
PTS for Night Trading of Stocks in Japan: Significance and Issues

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I. Introduction

On 15 September 2006, a leading online securities trading firm, kabu.com Securities, opened its kabu.comPTS market for night trading. Trading hours are from 19:30 until 23:00 (for receiving orders, price quotes start at 19:00), and the market handles trading in 300 listed stocks, primarily from the first section of the Tokyo Stock Exchange (TSE-1). This is Japan's first proprietary trading system (PTS) relying completely on auction trading, the same method used in the exchanges.

On 12 July, when kabu.com Securities announced that it had obtained approval from the Financial Services Agency (FSA) for its PTS, another leading online securities house, SBI E*Trade Securities, announced that it and two other companies, Rakuten Securities and SBI Securities, had agreed to work together in preparation for launching a night trading system. Two more companies, Orix Securities and GMO Internet, joined the three, and the project is now moving forward as a five-company consortium.

On 28 July, another leading online broker, Matsui Securities, announced that it would open a PTS with instant settlement (RTGS) capabilities to participate in night trading, with a target start date of Spring 2007.

This succession of Japan's leading online securities firms proposing to move into the PTS business, primarily for night trading, merits a closer look.

II. About PTS

1. PTS in the US

A PTS is an electronic trading system that matches buy and sell orders for stocks and other securities, as done by a securities exchange. The first-ever PTS was Instinet, which began business in the US in 1969. A PTS differs from a securities exchange, which has brokerage houses as members, in that it is operated by a securities company, and allows institutional investors to participate directly in trading. Usage of PTS as been growing in the US since the mid-1980s, and NASDAQ stocks' share of total trading has grown particularly fast since 1997, when the SEC implemented its rules

on handling orders (including rule 11Ac-1-4 in the 1934 Securities and Exchange Act).¹

The term PTS (proprietary trading system) is relatively well known in Japan, but within US legislation the term that is used is ATS (alternative trading system). Some ATS that meet certain requirements to comply with order handling rules are called ECN (electronic communications network) from the systems perspective, and PTS are often generally referred to as ECN. Meanwhile, the EU's Markets in Financial Instruments Directive (MiFID) refers to the same concept as multilateral trading facilities (MTF), and Japan's FSA has recently begun using MTF in place of PTS.

One reason for the increased use of PTS in the US is that such systems meet the trading needs of institutional investors by offering low-cost, quick order executions and a crossing mechanism that enables trades at predetermined prices, while another reason is the inherent problems of the NASDAQ market's market maker system. The real significance of the market maker system is that it provides a certain amount of liquidity to illiquid securities by guaranteeing smooth order execution when a securities firm posts a quote. On the NASDAQ, however, use of the market maker system even on highly liquid stocks like Microsoft led to a situation in which it became impossible to match orders within the quote spread posted by the market maker.

It was dissatisfaction with this situation that led institutional investors and the securities firms, including market makers trying to adjust their positions, to become committed to using a PTS. There has long been concern over collusion among market makers, and this has fueled investors' distrust of market makers. PTS have stepped in to conduct internal trades with market maker quotes, enabling them to capture roughly a 30% share of the trading in NASDAQ stocks in one fell swoop.

PTS have continued to develop since then, with some, like Archipelago, even converting into a securities exchange. Recently, the reverse has also been seen, with the incumbent exchanges, increasingly sensing a crisis, moving to incorporate PTS into their markets. NASDAQ acquired Brut in September 2004 and Inet, the largest of the PTS and operated by Instinet, in December 2005. In March 2006, the New York Stock Exchange (NYSE) demutualized, began to integrate its business with Archipelago, and listed its own stock.

¹ For details, see Sadakazu Osaki, *Kabushiki Shijo kan Kyousou* (Competition between stock markets) Diamond Publishing, 2000, Chapters 3 and 4.

2. PTS in Japan

In Japan, it was illegal to open a PTS, which was labeled as a facility similar to an exchange, prior to a revision of the Securities and Exchange Act that was prompted by the legislation reforming the financial system that set off Japan's financial big bang in 1998. Although the 1998 revision removed the restriction on opening a PTS and made running one an approved business for securities firms, none of the firms attempted to do so for a number of years following the legislative change, in part because the systems that could be used for setting the price of trades were greatly restricted.² The first two PTS to gain approval in Japan, both in June 2000, were BB Super Trade from Japan Bond Trading and E-Bond Securities, and neither is still operating.

The number of new PTS grew in December 2000 when administrative guidelines expanded the trade pricing systems usable by PTS.³ Usage of PTS never grew significantly, even following revision to the administrative guidelines, partly because there is already a low cost, high-liquidity system for trading stocks at the TSE.

The thinking behind having limited restrictions on PTS is that since the organized trading of securities must be conducted on a securities exchange, there is no need for PTS to offer the same level of advanced pricing and liquidity functions seen on exchanges. Although this thinking has been adhered to in principle thus far, the 2004 revision to the Securities and Exchange Act repealed most of the rules aimed at distinguishing between exchanges and PTS, including by eliminating the need for prior and explicit instructions from investors when executing orders for the trading of listed stocks, etc. off the exchange and by making it possible to open auction-based PTS.⁴

The PTS recently opened by Kabu.com Securities uses nearly the same pricing method as that used by the exchanges.

² For more on the evolution of PTS in Japan, see Sadakazu Osaki, *Bodaresuka suru torihikisho to shijo house* (Exchanges and market legal structures becoming borderless) (Kenjiro Egashira et al, editors, *Yukeru Sakai Koeru Hou (3); Shijo to Soshiki* (Ways to Surpass Dissolving Borders (3); Markets and Organizations)), Tokyo University Press, Chapter 9, 2005) (In Japanese).

³ See Sadakazu Osaki, *Wagakuni no Atarashii PTS (Shisetsu Torihiki Shisutemu)* (Japan's New PTS (Proprietary Trading System), in the Winter 2001 issue of the Japanese edition of the Nomura Capital Markets Review (in Japanese).

⁴ See Sadakazu Osaki, *Shijo no Kiban Seibi wo Hakaru Kaisei Shoutorihou no Seiritsu* (Establishing a Revised Securities and Exchange Aimed at Providing Market Infrastructure), in the Summer 2004 issue of the Japanese edition of the Nomura Capital Market Review (in Japanese).

Figure1 Active PTS in Japan (as of July 2006)

PTS handling stocks	Date approved	Trading hours	Method for determining price, etc.
Instinet Japan	Jan. 2001	07:00--21:00	Negotiation between customers, limit, and VWAP and closing price cross
Monex Securities	Jan. 2001	17:30--23:59	Closing price cross
Japan Securities Agents	Jun.2003	09:00--15:00	Posted quote of participating securities firm, trade based on limit

PTS handling bonds	Date approved	Trading hours	Method for determining price, etc.
ICAP Totan Securities	Jan. 2001	09:00--18:10	Interdealer trade on agency basis
Japan Bond Trading	Feb. 2001	08:40--18:05	Interdealer trade on agency basis and dealer-basis trades
BGC Securities	Feb. 2001	08:30--18:30	Interdealer trade on agency basis, formerly Cantor Fitzgerald
Yensai.com	Mar. 2002	09:00--15:00	Crossing based on posted quote of participating securities firm
Bloomberg Tradebook Japan	Jun. 2002	24 hours	Posted quote, negotiation between customers, limit correspondence
JBond Securities	Oct. 2002	09:00--15:00	Posted quote, negotiation between customers
Tradeweb Europe Securities	Sep. 2005	-	Primarily handles foreign bonds
Central Tanshi Securities	Jan. 2006	-	Trades in TB and FB

Note: kabu.com Securities, which began operation in September, is not included in the table.

Source: Compilation of data from the Financial Services Agency and the Japan Securities Dealers Association

III. Why night trading?

1. Online brokerages develop new markets

As briefly noted in the introduction, the main motive of kabu-com Securities, SBI E*Trade Securities, and Matsui Securities in opening a PTS was to offer night trading. In this respect, Japan's PTS differ from those in the US, which are primarily aimed at trading during the normal exchange trading hours.

The most important customers for online brokerages are day traders, individual investors who make frequent stock trades over the Internet. In contrast, salaried workers who are unable to make day trade often place their orders at night, after returning home from work. In the past, these orders have accumulated within the brokerage firms' internal systems and then been processed at the opening of the next day's session.

Monex Securities' PTS, Monex Nighter, has gone after these orders by offering closing at the closing price of the night session. With investors appreciative of this ability to trade at a set price (the closing price), the system has garnered a share of trading volume.⁵

Night trading not only provides online brokerages an opportunity to secure trading orders from investors who do not trade during the day, it also helps to alleviate the load on internal systems that would otherwise be forced to store orders issued at night until the opening of the following morning's session. The TSE has previously (in 2000) put together a working group to consider implementation of a night trading market, and the online brokerages, which had a strong need to alleviate the load on their systems, were at the time all very keen on implementing night trading.⁶

2. Problems with night trading

The night trading of stocks has numerous problems. Stocks are traded during set trading hours to ensure the efficient absorption of information that affects prices. Except for that concerning large corporations that have completely globalized their businesses, new information related to the value of a company is not often released at night. Accordingly, it would seem to be difficult to price new information into a stock at night, even if it is traded at night.

Furthermore, there is unlikely to be much participation in night trading by institutional investors, who play a leading role in the efficient formation of market prices. This is because fund managers and traders go home at night. There is a possibility that night trading in which only a portion of individual investors participate will fail to result in fair price formation or provide sufficient liquidity.

In fact, even in the advanced capital markets of the US, when trading is extended into the evening hours there is seldom a robust level of trading activity around 8:00 or 9:00 at night. All examples of serious night trading are at PTS rather than exchanges.⁷

Night trading on PTS in the US has not always been a major success. For example, Market XT, which was approved as an ECN in January 2000, offered after-hours trading from 4:00PM to 8:00PM as a selling point, but trading volume was low, and the company had trouble staying afloat.

⁵ In Europe and the US, cross trading at the closing price has developed primarily among institutional investors that are graded according to their performance based on the closing price. It would be somewhat irrational for individuals unconcerned with performance evaluations to prefer trades based on a closing price, which is a historical price.

⁶ The direct stimulus for this study group came from an announcement by Mitsui & Co. of a plan to open a night-trading PTS.

⁷ For more information on the problems of night trading, although in some respects it is already dated, is Sadakazu Osaki and Nasuka Hiramatsu, *Beikoku ni okeru Kabushiki Yakan Torihiki no Jittai to Mondaiten* (Status and problems with the night trading of stocks in the US), in the Fall 2000 issue of the Japanese edition of the Nomura Capital Market Review (in Japanese).

It is certainly true that there are individual investors who would like to trade at night while watching prices move in real time, even while recognizing the various problems that this entails. A securities exchange, which must give fair consideration to the interests of not only individual investors but a wide range of market participants, would invariably come under criticism if it were to make a large-scale investment in a night trading system to accommodate the needs of only a subset of investors, but a management decision to open a night-trading PTS by a securities firm, which is a purely private entity, it is unlikely to raise any eyebrows. This is because even though there have yet to be any examples of great success thus far, it is impossible to rule out the possibility that a night-trading PTS would be able to capture latent trading demand and achieve a certain degree of business success.

IV. Current situation and future outlook

1. Not that much trading activity

Although it is a bit early to render an opinion, given that less than a month has passed since kabu.com Securities launched trading on its PTS, with participation in trading thus far having been limited to only a portion of individual investors, trading value at kabu.com has only climbed to about 20-30% that of its predecessor, Monex Nighter.⁸

Kabu.com apparently expects order volume to increase moving forward with the participation of the institutional investors in Europe, who have so far been trading overseas stocks on the London Stock Exchange. Also a possibility is that investors who have thus far been cool to the idea may have their interest stoked when there is a case of new information moving the market to price levels that differ from where the market closed following trading during normal hours.

In contrast, if it remains difficult to conclude trades after hours owing to an inability to attract orders from a large number of investors, or if, as has been a concern of some, the night trading system is abused for market manipulation or other unfair trading, investors will lose interest and wind up preferring to have their orders processed at the opening of the next morning's session, where liquidity is extremely high.

Of some concern here, as touched upon in the introduction, is that another powerful online brokerage company has announced two concepts for night trading systems. If multiple systems of the same type are brought on line, it would obviously spread orders more thinly across systems and lower the liquidity of each system. Because a PTS is a securities firm, there may be psychological resistance to routing orders to an industry rival, but to achieve success as a market, we think it is important,

⁸ Yoshinari Taguchi, *Netto Shouken no Kouza Kaisetsusuu ga Donka* (Growth in new online brokerage accounts is slowing), Nihon Keizai Shimbun, 2 October evening edition, page 7 (in Japanese).

at least at the start-up stage, to concentrate orders on a single system to the maximum extent possible.

According to kabu.com Securities, it has begun talks with three securities firms, one of those being Goldman Sachs, to implement connections to its PTS.⁹ If these talks go well, it should improve the prospects for improved liquidity and possibly result in a further increase in the number of securities firms that want to connect to the system.

2. Future outlook

1) Related to approval as exchange

It will be important to watch exactly how the other two PTS concepts, which were announced as possible competitors to kabu.com's already up-and-running system, wind up taking shape.

We also think there is a possibility that the five-company consortium led by SBI E*Trade Securities, to the extent that it is comprised of securities firms with fairly substantial shares of the market for stock trading by individual investors and because of the overlap with PTS approval standards, may wind up having to convert into a securities exchange.

According to the guidelines for comprehensive inspections of securities companies issued by the FSA, (1) a PTS must expand its system for managing and reviewing trades, establish reserves for loss from paying out damages, and perform periodic checks to ensure stability and certainty in system capacity when, over the past six months, the ratio of the average daily trading value for that PTS to the total trading value of the exchanges reaches at least 10% for any one stock and at least 5% for the entire market, and (2) must obtain approval to open a securities market and convert into a securities exchange when, over the past six months, said ratio reaches at least 20% for any one stock and at least 10% for the entire market (under Items of concern related to the operation of privately established trading systems).

If a platform is converted into a securities exchange, it could become an issue as to whether it can continue freely trading in stocks listed on a variety of markets, as before. This is because under the traditional approach, a securities exchange could only trade in corporate stocks that had applied for listing on its exchange, submitted to the prescribed review, and received approval.

We do not think it will be a problem to deal with this flexibly, however. Exchanges have limited their listings to companies that have applied for listing on their own exchange as a way to earn listing fees. The German exchanges operate Open Market (Freiverkehr) in which listing does not require approval, while the London Stock Exchange's foreign stock market handles a large number of unlisted stocks. Regional exchanges in the US handle a wide range of stocks listed on other exchanges based on a system that assigns rights to trade unlisted shares.

⁹ On page 3 of the Nikkei Kin'yu Shimbun, 8 October 2006 edition.

Taking a stock that is already listed on an exchange and making proper and timely information disclosures, and then listing and trading it on another exchange without a listing application seems unlikely to create any problems from the perspective of investor protection. This is probably not anything that cannot be solved by ruling that stocks meeting certain requirements that have been listed by an exchange automatically meet the listing standard.

2) Is immediate settlement necessary?

Matsui Securities is apparently trying to differentiate its PTS by offering immediate settlement. There is some question, however, as to whether offering settlement rules that differ from regular market practices would really make a market more competitive.

It is important to make a market's settlement method as standardized as possible to achieve efficient trading. With only Matsui Securities' PTS providing immediate settlement and another market providing T+3 as currently in use, theoretically the price of a trade on the Matsui Securities PTS would be more favorable to the seller by the amount of three days of interest, and therefore the same stock traded at the same time on both markets should trade at two different prices. Such a situation may lead to a fragmentation of the market that would make it more difficult to concentrate supply and demand and form prices fairly and efficiently.

There is also the danger that immediate settlement would actually make trades less stable. Without management of fluid fund balances, there will be an increased risk of trades failing, owing to a lack of funds for settlement. The primary participants in PTS operated by online brokerages are individual investors, and there is serious doubt as to whether they would have the discipline to manage fluid fund balances. Of course, trade failures could be prevented if the brokerage firm manages fund balances in real time by requiring full deposit of the funds in advance, but this would probably defeat the whole purpose of promoting trade activity by offering immediate settlement.

We think that the real reason Matsui Securities wants to offer immediate settlement is that with so-called "net settlement" prohibited by law, it is impossible to trade the same stock multiple times on the same day (Article 161-2 of the Securities and Exchange Act and Article 9 of the Cabinet Office Directive concerning trades and collateral funds prescribed in said Article 161-2.) This provision was left intact with enactment of the Financial Instruments and Exchange Law in June 2006.

Although the reason originally given for prohibiting net settlement was to discourage speculative trades, it is not all clear that this is the case. If Matsui Securities truly thought that the prohibition of net settlement obstructed its ability to meet the legal trading needs of its clients, it would make much more sense for it to directly challenge the justification of the net settlement prohibition, rather than push for a PTS operated on the basis of proprietary settlement rules that inevitably make the market less efficient.

3) Impact on existing exchanges

Will the launch of night-trading PTS really have an impact on the exchanges? One possibility is that orders that would previously have been left within the internal systems of securities firms will be processed at night, thereby reducing the amount of orders processed at market opening. In my opinion, however, the likelihood of this happening is not very high. The competition to garner stock trading orders is not a zero sum game in which competitors fight over a predetermined, limited number of orders. It seems likely that the trading of stocks at night would actually create new trading demand, with stocks bought at night being sold at the opening and vice versa. It is also conceivable that if there is an expansion of night trading, the price movements that occur at night would have an affect on price formation at opening.

It is interesting that kabu.com Securities elected to open its PTS in Fukuoka. The location decision was probably based on a number of different considerations, including the ability of Fukuoka to serve as a backup center to computers located in Tokyo, but we do not dismiss the possibility that it might aimed at replicating what occurred in the US, where Archipelago made use of the self-regulatory organization of the Pacific Stock Exchange as it developed into an exchange.