

2009 la^kkyara

Kyara, which means "precious" in ancient Japanese, is an aromatic resin regarded as the highest quality of all agarwood. "lakkyara [la-ká-la]" aims to deliver the same quality as Kyara together with NRI's endeavour for continuous excellence and innovation to provide the most advanced and up-to-date information to our readers worldwide.

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Special Edition

**Equity Trading at
Japanese Asset Management Firms: 2009**

Introduction

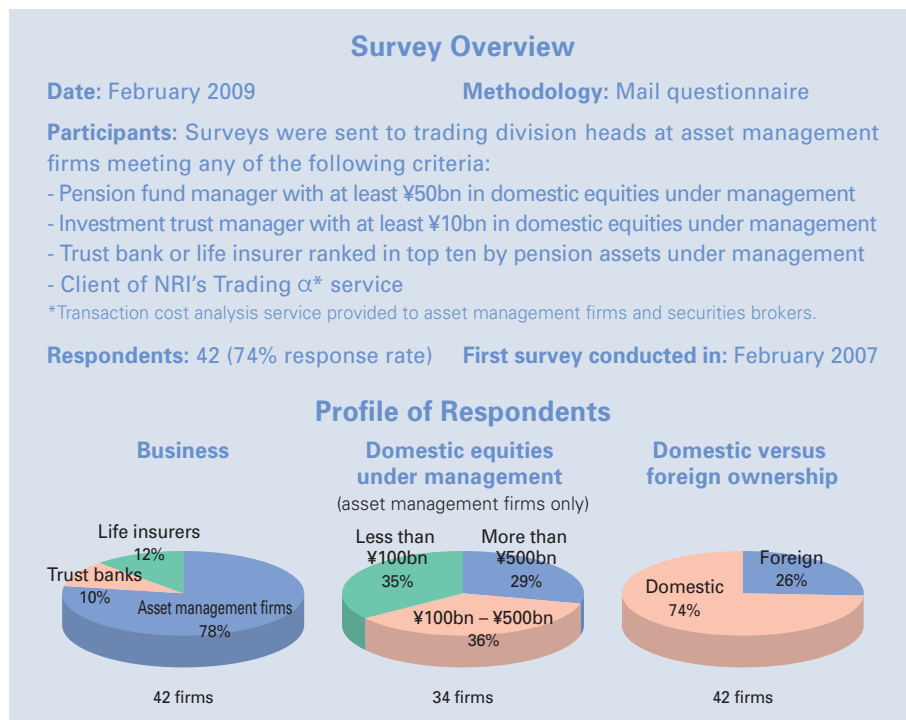
In February 2009 the Nomura Research Institute conducted its second survey of equity trading at Japanese asset management firms. The survey targeted trading division heads at 57 companies, including investment advisory firms, investment trust managers, life insurance companies, and trust banks. Forty-two of the 57 firms agreed to participate.

This report contains three sections: a special topic, a detailed presentation of survey results, and terminology glossaries. The special topic focuses on alternative trading systems in Japan, a key focus of the survey. The presentation of results examines survey findings on five topics—alternative trading systems, trading systems, algorithmic trading and DMA, transaction cost analysis, and broker services—and discusses their implications. The glossaries explain key terms.

We hope this report provides a window onto equity trading in Japan and contributes to the future development of the capital markets.

Masashi Amano

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Nomura Research Institute
August 2009





Solid growth prospects for ATS in Japan

The diversification of trading techniques enabled by IT advances has dramatically altered the buy-side business environment in Japan, much as it has in the US and Europe. In response to these changes, Nomura Research Institute initiated a series of surveys to shed light on the current state of trading operations in Japan.

The second of these surveys was conducted in February 2009 and focused on alternative trading systems (ATS), which have drawn much attention as more firms make use of DMA (Direct Market Access) and algorithmic trading. The survey revealed for the first time that many asset management firms seek a larger role for ATS.

What is an alternative trading system?

Alternative trading system, or ATS, is a catch-all term for trading venues other than regulated exchanges like the Tokyo Stock Exchange (TSE) or Osaka Securities Exchange (OSE). Common alternative venues include real-time matching systems, block-crossing systems, and broker dark pools (Exhibit 1). By selectively routing business to the type of ATS best suited to specific orders, asset management firms can benefit from fast, low-cost executions.

Like exchanges, real-time matching systems are “displayed markets” that show bid and ask quotes¹⁾, and trades are executed similarly. Equities traded in these systems tend to be

highly liquid. Two characteristics that differentiate them from exchanges are execution speed and minimum tick size²⁾.

A block-crossing system is a non-displayed market in which bid and ask quotes are not shown and execution prices are determined based on exchange prices or negotiations between counterparties. Market participants use block crossing mainly to execute large (block) orders without alerting others of their intentions.

Broker dark pools are operated by securities brokerages executing stock trades on behalf of clients. They are non-displayed markets where prices are set based on exchange-traded prices. In Japan, broker dark pools are offered mainly by foreign brokerages.

Good prospects for future growth

The survey indicated that one in four asset management firms uses ATS on a regular basis (Exhibit 2). Broker dark pools are used by roughly 80% of the ATS users, while none of the surveyed firms said they use real-time matching systems. ATS is still in the early adoption stage, but broker dark pools have taken the lead for now.

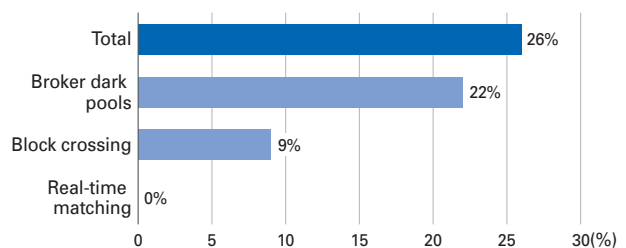
We expect use of ATS to increase going forward. More than

Exhibit 1. Alternative trading systems

Type	Displayed markets	Non-displayed markets		
	Regulated exchanges	Alternative trading systems (ATS)		
		Real-time matching	Block crossing	Broker dark pools
Examples	TSE OSE	Instinet CBX, kabu.com PTS, SBI Japannext	JapanCrossing Liquidnet BlockSec	CrossFinder, PIN (UBS), BIX

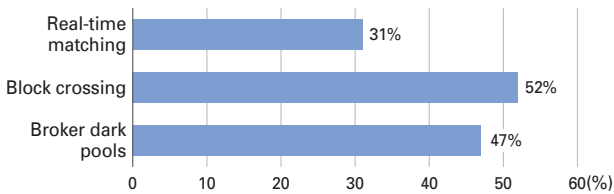
Source: NRI

Exhibit 2. Use of alternative trading systems



Source: NRI

Exhibit 3. Firms intending to use ATS more often



Source: NRI

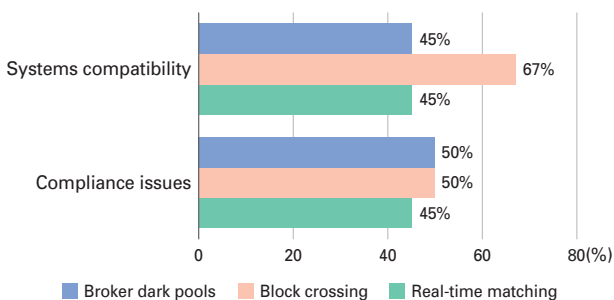
half the firms surveyed said they hoped to make greater use of block-crossing systems (Exhibit 3).

ATS environment is taking shape

The survey also revealed a number of obstacles to wider acceptance of ATS. Many respondents reported that all types of ATS pose problems in terms of (1) systems compatibility and (2) compliance (Exhibit 4).

Systems compatibility refers to the fact that asset management companies' computer systems were designed to execute trades only via exchanges. However, this is not an insurmountable problem—it simply requires an investment of time and money to modify existing systems. Leading asset management firms are already taking steps to make their systems compatible with ATS, whether through the development of proprietary systems or the purchase of vendor solutions.

Exhibit 4. Obstacles to ATS usage



Source: NRI

The other key compliance-related problem is the need to document that ATS trades are executed at fair prices. The standard practice in Japan is to treat exchange prices as fair prices. Asset management companies acting in a fiduciary capacity must be able to demonstrate that their execution prices are fair, but there is no industry-wide consensus, even among sponsors, on how to do this. Many firms have refrained from using ATS specifically for this reason.

Trading cost analysis (TCA) offers one solution to this problem. With TCA, an asset manager can verify and document the fairness of an execution price on an ATS by comparing it with concurrent exchange-traded prices. When block crossing is used to purchase shares at a negotiated price, those negotiations can be based on an estimated market price adjusted to factor in market impact. Even if an asset manager decides to pay a premium to the exchange-traded price because of liquidity considerations or market conditions, the price can be justified as long as it is less than the estimated price.

Creative solutions like these can help overcome the obstacles noted above and create an environment conducive to the use of ATS. We think the time has come for asset management companies that have been reluctant to use ATS to take another look at the potential benefits of such venues.

Note

1) Bid/ask quotes show the price and quantity at which prospective buyers and sellers are willing to trade. The highest quoted bid price is called the best bid; the lowest quoted ask price, the best ask.

2) Minimum tick size is the minimum price increment. On the TSE, for example, stocks with a share price in the ¥50,000–300,000 range are priced in increments of ¥100.

Survey results 1: Alternative trading systems

Survey results 1 Alternative trading systems

Japanese asset managers are not active users of alternative trading systems. Approximately a quarter of the respondents said they use ATS, with broker dark pools being the most common. Fewer than 10% use crossing networks regularly, and none were frequent users of real-time trading platforms.

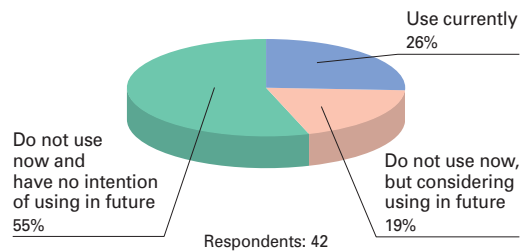
A key factor hindering growth is systems compatibility—the computer systems were simply not designed to work with non-exchange markets. There is also a compliance issue: the standard practice in Japan is to treat exchange prices as fair prices, and many asset management companies believe that when using ATS they must offer proof that execution prices were fair.

Nonetheless, asset managers seek a greater role for ATS and hope it will help them achieve best execution. Almost 80% of the firms surveyed would like ATS to offer at least a tenth of the liquidity currently provided by the TSE.

One in four firms use ATS

Twenty-six percent of respondents said they use ATS, and 19% said they are considering doing so.

Exhibit 1-1. Use of ATS

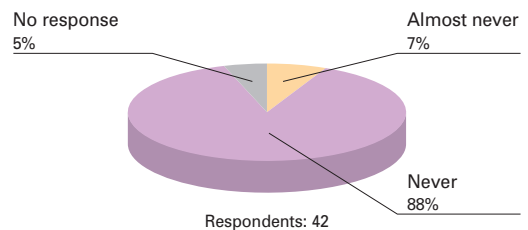


Source: NRI

Over one fifth use broker dark pools regularly

None of the firms surveyed were regular users of real-time matching. Nine percent said they use block-matching systems on a regular basis, and 22% said they use broker dark pools, although this figure is thought to include firms placing orders using algorithmic trading.

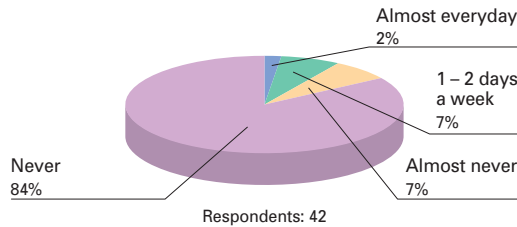
Exhibit 1-2. Use of real-time matching



Source: NRI

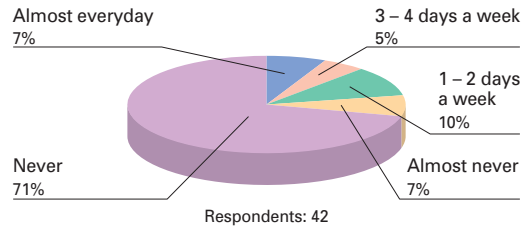
Survey results 1: Alternative trading systems

Exhibit 1-3. Use of block-crossing systems



Source: NRI

Exhibit 1-4. Use of broker dark pools

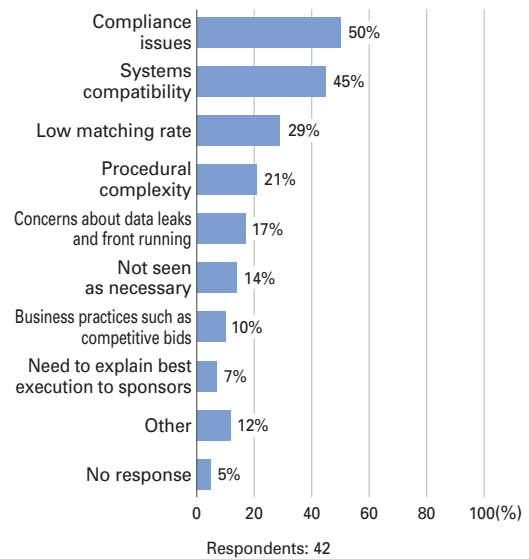


Source: NRI

Biggest obstacles are systems compatibility and compliance

The greatest obstacles to the use of all types of ATS are systems compatibility and compliance issues.

Exhibit 1-5. Obstacles to greater use of broker dark pools (multiple response)

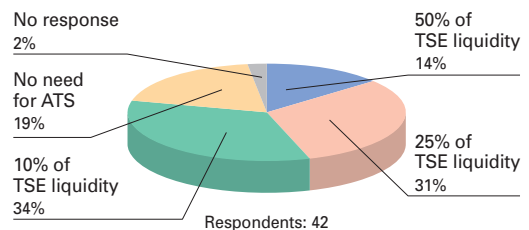


Source: NRI

Eighty percent seek greater role for ATS

Almost 80% of firms look forward to the growth of ATS and hope they will offer at least a tenth of the liquidity currently provided by the TSE.

Exhibit 1-6. Hopes for growth of ATS



Source: NRI

Survey results 1: Alternative trading systems

Glossary: Dark pools

A dark pool is a service that matches buy and sell orders without displaying order information. Both block-crossing systems and broker dark pools fall into this category.

Dark pools have become a key tool for institutional investors seeking to execute large orders in illiquid issues. However, the comparatively limited order volume in these pools means there is no guarantee that trades will be executed. It is therefore a common practice to use existing exchanges when trading medium- or high-liquidity issues or when execution speed is paramount, leaving dark pools for trades involving illiquid issues when the focus is on execution price.

Orders from institutional investors can represent a substantial portion of the total trading volume in a given issue and can move the price by affecting the behavior of other market participants. Getting a better execution price therefore requires that order information not be disclosed to other parties. Dark pools are used by many institutional investors because they offer anonymity and make it possible to execute large

orders without triggering unexpected price fluctuations.

A growing number of securities brokers in Japan are managing their own dark pools and offering “broker dark pools” (or in-house crossing services) to match up customer orders before sending them to an existing exchange. The Table below lists the broker dark pools currently in operation. By making it possible for investors to trade between the bid-ask spreads on exchanges, these pools provide a key service to institutional investors.

Exhibit. Broker dark pools in Japan

Broker	Dark pool
Goldman Sachs Securities	SigmaX
UBS Securities Japan	PIN (Price Improvement Network)
BNP Paribas Securities	BIX (BNP Internal eXchange)
Credit Suisse Securities	CrossFinder
Morgan Stanley Japan Securities	MS Pool
Merrill Lynch Japan Securities	MLXN (Merrill Lynch X-ing Network)

Source: NRI

Survey results 2: Trading systems

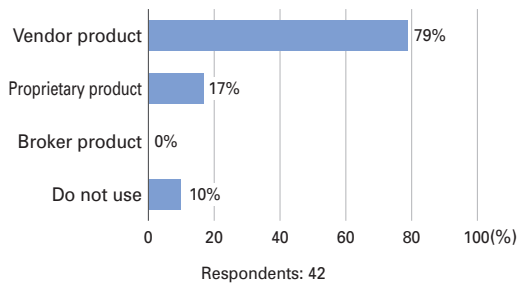
Survey results 2 Trading systems

Ninety percent of the asset managers surveyed use order management systems (OMS), while only about 40% use execution management systems (EMS). The largest reason for not using EMS was that OMS packages provided all necessary functionality. Other reasons included cost and systems compatibility.

Nearly all asset managers use OMS

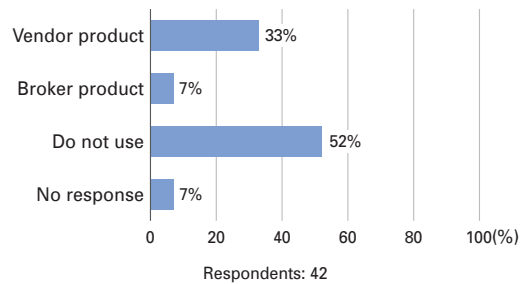
Roughly 90% of all asset managers use OMS, while 40% use EMS. Firms generally use vendor products.

Exhibit 2-1. Firms using OMS (multiple response)



Source: NRI

Exhibit 2-2. Firms using EMS

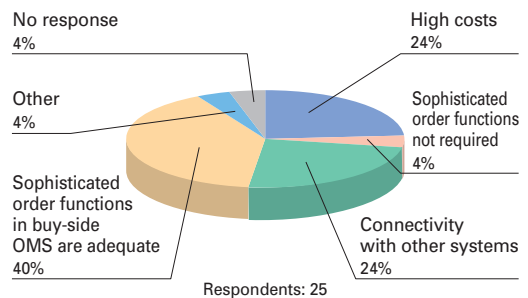


Source: NRI

Only 40% use EMS because of advances in OMS

Fully 40% of those who did not use EMS cited the fact that OMS packages were sufficiently advanced.

Exhibit 2-3. Reasons for not using EMS



Source: NRI

Survey results 3: Algorithmic trading and DMA

Survey results 3 Algorithmic trading and DMA

Algorithmic trading has become established as a standard trading technique and continues to grow. Half the firms surveyed use it on a regular basis.

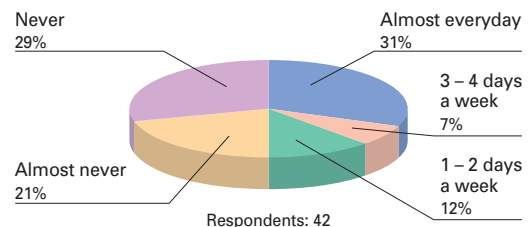
VWAP remains the most commonly used strategy. However, given the focus on minimizing implementation shortfall as a cost metric, IS and Arrival Price were singled out as strategies firms would like to use in the future. There is also growing interest in algorithms such as Guerilla and Snipe designed for trading in extremely illiquid issues. Algorithmic trading has gone beyond its original role as a simple tool for automatic trading and is increasingly becoming an execution strategy.

The survey also asked participants about the impact of the recent financial turmoil on their use of algorithmic trading. There have always been concerns about the effectiveness of algorithmic trading in market conditions that differ materially from the past, because these systems time trades based on a statistical analysis of historical market trends. The survey findings confirmed these fears, with 70% of respondents indicating that algorithms did not function effectively during periods when price fluctuations were far greater than in the past. However, only about 20% of respondents did not resume using algorithms after market conditions returned to normal. That the majority of firms continue to use algorithms suggests that most firms understand its limitations.

Half of all firms use algorithms on a regular basis

Half of all respondents said they use algorithms at least one day a week.

Exhibit 3-1. Use of algorithmic trading



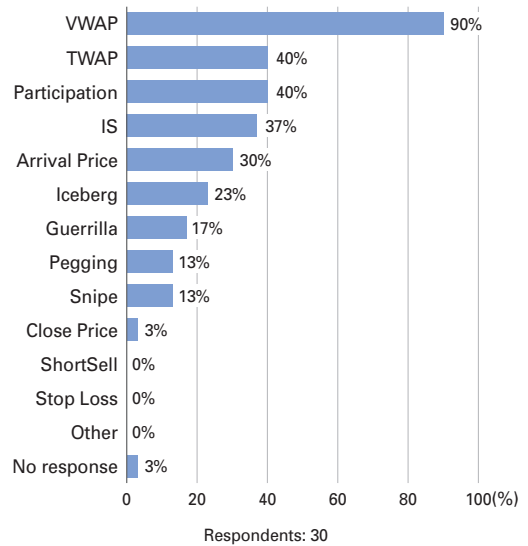
Source: NRI

Survey results 3: Algorithmic trading and DMA

Many firms still use VWAP

Of the firms using algorithms, 90% said they used VWAP. Other commonly used strategies included TWAP and Participation (see the Glossary on page 12 for an explanation of various algorithmic trading strategies).

Exhibit 3-2. Trading algorithms in use (multiple response)

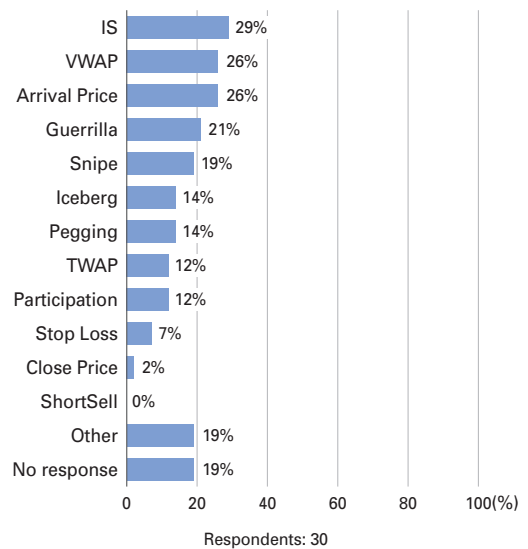


Source: NRI

Many firms looking at IS and Arrival Price

Many respondents said they would like to use IS or Arrival Price strategies in the future. They also indicated growing interest in algorithms such as Guerilla and Snipe, which are designed for trading in extremely illiquid issues.

Exhibit 3-3. Trading algorithms firms would like to use (multiple response)



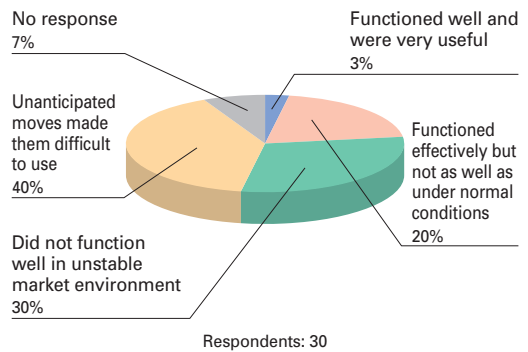
Source: NRI

Survey results 3: Algorithmic trading and DMA

70% of firms questioned effectiveness of algorithms during financial turmoil

Seventy percent of respondents said that algorithms either did not function effectively or were difficult to employ during the recent period of market instability.

Exhibit 3-4. Assessment of algorithms during financial turmoil

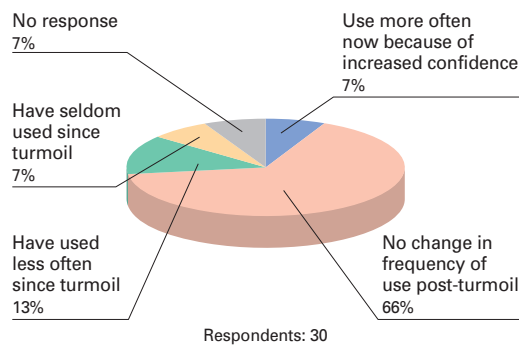


Source: NRI

But many investors have resumed using algorithms

Since market conditions have stabilized, however, many investors have resumed using algorithmic trading. Only about 20% said they have discontinued the use of algorithms.

Exhibit 3-5. Use of algorithms at present



Source: NRI

Survey results 3: Algorithmic trading and DMA

Glossary: Algorithmic trading

Algorithmic trading is a service provided by securities brokers for their institutional investor clients. It uses computers to execute trades automatically based on predetermined rules. Executing large orders from institutional investors all at once can move prices substantially, making it impossible to buy or sell the desired quantity at the expected price. Such orders were traditionally broken down into small lots that were executed piece by piece. Algorithmic trading uses computers to automate the execution of these split orders, which used to be done manually.

Institutional investors have a wide range of execution needs. Traditionally those needs were communicated to the broker using such expressions as “as fast as possible,” “slow down if the price rises,” and “buy more if there is enough volume.” With algorithmic trading, such needs are expressed in the selection of a strategy. The broker offers a number of strategies and explains them to the institutional investor client, which then

chooses the strategy best suited to its needs.

Algorithmic trading offers numerous benefits to institutional investors, including (1) the ability to achieve consistently good executions because execution expertise has been distilled into rules, (2) a high degree of anonymity, because the data does not pass through human hands, (3) the absence of any ambiguity in execution instructions because investors choose strategies themselves, and (4) cheaper commissions than on trades executed by human traders. That said, taking advantage of algorithms requires that institutional investors have the expertise necessary to use them properly.

Merits of algorithmic trading for brokers include the ability to (1) process large quantities of orders without hiring more traders, (2) distill the expertise of talented traders into algorithms and share it across the company, and (3) attract new customers interested in algorithmic trading.

Exhibit. Overview of popular algorithms and strategies

Algorithm	Strategy description
VWAP	Average execution price should be close to (or better than) VWAP
TWAP	Average execution price should be close to (or better than) TWAP
IS	Minimize cost as calculated from implementation shortfall, taking into account market impact and timing risk
Arrival Price	Minimize disparity between average execution price and price when order was placed
Participation	Execute trade without exceeding a given percentage of market volume
Close Price	Minimize disparity between average execution price and closing price, taking into account market impact and timing risk
Iceberg	Break off one piece of a larger order and disclose only that piece to the market, automatically revealing the next piece only after that piece has been absorbed
Guerrilla Snipe	Do not disclose the order to the market, executing order only when the requisite bid or offer emerges
Pegging	Peg order price to best quoted price
ShortSell	Created in response to restrictions on short-selling
Stop Loss	Place order to buy when price rises above specified stop loss and sell when it drops below stop loss

Source: NRI



Survey results 4: Transaction cost analysis

Survey results 4 Transaction cost analysis

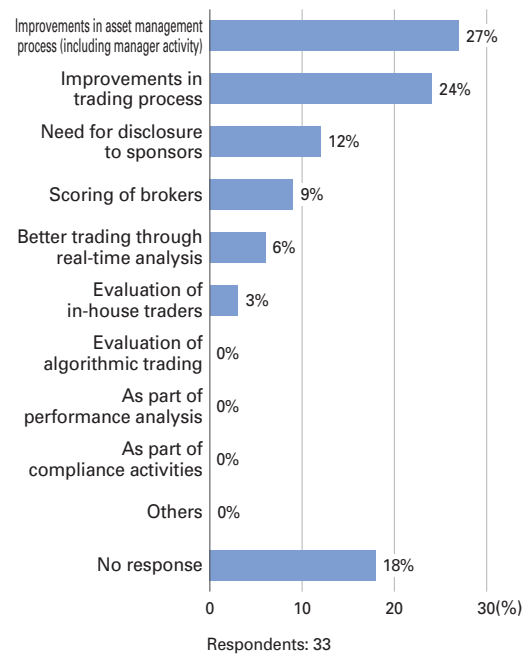
Fully 80% of Japan’s asset managers use trading cost analysis (TCA). Most of these firms make use of vendor solutions for both pre- and post-trade analysis, although some use proprietary tools for post-trade analysis.

The key reason cited for using TCA was to improve the entire asset management process, with firms using it to raise performance, including that of fund managers. The most common reason for not using TCA was cost, indicating a large disparity in views between firms that are using TCA and firms that are not.

Main reason for using TCA: process improvement

The most common reasons noted for using post-trade analysis were improvements in the asset management process (27%) and improvements in the trading process through post-trade reviews (24%), followed by disclosure to sponsors (12%).

Exhibit 4-1. Biggest reason for using post-trade analysis



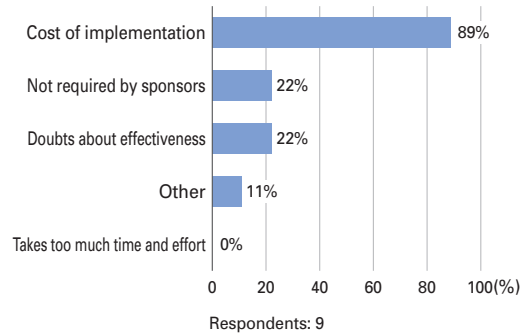
Source: NRI

Survey results 4: Transaction cost analysis

Main reason for not using post-trade analysis is cost

Fully 90% of companies not using post-trade analysis said the main reason was cost.

Exhibit 4-2. Reasons for not using post-trade analysis (multiple response)

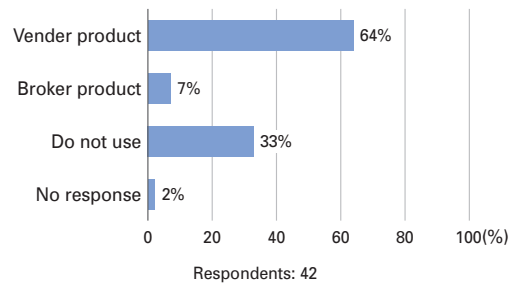


Source: NRI

Most firms using TCA rely on vendor solutions

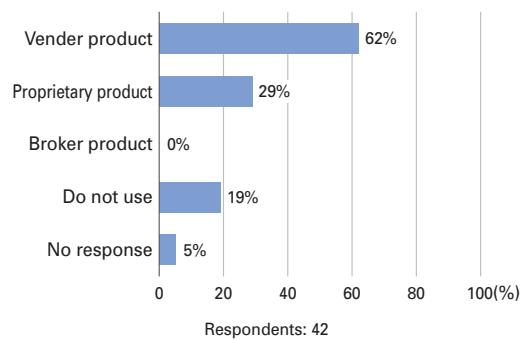
Vendor solutions are used for almost all pre-trade analysis and most post-trade analysis, although some firms use proprietary systems for the latter.

Exhibit 4-3. Use of pre-trade analysis (multiple response)



Source: NRI

Exhibit 4-4. Use of post-trade analysis (multiple response)



Source: NRI

Survey results 5: Broker services

Survey results 5 Broker services

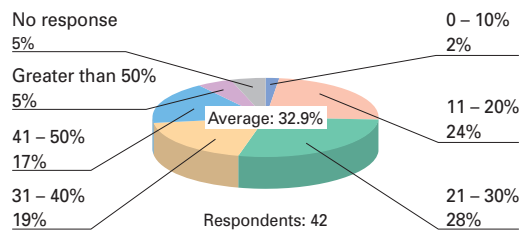
Asset management firms conduct quarterly or semi-annual scorings of their brokers to help decide how commissions should be distributed. They typically focus on two main areas: execution and research. Firms on average gave a 30% weighting to execution.

Respondents also indicated that commissions varied widely with execution method. Algorithmic trading and DMA have apparently become well established as low-cost execution methods. Compared with discretionary orders, DMA and algorithms can keep commissions down by eliminating the need for human intervention.

Firms give 30% weighting to execution when evaluating brokers

Asset management firms assigned an average weighting of 32.9% when assessing broker services. This is largely unchanged from the previous survey.

Exhibit 5-1. Weighting of various factors in evaluating brokers



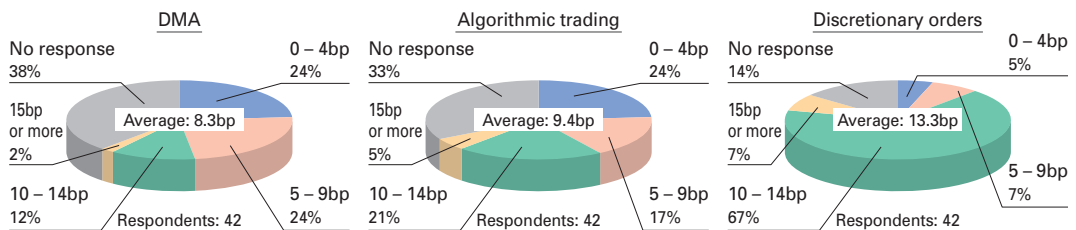
Source: NRI

Commissions vary greatly by execution method

Commissions were lowest for DMA orders, averaging 8.3bp, followed by algorithmic trading at 9.4bp and discretionary orders at 13.3bp. The greater variance in commissions for DMA and

algorithmic trading is attributable to the fact that some asset management firms included research costs in commissions, while others did not.

Exhibit 5-2. Commissions by execution method



Source: NRI



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