

Stock Splits: A Review, Reconceptualization and Extension

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Abstract

This paper includes an extensive review of the existing literature on corporates' significant event, i.e. stock splits. Also, the article critically discusses and evaluates many studies in the backdrop of Efficient Market Hypothesis (EMH) theory. The paper is an exploratory study and we have attempted to combine significant research on the share-splits rather than testing any hypothesis. It should also be read as a review of the existing studies, reconceptualization, and it would provide the extension & set the agenda for future research. It is observed that several studies have been carried out on the stock-splits world over, there is limited literature available for the emerging economies.

Keywords: stock split, corporate action, shareholder, emerging economies

Introduction

Researchers have used the stock splits to explain various corporate actions. This paper has reviewed several studies to identify critical reasons for stock splits and offer a reconceptualization of this corporate action. Building upon the firm's dynamic capabilities view, we distinguish between a firms' potential and realized capacity.

A broad range of research has been conducted on the stock splits relating to liquidity, trading-range, signalling, and neglected firms' theory. This paper offers the gist of the existing research undertaken on stock splits.

The study includes a review of various studies conducted on the related topic of the researchers' investigation. This review will help us understand many viewpoints about the problem and permit the researchers to advance an appropriate direction aimed at future research.

A split behaviour model has been created by the researchers where it has been observed that the stock-splits are associated with high cost and evidence have been found due to costs of trading in stock which depends on stock prices (Brennan & Copeland, 1988). Similarly, there has been an investigation on how dynamic information acquirement improves returns based on price movements, a characteristic variance in the split (Kong, Lin, & Liu, 2017). At the same time, the principal motives for the stock-split could generally be characterized in two

collections: persons who contend that companies practice the split to indicate promising evidence to the stock market and persons who claim that the splits are used to advance liquescency (Li, Liu, & Shi, 2017). Also, others observed that the splits assume that directors opt for the splitting the stocks of the companies' so as to offer a reasonable price and thus endeavour to diminish mispricing (Karim & Sarkar, 2016). Echoing similar views, the researcher has found that the firms expect higher volatility following splits (Gharghori, Maberly, & Nguyen, 2017).

Review and reconceptualization of stock splits

The firm undergoes stock splits due to the main reasons mentioned below:

Liquidity: To attract more retail stockholders. • **Signal:** To send a signal about the upcoming prosperous events of the firm.

Trading Range: To bring the trade price of the stocks in an optimum level of trading.

Neglect Firm: To draw the attention of shareholders towards the company.

There are other explanations of why firms undergo stock splits. The other widespread hypothesis is increased liquidity, signalling, optimum trade range and dispersal of ownership theories.

Liquidity

The researchers have witnessed an increase in the trading volumes and return on securities after the corporate announcement (Beaver, 1968). Also, (1987) found an upsurge in transactions that also led to the share returns' noise upturns. The study by Arbel & Swanson, (1993) found that announcement of the share split by firms have an essential role in determining its prices.

Also, there are studied like Ferris, Hwang, & Sarin, (1995) who have established an upsurge in the liquescency after the split. The study also observed that there is a surge in the quantity of institutional and individual stockholders after the stock split. In comparison, other have found shreds of evidence that support the signalling hypothesis (Mukherji, Kim, & Walker, 1997).

There are studies Desai, Nimalendran, & Venkataraman, (1998) that have examined the modification in trade activities around the stock-split and the subsequent impact on the price volatility. Also, after the regulation of microstructure prejudices, it has been observed that the variance after separation is substantially increased. Fluctuations in overall unpredictability and its perpetual variable are linked favourably to shifts in trading numbers.

The study (Koski, 1998) has provided sufficient proof of the splits in the United States are connected to optimistic anomalous earnings at the event and implementation time. On the presentation day, they find excess returns of 3.4 trillion.

Businesses offer to segment their stock such that the lowest amount tick size needed by the institution remains in the optimum percentage range of the stock price. A greater tick size improves prospects for the broker to build in the stock markets and for buyers to have liquidity, but at the expense of an expanded minimum bid-ask range, by placing small orders. A simple model demonstrates the correlation between firm size and share price. A minimum price variation of \$.01 in the U.S. could eventually lead through stock splits to an average share price of around \$3.00 (M. S. Rozeff, 1998).

The researchers Fernando, Krishnamurthy, & Spindt, (1999) examines "the theory of marketability," which notes that stock splits improve investment interest by returning values to the desired trading range. They noticed that the funds' division experienced substantial improvements in net assets and owners (comparable to the non-division of paired securities). The splits do seem to increase brand value.

The scholars' Jones, Kaul, & Lipson, (1998) by tracking adjustments in the limit order book, execution prices, and trading operation, non-public NYSE framework data are used to research stock splits' impact on liquidity. The researchers also noticed that the vigour accessible in the order book (limited) rises after a stock division at different cash distances from the middle quotes. Still, the depth available at a variable percentage decreases drastically.

The study by Schultz, (2000) has tried to prove the effect of stock splits among the brokers in NYSE, the period of study being between 1993 and 1994. The study finds that the brokers promote all stock split stocks, giving wider bid-ask spread, in turn, more margins. Boehme following stock splitting from 1950 to 2000, long-run success has been reexamined. During the first year after the announcement month, substantially positive and robust similarly measured excess returns are established; nevertheless, substantial valuation long-run excess returns are generally restricted to the duration from 1975 to 1987. Except for evenly graded investments from 1975 to 1987, irregular returns are negligible when long-run output is analyzed after the ex or exact time of stock splits. The similarly weighted long-run inconsistent results from 1975 to 1987 is closely associated with unexplained reductions in the post-split structural danger in additional research papers.

The study Chen, (2001) tried to test small trader

hypothesis. According to the small trader hypothesis, trivial buyers choose stumpy valued stocks and the spike in instability after these small investors' interchange observes may induce the break. The research work has proved that there are significant effects of interchange actions by small traders on the after-splits increase in unpredictability.

Also, there are studies Nayar, Nandkumar; Rozeff, (2001) examined the relationship between institutional investors and firms' stock split behaviour between 1994 and 1999. The author has also attempted to test specific hypotheses about institutional ownership effects upon firm split behaviour, signalling hypothesis, and the association between split behaviour and pre-existing institutional ownership levels.

According to Kamara & Koski, (2001), the connection between trading behaviour and volatility of returns, autocorrelations about the splits were studied. The researchers also studied (2001) the effect of the division of stocks on stocks' liquescency. They chose around 2500 in the majority of measures, stock splits and found a pervasive fall. Large stock splits, especially on the NASDAQ, display a more extreme liquidity decrease than small stock splits.

A potential reason for these non-explainable variables is that trade barriers correlated with record dates produce market discomforts that can be seen near-record dates in lower prices. In fact, anomalous positive ex-date returns emerge mainly from unconsolidated share price abnormally low due to the negative record date returns (Michayluk & Kofman, 2001).

Besides, Antti (2001) studies the shareholder capital and price impact of the Helsinki and Stockholm announcement and stock exchanges' implementation time. Empirical tests include irregular returns at the Stockholm Exchange around the notice and implementation periods of the stock separation, other than the Stock Exchange of Helsinki. The study Anshuman & Kalay, (2002) proposed a microstructure of the splits in minimal tick-size regulation. This is the primary function of the network that endogenously decides flexible trade. The research Baber & Kang, (2002) discuss that security consultants' predictions are used both academic and realistic accountants to predict investor perceptions for future earnings disclosures.

The researchers in their study (W. Y. Lee, Jiang, & Indro, 2002), the results also suggested that the variance in stock returns continues to rise dramatically after stock splits. The explanation for this is because securities are exchanged at distinct price increments known as ticks. The study was to analyze whether there is stock return volatility of split stocks after a decrease in the tick size starting 1/8th to 1/16.

The results show that the after return variation augment was unchanged by reducing tick size, concluding that value discreteness does not affect the change in returns following stock splits.

According to Kadiyala & Vetsuypens, (2002), the interest in short selling decreases when stock splits show a favourable signal about firms' future performance and short selling increases when firms expect more post-split liquidity improvements.

The study Guirao & Sala, (2002) the effects of market splits on liquidity has been analyzed. An improvement in the market composition was also noticed in the report, with a rise in the smallest trades, primarily shares whose values decreased dramatically after the break. Finally, despite higher transaction costs, splits encourage small investors because of lower stock prices.

Also, efforts were made to differentiate the signalling theory from the liquidity theory (Dennis & Strickland, 2003). The literature survey shows the author has mixed results as far as signaling and liquidity hypothesis are concerned. The firms that opt for stock splits generally send a signal that the future earnings will be incredulous. Hence, this assumption will encourage small investors to buy more of such stocks, thus enabling more liquidity. The study (J. B. and M. S. Rozeff, 2003) attempted to study the performance of 12747 splits from 1927 to 1996 using the size and book-to-market variables to measure anomalous earnings. The study shows that only small or negligible abnormal returns the sample earn using the calendar-time method.

For the duration 1977-1993, the researchers studied the consumer behaviour around stock split declarations in the Canadian market and the impact of 2 years prior comparison to 2 years after the announcement. The findings show that utilized the event study approach, and positive irregular returns are available in both the declaration days (0, 1) and the 11-day inventory break data. The findings also indicate that after the split case, offer spreads decline, with both the amount of trade and the number of dealings increasing, indicating that the corporate event improves liquidity. In addition, revenue tends to rise after split events within two years, which indicates that split events reflect the business' potential success (Elfakhani & Lung, 2003).

Signalling hypothesis

The occurrence of a stock split doesn't impact the cash flows of the companies. Also, the capital structure of the firm remains intact hence the net-worth of the firm. The research on splits that includes Bar Yosef & Brown, (1977),

Fama, Fisher, Jensen, & Roll, (1969) and Charest, (1978) establish anomalous yield nearby announcement. The firms have used the splits as a tool to propel an optimistic indication to the market players and studies have found empirical pieces of evidence in support of the signalling theory Ross, (1977), Leland & Pyle, (1977), Spence, (1973) and (Bhattacharya, 1979).

One need not get confused over signalling hypothesis with that of the attention-getting premise; there is a clear-cut distinction between the signalling theory and the interest getting theory, which states that the stock reaction will be positive results the company will draw more attention from the market.

The assessment effects of shares and stock dividends are studied by (Huang, Liano, & Pan, 2015). The study concluded that stock splitting and dividends' awareness continues to be related to the potential cash flows, projected income, or the value of companies' future shares.

A study conducted by (Karim & Sarkar, 2016) the atypical yield and exchange volumes post splits have been observed. In the study, a positive excess return and an improvement in the number of shares traded following the announcement were observed, supporting the principle of signalling that expects a positive market reaction to the stock split.

In support of the signalling hypothesis Dravid, (1990) a test was performed about whether the knowledge on the business' potential profits was transmitted during the dividends and the splits of stocks and on whether the split element behaves as a warning.

The assumption that trading is costly, based on this (Umesh, Parab, & Reddy, 2016), a market-split behaviour model has been built. The split acts as an expensive signal for private knowledge from managers stock exchange costs rely on stock values. The findings of (Brennan & Hughes, 1991), (Ikenberry, Rankine, & Stice, 1996), and (Conroy, Harris, & Robert, 1999) the signalling theory that management of undervalued businesses transmits knowledge to their customers by breaking their stocks has also been endorsed.

It is not necessarily credible to predict the optimistic signal, using the market's abnormal return split as confirmation. The anomalous yield may also be attributed to increased liquidity following declines in the stock price. The study Kadiyala & Vetsuypens, (2002) establish an optional means to create the signal test. The signalling theory cannot justify why surplus yield are still seen roughly during the stock splitting dates because after the splits declaration, the ex-split date is predictable. There would be no knowledge

material in the ex-split. So, for the stock break, researchers have other interpretations. Similarly, Hu, Jain, & Zheng, (2018), Maloney & Mulherin, (1992) illustrates anomalous yield from the point of view of microstructural and propose the interpretation of market splits dependent on liquidity and this incorporates the current possibility.

Trading Range

The researchers have conducted empirical studies that have shown that firms go for splits to keep their stocks price with the investors' trade ranges, especially smaller ones (Copeland, 1979). Also, surveys like Baker & Gallagher, (1980) on management's perception of the splits reveals that the companies use it as a tool to stock prices in an optimum trade range.

There are ample evidence supporting the trading range hypothesis like Singh, (2018) who have observed that trade volumes of stocks increased after the stock split. The research by Kryzanowski & Zhang, (1996) also observed an increase in the small investors transactions after the splits. The studies that include Desai et al., (1998), Angel, Brooks, & Mathew, (2004), Ma, Anderson, & Ben Marshall, (2018) and (Pandow & Butt, 2019) support the trading range theory.

Why do firms, though, continue to draw limited or not conversant trader to put in money by the inventories? One of the most common factors is that the increased customer base would improve the liquidity of stocks. Liquidity relates to the frequency and ease at which an asset is turned into currency. The study (O'Hara, 1995) defines it as "trading accommodation with the least price impact." Managers' motivation to divide stocks is to upsurge liquescency. In terms of liquidity, the trading range hypothesis is also referred to as the 'liquidity hypothesis.'

The reasoning explains the liquidity enhancement that the less value after the stock split will interest insignificant stockholders who are always thought of as wealth-constrained. The participation of more investors increases the liquidity of the stock. The study (Merton, 1987) devised a prototype to check capital market equilibrium with inadequate figures. While (Black, 1986) it notes that the presence of liquid markets requires noise trade, and the more noise trades there will be, the more liquescent will be in the stock market.

There is a need for proxies to estimate liquidity, and the proxies are divided into two categories: measurements of resistance and action and have two liquidity proportions. The resistance quantity is distinct by Demsetz, (1968), Grossman, Miller, & Merton, (1988), and Stoll, (2000) as the price compromise that is needed for the immediate

transaction. In capital markets, friction tests the difficulty at which a commodity is being exchanged.

The study Lakonishok & Lev, (1987) takes the quarterly shares sold compared to the outstanding shares as an indicator of stocks' marketability. It indicates that the outcome doesn't really support a decline in earnings potential by the impact of the splits on the stage of trade are not irreversible (Podgórski & Pasierbek, 2020).

Also, the research Kryzanowski & Zhang, (1996) observed the trading designs of traders in and around the stock split announcement date. The studies discovered that stock splits are correlated with major shifts in trade trends utilizing the intraday trading archive for the Stock Exchange of Toronto from 1983-89. The results show that the split is first and foremost meant to return stock' values to a 'natural' series. The study (Muscarella & Vetsuypens, 1996) it has been observed that the split could not affect company valuation in the ideal stock market. Still, the prices of stocks are growing on the split declaration dates.

The studies asserted that aftermarket splits, there is a rise in the involvement of small traders that measures the change in liquidity by changing the liquidity premium values defined as the exponential function of the average transaction price difference of the deal and asking for prices according to the method (C. M. C. Lee, 1993).

The study Conroy, Harris, & Benet, (1990) too examine the force of stock splits during the period between 1st January 1981, and 30th April 1983, on a bid-ask spread for listed firms on NYSE and found that spreads increase after divisions, which is an investment liquidity cost. These rises in spreads are closely attributable to declines in share values after divisions, which can explain part but not all of the rise in return rates after divisions have been observed. However, the data shows that the risks of liquidity for stock splits can be balanced against any potential benefits of splits. Such liquidity costs will confirm that stock splits are an indicator of favourable details regarding the company.

Besides, the paper (Ohlson & Penman, 1985) analyzes stock-return volatilities' empirical behaviour after and before the ex-dates of stock splits. At the same time, the research shows that found the volatility change after AMEX and NYSE splitting of stock (Dubofsky, 1991). Three main differences exist between the two stock exchanges: attributes of the stock and/or company, special behaviour, and ownership clientele factors. The study (Angel, 1997) use the event of issuing the stocks which can be traded at the post-split price level before the split to study noise traders' or small traders' trading behaviour. They find the difference in stock compared with matching firms before the differentiation is larger with equally the

un-split securities and the issued stocks. The measure of ambiguity will increase significantly after the split. They explain this anomaly because of small volume traders' return to exchange in a standard manner for a single price level (Wang, Wang, Yang, Zhang, & Zhu, 2020).

However, the truth is that after stock splits, both uninformed and educated traders will engage more actively in trades and is argued by (Admati & Pfleiderer, 1988). This form shows that in the context of stock splitting stipulation lesser after-split shares' price attracts noise traders, the stage of conversant traders' participation will augment endogenously.

The study (Essaddam & Mnasri, 2015) argues that trading activity changes will affect bids and asks spread decomposition in three gears: processing orders, adverse information, and register cost (R. Stoll, 1989). The researchers went ahead with the model by George, Kaul, & Nimalendran, (1991) to disintegrate the complete spread into the processing of the order and negative-information mechanism. They found an increase of 0.17 or 22 per cent above the before the number of the splits in the adverse-information section.

Neglected Firm

The regression analysis suggests that the ignored business hypothesis and liquidity hypothesis may be linked to a constructive response (Chakraborty, 2012)

. As well as a forgotten firm theory, there is proof against the signalling hypothesis. There is confirmation on an ex-split date of positive irregular return, but it reverses shortly afterwards. And thus, proof against the liquidity or trading range theory is also available.

The sample stocks have shown increasing mean returns after the split, and the "neglected firm" hypothesis apply in this case with the stock being relatively thinly traded before the split (Dash & Gouda, 2007). The impact is positive and substantial due to the stock splits on the financial ratios such as income per share, equity income, profit per share and earnings ratio (Bajaj, Arora, & Professor, 2017).

During this analysis, the findings identified in the Indian competition do not include any definitive proof of optimistic anomalous yield correlated with the declaration of the splits, which also discards the signalling hypothesis and ignored firm hypothesis proposed (Joshipura, 2008). Some studies have also shown the sectoral response to the stock splits (Pandow & Butt, 2018) and (West, Azab, Ma, & Bitter, 2020).

Variables proxy for traditional liquidity and signalling inventory-split process hypotheses may not be clarified by

split-induced returns. The optimistic splits yield are mostly overturned throughout the after splits month. During the stock-splits execution, the after-splits share performance is inversely connected to the sector's major overreaction and thus appears to be reversed. They offer an account of investors' irrationality for these observations, suggesting that the split is correlated with the bubble's development because of investors' inability to grasp splits better. They finish that training investor to correctly process knowledge in emerging markets increases such sectors' effectiveness (Charitou, Vafeas, & Zachariades, 2005).

Conclusion

In the past, numerous longitudinal experiments have been carried out to assess stock divisions' effect through nations on price and liquidity. In the U.S. and other developing nations, several experiments have been carried out. Although the market reacts differently to stock splits in the US, these studies' methodology has helped develop an influential research theory for the emerging economic climate, especially in Indian contexts. Since researchers have not received much attention in many emerging markets, little data and analysis have been carried out on the stock split's effects, especially in India. Therefore, an analysis should be carried out in emerging economies, especially in the Indian context, to examine and interpret a stock split's impact.

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