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Migration of SMEs in the Bombay Stock Exchange: A different look at the SME financing issues

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Abstract

We examine the impact of the creation of a new platform aimed at enabling small and medium enterprises (SMEs) to raise equity finance in the Indian capital markets. The empirical results suggest that a firm's performance does not improve significantly after it migrates to the Bombay Stock Exchange (BSE) main board. This implies that the firms have already absorbed the benefits of public listing when they first listed on the SME board, and the subsequent migration to the BSE main board does not bring any additional benefit in terms of a higher stock return and a lower stock return volatility. Consequently, we conclude that the new platform was successful in improving access to capital for SMEs.

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1. Introduction

There appears to be a consensus on the state of small and medium enterprises (SMEs) in most of the emerging market economies, including India. The sector, representing a mix of industries, is a major source of employment but experiences severe financial constraints.[1] Financial constraints faced by SMEs reduce their growth by inhibiting investment and technological progress.[2]

The importance of the sector, stemming from its pivotal role as a job creator, requires a fresh look at new sources of funding that may help them grow by reducing financial constraints. Traditionally, SMEs rely on self-financing or bank debt to finance investment as there are limited opportunities for them to raise external finance. The extant theories of finance and banking explicitly recognize such constraints arising mostly from information frictions of various forms between firms and outside investors. For example, pecking order hypothesis of Myers which asserts internal finance, debt, and equity as hierarchical order in firm finance. Diamond (1991), on the other hand, argues that firms while being smaller in size resorts to bank debt for being monitored and then later move on to outside market and issue public debt as they prosper and grow in size. Both arguments rely on the existence of a middle tier (like bank financing or public debt) that helps small firms grow in size and transform self-financing to equity financing via issuing debt in between periods. These middle tier institutions reduce information frictions via monitoring or helping the firm to issue securities that tend to be less under-priced.

SMEs in emerging markets such as in India are particularly affected because of the nascent state of the public debt markets in their economies, and inadequate bank lending due to stringent regulations prohibiting banks from holding a loan portfolio that is deemed to be risky. On the other hand, initial public offerings (IPOs) are prohibitively expensive not only because of huge direct (floatation) costs (e.g., underwriting fees, legal expenses) but also due to under-pricing of new issues. That is, a lack of an intermediate forum or platform makes it difficult for promising SMEs to grow in size by expanding investment. Recently, new financing platforms have been created by both the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE), which are exclusively designed to alleviate financing constraint for SMEs in India.

In this paper, we investigate the performance of SMEs in India on a new platform developed to allow them to access equity financing in the capital markets.[3] The platform, known as the

[1] In India, SMEs are found in industries ranging from textile, food and beverages to auto ancillary machine and tools and services sectors, and employ 40% of the total workforce, contribute 45% to the country's manufacturing output, and account for 40% of total exports.

[2] Beck (2013) and Beck and Demirguc-Kunt (2006) show that the cost and access to finance are major constraints for SMEs. Banerjee and Duflo (2004) find that access to subsidized credit results in a proportional increase in sales without any substitution away from of other non-subsidized credit, indicating the presence of credit constraints. For a survey, see Ayyagiri, Demirguc-Kunt, and Maksimovic (2013).

[3] This study is sponsored by the International Growth Centre and titled "Are small and medium enterprises

SME board, was launched by the BSE in March 2012. The SMEs are allowed to publicly list on this board, provided they meet certain requirements such as size, profitability, past performances, and norms of disclosures. Naturally, since this board targets SMEs, the criteria for listing are less stringent than the ones for listing directly on the BSE main board.

A novel feature of the SME platform is that it allows those SMEs to migrate on to the main board after a certain specified period of time who fulfill all the criteria of listing in the latter. We focus on firms that are first listed on the SME board and then migrate to the BSE main board, once they become sufficiently large to satisfy the requirements for regular listing. We analyze the change in stock performance in terms of returns and realized volatility, once a firm migrates from the SME board to the BSE main board. We conjecture that if the SME board/platform allows listed SMEs to increase their investment and profits by gaining access to equity markets, we should not observe a significant improvement in their stock price performance and return volatility once they migrate to the main board. This is because the SME board already gives a listed firm access to equity financing, which continues unchanged once the firm migrates to the BSE main board. Consequently, there is no change in the marginal product of capital post-migration as the firms do not experience a decrease in their capital constraint after migration. Conversely, if the SME board is ineffective and investors remain wary of firms listed on the SME board, we will observe that firms' performance will significantly improve once they migrate to the BSE main board, since migration brings real access to equity financing, which was not available on the SME board.

We also compare firms that are directly listed on the BSE main board and those that come to the BSE main board via the SME board. In principle, the latter could outperform the former if their tenure on the SME board eases their transition to the main board as they learn about being public listed. On the other hand, it is possible that the firms formerly on the SME board perform worse than their counterparts who are directly listed on the BSE main board. This may cast doubt on the SME platform as it suggests that the platform is unsuccessful in incubating firms for their eventual listing on the BSE main board.

A host of interesting results emerge from our empirical investigation. We find two things when we compare firms that are directly listed on the BSE main board and those that come to the main board via the SME board. First, there are no systematic differences in the stock returns of firms listed directly on the BSE main board and firms that are first listed on the SME board. Second, firms that are first listed on the SME board outperform the firms listed directly on the BSE main board in terms of experiencing a lower stock return volatility. Next,

constrained by the inability to raise funds from the equity markets? Evidence from the creation of a new platform in the Bombay Stock Exchange", Project 89413.

we among the firms that migrate to the main board via the SME board, we compare the stock returns and volatility before and after migration. We find that the stock returns and return volatility do not change significantly after migration. This suggests that capital constraints do not change much post-migration and therefore the SME board is at par with the BSE main board.

All these results remain robust even after controlling for firm fixed effects and year effects, among other control variables. We therefore conclude that the firms on the SME board receive robust access to the capital markets as their outcomes do not improve in the post-migration period. Our finding that access to equity financing is helpful to SMEs is interesting, since, traditionally, equity issuance has been seen as the last stage of financing when firms are already mature. Overall, our empirical results point out to the beneficial role of equity financing for a sector in India which is currently heavily dependent on bank loans and funds from friends and families.

The remainder of the paper is organized as follows. Section 2 provides institutional background of the BSE SME board, while Section 3 summarizes the main empirical results. Finally, Section 4 concludes. Additional robustness results are delegated to the Appendix of the paper.

2. Institutional background of the BSE SME board

Typically, stock exchanges perform multi-facet functions that connect issuers, traders, and investors. Broadly speaking, the stock exchanges are responsible for: (1) delivery and settlement of multiple transactions of financial securities to ensure a smooth transfer of financial claims between buyers and sellers; (2) checking manipulation of trades by both investors and firms to prevent potential frauds like insider trading or misrepresentation of facts; (3) dissemination of information about the issuers (firms) to investors by stipulating disclosure norms and imposing listing requirements which help pricing of stocks in line with their intrinsic value; and (4) creation of market liquidity and market making by attracting investors, specialists, traders, and other experts to exchanges (see, for example, Foucault, Pagano, and Röell, 2013; Macey and O′Hara, 2002). Though increasing competition among the exchanges, new frontiers in technology and changing regulatory framework are making these functions tenuous but such changes tend to affect the large and established firms more than the firms with smaller or medium size.[4] For the latter, fulfillment of the functions listed above play a crucial decision whether to enlist

[4] For example, see Macey and O′Hara (2002) for a discussion on why the availability of alternative platforms for raising finance and technological changes have increased outside options of the large firms and reduced their dependence on the traditional methods of raising finance via stock markets. However, small and medium sized firms do not enjoy such facilities often due to information asymmetry.

themselves as public corporation along with the choice of venue due to factors discussed earlier.

Different types of stock exchanges exist in the financial ecosystem. The heterogeneity among the exchanges arises as each caters to different agents (e.g., issuers, investors) by offering a mixture of services most suitable to their clients. For example, many small high-tech firms tend to enlist on the NASDAQ as opposed to the NYSE because of the differences in norms and the extent of disclosure and listing requirements. Similarly, although they are sister organizations, the BSE main board and the SME platform differ in many respects. Below we compare their listing requirements and disclosure norms as both have implications for our main hypothesis. The listing requirements for the SME board are[5]:

- a firm would be eligible to list if, within 10 years of incorporation, it is yet to generate an annual revenue of Rs. 1 billion or more and has a net worth capital of at least Rs. 30 million;
- the firm's post issue face value of capital must lie within the range of Rs. 10 – 250 million;
- audited financial results of the firm must yield a net worth equivalent to Rs. 10 million;
- the firm, unless it has net worth of less than Rs. 30 million, must have paid dividends in last two of the three financial years; and
- the firm must not have undergone any official or legal process of bankruptcy prior to IPO listing.

To prepare the IPO process, the interested SME firms contact an underwriter (merchant banker) for performing due diligence on all material aspect of business, finance, and accounting to be reviewed by the listing committee. If approved, the IPO process begins with the merchant bankers assuming responsibility of underwriting 100 per cent of the issue.

The requirements for listing and IPOs on the SME board are more relaxed and less stringent relative to what is required for the BSE main board. For example, the BSE main board requires more than 100 million Rs of paid up and issued capital. The net worth needs to be over 250 million (25 times that of SME requirements). The reporting (disclosures of information) requirement for firms listed on the BSE main board is quarterly and that of SMEs is half-yearly. The number of allotees in IPO must be 100 for the SME board and the same number is 1000 for the BSE main board. Finally, to be listed on the BSE main board, all documents submitted for IPO, such as those related to information about a firm's business, financial prospects, and characteristics, are vetted by the regulator known as the Securities Exchange Board of India

[5] For more details, see Vardhana and Deshmukh (2017).

(SEBI). On the other hand, similar documents required for approval of IPOs for the SMEs are vetted by the listing advisory committee and other experts from the BSE. Hence, the gatekeeper for an IPO on the BSE main board is SEBI but this role is played by the BSE's SME experts for the SME board.

Our conjecture is that if migration of the SMEs exhibits a huge upward movement in immediately aftermath migration to the new board, the SME board must not have been very effective. This is simple because the SME board already gives a listed firm access to equity financing, which continues unchanged once the firm migrates to the BSE main board. Conversely, if the SME board is ineffective and investors remain wary of firms listed on the SME board, we will observe that firms' performance will significantly improve once they migrate to the BSE main board, since migration brings real access to equity financing, which was not available on the SME board.

3. Empirical results

We consider firms listed directly on the BSE main board as well as firms first listed on the SME board and later migrated to the BSE main board. The data on stock prices and firm-specific accounting information are obtained from the BSE. Our sample period spans March 2012 to November 2018, in which 54 firms migrate to the BSE main board from the SME board. Table 1 reports summary statistics for the variables of interest.

Table 1: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Returns (closing price)	7606	0.407095	84.7671	−3714.5	1709.5
Returns (opening price)	7606	−0.040322	91.6778	−4583.5	1709.5
Volatility (closing price)	378046	5.16438	14.3925	0	839.627
Volatility (opening price)	378046	6.61278	17.9138	0	982.538
Post Migration	537062	0.033808	0.180735	0	1
Ever SME	858578	0.625525	0.483987	0	1
Shares Traded	395568	0.070764	0.740807	$1.0\times e^{-06}$	210.281
Market Cap	395568	0.019361	0.073607	0	1.08694

The table reports summary statistics. "Ever SME" is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. "Post Migration" is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. The sample period is from March 2012 to November 2018.

To verify our conjecture outlined in the preceding section, we begin by focusing on firms

listed on the BSE. Among these firms, we compare the return performance of firms that are listed directly on the BSE main board to the ones that came to the BSE main board via the SME board. We use the following regression specification:

$$y_{it} = \delta_y + \mu_m + \beta \, \text{Ever SME}_i + \mathbf{X}'_{it}\Gamma + \epsilon, \tag{1}$$

where y_{it} is the outcome variable for firm i in month t. The coefficient of interest is β, which captures the difference between firms that came to the BSE main board through SME board and those that were directly listed on the BSE main board. We also include year fixed effects δ_y, month fixed effects μ_m, and a vector of firm-month level control variables, $\mathbf{X}_{it}$.

Table 2 reports the ordinary least squares regression results, where y_{it} is the closing price stock returns of these firms. Our main variable of interest, Ever SME, is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. We find that, in each regression model specification, the coefficient estimate on Ever SME is statistically indistinguishable from zero at conventional significance levels. The finding remains robust when we control for year and month fixed effects, date of listing of a firm on the BSE main board to account for its age, number of shares traded to account for how actively the stock is traded, and market capitalization of the firm on the listing day to account for the effect of the size of the firm. Taken together, the empirical results in Table 2 suggest that there are no significant differences in the stock returns of firms listed directly on the BSE main board and firms that are first listed on the SME board.

In Table 3, we repeat the least squares regression analyses in Table 2 but using the return volatility. We compute stock return volatility of a firm as the firm-month level standard deviation of the daily difference in the closing price and require a minimum of 10 non-missing daily return observations. It can be seen that firms that are first listed on the SME board have a significantly (even at the 1% level) lower volatility across all model specifications in Table 3. This implies that the firms that are first listed on the SME board outperform the firms listed directly on the BSE main board in terms of experiencing a lower stock return volatility.

We now examine the post-migration performance of firms that migrated from the SME board to the BSE main board. To do so, we adopt the following regression specification:

$$y_{it} = \alpha_i + \delta_y + \mu_m + \beta \, \text{Post migration}_{it} + \mathbf{X}'_{it}\Gamma + \epsilon, \tag{2}$$

where y_{it} is the outcome variable for firm i in month t. The coefficient of interest is β, which captures the change in y_{it} when a firm migrates to the BSE main board from the SME board.

Table 2: Returns of firms on the BSE main board (closing price)

	(1)	(2)	(3)	(4)
Ever SME	−1.569	−1.569	−0.862	−0.816
	(4.616)	(1.565)	(1.810)	(2.575)
BSE list date				−0.0000384
				(0.00281)
Shares Traded				−0.0286
				(0.525)
Market Cap				0.899
				(9.692)
Constant	0.355	0.355	2.071	2.799
	(1.068)	(0.968)	(8.041)	(55.56)
Year FE	No	No	Yes	Yes
Month dummies	No	No	Yes	Yes
Observations	7042	7042	7042	7042

The table reports ordinary least squares regression results for firms listed on the BSE main board. Dependent variable is the difference between the firm's closing price for the last trading day in each month. "Ever SME" is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. "BSE list date" is the date of listing on the BSE main board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Firm-months where a firm wasn't traded on the last trading day of the month were dropped. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

Table 3: Volatility of firms on the BSE main board (closing price)

	(1)	(2)	(3)	(4)
Ever SME	−2.736***	−2.736***	−3.412***	−3.547***
	(0.527)	(0.654)	(0.718)	(0.872)
BSE list date				0.00189**
				(0.000804)
Shares Traded				−0.105
				(0.247)
Market Cap				23.90***
				(6.434)
Constant	5.536***	5.536***	2.210**	−33.68**
	(0.120)	(0.474)	(0.898)	(15.65)
Year FE	No	No	Yes	Yes
Month dummies	No	No	Yes	Yes
Observations	16708	16708	16708	16708

The table reports ordinary least squares regression results for firms listed on the BSE main board. Dependent variable is the firm-month level standard deviation of the daily difference in the closing price. Only those firm-months with at least 10 daily return observations are included in the sample. "Ever SME" is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. "BSE list date" is the date of listing on the BSE main board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

We also include firm fixed effects α_i, year fixed effects δ_y, month fixed effects μ_m, and a vector of firm-month level control variables, $\mathbf{X}_{it}$.

Table 4: Returns of firms migrated to the BSE main board (closing price)

	(1)	(2)	(3)	(4)	(5)
Post Migration	−3.316	−3.316	−3.842	−1.733	−1.647
	(2.682)	(2.433)	(3.626)	(7.108)	(7.688)
Shares Traded					22.49**
					(9.639)
Market Cap					−1327.3*
					(697.0)
SME list date					−0.00861
					(0.00675)
Constant	2.102	2.102	10.92***	10.82	176.1
	(1.697)	(2.000)	(0.906)	(10.50)	(123.2)
Firm FE	No	No	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes
Month dummies	No	No	No	Yes	Yes
Observations	941	941	941	941	941

The table reports ordinary least squares regression results for firms that were first listed on the SME board and then migrated to the BSE main board. Dependent variable is the difference between the firm's closing price for the last trading day in each month. "Post Migration" is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. "SME list date" is the date of listing on the SME board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Firm-months where a firm wasn't traded on the last trading day of the month were dropped. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

In Table 4, we compare the stock returns of these firms before and after migration, where post-migration is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. $\mathbf{X}_{it}$ includes the number of shares traded, market capitalization of the firm on the listing day in Indian Rupees, and the date of listing on the SME board. When they migrate their capital constraint will relax and this would lead to greater investment. Consequently, their returns should increase after migration as firms with a high marginal product of capital gain access to the capital market. Across all model specifications, the least squares regression results show that the coefficient estimates on Post migration are statistically indistinguishable from zero at conventional significance levels. This implies that

stock returns of the migrated SMEs do not increase significantly after migration to the BSE main board. If the SME board is unsuccessful in alleviating capital constraints, their marginal product of capital will be high before migration.

Looking at the results for stock return volatility of these firms in Table 5, we also find that realized volatility does not decrease significantly. In summary, the empirical results in Tables 4 and 5 suggest that the firms on the SME board receive a robust access to the capital markets as their outcomes do not improve in the post-migration period. This, in turn, suggests that migration to the main board does not improve the stock returns or stock return volatility of a firm.

Table 5: Volatility of firms migrated to the BSE main board (closing price)

	(1)	(2)	(3)	(4)	(5)
Post Migration	−0.357	−0.357	0.329	0.0887	−0.171
	(0.251)	(0.520)	(0.443)	(0.429)	(0.360)
Shares Traded					−1.793***
					(0.573)
Market Cap					338.8***
					(122.9)
SME list date					0.000361
					(0.000360)
Constant	3.158***	3.158***	0.112***	−1.006*	−7.808
	(0.127)	(0.300)	(9.38e-14)	(0.540)	(7.033)
Firm FE	No	No	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes
Month dummies	No	No	No	Yes	Yes
Observations	3385	3385	3385	3385	3385

The table reports ordinary least squares regression results for firms that were first listed on the SME board and then migrated to the BSE main board. Dependent variable is the firm-month level standard deviation of the daily difference in the closing price. Only those firm-months with at least 10 daily return observations are included in the sample. "Post Migration" is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. "SME list date" is the date of listing on the SME board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

Finally, as a robustness check, we conduct the least squares regression analyses in Table 2 through Table 5 using stock returns and return volatility computed from opening prices. These

results, reported in the Appendix A in Table 6 through Table 9, are qualitatively similar to those in Table 2 through Table 5. Collectively, the empirical results suggest that the new platform was successful in improving access to capital for SMEs.

4. Conclusion

In this paper, we study the impact of the development of a new platform aiming to enable SMEs to raise equity financing in the Indian capital markets. The empirical results suggest two things. First, firms on the BSE main board that were previously listed on the SME board outperform the firms that list directly on the main board as they have lower volatility of returns (and indistinguishable average returns). This implies that the gestation period on the SME board appears to improve firm performance. Second, that a firm's performance does not improve significantly after it migrates to the BSE main board. This, in turn, implies that the firms have already absorbed the potential benefits of public listing when they first listed on the SME board, and the subsequent migration to the BSE main board does not bring any additional benefit in terms of a higher stock return and a lower return volatility. We deem that our empirical findings speak for the success of the SME board in helping small firms access capital markets in India.

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A Robustness using opening price

Table 6: Returns of firms on the BSE main board (opening price)

The table reports ordinary least squares regression results for firms listed on the BSE main board. Dependent variable is the difference between the firm's opening price for the last trading day in each month. "Ever SME" is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. "BSE list date" is the date of listing on the BSE main board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Firm-months where a firm wasn't traded on the last trading day of the month were dropped. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

	(1)	(2)	(3)	(4)
Ever SME	−1.801	−1.801	−0.848	−0.430
	(4.999)	(1.617)	(1.918)	(2.933)
BSE list date				−0.000941
				(0.00318)
Shares Traded				0.226
				(0.559)
Market Cap				0.592
				(9.905)
Constant	−0.0799	−0.0799	4.623	22.42
	(1.157)	(1.037)	(8.328)	(62.71)
Year FE	No	No	Yes	Yes
Month dummies	No	No	Yes	Yes
Observations	7042	7042	7042	7042

Table 7: Volatility of firms on the BSE main board (opening price)

The table reports ordinary least squares regression results for firms listed on the BSE main board. Dependent variable is the firm-month level standard deviation of the daily difference in the opening price. Only those firm-months with at least 10 daily return observations are included in the sample. "Ever SME" is a dummy variable that is equal to one if a firm is first listed on the SME board and is zero otherwise. "BSE list date" is the date of listing on the BSE main board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

	(1)	(2)	(3)	(4)
Ever SME	−3.151***	−3.151***	−3.865***	−4.279***
	(0.660)	(0.910)	(0.983)	(1.165)
BSE list date				0.00252***
				(0.000962)
Shares Traded				−0.292
				(0.237)
Market Cap				23.30***
				(6.780)
Constant	7.117***	7.117***	2.997***	−44.90**
	(0.151)	(0.651)	(1.031)	(18.69)
Year FE	No	No	Yes	Yes
Month dummies	No	No	Yes	Yes
Observations	16708	16708	16708	16708

Table 8: Returns of firms migrated to the BSE main board (opening price)

The table reports ordinary least squares regression results for firms that were first listed on the SME board and then migrated to the BSE main board. Dependent variable is the difference between the firm's opening price for the last trading day in each month. "Post Migration" is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. "SME list date" is the date of listing on the SME board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Firm-months where a firm wasn't traded on the last trading day of the month were dropped. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

	(1)	(2)	(3)	(4)	(5)
Post Migration	−3.539	−3.539	−4.219	−2.750	−2.689
	(2.700)	(2.376)	(3.524)	(6.945)	(7.532)
Shares Traded					23.00**
					(9.236)
Market Cap					−1327.7*
					(727.8)
SME list date					−0.00903
					(0.00664)
Constant	1.658	1.658	10.31***	1.141	174.5
	(1.709)	(1.940)	(0.881)	(9.639)	(121.6)
Firm FE	No	No	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes
Month dummies	No	No	No	Yes	Yes
Observations	941	941	941	941	941

Table 9: Volatility of firms migrated to the BSE main board (opening price)

The table reports ordinary least squares regression results for firms that were first listed on the SME board and then migrated to the BSE main board. Dependent variable is the firm-month level standard deviation of the daily difference in the opening price. Only those firm-months with at least 10 daily return observations are included in the sample. "Post Migration" is a dummy variable that is equal to one for firms after migration to the BSE main board and is zero otherwise. "SME list date" is the date of listing on the SME board, "Shares Traded" is the number of shares traded divided by 1 million and "Market Cap" is the market capitalization of the firm in Indian Rupees divided by 1 trillion. Standard errors reported in the parentheses are clustered at the firm level (from column (2) onwards). *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively. The sample period is from March 2012 to November 2018.

	(1)	(2)	(3)	(4)	(5)
Post Migration	0.0572	0.0572	0.915	0.607	0.255
	(0.296)	(0.690)	(0.688)	(0.732)	(0.614)
Shares Traded					−2.099***
					(0.717)
Market Cap					437.8**
					(192.0)
SME list date					0.000521
					(0.000485)
Constant	3.909***	3.909***	0.196***	−0.426	−10.32
	(0.151)	(0.370)	(3.55e-13)	(0.746)	(9.247)
Firm FE	No	No	Yes	Yes	Yes
Year FE	No	No	No	Yes	Yes
Month dummies	No	No	No	Yes	Yes
Observations	3385	3385	3385	3385	3385

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