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Current state of brokers' back-office systems serving foreign institutional investors in Asia

Nomura Research Institute, Ltd.

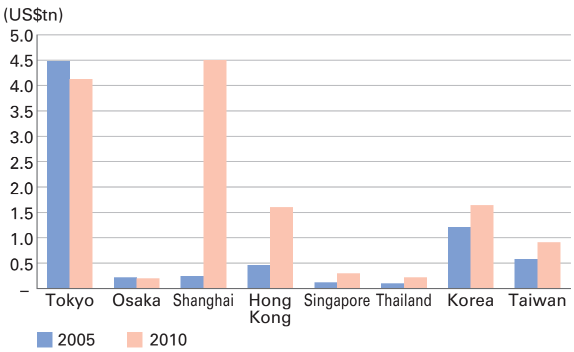
In Asia, trade orders from foreign institutional investors have historically been routed to their destination market through Hong Kong or Singapore. Recently, with trading volume growing throughout Asia, brokers are increasingly upgrading their computer systems even in markets other than Hong Kong and Singapore.

Asian markets differ in terms of participant mix

The Tokyo Stock Exchange (TSE) and Osaka Securities Exchange's (OSE) annual trading value (i.e., volume in value terms) decreased modestly between 2005 and 2010. Over the same timeframe, Asian equity markets' trading value grew markedly, most notably at the Shanghai Stock Exchange (see Exhibit below). Even at the Hong Kong Stock Exchange, annual trading value rose to nearly half that of the TSE as of 2010. Meanwhile, the Singapore Exchange and Stock Exchange of Thailand have eclipsed the OSE in terms of trading value. The drivers behind such recent growth in Asian exchanges' trading volumes include growth in the local investor class and expansion of equity investment products such as ETFs and mutual funds.

The Asian markets now gaining prominence are distinguished from each other in certain respects such as their trading value's distribution by investor type (i.e., domestic versus foreign, institutional versus retail). In Singapore and Hong Kong, foreign institutional investors account for 60–70% and slightly over 40% of trading value, respectively. Domestic retail investors' share of these markets' trading value is slightly over 30% and around 20%, respectively. These two markets' investor mix reflects that both are relatively transparent and liberalized as financial infrastructure. In Korea and Taiwan, by contrast, foreign institutional investors' share of trading value has fallen to the vicinity of 20% in the wake of growth in domestic retail investors' share of trading value. In mainland China, domestic investors' share of trading value is nearly 90%.

Exhibit. Asian stock exchanges' annual trading volume in value terms



Source: NRI, based on World Federation of Exchanges data

In markets where foreign institutional investors account for a large share of trading value, such as Hong Kong and Singapore, foreign brokers (investment banks) account for a larger share of order flow. In Hong Kong, where brokers are classified into three tiers, the 15 top-tier brokerages are all major US, European, or Japanese brokers. These 15 brokers account for 65% of order executions by value. In Singapore, the major local brokers are larger than their counterparts in Hong Kong, but foreign brokers' activities nonetheless have a similarly large influence.

In Korea and Taiwan, where domestic retail investors account for large shares of trading value, foreign brokers' operations are small in scale. While foreign brokers' limited presence in Taiwan and Korea partly reflects regulatory barriers to market entry, it is primarily attributable to a relative dearth of local demand for their services from foreign institutional investors, their main customers. Foreign brokers have accordingly set up subsidiaries or branches in Taiwan and Korea on a scale commensurate with foreign institutional investors' demand level.

Foreign brokers use Hong Kong or Singapore as an Asian hub

Such being the case, what do foreign institutional investors do when they want to trade equities in Asian markets other than Hong Kong or Singapore (i.e., markets in which foreign brokers do not have much of a presence)? With respect to Asian equities, many foreign brokers that serve globally active institutional investors manage customers' accounts in Hong Kong or Singapore. Such brokers route customers' orders to buy or sell Asian stocks through their Hong Kong or Singapore subsidiary/branch where the customer's account is managed.

For example, suppose a broker manages London-based customers' Asian equity trading accounts at its Hong Kong subsidiary. When customers place orders to purchase Malaysian or Indonesian stocks, the orders are forwarded to its Hong Kong subsidiary[1]. Since institutional investors' orders are often basket orders to trade index-constituent stocks, the Asian stocks traded by institutional investors are largely identical across customers. The broker's Hong Kong subsidiary bundles together customers' orders for the same stock and submits the order to a local broker under its own name. Upon receipt of the order, the local broker submits it to the stock exchange on behalf of the foreign broker's Hong Kong subsidiary, obtains an execution from the exchange, and transmits the trade execution information to the foreign broker's Hong Kong subsidiary. In the event of a partial execution, the foreign broker's Hong Kong subsidiary would allocate the executed quantity of shares among customers based on predetermined rules. After confirming the trade, the local broker settles and clears the trade with the stock exchange and/or local clearinghouse.

In sum, the order submission, execution, settlement and clearing functions are performed locally while account management functions, including reporting trade executions to customers and processing of dividend and rights transactions, are performed in Hong Kong or Singapore. Foreign brokers' Hong Kong or Singapore business units thus function as regional hubs in Asia. These regional hubs of course perform all functions in-house in their own local markets.

Back-office automation to spread beyond Hong Kong and Singapore

With foreign brokers' regional hubs in Hong Kong or Singapore thus performing a broad range of functions, including order routing, execution, settlement, clearing, and account management, they require computer systems capable of handling all such functions. Of particular importance are back-office systems that perform trade settlement/clearing and account management functions. Foreign brokers' computer systems must also fulfill peripheral functions such as reporting to local regulatory authorities and interfacing with local settlement/clearing institutions (e.g., Central Securities Depositories).

At their Asian regional hubs, foreign brokers (investment banks) use proprietary systems developed in their home country or systems supplied by global vendors such as Broadridge, SunGard, and Calypso. In recent years, however, certain European and Japanese brokers have adopted systems supplied by Australian or Indian vendors that are highly competitive in terms of price and local support capabilities. Peripheral (e.g., regulatory reporting) systems used by foreign brokers are likewise split between self-developed and vendor-supplied systems.

In Asian markets other than Singapore and Hong Kong (e.g., Malaysia, Vietnam, Indonesia), foreign brokers' back-office systems do not require account management functionality, even if the broker's local subsidiary in that market performs trade execution, settlement, and clearing functions in-house. Account management involves more complex processing than trade settlement/clearing. To the extent that account management functionality is not required, a lighter-duty system will suffice. Previously, foreign brokers performed order flow management, trade confirmation, and settlement confirmation functions using self-developed EUC (end-user computing) applications. However, such EUC systems were operationally similar to manual processing and became inadequate in the wake of two- to threefold growth in trading volumes. European, US, and Japanese brokerages have consequently begun using regional vendors' (functionally limited) systems. Additionally, major local brokerages that had hitherto been using simple self-developed systems have increasingly been upgrading to regional vendors' systems in recent years.

With Asian emerging markets gaining favor among foreign institutional investors as an investment destination, such markets are poised for a major wave of back-office automation.

Note

1) In some cases, even brokerages that manage customer accounts in Hong Kong may route orders through their Singapore subsidiary/branch if Singapore is closer to the order's destination exchange.

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