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Stock Supply/demand Following Earthquake

Buying, selling pressure satisfied by foreign inflows, selling futures to unwind arbitrage positions

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Summary

- The setback in equity markets immediately following the Great East Japan Earthquake can probably be explained by (1) the selling of index futures by foreign investors leading to an unwinding of index arbitrage positions and (2) early selling to cut losses on long positions.
- While foreign investors were net buyers in cash trading to a significant degree, both the amount bought and sold were nearly double that of normal trading activity. To some extent, this could indicate that both buying and selling appetites had been reasonably satisfied. Investment trusts and other vehicles saw inflows of money.
- Overseas investors were net sellers of Nikkei 225 futures before the earthquake, which may have reflected concerns about geopolitical risks. This investor group became major net sellers of TOPIX futures, as well, right after the earthquake struck.
- We think shorter trading cycles were one reason why retail investors did not exhibit a clear trend towards net buying. Trust banks shifted to net buying of Japanese equities as share prices fell below levels from about six months ago.

The setback in equity markets immediately following the Great East Japan Earthquake can probably be explained by (1) the selling of index futures by foreign investors leading to an unwinding of their index arbitrage positions and (2) early selling to cut losses on long positions. While foreign investors were net buyers in cash trading to a significant degree, both the amount bought and sold were nearly double that of normal trading activity. Investment trusts and other vehicles saw an inflow of money from overseas.

Foreign Investors Net Buyers in Cash Trading, Net Sellers in Futures Trading

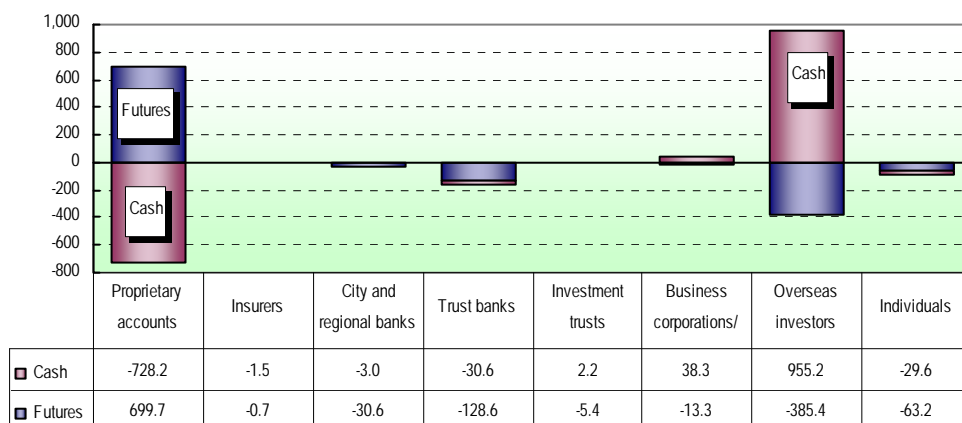
Foreign investors net buyers in cash trading; proprietary accounts net sellers of futures

In the wake of the disaster, equity indices plummeted in the third week of March. Net buying by foreign investors totaled Y955.2 billion that week (Chart 1). Most other investor groups were either net buyers or net sellers to a low degree, except for proprietary accounts, which sold a net Y728.2 billion (1st and 2nd sections of Tokyo, Osaka, and Nagoya stock exchanges; same basis for data below).

Net buying of futures (total of Nikkei 225, TOPIX, and Nikkei 300) by proprietary accounts came in at a noteworthy Y699.7 billion, while foreign investors and all brokerage accounts (incl. groups not shown in chart) were net sellers.

To sum up activity during the third week of March, foreign investors were major net purchasers in cash trading, while proprietary accounts were net big sellers. Meanwhile, proprietary accounts were net buyers of futures to a significant degree, while all other investor groups were net sellers.

Post-Quake Stock Transactions by Investor Group (3rd Week of Mar; Y bil) Chart 1



Source: TSE and OSE; compiled by DIR.

Note: Cash trading based on 1st and 2nd sections of Tokyo, Osaka, and Nagoya stock exchanges.

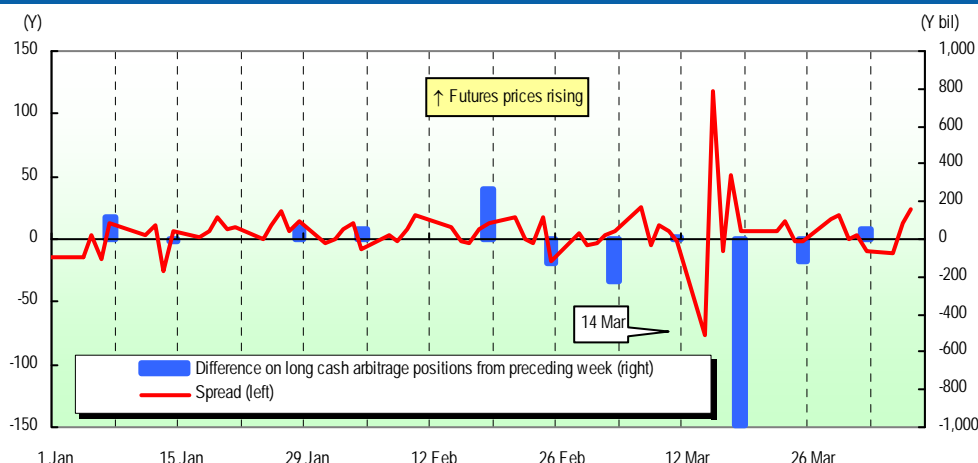
Futures represent total for Nikkei 225 futures, TOPIX futures, and Nikkei 300 futures. Only major investor groups shown.

Selling of index futures led to unwinding of index arbitrage positions

Share prices pulled back sharply around 15 March. The day before, Nikkei 225 futures prices fell well below their theoretical value (Chart 2). This resulted in a missed arbitrage opportunity between actual and theoretical futures prices, causing investors to suddenly close their long cash positions related to index arbitrage.

Long cash positions related to index arbitrage fell by Y987.2 billion between 11 March (Y2,185 billion) and 18 March (Y1,197.9 billion). This represented a 45.2% decline, the steepest drop-off since 1993. Among brokerage transactions, the net selling of futures by all investor groups led to the dramatic decline in long cash arbitrage positions, with proprietary accounts becoming the biggest seller in cash trading.

Spread, Long Cash Arbitrage Based on Nikkei 225 Theoretical Futures Price Chart 2



Source: TSE, OSE, Bloomberg; compiled by DIR.

Note: Spread is futures price minus theoretical value for month in question (based on daily closing prices).

Post-quake activity mirrors trading following collapse of Lehman Brothers

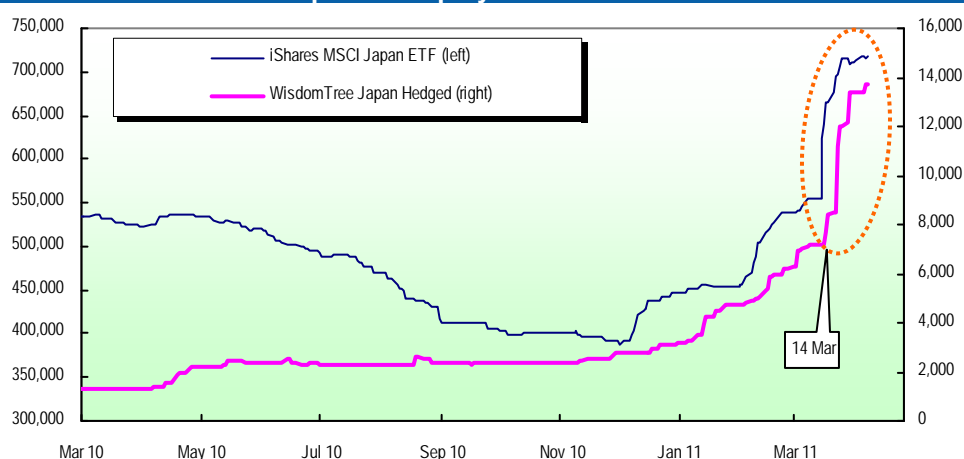
This post-quake trading resembles the activity seen following the collapse of Lehman Brothers, when foreign investors were notable net sellers. For example, in October 2008, foreign investors were net sellers of equities (Y1,069.6 billion) in cash trading as well as futures (Y875 billion). In contrast, proprietary accounts were net buyers of futures (Y912.5 billion) and net sellers of equities (Y1,536.7 billion) in cash trading. In the same year, long cash positions related to index arbitrage declined by more than half from Y2,324.9 billion on 26 September to Y1,112.5 billion on 31 October. These cash positions dropped further to Y253.8 billion as of 20 February 2009.

US fund trends

Unlike the trends seen during Lehman Brothers collapse, foreign investors were net buyers of Japanese equities in cash trading following the earthquake. US funds were likely one of the new buyers this time around. For instance, the number of shares in Japanese equity ETFs in the US started to rise from the latter half of 2010 (Chart 3). This number spiked, however, from 14 March 2011, just days after the disaster struck. We think this sudden rise in the number of shares reflected investor appetite for Japanese equities after they suffered a sharp correction following the earthquake.

While this may only partially explain why foreign investors were net buyers of equities in cash trading, net asset values in US ETFs have grown to nearly 10% of the total for US mutual funds. Thus, ETF activity may point to the overall trend.

Number of Shares in Japanese Equity ETFs in the US **Chart 3**



Source: Bloomberg; compiled by DIR.

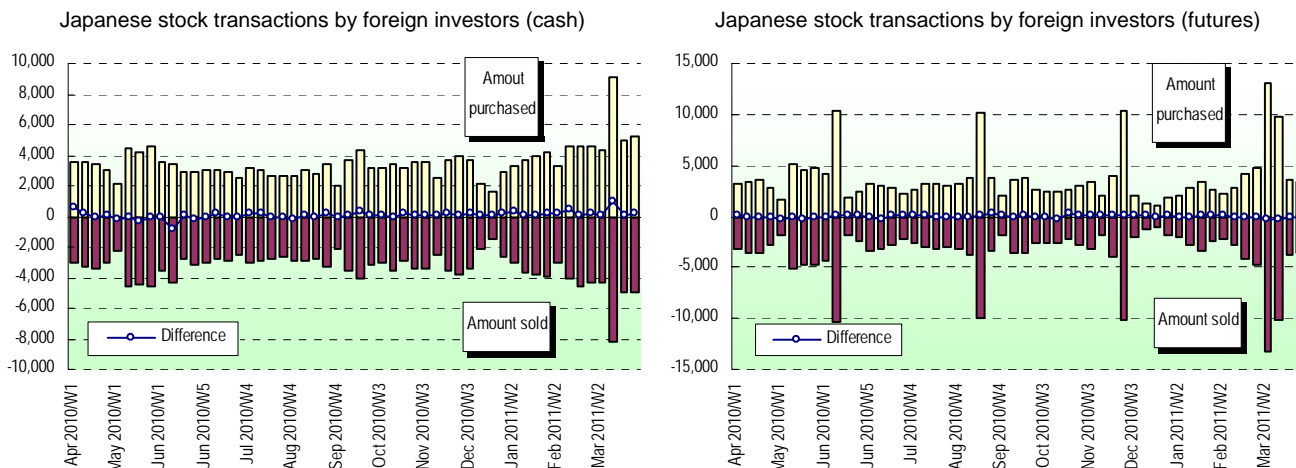
Note: On daily basis; most recent data as of 7 April.

Daily trading activity roughly doubled

As outlined above, foreign investors conducted a notable amount of net buying of equities in cash trading and net selling of futures. However, both sales and purchases of equities (cash trading basis) during the third week of March were more than double than during the preceding weeks (Chart 4; left). Sales totaled Y8.2 trillion, 2.5X higher than the average purchase for the 52 weeks through the second week of March. Meanwhile, purchases checked in at Y9.1 trillion, a 2.7-fold increase vs. the same period. Futures transactions (Chart 4; right) were also more than double the norm, ballooning to a level rivaling that of a special quotation (SQ) week when futures prices are settled. Sales of futures totaled Y10.1 trillion, a 2.7-fold increase vs. the average for the past year. Purchases of futures were Y9.7 trillion, 2.6X higher than the average (average over past year incl. weeks when SQ occurred).

Turnover settled down from the fourth week of March, which seemed to indicate that both short-term buying and selling appetites had been reasonably satisfied. Cash trading has been at high levels (roughly 1.5X higher than average over past year), which suggests that market opinion is still mixed on the outlook for both the economy and share prices.

Japanese Stock Transactions by Overseas Investors (cash, futures; Y bil) Chart 4

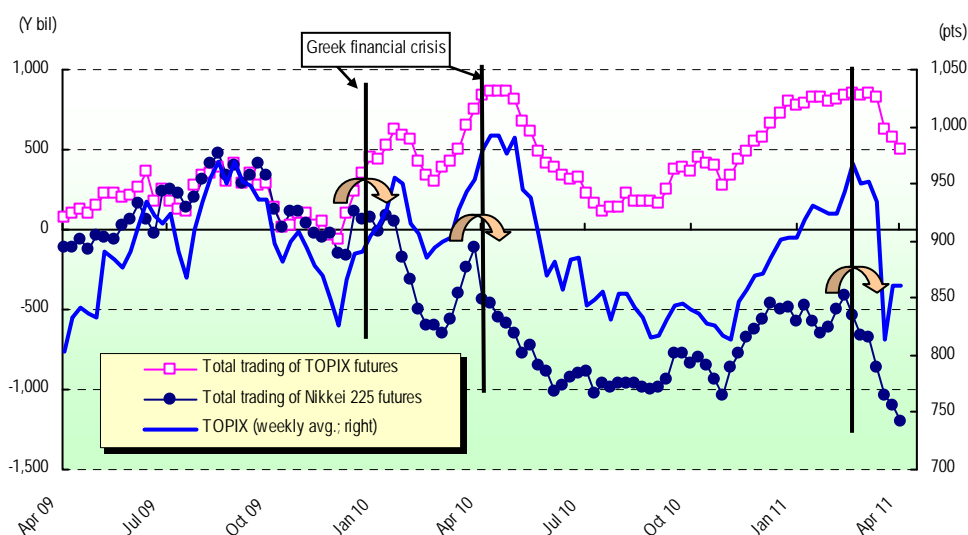


Source: TSE and OSE; compiled by Daiwa Securities CM.
 Note: Cash trading based on 1st and 2nd sections of TSE, OSE, NSE. Futures represent total of Nikkei 225 futures, TOPIX futures, and Nikkei 300 futures.

Nikkei 225 futures: net selling since before earthquake

Chart 5 depicts net trading of Nikkei 225 and TOPIX futures by overseas investors. This group has been a net seller of Nikkei 225 futures since before the earthquake, but TOPIX futures showed higher net selling after the quake. To cite an historical example, Nikkei 225 futures reversed course to net selling when the Greek financial crisis took center stage, and then TOPIX futures followed suit. Overseas investors have been net sellers of Nikkei 225 futures since the third week of February 2011, which could be in response to the unrest in the Middle East and North Africa. Another possible interpretation is that net futures trading reflected the downturn in share prices. However, overseas investors may become net purchasers of Nikkei 225 futures as geopolitical risks start to wane.

Net Futures Trading by Foreign Investors & Share Price Movements Chart 5



Source: TSE, OSE; compiled by DIR.
 Note: Weekly basis. Aggregate figures from Apr 2009.

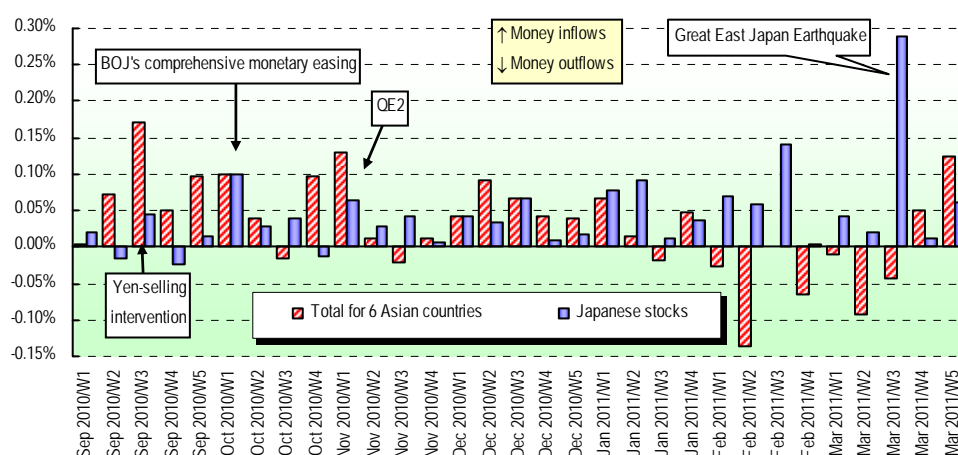
Net purchasing low vs. Asian stock markets

Overseas investors were net purchasers of Japanese stocks both pre- and post-earthquake, but we see some differences between this trend and developments in Asian stock markets (excl. Japan).

Due to differences in stock market size, we have compared overseas investors' net money flows into/out of Japanese stocks with their fund flows into/out of aggregate Asian stock markets relative to total market cap (Chart 6). From autumn 2010, this investor group was a net purchaser of Japanese equities but to a lesser degree than Asian equities. However, net purchases of Japanese stocks became comparatively larger from around January 2011. Interest may have shifted to Japanese stocks after a number of countries tightened their monetary policies, partly in response to higher global commodity prices.

Japanese equities still experienced net purchasing after the earthquake, but to a lower degree than Asian stocks in the fourth and fifth weeks of March. Net transactions in Japanese markets moved in the same direction as before, but buying did not gain intensity as it tended to around January and February. Fund flows may have returned to comparatively low levels, as seen in the latter half of 2010. If the global environment causes governments to keep their accommodative monetary policies in place, we think the future direction of fund flows will be impacted by developments after the end of the Fed's QE2 program, geopolitical risks, and global inflation risks.

Fund Flows Into/out of Asian Stocks (vs. Total market cap) Chart 6



Source: Each country's stock exchange, Bloomberg; compiled by DIR.

Note: Asia total reflects stock markets in South Korea, Taiwan, Thailand, Indonesia, Vietnam, and the Philippines. Money flows into those markets was divided by the previous week's average market cap.

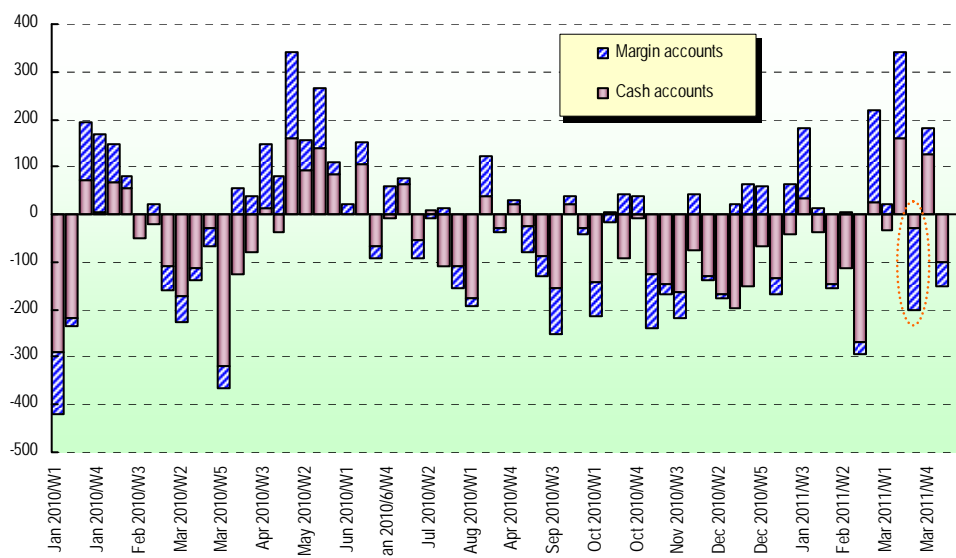
Domestic Investors: Trust Banks Become Net Buyers of Japanese Equities

Shorter cycle to trading by individual investors

One other difference between the pullback following the earthquake pullback and the bankruptcy of Lehman Brothers is individual investors' trading patterns. Buying by retail investors taking a contrarian stance has underpinned share prices. Following the earthquake, however, individuals did not exhibit a clear trend towards net buying.

One reason for this might be a tendency towards shorter trading cycles for retail investors. Individual investors are rapidly making moves, both to lock in profits and cut losses. Trading in margin accounts comprised Y170.2 billion of the Y199.9 billion in net selling by retail investors during the third week of March (Chart 7). We think individuals' quick action to cut losses was one factor dragging down share prices during that week. In short, as retail investors have scaled down their holdings, we see less likelihood that investors will close out their long margin positions over a prolonged period.

Net Buying/selling by Retail Investors (Cash, Margin Accts.; Y bil) Chart 7



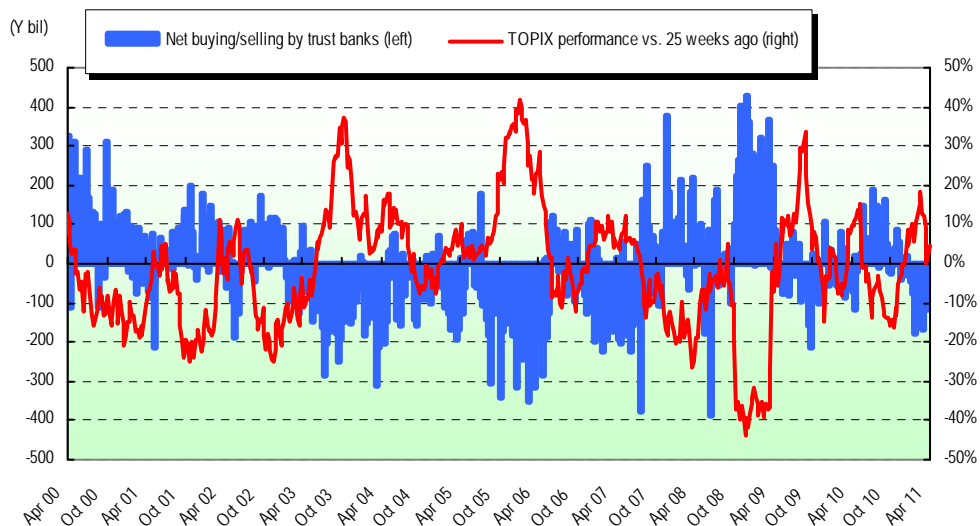
Source: TSE; compiled by DIR.
 Note: Weekly data.

Trust banks shift to net buying

Trust banks became net buyers of Japanese equities from the fourth week in March. Previously, activity by trust banks tended to change based on share price performance vs. 25-week-earlier levels (Chart 8). Trust banks shifted to net buying when share prices fell below the six month-ago level during the post-earthquake pullback. Based on this, comparison between current share price levels and those about six months ago may be one useful indicator of future trends.

Futures transaction trends for the fifth week in March include data for 1 April. Net buying recorded during this week reflects unwinding of hedge positions, which typically occurs at the beginning of April each year.

Net Buying/selling by Trust Banks & Share Price Performance Chart 8



Source: TSE; compiled by DIR.
 Note: Weekly data. TOPIX performance is comparison of current week's performance vs. 25 weeks ago.

