</td>
<td>0.002</td>
<td>0.428</td>
<td>-0.001</td>
<td>-0.705</td>
</tr>
<tr>
<td>MAMA-Mnet Asian Music Awards</td>
<td>1/12/18</td>
<td>-0.004</td>
<td>-0.752</td>
<td>0.002</td>
<td>-1,219</td>
</tr>
<tr>
<td>GDA-Golden Disc Award</td>
<td>5-6/1/19</td>
<td>-0.004</td>
<td>501</td>
<td>0.000</td>
<td>252</td>
</tr>
<tr>
<td>SMAs (Seoul Music Awards)</td>
<td>15/1/19</td>
<td>-0.005</td>
<td>-0.796</td>
<td>-0.005</td>
<td>-4,019*</td>
</tr>
<tr>
<td>GCMA-GAON Chart Music Awards</td>
<td>23/1/19</td>
<td>-0.015</td>
<td>-2,164*</td>
<td>-0.015</td>
<td>109*</td>
</tr>
<tr>
<td>MBC Plus X Genie Music Awards</td>
<td>1/8/19</td>
<td>0.005</td>
<td>484</td>
<td>-0.008</td>
<td>32*</td>
</tr>
<tr>
<td>Soribada Awards</td>
<td>22-23/8/19</td>
<td>-0.002</td>
<td>524</td>
<td>-0.005</td>
<td>109*</td>
</tr>
</tbody>
</table>

Note: *significant at $p < 0.05$, the italics showed Wilcoxon-Signed Ranked Test.
Source: authors’ computations.

Table 1 shows that the highest AR and CAR values are at the 2018 MGMA. There are two potential causes of this condition. First, 2018 marked the first time the MGMA was held and featured a collaborative performance between a rising K-pop group (BTS) and a world artist (Charlie Puth), demonstrating the growing popularity among the public (Cha, 2018). Second, Genie, a digital music chart run by KT Music Corp., is one of the music benchmarks for each work released by idols (Kumparan, 2018). Apart from attracting the attention of the public, some of these factors can also generate investor confidence in the award event being held.

Table 1 also lists the 2018 and 2019 awards with positive and significant ARs and CARs. Positive CARs were found at the 2018 GDA and GCMA, the 2019 MGMA and Soribada Awards. Positive ARs and CARs happened at the Soribada


Awards and MGMA 2018. This indicates that investors regard award information as a positive signal, prompting them to purchase stocks of the award-winning company (Fombrun, 1996). Due to the high demand in the market, prices rise, resulting in a positive AR and CAR. This is consistent with prior study finding that rewards can result in positive AR and CAR because investors perceive them as a means of evaluating award performance (Defond, Konchitchki, McMullin & O’Leary, 2013). Hence, investors believe that certain awards contain interesting information, resulting in a positive change in stock returns.

Several music awards did not generate significant ARs or CARs (see table 1), indicating that the awards had no effect on the entertainment industry’s stock price. This could be because South Korea hosts an excessive number of music awards, diminishing the credibility and prestige of each award (Sun-hwa, 2020). In addition, the lack of transparency regarding the evaluation criteria for several awards, such as the jury’s unknown identity, the assessment criteria, and the qualifications of the participating artists, maybe a factor contributes to a loss of enthusiasm and even public respect for associated award events (Sun-hwa, 2020), leading investors to conclude that the award is no longer relevant for use as a reference when analyzing stock movements. AR and CAR may also be insignificant because few investors are capable of making predictions after the nomination for the music awards are announced (Maltsbarger, 2011). Rather than waiting for the announcement of the award winner, the nominations served as an indicator of which company would be chosen as their investment destination (Maltsbarger, 2011).

The lack of investor reaction to the announcement of the award is due to the company being over-awarded or having received too many awards (Arthur & Cook, 2009). This raises the notion that receiving awards is a common occurrence, and thus, investors regard the information as less valuable and send no signal to them, causing no reaction in the market. The findings of this study indicate that the award is not fully considered good news, and thus becomes less relevant to consider when making investment decisions (Jao & Jimmiawan, 2018).

Table 1 also shows that the 2019 GCMA has negative and significant ARs and CARs. This negative values can be explained by the Korean market’s over-reaction, in which a positive shock is followed by a significant negative AR and CAR (reversed stock return) (Stefanescu, Dumitriu & Nistor, 2012). This reduces (increases) market demand for stocks with high (low) returns (Ardi, Kiryanto & Amalia, 2008), resulting in a decrease (increase) in returns. This situ-
ation results in the occurrence of negative AR (Ardi et al., 2008). Negative AR and CAR values indicate that the actual return is less than expected (Aziroff, 2020; CFI, 2020). This could be a result of award-winning information being leaked, boosting investor confidence (Handayani, 2020). This information leak informed investors about the award-winning idol company, creating an atmosphere of overconfidence that resulted in the company’s stocks being sold simultaneously (Dhankar, 2019). This selling strategy is based on the assumption that the winning company’s price will rise, but concurrent sales will result in a decrease in price (Dhankar, 2019).

This study corroborates previous studies indicating that companies’ good news may result in a negative AR. The positive news sent the stock price skyrocketing well above its fundamental value, but investors realized their mistakes and corrected their actions, causing the price to reverse course (Dhankar, 2019). Past studies suggest that winning companies experience negative AR because of the euphoria surrounding them, which causes investors to overpay (Brammer, Brooks & Pavelin, 2009; Chen & De Bondt, 2004; Clare & Thomas, 1995). In addition, negative AR and CAR can occur because investors liquidate their securities as a result of stock surges, resulting in falling prices (Dhankar, 2019). This finding contradicts Fama’s (Fama, 1970) statement that investors cannot rely on historical data to generate ARs. The findings of this study indicate that investors are irrational in their optimism in response to good news, causing overreaction. Thus, the findings of this study do not support the idea that investors are rational beings (Fama, 1970).

The differences in the results in this study indicate that investors place different values on the music awards. However, certain music awards continue to provide signals that prompt investors to make decisions and influence the stock market (Fala et al., 2018). Music awards that fail to elicit a response can be attributed to the awards’ timing being too close and the assessment criteria being too restrictive, preventing the public, especially investors, from making an investment decision.

Conclusion

This study aims to determine whether there is an AR on awards obtained by music industry idols and provides several conclusions. This study found different investor responses for each award, causing some awards to generate signif-
icant AR and CAR, while others do not. Positive AR and CAR indicate investors’ belief and confidence that some awards can increase the value of the company. However, insignificant AR and CAR are a result of idols receiving too many awards.

This study also found an overreaction that made negative AR and CAR. This overreaction is a result of investors’ excessive optimism about the winning company’s stock price. Hence, it confirms that investors behave irrationally as a result of their overconfidence in judging good news, resulting in a negative AR. These findings contradict the EMH, implying that future returns and losses can be predicted. For this reason, investors should consider the types of award events and timing when making investment decisions to avoid potential losses and maximize profits. It is expected that entertainment companies will be more selective in involving their idols to participate in awards, ensuring their participation does not become a boomerang for the company or the artist’s success.

This study contributes to the literature on the EMH and behavioral finance by examining the effect of award announcements on the occurrence of ARs in the South Korean K-pop industry, as award announcements are of an important concern and achievement in industries engaged in the arts, culture, and industry media. However, this study is incapable of predicting the timing of abnormal returns. Also, the diminishing of overreaction cannot be determined. Future research should therefore employ different methods and extend the sample period in order to predict both the presence of abnormal returns and diminishing overreaction.

References


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