The six-digits number in the following graph is the is the code for the crude oil related stock in Chines stock market. In the MST diagram, the length of the edge does not represent the relative distance between two stocks.

According to trading days, we construct the sliding window of the cross-correlation coefficient to be one week, two weeks, one month, one month and a half, three months, half a year and one year. We observe that that clustering structure of the crude oil related stocks is changing over short and long periods.

In the upturn period, the leading stock is not fixed over different size of sliding window, indicating a varying structure over small volume stocks. When the market is active, those small-volume stocks might be controlled by large institutions. Also, the change in structure may reveal the trading and competing between institutions. As a result, active stock with small volume could be always in the leader position during this period. However, the overall structure is relatively loose, as we have only a few points connected to each center, so that those leaders may not be controlled by one institution, and there would have been quite a lot of them who want to make money during the upturn period.

In the recession period, similar to the upturn period, stocks with small volume hold their clustering point. The leader stocks change in short scales but are steady and with trends in longer scales. This phenomenon may contribute to the reaction of institutions, since a continuous falling in prince will force institutions to sell their shares. Each institution has its own stratagem on selling, so that the time to sell the shares look random. However, in long term, a great number of shares are sold, and meanwhile, buyers become less, leading to a relatively stable structure in long scale.

Since China has a really special market, we also analyze DPXA coefficient. The result show that MF-DPXA coefficients are around 1 in different scales, which means that the common factor SSE Composite Index makes great effects on the market structure. Each stock could rise at random days and random periods, but it has to meet the trend of SSE Composite Index. As a result, under the common factor of SSE Composite Index, the structure of the market will lose its value of analysis. Consequently, we might not be able to indicate the trend of the structure and relation of markets.

To enhance the stratagem we have found above, we introduce another type of graph for comparison. We set the x-axis to MF-DCCA coefficients during upturn period, and y-axis to be the coefficients in recession period. In the upturn period, for most cases, we observe that points are distributed above the line (f(x)=x), implying that that the market structure is quite loose in the upturn time. But for the recession period, the market structure is closer. The distribution in the graphs also verifies the result from previous analysis. For stocks of small volume, they distribute above the line (f(x)=x) in different scales, providing these stocks a property of clustering when the market breaks down. Furthermore, for stocks of large volume, they distribute on the line of y=x when in small scales but on both side averagely for longer scales, avoiding these stocks to be the hub of cluster.