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Correlational tendencies between Goods and Services Tax and Financial Markets in India

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ABSTRACT

This paper is aimed at finding correlation, if any, between Goods and Services Tax (GST) collection announcements and financial markets, specifically, the National Stock Exchange in India. The authors hypothesize that news of GST collection data affects investor confidence and thus the stock market. The result is evident from the correlation between the index of companies with highest MCap and GST, especially in the financial year 2021.

Keywords: *GST, Stock Markets, Nifty Indices, Correlation, Investor Confidence, Data Analysis, Bivariate Analysis*

1. INTRODUCTION

On 1st July 2017, India implemented its bill of unifying its various indirect taxes and creating one market for Indian goods and services. The Goods and Services Tax (GST) act was brought into effect, thereby eliminating the cascading effect and complexity in the erstwhile system. "The idea of a GST was first proposed by the then-Union Finance Minister in his 2006-07 Budget speech. The adoption of GST is a big step forward in India's indirect tax reforms. GST will significantly reduce the negative impacts of cascading or double taxation by combining a large number of Central and State taxes into a single tax, paving the path for a common national market.", reports the GST council of India[1].

While the effect of GST can be observed in the accounting sector with revised syllabus of Chartered Accountants and Indian Accounting Standard, it can also be said that increased level of tax compliance, simplicity and collection efficiency may have an impact on financial markets through changes in investor confidence.

This paper aims to find out the correlation, if any, between announcements of GST collection and various stock market indices driven by investor sentiment.

2. METHODOLOGY

The method of this study is using Pearson's correlation between bivariate data. This paper measures the market's reaction to Government's announcements[2] on total GST collected every month. The time period under scrutiny is August 2017 to April 2021. This data is thus compared to the data of increase or decrease in growth of stock market indices on a daily basis after the information about collection is made public.

The indices referred to in this paper are the Nifty50 index, Nifty next 50 index and the Nifty SME Emerge index[3]. These indices are taken in order to assess the overall reaction of the market towards information of collection and if it is a factor affecting retail investors, or otherwise in decision to invest in large capital and/or small capital companies.

The information of GST collection has been gathered as secondary data from official government bodies, as given in its public information bulletin. Post compilation, month-on-month growth of absolute revenue is calculated.

Information on indices is collected as secondary data from official National Stock Exchange Resources. Closing values of these indices are taken for every closing bell from August 2017 to April 2021. Daily growth is thus calculated and values are taken for the first trading day of month after the 1st date. It is done so to allow for investors to react in the market after the information on the collection is made public of a month's collected revenue on the first day of the next month.

In the year 2020-21, a large amount of deviations were recorded, due to the Covid-19 pandemic, in the collection data. Fluctuations in the collection affected the statistics, owing to the differential base. In such a scenario, it is worth noting that GST collection may become an important factor, swaying investment decisions. Moreover, the year witnessed a rise in share of retail investors in the market which may have led to such results.

The hypothesis of a possible causality is taken on the base of a 'post hoc ergo propter hoc' philosophy.

3. HYPOTHESIS

The hypothesis taken for this paper by the authors is that the news of collection of data would instill investor confidence and thus encourage investment and higher trading in the financial markets. However, this hypothesis is limited to retail traders specifically.

It is believed that such news titillates novice investors and thus precedes a rally in the stock market, affecting its indices. This hypothesis cannot be tested in ceteris paribus conditions due to the contingent and complex structure of the factors that influence investor decision-making.

It is believed that information of revenue collection data is an indicator to investors of the strength of the economy and thus acts as an impetus towards investment in well-performing equity, in the absence of other influencing news.

Moreover, the authors propound that announcement of revenue collected from indirect taxes acts as a heralding signal for retail investors of the economy, while not disturbing the financial position of any company explicitly. In such a scenario, investors may flock to buy stocks of companies with higher market capitalisation, ignoring careful analyses of the stocks that they invest in. This justifies the use of Nifty50[4] for the research, as it includes the 50 stocks with the highest market capitalization

4. INFERENCES

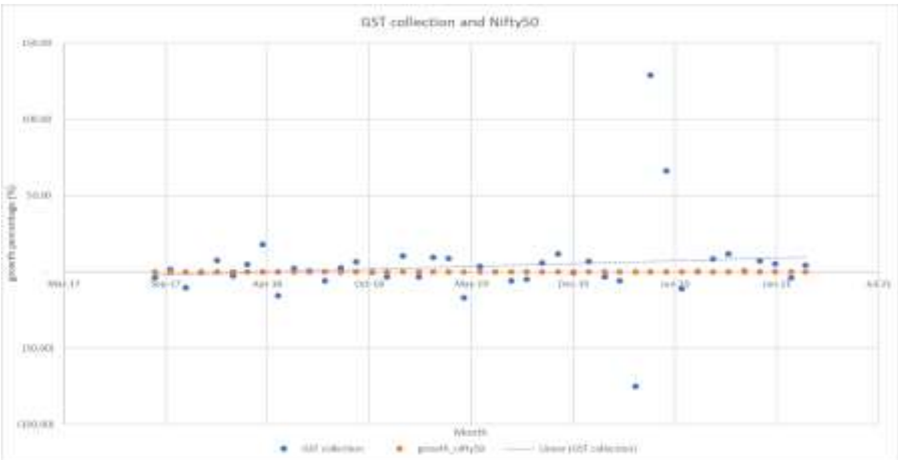

Figure 1: Relation between Nifty50 growth and GST revenue from September 2017 - March 2021

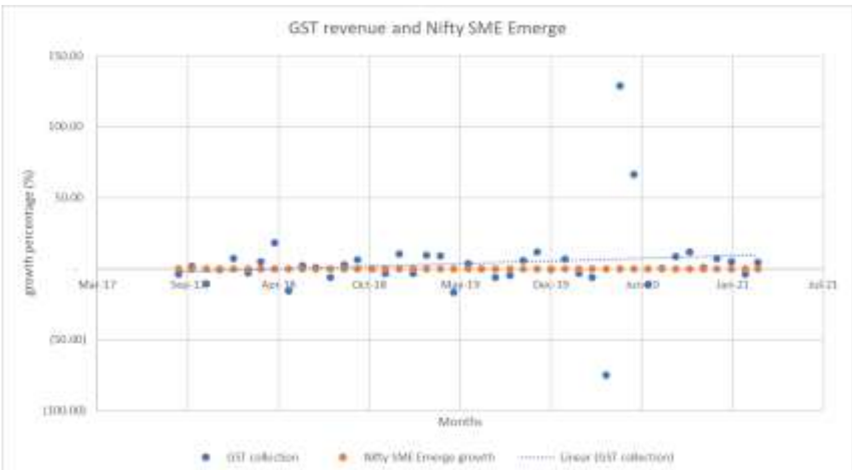

Figure 2: Relation between NiftySME Emerge and GST revenue from September 2021

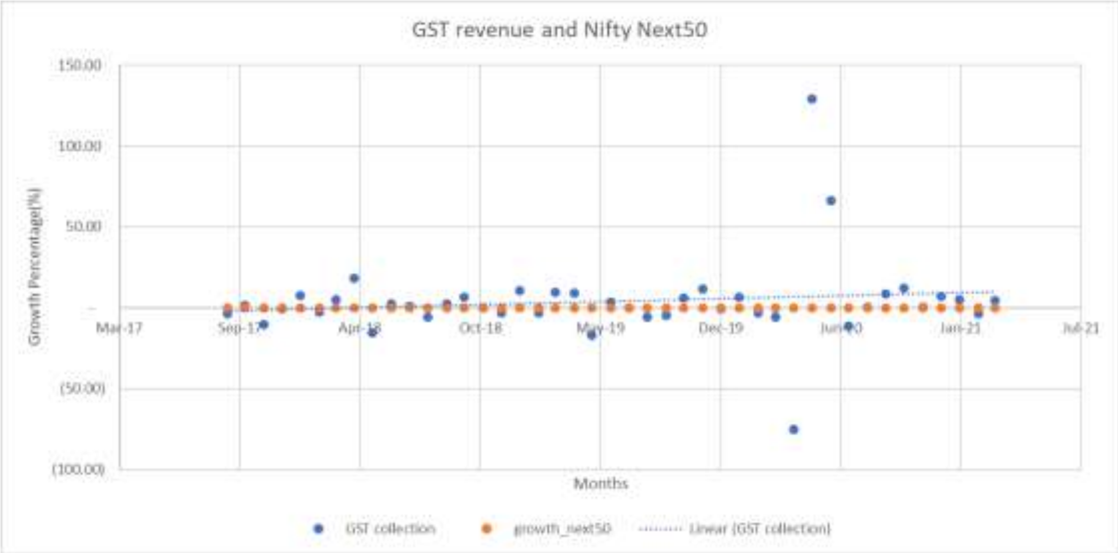

Figure 3: Relation between Nifty Next50 and GST revenue from September 2017 to March 2021

On overall assessment of the data, it was observed that a correlation of 0.55 was observed between the index Nifty50 (the largest 50 stocks listed on the National Stock Exchange) while Nifty SME Emerge showed a very low correlation of .14, indicating exclusivity of the two factors. The index of Nifty Next50 displayed a correlation of .35 between the time period, September 2017 and March 2020.

From the above data, it can be inferred that there may be a small degree of correlation between investment decision and announcement of GST collection data.

For the year 2017, there was relatively low correlation between the indices and GST collection while Nifty50 displayed moderately high correlation for the excluded time period. In FY2019, the results displayed fewer signs of correlation while the set of points outside of fiscal year 2018-2019 still displayed a high correlation between Nifty50 and GST collection data.

The financial year 2020 was consistent with the correlational result of Nifty50 and Nifty next50 being in the bracket of 0.4 and 0.5.

The time period between April 2020 and March 2021 displayed the highest witnessed correlation of all three indices. Nifty50 reported a correlation of 0.65, Nifty Next50 displayed a correlation of 0.44 and Nifty SME Emerge showed a correlation of 0.22.

It can thus be inferred that GST collection data was moderately related to the performance of the Nifty 50 index while disjointed from Nifty SME Emerge index.

However, due to varying market conditions and a dynamic environment, these inferences have a narrow scope.

The scope of this study is limited to the 3 indices chosen in correspondence to the GST collection data published between September 2017 and March 2021 in the context of Indian stock markets.

Such studies can be extrapolated to check such correlations between GST collection and stock markets in specific sectors, as well as international economies.

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