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**The Impact of Migration Announcement on share Prices
of the Firms that Migrate from AltX to the JSE Main
Board, South Africa**

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Abstract

This paper uses an event study methodology to empirically examine the impact of migration announcements on the share prices of the firms that migrate from the Alternative Exchange (AltX) to the Johannesburg Stock Exchange (JSE) main board. The employed dataset consists of daily closing share prices and dividends of the sample firms over seven years. Significant abnormal returns were observed three weeks before the migration announcement. Moreover, the

significant average abnormal returns observed two days after the migration announcement suggest that the market is not information-efficient.

Keywords: *Alternative Exchange (AltX); Johannesburg Stock Exchange (JSE); abnormal returns; market efficiency; small, medium and micro enterprises (SMMEs); migration*

1. Introduction

In South Africa, the forerunners to the Alternative Exchange (AltX) board were the Development Capital Market (DCM) board in 1984 and the Venture Capital Market (VCM) board in 1989 of the Johannesburg Stock Exchange (JSE). These boards were launched to meet the needs of less established firms, which were not qualified to be listed on the JSE main board due to the stringent requirements of the JSE main board (Mkhonza, 2007). The DCM and the VCM could not attract quality firms or investors, so the AltX was established. The AltX was formed on the basis that it would represent a parallel exchange to the main board of the JSE to ensure the development of small, medium, and micro enterprises (SMMEs) (Magliolo, 2004).

The AltX advisory committee, the directors' induction programmes, and the designated advisers are all focused on the quality controls of the firms listed on the AltX (Czepek, 2008). One of the significant contributions of the AltX is its ability to provide a platform from which SMMEs can raise their profiles, raise capital, secure better quality deals and employ more people to contribute to the South African economy (Nemer, 2017).

A thorough investigation of research on migration from the AltX to the main JSE board has revealed a scarcity of studies in South Africa, therefore exposing a gap in the current literature. Therefore, this research aims to examine the impact of migration on the share prices of the firms that migrate from AltX to the main board (JSE) before and after the announcement date and the actual migration date.

The following sections present the theoretical overview, literature review, research methodology, analysis of the data and discussion, conclusion, limitations of the study, and recommendations for future research.

2. Theoretical Overview

This section discusses the different finance theories that relate to this study and are often utilised as methods for testing the efficiency of the markets. Such theories include the Efficient Market Hypothesis (EMH), Random Walk Hypothesis (RWH), Capital Asset Pricing Model (CAPM) and behavioural finance.

Efficient Market Hypothesis (EMH) and Random Walk Hypothesis (RWH)

According to the EMH theory, when new information is made available to the market about a particular stock, that specific stock's current price will quickly adjust to reflect this new information, suggesting that no investor can generate a return above the risk-adjusted rate of return out of the market. According to Eakins and Mishkin (2012), a market can only be considered efficient when all the information available is reflected in the stock prices. The EMH is linked with the notion of RWH, which according to Asif, Khwaja and Wali (2015), states that stock price follows a random walk; therefore, the investor cannot predict the future stock price based on its previous patterns.

Capital Asset Pricing Model (CAPM)

Sharpe (1964), Lintner (1965) and Mossin (1966) contribute towards the development of the Capital Asset Pricing Model (CAPM), which is an extension of the Markowitz (1952) Modern Portfolio Theory. The CAPM is a model that illustrates the relationship between systematic risk and expected return for portfolios and individual stocks. According to Elbannan (2015), the CAPM is a finance model that employs a single risk factor known as beta. Notwithstanding its extended use by many scholars and professionals, the CAPM has its weaknesses. One of the main criticisms against the CAPM is that it is based on unrealistic assumptions. The CAPM is built on several assumptions; however, the most controversial assumption by CAPM is that of a perfect capital market (Bodie, Kane and Marcus, 2008).

Arbitrage Pricing Theory (APT)

Developed by Ross (1976), the APT is viewed as an appropriate substitute for the CAPM. The theory claims to circumvent the CAPM's weaknesses by presenting assumptions that are more realistic than those of the CAPM. One of the APT model's strengths is that it permits the researcher to select more factors, unlike the CAPM which is a one-factor model. The theory asserts that, at times, the security market prices are not correctly priced, suggesting that over time the security prices are mispriced. If this holds, it will give an investor a chance to profit from the mispriced securities, before the market corrects itself.

Behavioural finance

Behavioural finance studies how human psychology affects the financial decision-making process and, subsequently, the financial markets. It has become one of the crucial modern finance theories critical to financial practitioners and academics because of its ability to explain market inefficiencies. Behavioural finance argues that investors are irrational and act irrationally when making investment decisions, which may cause them to over- or under-price stocks (De Bondt & Thaler, 1994). In essence, Behavioural finance refers to a state where the performance of a stock or a group of stocks deviates from the assumptions of the EMH for various reasons.

3. Literature Review

To the best of the authors' knowledge, this is the second study conducted in South Africa on the migration of firms from the AltX to the JSE main board. Therefore, this section discusses and highlights some of the essential aspects and debates related to the JSE history and the establishment of the AltX and concludes with a global overview of other SMME capital markets.

Brief history of the Johannesburg Stock Exchange (JSE)

The JSE is the largest stock market in Africa, with 357 companies listed on the exchange, with an overall market capitalisation of \$940 million (Trimble and Bryant, 2019). The JSE is ranked as the 16th largest stock exchange in the world (Wehmeyer, 2021).

In 1996, the JSE introduced a new trading platform called the Johannesburg Equities Trading (JET) system, replacing the open outcry trading floor system, which has been in operation for 108 years. A significant improvement in the JSE operation systems occurred in 1997 when it introduced the Shares Transactions Totally Electronic (Strate) and the Stock Exchange News Service (SENS). Strate aims to facilitate the electronic transactions of stocks in South Africa and ensure the safekeeping of the transaction's records. At the same time, the SENS provides real-time news relating to the listed firms and price-sensitive information.

In October 2003, the JSE introduced the Alternative Exchange (AltX) as a suitable replacement for its forerunners, the Developmental Capital Market (DCM) and the Venture Capital Market (VCM). The AltX allowed businesses to raise capital, issue new shares, widen investors' base and make firm shares available for trading on a regulated market (Czepek, 2008). Neither the DCM nor the VCM could not attract potential and quality investors. As a result, the AltX was established mainly to provide smaller firms with a minimum capital of R2 million (\$0.14 million) which are unable to list on the main board of the JSE.

Since its establishment as a central facility for trading in South Africa, the JSE has developed to become one of the top 20 largest stock exchanges in the world, with a market capitalisation of \$894 billion as of November 2018 and an average trading volume of \$29 billion per month (Samuelsson, 2022).

Establishment of the Alternative Stock Exchange (AltX) as SMME capital market

In October 2003, the JSE launched the Alternative Exchange (AltX) to function as a corresponding market along with the JSE main board but focuses on small, medium, and micro enterprises (SMMEs). One of the main objectives of the AltX is to provide a high-quality migratory platform to the main board of the JSE. It offers similar benefits to the JSE main board, permitting firms to raise capital and list publicly while enjoying less stringent rules and regulations than those listed on the JSE main board (Kruger, 2014). On the other hand, the firms that desire to list on AltX must undergo a stringent assessment and endorsement process, including a review and approval by the AltX advisory committee to ensure that all the listing regulations are followed.

As a division of the JSE main board, the AltX provides similar services to the stock exchanges such as AIM (in the UK), TSX Venture Exchange (in Toronto Stock Exchange), Mothers (in Tokyo Stock Exchange), NASDAQ (in the USA), BSE and NSE boards for SMMEs (in India). These are all the SMME exchanges that allow firms that cannot list on their main boards to raise equity in a public market.

The establishment of the AltX has contributed positively to the South African economy in many ways, including job creation and small business development (Beneke, 2016). One of the aims of establishing the AltX is to provide smaller firms that are unable to list on the JSE main board with an opportunity to have access to corporate funding. An increase in the number of firms that migrate from the AltX to the JSE main board is clear evidence that the exchange is meeting some of its intended purposes. In support of such evidence, Cheyne (2013) states that a listing on AltX has provided many firms with great opportunities, such as access to a large pool of investors, an increase in the firm's profile, and a clear growth path.

One characteristic that sets the AltX apart from the DCM and VCM board is that it offers investors an opportunity to invest in high-growth firms (Cheyne, 2013). It boosts investors' confidence to list on an exchange that complies with the rules and regulations of a formal stock exchange such as the AltX. The JSE has a large pool of domestic and international investors. As a result, foreign firms that list on the JSE are regarded as local firms for trading purposes.

Given the current difficulties faced by the South African economy, such as the increasing rate of unemployment and decline in the gross domestic production (GDP) growth rate, and collateral requirements by finance institutions, it is becoming more necessary to promote other forms of external financing of SMMEs, in the form of equity, as an alternative to the banking channel. Credit access has become more critical for SMMEs due to the stringent regulations imposed by banks after the financial crisis that erupted in August 2007 (South African National Treasury, 2011). It becomes apparent that there is a need for an SMME / AltX exchange that will allow South African small firms to raise capital in the form of equity in a public market as opposed to lending from banks.

Migration of firms from the AltX to the JSE main board

The AltX was established to catalyse the growth potential of SMEs by providing them with a platform to obtain capital for their investment

initiatives. The literature shows that very few studies have been conducted on the history of the migration of firms from the AltX to the JSE main board. Existing studies include those conducted by the JSE (2014), Kruger (2014), Van Heerden (2015), Harwood and Konidaris (2015), Cheyne (2016), and Schellhase and Woodsome (2017).

Since its inception in 2003, the AltX has listed more than 112 firms, and 24 of these have migrated to the main board, while 27 have delisted or closed down. Similarly, Cheyne (2016) mentioned that the AltX had listed 123 firms since its establishment in October 2003, and only 30 of these have successfully migrated to the JSE main board. Based on that, Van Heerden (2015) proposes that the AltX has succeeded in offering an opportunity for SMMEs to raise capital and be a springboard to the main board of the JSE.

Despite the successful transition from the AltX to the JSE main board, Kruger (2014) points out that most AltX firms tend to be listed under the Fledgling Index and Small Cap Index due to their lack of liquidity compared to their JSE main board counterparts. The Fledgling Index represents the lowest 1% of the total market cap value of all eligible ordinary securities listed on the main board of the JSE. In comparison, the Small Cap Index represents 96% to 99% of the total market cap value of all eligible ordinary securities listed on the main board of the JSE. Similarly, Harwood and Konidaris (2015) state that the growing number of firms that migrate from the AltX to the JSE main board forms part of the tangible results of how the AltX has achieved its objective.

Global overview of other SMME capital markets

SMMEs play a significant role in the development of the economy and job creation globally. They provide more than 60% of overall employment worldwide and approximately 80% of jobs in the developed world (Peterhoff, Romeo & Calvey, 2014). Despite their economic importance, on the other hand, SMMEs often struggle to secure access to funding. According to Freeman (2015), SMMEs mainly use short-term funding options such as overdrafts and bank credits. Such funding sources can be considered vital in the start-up phase, but, unlike long-term finance, they cannot ensure the financial sustainability of SMMEs. As a result, many SMMEs are forced to seek alternative funding sources.

Dlova (2017) advocates that capital markets can be a suitable alternative to bank lending as many SMMEs struggle to acquire loans.

According to Oteb (2014), promoting capital markets is imperative as it provides alternative funding sources for SMMEs. Nassr and Wehinger (2015) state that equity financing can be used as an alternative source of finance for SMMEs that lack collateral. On the other hand, raising funds through private equity markets is challenging as it involves stringent listing rules and complex legal and regulatory frameworks.

Internationally, a few countries have managed to develop successful stock exchanges for SMMEs. Such international markets with successful SMME exchanges include the London Stock Exchange (LSE), which established the Alternative Investment Market (AIM) in 1995 as its sub-market. The AIM allows SMMEs to raise capital on a public market with less stringent rules and regulations than the LSE. The AIM has been fast growing since its establishment, as it has listed more than 3500 firms with a market cap of more than £90 billion in the 2015 financial period (Hussain, 2015). Since its establishment, it has attracted several firms from various sectors, both locally and internationally, because of its flexible regulations compared to the main market.

In 1999, the Tokyo Stock Exchange (TSE) launched the Mothers market to develop SMMEs. Mothers has attracted many SMMEs because of its less stringent listing requirements in comparison to the TSE. Although the Mothers has flexible rules and regulations compared to the primary market, it requires that any firm that lists with it demonstrates the potential for sustainable growth. Since its inception, the Mothers has been operating as a parallel market to the TSE and has done well in providing funding prospects to firms with the potential for sustainable growth. As of 2014, 15 years after its 1999 launch, Mothers has recorded more than 365 firms, and more than 99 firms have migrated to the TSE (Honjo & Kurihara, 2022).

The ChiNext is another platform for SMMEs established by Shenzhen Stock Exchange (SZSE) in October 1999. The purpose of the ChiNext establishment is to assist high-growth firms with access to the Chinese capital markets. The ChiNext emphasises economic growth and development stimulation in emerging industries of strategic importance. The ChiNext has less stringent listing standards compared to the Shenzhen Stock Exchange. As of April 2016, there were 501 firms listed on ChiNext with a market capitalisation of USD 754.5 billion (Shenzhen Stock Exchange, 2016).

In Australia, the Australian Security Exchange (ASX) was established in 1987. The ASX has been a successful platform for the needs of SMMEs, such as mid-cap and micro-cap firms, which represent the

majority of the listings on the ASX. Listing on the ASX offers investors benefits such as raising capital, public recognition, increasing the firm profile, and broadening the shareholder base. Since its establishment, ASX has listed more than 2200 companies and issuers from across the globe. In 2015, ASX had 2029 listed companies with a market capitalisation of Australian \$1.6 trillion (Australian Security Exchange, 2020).

The Toronto Stock Exchange (TSX), in 1999, launched the TSXV as its sub-market, which caters for SMMEs that seek to raise capital from the public market. In 2015, the TSXV listed 1791 firms worldwide with a market capitalisation of \$2.3 billion (Lamb, Jennings & Calain, 2017). TSXV provides various opportunities to its listed firms, such as visibility to potential investors, liquidity, and accessibility. The TSXV has lower listing costs and less stringent regulatory requirements than its counterparts. One of the benefits of listing on the TSXV is that it offers various programmes, which provide SMMEs access to the markets with the support of experienced directors and officers. Such programmes include a capital pool company (CPC) programme, which introduces the entrepreneurs of the developing businesses to the pool of potential investors.

The establishment of the Bombay Stock Exchange (BSE) SME Exchange and the National Stock Exchange (NSE) EMERGE Exchange in 2012 created a good platform for SMMEs to be listed on the public markets. Since its establishment, the BSE SME has listed more than 345 firms, and 114 have migrated to the BSE main board (Soni, 2021). On the other hand, since its inception, the NSE EMERGE has listed nearly 200 firms, and only 22 of them have migrated to the main board (Laskar, 2019). In October 2022, the BSE SME listed 394 companies with a market capitalisation of 60 000 Crore (Mumbai Press, 2022). The NSE MERGE listed 99 companies with a market capitalisation of more than 76000 crores in November 2017 (The Economic Times, 2017).

Similarly, in 2009, Bursa Malaysia set up the ACE Market as its sub-market for SMMEs. The regulations for listing in the ACE market are less stringent than the Bursa Malaysia, which is the main board. However, the lack of a transparent regulatory platform has been challenging for companies listed on the ACE Market. The ACE Market has listed 14 companies (Lumpur, 2022).

SMMEs are the critical drivers of economic growth, innovation, and job creation worldwide. Access to finance has been one of the main challenges obstructing the growth and development of SMMEs globally.

The stringent rules and regulations that the banking sector introduced post-2008 financial crisis have limited the amount of bank lending to SMMEs. This has necessitated diversified funding alternatives beyond bank lending that promote financial inclusion. The development of the exchanges for SMMEs can therefore be regarded as a better alternative platform for the financing needs of SMMEs and for ensuring their financial sustainability. Moreover, listing SMMEs on the exchange can increase their profile, visibility, and transparency and expose them to opportunities they would not have access to had they not been listed. The firms on the AltX may eventually aim to migrate to the JSE main boards for their growth opportunities and funding.

There have been studies on the migration of firms from the AltX to the JSE main board by Mlonzi, Kruger, and Nthoesane (2011) and Kruger (2014). However, there are few studies on the share price performance before and after the announcement of migration to the JSE main board. Consequently, this research investigates investor reactions using the announcement date of firms from the AltX to the JSE main board. This will add to the investors' understanding of the effects of the migration announcement date and actual migration date on the share prices of the AltX-listed firms. The results of this research will contribute significantly to the existing literature on the development of the AltX as a stock exchange and its contribution to the SMME sector and the South African economy.

4. Research and Methodology

This chapter discusses the data and sample selection process and the equations used in the analysis to achieve the objectives of this study.

The membership list for the AltX listed firms and the information regarding the firms that have migrated to the JSE main was provided by the personnel from the JSE. The daily closing share prices, the volume traded, and sample firms' dividends were downloaded from the I-Net BFA database at the University of the Western Cape

The initial sample included all the firms listed on the AltX since its establishment in October 2003. This initial sample consists of 64 firms. The 30 firms that migrated from the AltX to the JSE main board were extracted from the initial sample. From the list of the 30 firms that migrated from the AltX to the JSE main board, firms with inadequate data, suspended firms, and delisted firms were further excluded from the sample. The remaining sample consists of 20 shares, including 15 small

caps and 5 mid caps from a wide range of industries. The announcement date, migration date, and relevant sectors of the AltX firms are listed below in Table 1.

Table 1 List of sample firms

No	Name	Market cap category	Announcement date	Migration date	Industry
1.	Esor Ltd	Small Cap	24-06-2009	25-06-2009	Civil
2.	1 Huge Group Ltd	Small Cap	04-02-2016	01-03-2016	Engineering Mobile
3.	Calgro M3 Holdings Ltd	Small Cap	08-02-2012	23-02-2012	Telecommunication Construction
4.	Curro Holding Ltd	Mid Cap	14-05-2012	03-07-2012	Private
5.	Cognition Holding Ltd	Small Cap	27-10-2007	03-11-2014	Education Technology
6.	Ellies Holding Ltd	Mid Cap	17-11-2010	26-11-2010	Manufacturing
7.	Finbond Group Ltd	Small Cap	03-03-2014	24-03-2014	Banking
8.	Insimbi Refractory-Alloy Supply Ltd	Small Cap	08-12-2011	20-01-2012	Resources
9.	Interwaste Holding Ltd	Small Cap	07-11-2014	18-11-2014	Services
10.	Mas Real Estate Inc.	Mid Cap	10-12-2014	18-12-2014	Real Estate
11.	Mazor Group Ltd	Mid Cap	07-07-2008	14-07-2008	Construction
12.	Onelogix Group Ltd	Small Cap	07-06-2008	18-06-2013	Logistic
13.	Pan African Resources Plc	Small Cap	26-11-2009	01-12-2009	Mining
14.	Rockcastle Global Estate Co. Ltd	Mid Cap	17-11-2014	25-11-2014	Real Estate
15.	Rolfes Technology	Small Cap	02-11-2011	21-11-2011	Chemicals
16.	Holdings Ltd Santova Ltd	Small Cap	28-10-2011	02-11-2011	Logistics
17.	Stenprop Ltd	Small Cap	23-09-2015	05-10-2015	Real Estate
18.	Wescoal Holdings Ltd	Small cap	08-03-2010	24-04-2010	Mining

19.	Taste Holdings Ltd	Small Cap	28-06-2011	08-07-2011	Services
20.	Consolidated Infrastructure Group Ltd	Small Cap	25-02-2009	06-09-2009	Manufacturing

As noted from the sample firms listed in Table 1, most AltX firms migrated to the JSE main board between 2008 and 2015, post-financial crisis. The research sample includes firms from various industries, including civil engineering, construction, private education, technology, manufacturing, banking, resources, real estate, logistics, mining, chemicals, and services.

The market response to share migration from the AltX to the JSE main board was determined by the event study methodology proposed by Fama, Fisher, Jensen, and Roll (1969). This methodology has been used by various scholars such as Jenkinson and Ramdorai (2013), Ikram and Nugroho (2014), Kruger (2014), and Abbas (2015) to investigate the impact of corporate actions on stock returns. This method was adopted to estimate the abnormal returns of sample shares on the announcement date and the migration date. The estimation period is from day -120 to day -21 relative to the announcement date. The abnormal return is defined as the difference between the actual return and the benchmark return. The event window consists of 41 days, that is, 20 days before the announcement date ($t-20$) to 20 days after the announcement date ($t+20$), along with the announcement day itself (that is, $t = 0$). This study employed daily closing prices to compute the actual return for each stock and the benchmark index using the following Equation 4.1:

$$R_{it} = \frac{P_{it} - P_{it-1} + D_{it}}{P_{it-1}} \tag{4.1}$$

Where

- R_{it} is the return of share i on day t ;
- P_{it} is the closing price of stock i on day t ;
- P_{it-1} is the closing price of stock i on day $t-1$ and
- D_{it} is the dividend payable for firm i at time t ,

Although Equation 4.1 includes D_{it} , none of the sample shares has announced or paid dividends during their respective period of evaluation. The average daily return between $t = -120$ and $t = -21$ before the

announcement date for sample share i (R_i) is employed as the benchmark return using Equation 4.2:

$$\bar{R}_i = \frac{\sum_{t=-120}^{t=-21} R_{it}}{100} \tag{4.2}$$

The benchmark return \bar{R}_i in Equation 4.2 is compared with the actual return (R_{it}) to determine the daily abnormal return during an event window of 41 days. The abnormal return (AR_{it}) for share i at day t during the 41-day event window was calculated using Equation 4.3 as follows:

$$AR_{it} = R_{it} - \bar{R}_i \tag{4.3}$$

where:

- R_{it} is the actual return for share i in day t ; and
- \bar{R}_i is the benchmark return estimated between $t-120$ and $t-21$.

Once the daily abnormal return for each sample share was computed in the event window, the average abnormal return (AAR) was calculated by averaging the abnormal return for all sample shares for each day in the event window. The AAR for day t in the event window was calculated using Equation 4.4 as follows:

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{it} \tag{4.4}$$

Subsequently, the daily AARs were accumulated to compute the cumulative average abnormal return (CAAR) for each day in the event window using Equation 4.5. The CAAR is a useful statistical measure in addition to the AAR to indicate the aggregate effect of abnormal returns.

$$CAAR_t = \sum_{t=1}^T AAR_t \tag{4.5}$$

Finally, the Student's t -test was conducted to determine the statistical significance of AAR_t and $CAAR_t$, respectively. The test statistic for each AAR_t is computed using Equation 4.6, where σ_{AAR} is the cross-sectional standard deviation of abnormal returns at day t ; and n is the number of sample shares at day t .

$$t = \frac{AAR_t}{\sigma_{AAR} / \sqrt{n}} \tag{4.6}$$

Following the methodology of Abbas (2015), the test statistic for CAAR_t was computed using Equation 4.7, where d is the total number of days in which CAAR was calculated.

$$t = \frac{CAAR}{\sigma_{AAR} / \sqrt{d}} \quad (4.7)$$

In an event where the AAR or the cumulative abnormal return before the announcement date is significantly different from zero, this could indicate that the event significantly affects the share price. This could suggest a possibility of information leakage before the announcement date owing to inside information. Suppose significant AARs are observed after the announcement date. In that case, this could mean that share prices do not fully reflect the information already in public after the announcement. The following section discusses the empirical results.

5. Empirical Results and Discussion

This section discusses the abnormal returns across all the sample firms between 1 January 2004, and 31 December 2015, when most of the migrations were assumed. Subsequently, the average cumulative abnormal returns and a graphical illustration thereof.

Stock price reaction before the migration announcement date

Table 2 illustrates the AARs and CAARs before the migration announcement date measured by the historical performance of the sample shares with the corresponding t-statistic values for each day in the event window. The parametric t-tests determine whether the abnormal returns are statistically significant. The abnormal returns are the difference between the actual and benchmark returns. The window period is 21 days before the announcement (t-20) and the announcement date (t = 0).

Table 2: AAR and CAAR before the migration announcement date

Market Proxy = Excess Return ($R_i - R_m$)				
Days	AAR (%)	t-test	CAAR (%)	t-test
t-20	-0.01	-1.82*	-0.01	-1.82*
t-19	0.00	1.51	-0.01	-0.72
t-18	0.02	1.08	0.01	0.71
t-17	0.01	0.67	0.02	1.00
t-16	-0.01	-0.77	0.01	0.69
t-15	0.03	2.32	0.04	1.38
t-14	-0.01	-0.41	0.03	1.37
t-13	0.02	2.53**	0.05	2.35**
t-12	0.00	-0.78	0.05	2.16**
t-11	-0.01	-1.77	0.04	1.77
t-10	-0.01	-1.75	0.03	1.20
t-9	0.00	0.53	0.03	1.46
t-8	0.00	-0.19	0.03	1.30
t-7	0.00	-0.87	0.03	1.06
t-6	0.00	0.79	0.03	1.22
t-5	0.00	0.17	0.03	1.30
t-4	0.01	0.36	0.04	1.53
t-3	-0.01	-0.52	0.03	1.38
t-2	0.00	0.18	0.03	1.42
t-1	0.01	0.32	0.04	1.45
t = 0	0.01	1.22	0.05	0.32**

Note: *, ** indicates a significant p-value at 10% and 5%, respectively.

The results revealed that the shareholders of the migrated firms had experienced significant negative abnormal returns of -0.01% (t = 0) and 0.02%(AAR), and 0.05% (CAAR). Table 2 shows a pattern of negative and positive AARs during the 20-day pre-announcement window, starting from day t (-20) today t (-1). Table 2 shows that during the 20-day pre-announcement window, the market reacted significantly

differently from zero on day t (-20) and at 5% level on day t (-13), respectively.

The observations on abnormal returns before the migration announcement date suggest the possibility of information leakage and consequently provide supporting evidence against the strong form of market efficiency. The strong form of market efficiency argues that public and private information about a market is revealed in current market prices. Therefore, the investors will not generate any abnormal returns from the market. Notwithstanding the evidence of the market reaction before the announcement date, it was also observed that on the actual event day t_0 , the shareholders of the migrated firms experienced positive abnormal returns of 0.01% (AAR) and a significant abnormal return of 0.05% (CAAR). The overall results suggest mixed investors' reactions toward the migration announcement.

Similarly, Table 3 presents both the AARs and the CAARs of the sample firms after the migration announcement date measured by the historical performance of the sample shares with the corresponding t-statistic values for each day in the event window ($t = 0$ to $t = -20$).

Table 3: AAR and CAAR after the migration announcement date

Market Proxy = Excess Return ($R_i - R_m$)

Days	AAR	t-test	CAAR	t-test
t = 0	0.01	1.22	0.05	0.32**
t+1	0.00	0.37	0.05	1.92*
t+2	0.02	2.13*	0.07	2.57**
t+3	0.01	0.61	0.08	2.67**
t+4	0.00	0.96	0.08	3.38
t+5	0.02	1.40	0.10	3.27
t+6	-0.01	-0.34	0.09	2.92**
t+7	0.00	-0.16	0.09	3.20**
t+8	0.00	0.02	0.09	3.00**
t+9	0.00	-0.56	0.09	2.91**
t+10	0.01	2.51**	0.10	3.21

t+11	0.01	1.09	0.11	3.08**
t+12	0.00	0.37	0.11	2.96**
t+13	0.01	1.95*	0.12	3.17
t+14	0.00	0.11	0.12	3.07**
t+15	0.00	0.10	0.12	3.24
t+16	0.01	0.58	0.13	3.34
t+17	0.00	1.22	0.13	3.63
t+18	0.00	-0.58	0.13	3.58
t+19	0.01	1.20	0.14	3.81
t+20	0.00	0.89	0.14	3.80

Note: *and ** indicate p-value significance at 10% and 5%, respectively.

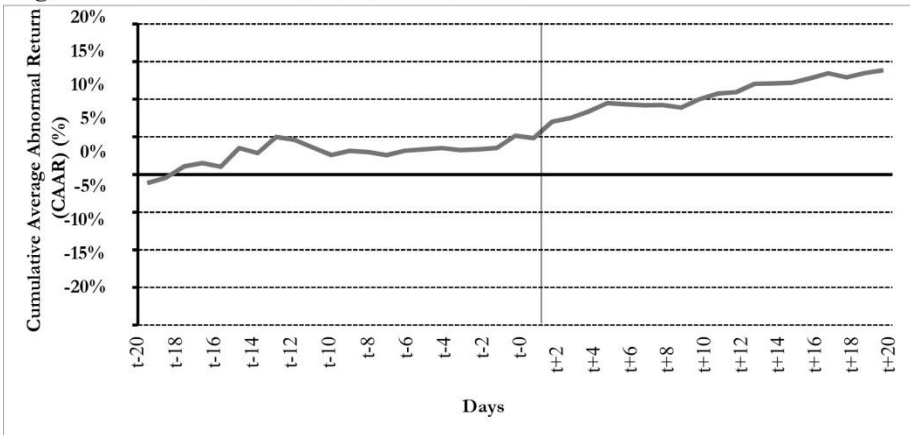
As reflected in Table 3, during the post-announcement window ($t_{(+1)}$, $t_{(+20)}$), a pattern of both positive and negative AARs was observed. The results indicate that the shareholders of the migrated firms have experienced significant positive abnormal returns of 0.02 % ($t = +2$) with a t-statistic of 2.13 on day $t_{(+2)}$. Similarly, significant positive abnormal returns of 0.01% with t-statistics of 2.51 and 1.95 were observed on days $t_{(+10)}$ and days $t_{(+13)}$. The results suggest that migration announcements contained value-relevant information for the shareholders. However, the market was slow to react to such information, making it possible for investors to earn abnormal returns during the post-announcement period. Consequently, the observation of abnormal returns post-migration announcement indicates that the market is not information-efficient in the semi-strong form of the EMH. Investors' delayed reaction to the migration announcement provides evidence of market inefficiency on the AltX.

Moreover, Table 3 presents the CAARs for each day during the post-announcement window and their corresponding t-statistic values. The results show that the CAAR accumulated positively from day $t_{(+1)}$ after the migration announcement and remained mainly positive until day $t_{(+20)}$ of the window. After the migration announcement day $t_{(0)}$, a statistically significant positive CAAR of 0.05% with a t-statistic of 1.92 was found on day $t_{(+1)}$. It was also observed that significant CAARs of 0.07%, 0.08%, 0.09%, 0.11% and 0.12% were witnessed between day $t_{(+2)}$ and day $t_{(+14)}$. After the migration announcement day $t_{(0)}$, the CAAR started rising considerably from day $t_{(+2)}$ up to the last day of the event window

under consideration. This means that the stock market prices were slow to reflect the new information conveyed to the market; nonetheless, significant reactions were noticed a few days after the migration announcement. This explanation relates to the 'delayed price reaction' proposition highlighted by Ball and Kothari (1991).

To determine the accumulated impact of the announcement, the CAARs for each day during the 41-day event window are examined. Figure 1 presents the CAAR around the migration date. The results in Figure 1 indicate that the CAAR accumulated positively from day t-18 until it settled at 0.14% on day t-19 and day t-20. The positive trend, built up long before the actual announcement (t-18 to t-1), supports the possibility that investors acted on the new information before it could be reflected on the market stock prices. At the same time, the fact that accumulation of positive abnormal returns persists since the announcement until t+20 is an indication of underreaction due to the delayed response to the announcement. These observations (the possibility of new information that the market could not quickly reflect on its stock prices and underreaction) provide evidence against the semi-strong form and the strong form of market efficiency.

Figure 1: CAAR around the announcement date



The results of the various indicators of size growth may suggest that relatively good pre-listing performances in operating revenues and assets may generate resources that, when reinvested, enable job creation later. Moreover, companies admitted on AltX may have expanded their workforce faster than companies that have not migrated to the JSE main board.

Trading Turnover reaction before the Migration Announcement date

Trade turnover is a significant technical indicator for traders, as it measures the number of shares transacted within a given time. Therefore, the trading turnovers of the sample shares displayed in Table 4 were computed to investigate their abnormal turnover before the migration announcement date.

Table 4: AAT and CAAT before the migration announcement date

Days	Market Proxy = Access Turnover ($T_{j,t} - AT_j$)		CAAT	t-test
	AAT	t-test		
t-20	-0.12	-0.84	-0.12	-0.84
t-19	-0.02	-0.16	-0.14	-0.54
t-18	-0.07	-0.47	-0.21	-0.67
t-17	0.15	1.53	-0.06	-0.13
t-16	0.16	1.28	0.10	0.23
t-15	0.19	1.70	0.29	0.65
t-14	-0.11	-0.63	0.18	0.33
t-13	0.05	0.34	0.23	0.38
t-12	0.08	0.56	0.31	0.47
t-11	0.15	1.47	0.46	0.63
t-10	-0.01	-0.09	0.45	0.62
t-9	0.09	1.04	0.54	0.71
t-8	0.03	0.16	0.57	0.69
t-7	0.19	1.76*	0.76	0.87
t-6	0.22	1.81*	0.98	1.07
t-5	0.23	1.82*	1.21	1.23
t-4	0.08	0.50	1.29	1.20
t-3	-0.12	-0.59	1.17	1.05
t-2	0.06	0.28	1.23	0.98
t-1	-0.08	-0.33	1.15	0.86
t = 0	-0.09	-0.77	1.06	0.77

Note: *and ** indicate p-value significance at 10% and 5%level, respectively.

Table 4 illustrates the average abnormal turnover (AAT) and cumulative average abnormal turnover (CAAT) around the pre-announcement window, that is, 20 days before the announcement day (-20), with their corresponding t-statistic values. A positive and negative AAT pattern is observed throughout the pre-migration announcement window with the most insignificant t-values. During the 20-day pre-announcement window, significant abnormal turnovers are witnessed approximately one

week before the migration announcement date. As a result, the shareholders of the migrated firms have experienced significant positive abnormal returns of 0.19%, 0.22%, and 0.23% with their respective t-statistics of 1.76, 1.81, and 1.82 on day $t_{(-7)}$, day $t_{(-6)}$ and day $t_{(-5)}$. These results consequently provide some supporting evidence against the strong form of market efficiency.

The CAAT accumulated positively from day $t_{(-16)}$ before the migration announcement and stayed mainly positive until it reached a peak of 1.29% on day $t_{(-4)}$ and started declining. Overall, the CAAT shows a pattern of both positive and negative statistically insignificant values, implying that the accumulated returns before the announcement date did not significantly influence the investors' sentiment towards migration.

Table 5 displays the AAT and CAAT after the migration announcement window ($t_{(+20)}$, $t_{(+1)}$) with their corresponding t-statistic values. After the migration announcement day $t_{(0)}$, a statistically significant positive AAT of 0.27% with a t-statistic of 2.79 was found on day $t_{(+9)}$. This implies that the stock market prices were slow to reflect the new information communicated to the market regarding the migration announcement, resulting in a significant positive impact on the trading turnovers, providing evidence against the semi-strong form of market efficiency.

Table 5: AAT and CAAT after the migration announcement date

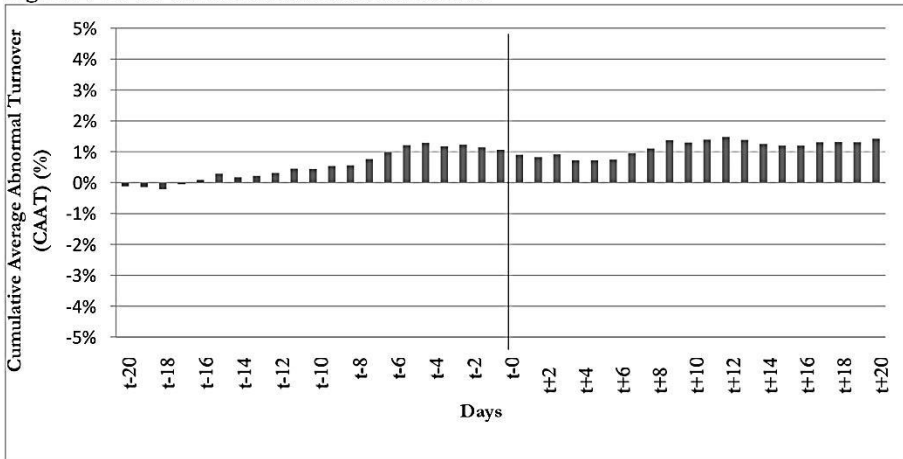
Days	Market Proxy = Access Turnover (T_t , T_t)		CAAT	t-test
	AAT	t-test		
t = 0	-0.09	-0.77	1.06	0.77
t+1	-0.16	-1.01	0.90	0.63
t+2	-0.07	-0.47	0.83	0.57
t+3	0.08	0.68	0.91	0.62
t+4	-0.19	-1.03	0.72	0.48
t+5	0.01	0.04	0.73	0.47
t+6	0.02	0.16	0.75	0.47
t+7	0.20	1.69	0.95	0.58
t+8	0.16	1.27	1.11	0.65
t+9	0.27	2.79**	1.38	0.81
t+10	-0.08	-0.36	1.30	0.72
t+11	0.09	0.77	1.39	0.74
t+12	0.09	0.67	1.48	0.79
t+13	-0.09	-0.52	1.39	0.72
t+14	-0.14	-0.82	1.25	0.62
t+15	-0.06	-0.42	1.19	0.58
t+16	0.00	0.00	1.19	0.58
t+17	0.11	1.16	1.30	0.63
t+18	0.02	0.10	1.32	0.64
t+19	-0.02	-0.10	1.30	0.61
t+20	0.13	1.00	1.43	0.66

Note: *and ** indicate p-value significance at 10% and 5% level, respectively.

The results on CAAT accumulated positively from day t (+4). They stayed mainly positive until they reached the peak of 1.48% with a t-statistic of 0.79 on day t (+12) and started declining for a few days before they picked up the gain on day t (+17). It was observed that all the CAAT values post-announcement are positive and statistically insignificant. This may imply that the accumulated returns post the announcement date did not significantly influence the investors' sentiment towards migration. It may indicate that the investors perceive the migration announcement to benefit them.

The study also analysed the CAATs associated with pre-and post-event windows around the migration announcement period, as shown in Figure 2.

Figure 2: CAAT around the announcement date



These cumulative turnovers ranged from negative 0.90% at the beginning (day $t_{(-4)}$) of the pre-announcement window to positive 1.43% at the end (day $t_{(+12)}$) of the event window. The results indicate that the CAAR accumulated positively from day $t_{(-10)}$ before the migration announcement and remained positive until day $t_{(+20)}$ after the migration announcement. Moreover, one can observe that the CAAR values after the migration announcement day are positive but insignificant. Overall, the results indicate optimistic investors' sentiment about the migration announcement.

6. Summary and Conclusion

The purpose of this research was to examine the impact of migration announcements on the stock price of the firms that migrated from the AltX to the JSE main board on the AltX between January 2004 and December 2015. The empirical findings revealed the impact of migration announcements and actual migration on the returns as follows: (1) The significant AARs observed three weeks before the migration announcement date suggest the possibility that investors reacted to the new information related to the migrating firms. On the other hand, the significant AARs observed two days after the migration announcement date suggest that the market is not information-efficient in the semi-strong form of the EMH. (2) Similarly, significant abnormal turnovers were observed approximately one week before the actual migration date, suggesting the possibility of investors reacting to new information related

to the migrating firms and better operational performance. On the other hand, the significant abnormal turnover observed two weeks after the migration date provides evidence against the semi-strong form of market efficiency.

7. Limitations and Recommendations for Future Research

Although this research represents a unique attempt to investigate the impact of the migration announcement on the AltX, some limitations exist. Initially, the study comprised 30 sample firms; however, after a stringent selection process was implemented in this research, only 20 AltX firms survived to become part of this study's sample data. The sample used in this research only includes the AltX firms, which are viewed as the only survivors from the selection process. Therefore, the results established in this study may be biased. An important area where future research may be fruitful would be to examine the impact of migration announcements on the earnings of the AltX-listed firms. Since the analysis on market reaction to migration announcement documented in this research is based on market returns, the study did not consider the impact of migration announcement on earnings of the AltX listed firms.

8. References

- (ASX), A. S. (2020, November 16). *Australian Stock Exchange (ASX)*. Retrieved from Moneyzine:<https://moneyzine.com/investments/australian-stock-exchange/>
- Abbas, G. (2015). Stock Prices Reaction to Dividend Announcements: A Study on Listed Companies in the Damascus Securities Exchange. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 5, No. 1.
- Asif, M., Khwaja, H., & Wali, S. (2015). "Testing the weak form efficiency of KSE 100". *City University Research Journal*.
- Beneke, J. (2016). "Benchmarking value creation of companies listed on the JSE's AltX". *International Journal of Economics and Finance Studies*, Vol. 8, No. 1, pp. 131 - 132.
- Bodie, Z., Kane, A., & Marcus, A. (2008). *Essentials of Investments*. 7th International ed. Singapore: McGraw Hill.
- Cheyne, N. (2016). "AltX gives business tools to grow". Retrieved from *Business Day*: <https://www.pressreader.com>.

- Cheyne, N. (2013, October 31). *JSE's AltX marks 10th anniversary*. Retrieved from: <https://www.brandsouthafrica.com/investments-immigration/business/trends/newbusiness/altx-311013>
- Czepek, L. (2008). *AltX 2008*. Retrieved from Retrieved from: <https://www.fin24.com/Finweek/This-weeks-survey/ALtX-2008-20081201>
- De Bondt, W., & Thaler, R. H. (1994). "Financial decision-making in markets and firms: a behavioral perspective". *National Bureau of Economic Research Working Paper No. 4777*.
- Dlova, M. (2017). "Small, micro and medium enterprises access to credit in the Eastern Cape, South Africa". *Doctoral dissertation*.
- Eakins, G., & Mishkin, S. (2012). "Financial Markets and Institutions". *Boston: Prentice Hall*.
- Elbannan, M. A. (2015). "The Capital Asset Pricing Model: An Overview of the Theory". *International Journal of Economics and Finance*, Vol. 7, No. 1.
- Exchange, S. S. (2016, Novemeber 14). *Shenzhen Stock Exchange (SZSE) Chinese market overview*. Retrieved from: https://www.hkex.com.hk/Mutual-Market/Stock-Connect/Getting-Started/Information-Booklet-and-FAQ/ChiNext-Market-Overview?sc_lang=en
- Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The Adjustment of Stock Prices to New Information. *International Economic Review*, 10(1), pp. 1-21.
- Freeman, N. (2015). "Financing Small and Medium Sized Enterprises for Sustainable Development: A View from the Asia-Pacific Region. *Jakarta, Indonesia: Draft discussion paper submitted to AsiaPacific High-Level Consultation on Financing for Development*.
- Harwood , A., & Konidaris, T. (2015). "SME Exchanges in Emerging Market Economies". *Policy Research Working Paper*.
- Honjo, Y., & Kurihara, K. (2022). "Graduation of initial public offering firms from junior stock markets: evidence from the Tokyo Stock Exchange". *Small Business Economics*.
- Hussain, A. (2015, June 14). *Money Made Easy: Your quick guide to Alternative Investment Market*. Retrieved from The Times: <https://www.thetimes.co.uk/article/money-made-easy-your-quick-guide-to-alternative-investment-market-cx3ctt8kc63>
- Ikram, F., & Nugroho, A. B. (2014). Cumulative Average Abnormal Return and Semistrong Form Efficiency Testing in Indonesian Equity Market over Restructuring Issue. *International Journal of Management and Sustainability*, Vol. 3, No. 9, 552-566.

- Jenkinson, T., & Ramadorai, T. (2013). Does One Size Fit It All? The Consequences of Switching Markets with Different Regulatory Standards. *European Financial Management*, Vol. 9, No. 5, 852-886.
- Kruger, R. (2014). Has The Transition Of AltX-Listed Companies To The Main Board Of The Johannesburg Share Exchange Met With Success? *The Clute Institute International Academic Conference Munich, Munich, 8-12 June 2014*, Pp. 141-148.
- Lamb, S., Jennings, J., & Calain, P. (2017). "The evolving role of CSR in international development: Evidence from Canadian extractive companies' involvement in community health initiatives in low-income countries". *The Extractive Industries and Society*, Vol. 4, No. 3, Pages 614-621.
- Laskar, A. (2019, August 22). *NSE gets the 200th company listed on its SME platform*. Retrieved from:<https://www.livemint.com/market/stock-market-news/nse-gets-200th-company-listed-on-its-sme-platform-1566484616132.html>
- Lintner, J. (1965). "The Valuation Risky Assets and Selection of Risky Investments in Stock Portfolios and Capital Budgets". *Review of Economics and Statistics*, Vol 47, No 1, 3-37.
- Lumpur, K. (2022, July 20). *Bursa Malaysia's Total Number of Listed Companies Rises to 982, Highest Since 2008*. Retrieved from: https://klse.i3investor.com/web/blog/detail/ceomorningbrief/2022-07-20-story-h1626227101-Bursa_Malaysia_39_s_Total_Number_of_Listed_Companies_Rises_to_982_Highe
- Magliolo, J. (2004). *A Guide to AltX: Listing on South Africa's Alternative Stock Exchange*. Zebra Press: New Holland Publishing.
- Markowitz, H. M. (1952). "Portfolio Selection". *Journal of Finance*, Vol. 7, No. 1, 77-91.
- Mkhonza, R. V. (2007). *The influences of share buyback schemes on earnings per share and profitability of listed companies in South Africa.*, (Masters dissertation).The University of Johannesburg, Johannesburg, South Africa.
- Mlonzi, V. F., Kruger, J., & Nthoesane, M. G. (2011). "Share Price Reaction to Earnings Announcement on the JSE-AltX: A Test for Market Efficiency". *Southern African Business Review*, Vol. No. 15.
- Mossin, J. (1966). "Equilibrium in a Capital Asset Market". *Econometrica*, Vol. 34, No 4, 768 - 783.

- Mumbai, P. (2022, October 10). *BSE SME Platform achieves milestone of 400 Listed Companies*. Retrieved from Press Information Bureau: <https://pib.gov.in/TagbasedSearch.aspx?Tag=%20MUMBAI>
- Nassr, L. K., & Wehinger, G. (2015). "Unlocking SME finance through market-based debt: Securitisation, private placements and bonds". *OECD Journal: Financial Market Trends*, Vol. 2.
- Nemer, D. (2017). *BusinessTech*. Retrieved from Retrieved from: <https://businesstech.co.za/news/technology/206250/4sight-lists-on-the-jse/>
- Oteh, A. (2014). "Role of capital market in SMEs' growth". *Lagos; Nigeria.: Paper delivered at the Fidelity Bank SMEs Forum*.
- Peterhoff, D., Romeo, J., & Calvey, P. (2014). "Towards better Capital Markets Solutions for SME Financing". *Marsh & MacLennan*.
- Ross, S. A. (1976). "The Arbitrage Theory of Capital Asset Pricing". *Journal of Economic Theory*, Vol. 13, No 2, 341-360.
- Samuelsson. (2022, September 19). *TOP 20 Biggest Stock Exchanges in the World – Largest by Market Capitalization*. Retrieved from: <https://therobusttrader.com/largest-stock-exchanges-in-the-world/>
- Schellhase, J., & Woodsome, J. (2017). "SMEs and Public Equity Financing: A New Dataset of SME Boards in Emerging-Market and Developing Economies". *Milken Institute*.
- Sharpe, W. (1964). "Capital Asset Prices: A theory of Market Equilibrium Under Conditions". *Journal of Finance*, Vol 19, no 3, 425-442.
- Soni, S. (2021, September 22). *How MSMEs can migrate to BSE or NSE mainboard from SME platform BSE SME or NSE Emerge*. Retrieved from: <https://www.financialexpress.com/industry/sme/msme-fin-listed-on-bse-sme-or-nse-emerge-heres-what-it-takes-for-msmes-to-migrate-to-mainboard-of-bse-or-nse/2334078/>
- Times, T. E. (2017, November 20). *NSE SME platform to touch 100-mark sees 50 IPOs in 6 months*. Retrieved from: <https://economictimes.indiatimes.com/markets/stocks/news/nse-sme-platform-to-touch-100-mark-sees-50-ipos-in-6-months/articleshow/61710279.cms>
- Treasury, S. A. (2011). "A safer financial sector to serve South Africa better". *National Treasury Policy Document*, pp. 12 - 13.
- Trimble, T., & Bryant, J. (2019). "Illiquidity in African Stock Markets A Challenge for Private Equity". *EMPEA Legal & Regulatory Bulletin*, ISSUE NO. 28 2.

- Van Heerden, C. (2015). "Is the AltX doing what it is supposed to do? An analysis of the JSE alternative exchange". *Masters in Business Administration, Stellenbosch University*.
- Wehmeyer, F. (2021, September 28). *How to buy shares on the JSE: A simple guide*. Retrieved from: <https://invest.co.za/2021/09/28/how-to-buy-shares-on-the-jse/>

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