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TSE looking at extending cash equity trading hours again

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Executive Summary



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In February 2014, the Tokyo Stock Exchange (TSE) established a working group to look into extending its cash market trading hours. The TSE's cash equity markets are currently open five hours per trading day, from 9:00am to 3:00pm with a midday recess from 11:30am to 12:30pm. Below I discuss what led the TSE to consider extending its trading hours and how it should approach the issue.

Trading hours need to be extended

The TSE has long been criticized for having equity trading hours that are too short in comparison to major overseas markets and have insufficient overlap with other Asian markets' trading hours. In the summer of 2010, the TSE began looking into extending its trading hours by shortening the midday recess, which was then 90 minutes long. The TSE adopted its current trading hours by shortening the midday recess by 30 minutes effective from November 21, 2011¹⁾. Despite this change, the TSE's trading hours are still shorter than overseas markets' (Exhibit 1).

NOTE

1) For more details, see "Debate about extension of equity trading hours" (October 2010) <http://www.nri.com/global/opinion/lakyara/2010/pdf/lkr201090.pdf>.

Exhibit 1. Major overseas equity markets' trading hours

●New York market:	9:30am to 4:00pm (6.5 hours)
	NYSE Arca, which lists mainly ETFs, is also open from 4:00 to 9:30am and from 4:00 to 8:00pm
●London market:	8:00am to 4:30pm (8.5 hours)
●Hong Kong market:	9:30am to 4:00pm with one-hour recess from 12:00pm (5.5 hours)
●Singapore market:	9:00am to 5:06pm (8.1 hours)
	The Singapore market also has a pre-open session from 8:30am

Source: Author, based on information publicly available from the above exchanges

When it comes to equity market trading hours, longer is not necessarily better. As discussed in detail below, it is preferable for equity markets to be closed during times of day when, for example, illiquidity or a severely imbalanced mix of market participants is a concern. In fact, no major equity market anywhere in the world is open for trading 24 hours a day. That said, the TSE's trading hours, which total five hours between the morning and afternoon trading sessions, seem too short in comparison to major overseas markets. If trading hours are too short, investors lose trading opportunities and new information is not immediately reflected in market prices. This delay detracts from pricing efficiency.

Meanwhile, Hong Kong and Singapore are playing increasingly bigger roles as financial centers in the wake of Asian economic growth in recent years. Linkages between TSE markets and markets in other Asian countries are stronger today than in the past as a result of Japanese companies' overseas expansion within Asia and growth in non-Japanese Asian investors. In light of such, the fact that TSE markets close three hours earlier than the Singapore market and close at 2:00pm Singapore time highlights just how exceedingly short the TSE's trading hours are.

Options for extending trading hours

The adequacy of the TSE's current trading hours is thus highly questionable. Such being the case, the TSE's decision to start looking into extending trading hours to strengthen market function was timely.

The manner in which trading hours are extended could take various forms. Broadly speaking, the TSE has three options: (1) open for trading earlier in the morning, (2) shorten or eliminate the midday recess, or (3) end trading later in the afternoon or evening. For the first and third of these options, the TSE could use two different approaches. First, it could simply change the morning session's opening time and/or the afternoon session's closing time. Second, it could add a new trading session before the morning session opens or after the afternoon session closes. Below I discuss each of these options' pros and cons.

Earlier opening time

The first option is opening for trading earlier in the morning. Specifically, the TSE could add a pre-open session like the Singapore Exchange or it could change its current 9:00am opening time to an earlier time. In either case, the presumptive benefits of an earlier opening time include increased linkage between the TSE and New York Stock Exchange (NYSE), whose regular trading session closes at 6:00am JST (5:00am when daylight saving time is in effect in the US), and greater continuity of Nikkei 225 futures trading between the Tokyo and Chicago markets. Another possible benefit is that Japanese stocks would price in dollar/yen exchange rate movements in the Sydney market, which opens earlier than the Tokyo forex market.

However, an earlier opening time would also pose a number of drawbacks, depending on how much earlier it is. If, for example, the TSE were to propose changing its opening time to 6:00am to coincide with the NYSE's closing time, the change would

2) In the US, which spans multiple time zones, it is 6:30am on the west coast when the NYSE opens for trading at 9:30am local time. West-coast brokerage employees typically arrived at work early in the morning and finish work relatively early in the afternoon. The idea of commencing trading at 6:00am therefore cannot be dismissed as outlandish in and of itself. Even in the US, however, when the NYSE proposed changing its opening time to 9:00am in July 1991, it ended up withdrawing the proposal due to fierce opposition from west-coast brokerages. The west-coast brokerage offices that I have previously visited all opened for business at 8:30 or 9:00am. The fact that they are not open when the NYSE opens for trading did not seem to be regarded as a major issue.

3) What is the likelihood of institutional investors in Singapore, for example, actively participating in Tokyo trading from 5:00am local time?

likely be strongly opposed by market participants, given that it would require major staffing adjustments by exchanges and brokerages²⁾. Moreover, even if exchanges and brokerages adjust their staffing by adding an early-morning shift, institutional investors may not necessarily follow suit. There is little likelihood of domestic and non-Japanese Asian institutional investors actively trading on the Tokyo market in the early morning hours³⁾. Even among retail investors, I doubt many would be willing to wake up at the break of dawn to trade stocks. One of the TSE markets' distinguishing structural attributes is a high degree of liquidity at the morning session's open. Opening for trading earlier or adding a pre-open session would pose a risk of dispersing the liquidity currently concentrated at the morning session's open, thereby detracting from pricing efficiency.

Shortening/elimination of midday recess

The second option for extending trading hours is shortening or eliminating the existing one-hour midday recess from 11:30pm to 12:30pm. One benefit of this change is that the Tokyo market would be able to immediately price in developments in other Asian markets, including Singapore and Hong Kong, that are open during the TSE's current midday recess. Another benefit is that retail investors who work during the day would be able to trade stocks during their lunch breaks without worrying about being accused of neglecting their work duties.

Shortening the midday recess was already studied in depth when the TSE last discussed extending trading hours in 2010-11, as mentioned above. Through this process, the TSE decided to shorten the midday recess from 90 minutes to its current length of one hour.

At that time, eliminating the midday recess altogether was also discussed as an option. The TSE ultimately decided to retain the midday recess for three reasons. First, TSE markets have a strong tendency to be more liquid at the open and close of the morning and afternoon trading sessions than during the intervening trading hours. At the open and close of each trading session, the TSE uses the *Itayose* (clearing-house auction) procedure to execute trades instead of the *Zaraba* (continuous-double auction) procedure it uses during the rest of the trading day. If the midday recess were eliminated, the frequency of *Itayose* would be reduced by half, from four times to twice a day. There were concerns that market liquidity would decrease as a result. Second, during the midday recess, block trades and basket trades are executed through off-floor trading systems. If the midday recess were eliminated, the current timeslot for

executing such trades would be lost. Third, publicly traded companies often release information pursuant to timely disclosure regulations during the midday recess. There were concerns that such disclosures, if made during trading hours, could lead to heightened market volatility.

Moreover, if the TSE merely shortened the midday recess to, say, 30 minutes, trading volume is unlikely to increase much as a result. In light of such, there does not appear to be much sense in further shortening the midday recess at present.

Later closing time: evening trading

The third option to extend trading hours is rescheduling the close of trading to a later time. This option is often described as introduction of "evening trading," but it actually could take the form of a literal evening trading session from, say, 7:00 or 8:00pm until 11:00pm or 12:00am or a late-afternoon session that would extend the trading day for several hours beyond the afternoon session's current 3:00pm closing time. These two alternatives differ substantially in terms of their significance and drawbacks. I accordingly discuss them separately below, beginning with evening trading lasting until late at night.

Some have long advocated adding evening equity market trading hours from the standpoint of meeting the trading needs of retail investors who work during the day and are therefore unable to actively trade stocks during current regular trading hours. For example, Matsui Securities, a major online broker, has formally requested three times, most recently in November 2013, that the TSE add evening trading hours. The TSE itself has previously studied the feasibility of evening trading hours through a working group established in July 2000.

Drawbacks of evening trading

I have long questioned whether investor demand for evening equity market trading really exists. I have also expressed doubts about the advisability of adding evening trading hours from the standpoint of investor protection and operation of fair and orderly markets⁴⁾. I will not repeat all that I have written previously, but I want to reiterate a few points I consider to be particularly important.

First, institutional investors that trade domestic equities during regular daytime trading hours are unlikely to actively participate in evening trading. Although there is a non-

4) See "After-hours Equity Trading in the US: Current Status and Problems" by Sadakazu Osaki and Nasuka Hiramatsu in the fall 2000 issue of *Capital Markets Quarterly* and "Comments on Evening Equity Trading" in the November 12, 2013, edition of *Capital Markets Memo* (both in Japanese).

negligible possibility of participation by overseas (e.g., European, US) institutional investors whose regular business hours coincide with nighttime in Japan, many such institutional investors already have fund managers and/or traders stationed in Japan or elsewhere in Asia. I therefore doubt the TSE would see much direct order flow from Europe or the US. I accordingly question how much demand there actually is for evening trading in the Tokyo market from European and US investors that currently do not actively trade Japanese equities but would decide to start doing so if they could trade in the Tokyo market during their normal business hours.

If institutional investors are unlikely to participate, the main participants in evening trading would be retail investors. Among Japanese retail investors, active traders that habitually trade stocks online account for the bulk of retail trading volume. Can efficient pricing and a high degree of liquidity be maintained in a market where participation is heavily skewed solely toward such active retail traders⁵⁾?

5) In the Capital Markets Memo cited in footnote 4, I discussed differences between cash equity markets and forex and derivatives markets, where are open for trading for a while at night. I refrain from reiterating those differences here.

Second, as noted above, one major benefit of extending trading hours is real-time discounting of information from other Asian markets. However, even if the TSE added an evening trading session that opens at, say, 7:00pm JST, which is 6:00pm in Singapore and Hong Kong, the Singapore and Hong Kong markets would already be closed. If the Tokyo market is closed while other Asian markets are open and reopens in the evening after the other markets have closed, such a schedule would not help to increase inter-market linkages.

Is there really demand for evening trading?

Third, while surveys conducted by online brokers have found that investors are in favor of evening trading, the extent to which such surveys' respondents understand the likely reality of evening trading is questionable. To be sure, many investors, if surveyed, would reply affirmatively to the question, "If evening trading were available, would you want to trade in the evening?"

However, I believe that such survey results are based on tacit assumption that a high degree of liquidity and efficient pricing would be available in the evening like during daytime trading sessions. How many retail investors would confidently answer "yes" to a survey question phrased, for example, as follows? "Evening trading hours are likely to be liquidity-constrained. Orders are unlikely to be filled in a timely manner and execution prices are unlikely to adequately reflect corporate earnings and economic fundamentals. Would you want to trade in such a market by aggressively submitting

limit orders to shape market pricing yourself?

Additionally, given that delaying the 3:00pm closing-price determination until 11:00pm would not be realistic, an evening trading session separate from the regular daytime trading sessions would have to be added. If so, treating evening-session trades the same as the same day's daytime-session trades for settlement purposes would most likely not be feasible. For example, if an investor sells shares during evening trading on March 10, the investor would likely receive the sales proceeds on the fourth, not the third, subsequent trading day. If so, the settlement date would be the same regardless of whether the investor sells on the evening of the 10th or at the market open on the 11th. If aware of this, would the investors who respond to online brokers' surveys still think that evening trading is needed?

Furthermore, even if online brokers' survey results accurately reflect the sincere hopes of at least the survey respondents and such hopes are based on an adequate understanding of evening trading, many investors with accounts at online brokers tend to actively engage in margin trading and frequent, repetitive trading. In light of such, it is questionable whether adding an evening trading session to meet the "needs" of such investors would be consistent with the policy objective of increasing the population of retail equity investors with a medium- to long-term investment horizon⁶⁾.

6) If the TSE adds a trading session solely for habitual online traders without active participation from institutional investors, the new trading session would arguably be largely tantamount to a casino for a small minority of investors. By sanctioning such trading activity, would the TSE be fulfilling its societal mission as a financial instrument exchange charged with serving the public good?

Medium/long-term Investors have absolutely no need to hastily buy or sell stocks at 8:00 or 9:00pm. They would be better off carefully reviewing market data in the evening and placing next-day orders. Even among full-service brokers, quite a few allow customers to place orders online or by telephone in the evening. If an investor is worried about forgetting to place an order the next day, he should place the order the night before. The idea that medium/long-term investing is difficult without access to evening trading does not make much sense.

Compliance with restrictions against solicitation is another problem

The CEO of a certain brokerage recently pointed out that if the TSE adds an evening trading session, brokers (particularly full-service brokers) could be accused of violating the law if they endeavor to serve their customers' best interests. Specifically, if an evening trading session is added and the price of the stock owned by a customer hypothetically plunges during evening trading, a conscientious sales rep would attempt to contact the customer by telephone or other means and ask what, if anything, the customer would like to do in response to the price decline.

Under current law, however, brokers are prohibited from telephoning or visiting individual customers to solicit the purchase or sale of financial instruments, including stocks, at times of day when such a contact would constitute a nuisance (Article 117(1)-7 of the Cabinet Office Ordinance on Financial Instruments Business). While the specific hours during which such a contact would constitute a nuisance should be determined on substantive grounds, one legal expert recommends taking into account similar restrictions in lending laws when interpreting the aforementioned anti-nuisance provisions⁷⁾. Lending laws stipulate that solicitations between the hours of 9:00pm and 8:00am are deemed improper from the standpoint of societal conventions. In other words, a sales rep could be accused of violating the law for informing a customer, for the customer's own sake, that a stock has fallen sharply in price in evening trading and advising the customer to sell, or hedge his position in, the stock⁸⁾.

7) Matsuo, Naohiko, "The Financial Instruments and Exchange Act" (Third Edition), Shojihomu (2014), p.399 (in Japanese).

8) Even if stock owned by customers falls sharply in price, online-only brokers would likely take the view that the price decline is of no concern to them because customers are responsible for monitoring their own investment holdings. Such brokers may see no need to contact customers regardless of whether the price decline occurs during the day or in the evening. Additionally, contacting customers by e-mail would not constitute solicitation by telephone or personal visit.

Big cost-benefit imbalance

In sum, I believe that the biggest problem with evening trading is that the expected benefits are too small relative to the presumptive costs of adding an evening trading session. I have heard from brokerage industry insiders that the cost of accommodating evening trading would be astronomical. Not only would brokers and exchanges have to hire many new personnel to handle evening order flow and monitor trading, they would need to make huge IT investments to radically upgrade their existing systems if those systems' existing overnight batch processing capacity is insufficient to handle trade clearing/settlement and account management tasks in a timely manner. The online brokers that are lobbying the TSE to add an evening trading session seemed to be tacitly assuming that margin trading will be available in the evening. If so, Japan Securities Finance would likely have to substantially upgrade its existing business processes and computer systems that handle margin trades.

Of course, exchanges and brokers should definitely not hesitate to undertake such enormous investments if the investments would contribute commensurately to the development of fair and orderly equity markets. The problem is that the huge investment required vastly outweighs the expected benefits. The investment would merely create a low-liquidity trading venue in which institutional investors are unlikely to actively participate and retail investors, with the exception of some speculative traders, have little interest. Moreover, there are strong concerns that evening trading would be a breeding ground for unfair trading and cause undue volatility during the next day's regular trading sessions.

9) NYSE Arca conducts cash equity trading from 4:00 to 8:00pm. However, the main issues traded on NYSE Arca are all ETFs, which are more easily priced and tend to trade more in response to macro factors than individual companies' stocks.

I believe that such a view is amply substantiated by the following facts. First, all of the world's major equity markets completely cease active trading in individual equities by 6:00pm local time⁹⁾. Second, US ECNs (electronic trading systems) that were dedicated solely to evening trading have been shut down. Third, even in Japan, evening trading previously conducted by proprietary trading systems (PTS) has been shut down due to insufficient liquidity. The fact that the TSE is nonetheless again considering adding an evening trading session for cash equities is frankly mystifying.

Possibility of late-afternoon session

Despite my exceedingly negative opinion of evening trading, I am not opposed to extending the close of trading to a later time. On the contrary, I believe that extending trading hours to a moderately later closing time would contribute greatly to revitalizing Japan's cash equity markets.

Specifically, I think that the TSE should seriously consider adding a late-afternoon session from 3:30 or 4:00pm to 5:00 or 6:00pm. Instead of simply extending regular trading hours, I suggest a separate late-afternoon session in light of claims that a major departure from the current practice of calculating investment trust NAVs based on closing prices determined at 3:00pm would not be realistic. If determining closing prices at 4:00 or 5:00pm would be feasible without major investments to upgrade IT systems, the option of simply extending existing trading hours by one or two hours should not be ruled out.

If a late-afternoon session is added, many of the previously cited drawbacks of the TSE's short trading hours may be rectified.

First, in addition to providing additional trading opportunities to investors now deprived of trading opportunities by the existing short trading hours, a late-afternoon trading session may allow Japanese companies' share prices to discount incoming information from Asian markets in real time. For example, if the late-afternoon session closes at 6:00pm, the TSE would be open for trading for a total of about eight hours per trading day (the exact number of hours would depend on the length of the recess between the afternoon session's 3:00pm closing time and the start of the late-afternoon session). An eight-hour trading day would compare favorably with European and US markets' trading hours and the TSE's late-afternoon session's closing time would roughly coincide with the Singapore market's closing time.

Second, a diverse mix of investors would likely participate in late-afternoon trading sessions. Unlike evening trading, late-afternoon sessions would likely attract many institutional investors. If investors that submit orders to the TSE from Singapore or elsewhere actively participate in late-afternoon trading, institutional investors based in Japan are also likely to adjust their current working habits and likewise participate. If the late-afternoon session closes at 5:30 or 6:00pm, retail investors unable to trade during the day because of their work schedules would also be able to participate in late-afternoon trading to some extent. Retail day traders who currently trade actively during the day would presumably also actively participate in late-afternoon sessions.

Third, if the recess between the current afternoon session's 3:00pm close and the start of the late-afternoon session is long enough to allow companies to report earnings, such a schedule would adequately address the criticism that earnings information is not priced into stocks on a timely basis.

The addition of a late-afternoon trading session would pose challenges such as system modifications and staffing adjustments by exchanges and brokers, but the resulting costs would likely be much smaller than the costs required to accommodate an evening trading session beginning from 7:00 or 8:00pm. Given the magnitude of the expected benefits of adding a late-afternoon trading session, market participants should be amenable to the idea.

Conclusion

The focus of TSE's current study is extending trading hours, not necessarily by adding an evening session. I earnestly hope that the TSE's working group engages in productive discussions that contribute to revitalizing Japan's equity markets.

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