

Is imbalance between supply and demand the reason of Japanese stock market fall?

- Short sale ratio exceeded 40% for record 42 consecutive days in the recent past. Many investors expect falling stock price as a profit opportunity.
- When futures price drops, net unsettled balance of arbitrage trading tends to fall as unsettled buying balance decreases and unsettled selling balance increases.
- The stock price fall and supply and demand imbalance are mainly caused by the huge selling of futures and spot equity markets by foreign investors. However we believe that chance of sharp rally is increasing.

Short sale ratio exceeded 40% for record 42 consecutive days in the recent past. Many investors expect falling stock price as a profit opportunity.

For the recent past, the supply is in excess of the demand in Japanese stock market due to (1) a high proportion of short selling and (2) sharp decrease of net unsettled balance of arbitrage trading. Currently, the gap between supply and demand of Japanese stock market is extremely wide. This report is to validate how current supply and demand situation impacts the stock price.

Short sale ratio is generally deemed high when it exceeds 40% and translated as the stock price will soon hit the bottom. However, the excess of 40% had continued for 42 days (October 1st to November 29th, 2018), the longest record since October 16th, 2008 from when data became available. As it was not uncommon that the percentage exceeded 40% for days this year (Diagram 1), it indicates that extremely large number of investors expect profit opportunities in the weakening equity market.

“Diagram 1: Consecutive business days of short sale ratio exceeded 40%”

Period	Business days	Period	Business days
25 Jan to 23 Feb	21	17 Jul to 26 Jul	8
28 Feb to 15 Mar	12	30 Jul to 12 Sep	33
19 Mar to 4 Apr	12	1 Oct to 29 Nov	42
22 May to 30 May	7	3 Oct to 18 Dec	12
18 Jun to 12 Jul	19		

(Note) Data from 4 Jan to 18 Dec, 2018. Subject of period above 5 consecutive business days.
(Source) SMAM, based on Bloomberg L.P. data.

“Diagram 2 : Net unsettled balance of arbitrage trading and later stock price movement”

d/m/y	Net unsettled balance of arbitrage trading (stocks)	Later Nikkei 225 Price Movement
28 Aug 1998	-85.27mil	
31 Aug 1998	-144.27mil	9 Oct 1998 Closing Price: JPY12,879.97
1 Sep 1998	-127.34mil	12 Apr 2000 Closing Price: JPY20,833.21
2 Sep 1998	-129.09mil	Price Increase: JPY7,953.24
3 Sep 1998	-139.62mil	Rate of Increase: 61.7%
4 Sep 1998	-134.00mil	
14 Sep 2016	-17.13mil	9 Nov 2016 Closing Price: JPY16,251.54
15 Sep 2016	-18.52mil	2 Oct 2018 Closing Price : JPY24,270.62
16 Sep 2016	-25.16mil	Price Increase: 8,019.08
20 Sep 2016	-6.42mil	Rate of Increase: 49.3%

(Source) SMAM, based on Bloomberg L.P. data.

When futures price drops, net unsettled balance of arbitrage trading tends to fall as unsettled buying balance decreases and unsettled selling balance increases.

As to arbitrage trading, when futures price is temporarily higher than spot price as foreign investors are buying futures, arbitrage companies (mainly securities houses) will practice arbitrage of selling futures and buying spot. On the other hand, when futures price is temporarily lower than spot price as foreign investors are selling futures, arbitrage companies will practice arbitrage of buying futures and selling spot. The balance of spot buying is called “unsettled buying balance of arbitrage trading” and that of spot selling is called “unsettled selling balance of arbitrage trading”. The former subtracted by the latter is called “net unsettled balance of arbitrage trading”.

Net unsettled balance of arbitrage trading tends to decrease with futures price fall. For example, when futures price falls, the arbitrage company who had sold futures and had bought spot will buy back futures and sell spot to cancel the trade, which will decrease unsettled buying balance of arbitrage trading. As mentioned before, unsettled selling balance of arbitrage trading will increase if futures price falls, as another arbitrage company will buy futures and sell spot. Accordingly, net unsettled balance of arbitrage trading will decrease.

The stock price fall and supply and demand imbalance are mainly caused by the huge selling of futures and spot equity markets by foreign investors. However we believe that chance of sharp rally is increasing.

Generally, when net unsettled balance of arbitrage trading falls below 500 million stocks, it is translated as the stock price is almost at the bottom. As of December 14th, it dropped below 100 million to 91.44 million possibly due to foreign investors selling futures. In fact foreign investors had sold JPY 6774.1 billion of futures (total of Nikkei 225 Futures, Nikkei 225 mini, TOPIX Futures and mini-TOPIX Futures) from the beginning of the year to the first week of December (3rd to 7th). It suggests that equivalent amount of selling occurred in the spot market due to the cancelations of arbitrage trading.

Furthermore, foreign investors had sold JPY 5199.1 billion of spot (total of first and second sections and emerging markets in both TSE and NSE) from the beginning of the year to the first week of December. It has already exceeded the selling amount of year 2008 (JPY 3708.5 billion). The reason of falling Japanese stock market may possibly be attributed to the extreme imbalance between supply and demand. After December 13th 1991, net balance of arbitrage trading became negative for twice and Japanese stock market sharply recovered after both occasions (Diagram 2). We believe that chance of sharp rally is increasing as unsettled selling balance of arbitrage trading will settled sooner or later.

***Please note that this report is a translation of Japanese report written on December 19, 2018.**

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