# THREE ESSAYS ON NOMINAL PRICE PREFERENCE IN EQUITY MARKETS


A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE FELLOW PROGRAMME IN MANAGEMENT (INDUSTRY), INDIAN INSTITUTE OF MANAGEMENT, INDORE

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FPM (Industry) 2014

IIM Indore, India

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# Abstract

**JEL classification**: G12; G14; G32: G40

**Keywords**: share price level; stock split; initial public offering; ownership structure; investor behaviour; liquidity

There should be no optimal nominal price range in frictionless and efficient equity markets. However, companies continue to manage a nominal price range throughout their life cycle. Companies follow norms when determining their 'optimal' range for share prices in the primary and secondary equity markets. This thesis contains three essays on nominal price preference in equity markets. The first essay focuses on an individual shareholder's preference for low nominal prices in the secondary equity market and proposes to establish a nominal price range preferred by individual shareholders in the Indian secondary equity market. Prior studies have focused on the linear relationship between nominal prices and the underlying ownership of companies (individual and institutional). Using split data of nominal prices, the study examines the effect of various levels of nominal price reduction on individual ownership in the secondary equity market. The study uses a cross-sectional sample of Indian companies that have split the nominal prices between 2006 and 2015 (inclusive). The study's research model examines the impact of various post-split price ranges on individual shareholding holdings post-split. The result establishes a significantly positive relationship between individual shareholding and post-split nominal prices lower than INR 20. The research model controls for various firm-specific variables, such as market capitalization (size), promoter holding, and price-to-book ratio (value) prior to the split.

The second essay focuses on an individual shareholder's preference for low nominal prices in the primary equity market. It proposes to identify the nominal price range preferred by individual shareholders in the Indian primary equity market. Using the IPO issue price, the study examines the effect of various IPO issue price levels on individual shareholding immediately post-IPO. The study uses a cross-sectional sample of Indian companies that issued a public offering between 2006 and 2015 (inclusive). The research model examines the impact of various IPO issue price bands on individual shareholding immediately post-IPO. The result establishes a significant positive relationship between individual shareholding (immediately post-IPO) and IPO issue prices lower than INR 100. The model controls for various firm-specific variables, such as IPO market-adjusted underpricing (MAU), IPO issue size, promoter holding, and financial parameters such as price earnings ratio (pre-IPO) and return on net worth (pre-IPO).

The first two essays propose the nominal price range preferred by individual investors in both the primary and secondary equity markets. The literature argues that an increase in individual shareholders has a positive effect on liquidity, in both the primary and secondary equity markets. In the third essay research model uses established variables of trading value and initial turnover as measures of liquidity in the secondary and primary equity markets, respectively. The model analyses the impact of various post-split prices and IPO issue prices on the post-split change in trading value and initial turnover, respectively, across a cross-section of Indian companies. The results on companies' secondary market liquidity establish a significantly positive relationship between the post-split change in trading value (in percentage) and post-split prices lower than INR 20. The results on primary market liquidity establish a significantly positive relationship between initial turnover (first-day trading post IPO) and IPO issue prices between INR 50 and 100. To

measure the impact on liquidity in the secondary market, the model controls for various firm-specific variables, such as market capitalization (pre-split), price to book (pre-split), and individual holding (pre-split). To measure the impact on liquidity in the primary market, the model controls for firm-specific variables, such as MAU, IPO issue size, and individual holding (post-IPO).

Overall, the results of these three studies establish a common nominal price range for individual investors and identify the impact of nominal prices on liquidity in both the primary and secondary equity markets in India.

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# References


Aggarwal, R., and P. Rivoli. 1990. Fads in the initial public offering market? Financial Management.19(4):45-57.

Aitken, M., and C. Comerton-Forde. 2003. How should liquidity be measured? Pacific-Basin finance Journal Volume 11, Issue 1, January 2003, Pages 45-59

Amihud, Y., Mendelson, H., 1986. Asset pricing and the bid–ask spread. Journal of Financial Economics 17, 223–249

Baker, H.K., and P.L. Gallagher, 'Management's View of Stock Splits,' Financial Management, 9, no. 2 (Summer 1980), pp. 73

Booth, J. R., and I. Chua. 1996. Ownership dispersion, costly information, and IPO underpricing. J. Financial Econ. (41):291-310.

Baker, H. and G. Powell, 1993, Further Evidence on Managerial Motives for Stock Splits, Quarterly Journal of Business and Economics 22, 83-102.

Baker, H. and P. Gallagher, 1980, Management View of Stock Splits, Financial Management 9, 73-77

Brennan, M.J., Subrahmanyam, A., 1995. Market microstructure and asset pricing: on the compensation for illiquidity in stock returns. Journal of Financial Economics 41, 441–464.

Bhide, A. 1993. The hidden costs of stock market liquidity. J. Financial Econ.34:31-51.

Brockman, P., and X.Yan. 2009. Block ownership and firm-specific information. J. Banking & Finance. 33(2):308-316.

Chowdhry, B., and A. Sherman. 1996. The winner's curse and international methods of allocating initial public offerings. Pacific-Basin Finance J. citation?

Conroy, R. M., Harris, R. S., and B. A. Benet. 1990. The effects of stock splits on bid-ask spreads. The Journal of Finance Vol. 45, No. 4 (Sep., 1990), pp. 1285-1295

Copeland, T.E. 1979. Liquidity changes following stock splits. Journal of Finance, 34(1):115-141.

Conroy, R. M., R. S. Harris, and B. A. Benet, 'The Effects of Stock Splits on Bid- Ask Spreads,' Journal of Finance, 45, 4 (September 1990), pp. 1285-1295

Dolley, J., 'Common Stock Split- Ups Motives and Effects,' Harvard Business Review, 12, no. 1 (October 1933), pp. 70-81

Elgers, P. T., and D. Murray. 1985. Financial characteristics related to management's stock split and stock dividend decisions. Journal of Business. Finance & Finance Volume12, Issue4 December 1985 543-551

Ellis, K., Michaely, R., O'Hara, M., 2000. When the underwriter is the market maker: an examination of trading in the IPO aftermarket. Journal of Finance 55, 1039–1074

Fernando, C. S., Krishnamurthy, S., and P. A. Spindte. 2004. Are share price levels informative? Journal of Financial Markets 7 (2004) 377–403

Hanley, K. (1993), 'Underpricing of initial public offerings and the partial adjustment phenomenon', Journal of Financial Economics, Vol. 34 No. 2, pp. 231-250.

Krigman, L., Shaw, W., Womack, K., 1999. The persistence of IPO mispricing and the predictive power of flipping. Journal of Finance 54, 1015–1044.

Lakonishok, J., and B. Lev. 'Stock Splits and Stock Dividends: Why, Who and When,' Journal of Finance, 42, no. 4 (September 1987)

Lamoureux, C., and P. Poon. 1987. The market reaction to stock splits. Journal of Finance, Volume42, Issue5 December 1987 1347-1370

McNichols, M., and A. Dravid, 1990. Stock dividends, stock splits, and signaling. Journal of Finance, Volume45, Issue3 July 1990 Pages 857-879

Mello, A. S., and J. E. Parsons. 1998. Going public and the ownership structure of the firm. J. Financial Econ. 49(1):79-109.

Miller, R. E., and F. K. Reilly. 1987. An examination of mispricing, returns, and uncertainty for initial public offerings. Financial Management.16(2):33-38.

McInish, T., Wood, R., 1992. An analysis of intraday patterns in bid/ask spreads for NYSE stocks. Journal of Finance 47, 753–764.

Reese, W.A. (1998), 'IPO underpricing, trading volume, and investor interest', working paper, Tulane University, New Orleans, LA

Schultz, P. and Zaman, M. (1994), 'After-market support and under-pricing of initial public offerings', Journal of Financial Economics, Vol. 35 No. 2, pp. 199-219.

V.R. Anshuman, A. Kalay /Can splits create market liquidity? Theory and evidence Journal of Financial Markets 5 (2002) 83–12

## Appendix 3.1-

## Regression results – Trading volume

Linear regression

| | |
|---|---|
| Number of obs | = 331 |
| F( 12, 318) | = 2.33 |
| Prob > F | = 0.0071 |
| R-squared | = 0.0464 |
| Root MSE | = 4.8521 |

| vol6months | Coef. | Robust Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| dummy_020 | 2.538984 | .8593023 | 2.95 | 0.003 | .8483484 | 4.22962 |
| dummy_2040 | .9101781 | .8312857 | 1.09 | 0.274 | -.7253366 | 2.545693 |
| dummy_4060 | 1.814719 | 1.027842 | 1.77 | 0.078 | -.2075116 | 3.836949 |
| dummy_6080 | .143017 | .5165806 | 0.28 | 0.782 | -.8733306 | 1.159365 |
| dummy_80100 | -.4246816 | .3508349 | -1.21 | 0.227 | -1.114932 | .2655692 |
| dummy100150 | .162758 | .390407 | 0.42 | 0.677 | -.6053491 | .930865 |
| dummy150200 | .3974912 | .4779557 | 0.83 | 0.406 | -.5428637 | 1.337846 |
| dummy_200250 | 1.352297 | 1.670042 | 0.81 | 0.419 | -1.93343 | 4.638025 |
| promotor | .0019695 | .0137056 | 0.14 | 0.886 | -.0249956 | .0289346 |
| mc1 | -4.48e-07 | 2.78e-07 | -1.61 | 0.108 | -9.94e-07 | 9.84e-08 |
| pb | .0046853 | .0180864 | 0.26 | 0.796 | -.0308987 | .0402694 |
| totalindividualholding | .0055993 | .0115033 | 0.49 | 0.627 | -.0170329 | .0282315 |
| _cons | .2248758 | .945369 | 0.24 | 0.812 | -1.635092 | 2.084844 |

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## Appendix 3.2

Linear regression

| | |
|---|---|
| Number of obs | = 189 |
| F( 9, 179) | = 4.58 |
| Prob > F | = 0.0000 |
| R-squared | = 0.1741 |
| Root MSE | = 2.0765 |

| firstdayratio | Coef. | Robust Std. Err. | t | P>\|t\| | [95% Conf. | Interval] |
|---|---|---|---|---|---|---|
| dummy_50 | .2274217 | .5104818 | 0.45 | 0.656 | -.7799148 | 1.234758 |
| dummy_100 | 1.078411 | .514121 | 2.10 | 0.037 | .0638927 | 2.092928 |
| dummy_150 | .3965329 | .4874869 | 0.81 | 0.417 | -.5654276 | 1.358493 |
| dummy_200 | -.2832466 | .4314199 | -0.66 | 0.512 | -1.13457 | .5680765 |
| dummy_250 | .7570924 | .6630989 | 1.14 | 0.255 | -.5514042 | 2.065589 |
| issuesizeinlakhrs | -4.74e-06 | 1.89e-06 | -2.50 | 0.013 | -8.48e-06 | -1.00e-06 |
| peratio | -.003004 | .001389 | -2.16 | 0.032 | -.005745 | -.000263 |
| mau | 1.382409 | .4831727 | 2.86 | 0.005 | .4289621 | 2.335857 |
| rnowwtavg | -.0062176 | .0051096 | -1.22 | 0.225 | -.0163005 | .0038653 |
| _cons | 2.046712 | .4571244 | 4.48 | 0.000 | 1.144666 | 2.948758 |

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