„Competition between Stock Exchanges“

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Outline.

• Overview: Centers of Stock Exchanges
• Basic Facts
• Selection Criteria for Stock Exchanges:
  Structural Selection Criteria
  Central Functions and Responsibilities of Stock Markets
6. Comparative Analysis of Six Global Exchanges
  Trading Volume
  Volatility
  Zero-Trade-Ratio
  Ranking
• M&A Activities of NASDAQ and NYSE Group
• Conclusion
• References
Overview – Centers of Stock Exchanges.

(1) New York
(2) London
(3) Tokyo
(4) Frankfurt
(5) Hong Kong
(6) Singapore
(7) Toronto
(8) Zurich
(9) Amsterdam
Stock Exchanges – Basic Facts.

**Definitions**

**Stock exchange:** Organized market for securities trading.

**Primary market:** Financial market for the initial issue and placement of securities.

**Secondary market:** Financial market for trading securities that have already been issued.

**The role of stock exchanges:**

- Raising capital for businesses
- Facilitating company growth
- Creating investment opportunities for small investors
- Government capital-raising for development projects
- Barometer of the economy
Selection Criteria for Stock Exchanges.

- Reputation of a stock exchange
- Requirements by stock exchange
- Communication with the capital market (trading focus: Domestic Market)
- Image of a company
- Range of analysts
- Tax/legal advantages in the country of the stock exchange
- Merger, subsidiary is based in another country

- Structural criterias
- Central functions and responsibilities of stock markets
Structural Selection Criteria.

- **Goods traded**
  - Commodity Exchanges
  - Derivatives Exchanges
  - Securities Exchanges
  - Currency Exchanges

- **Organization**
  - Floor trading
  - Computer-based trading

- **Type of transaction**
  - Derivatives Market
  - Cash Market

Competition between Stock Exchanges
Central Functions and Responsibilities of Stock Markets – Key Driver for Competition.

- **Liquidity**
  - bundling of liquidity by concentrating supply and demand

- **Transaction Costs**
  - making available cost-effective trading platforms

- **Fungibility**
  - guaranteeing the fungibility as well as the identical structuring of a particular category of security (trading standards)

- **Transparency**
  - ensuring the greatest possible transparency for investors
High Trading Volume helps build Liquidity.

Daily Trading Volume per Stock for Main Markets

- The average value of the stock traded for each company listed on Deutsche Börse's main market is USD 41.85 million.
- Although less than the average value of turnover on the LSE and NYSE, it is higher than the levels seen on the main markets of Euronext, the HKSE and NASDAQ.
The Impact of Volatility.

Stock Return Volatility for Main Markets

- The volatility of firms listed on Deutsche Börse's main markets (2.79%) is significantly lower than that for large-cap companies listed on the HKSE and NASDAQ.
- The volatility not as low as that found on Euronext, the LSE and the NYSE.

Source: deutsche-boerse.com
Zero-Trade-Ratio – A Measure of Poor Liquidity.

The zero-trade-ratio (ZTR) is a measure of inactivity and it is calculated on a daily basis to show how many stocks listed on an exchange have no turnover.

- The ZTR of Dt. Börse is far lower than that on other main markets.

Source: deutsche-boerse.com
# Competition between Stock Exchanges

## Ranking of the six global Exchanges.

### Ranking for main and alternative markets

<table>
<thead>
<tr>
<th>Market Type</th>
<th>Rspread</th>
<th>TVO/MV</th>
<th>VOL</th>
<th>ZTR</th>
<th>IPO-TFC</th>
<th>SEO-GS</th>
<th>Admission Fees</th>
<th>Listing Fees</th>
<th>Overall Score</th>
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<tbody>
<tr>
<td><strong>Main Markets</strong></td>
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Rspread = Relative Spread, TVO/MV = Trading Volume/Market Value, VOL = Volatility, ZTR = Zero-Trade-Ratio, IPO-TFC = Initial Public Offering-Total Flotation Cost, SEO-GS = Season Equity Offering-Gross Spread (Gross Spread refers to the underwriting fee). These parameters are explained further in this brochure.

Source: deutsche-boerse.com

1) There is no differentiation between main markets and alternative markets at the NYSE and NASDAQ; small and large segments for companies with market capitalizations of less and more than EUR 100m respectively were created. This was only used for analysis of the initial total flotation costs. For the other parameters no distinctions were made and the same values were taken for both segments.
M&A Activities of NASDAQ and NYSE Group.

Latest Announcements as of May 25, 2008

NASDAQ may consider bidding for LSE. NASDAQ is reconsidering a bid following sharp falls in the LSE’s share price. NASDAQ had never dropped its interest in a merger with the LSE. The LSE has a market cap of around GBP 3.15bn (USD 7bn).

M&A Press as of January 1, 2007

A consortium of investors led by NYSE Group, Inc, the listed US based provider of securities listing, trading and market data products and services, has agreed to acquire a collective 20% stake in The National Stock Exchange of India Limited (NSE), the Indian securities trading exchange, from a consortium of promoters, for a consideration of USD 460m.

M&A Press as of October 25, 2006

NYSE Group Inc., has agreed to acquire 33.33% stake it did not already hold, in Securities Industry Automation Corporation (SIAC), the US based company which develops, implements and manages a variety of automated information-handling and communications systems, from American Stock Exchange LLC (AMEX), the US based exchange market, for a consideration of USD 40m. The acquisition of SIAC will give NYSE access to the cost base, allowing improved efficiencies and growth.

M&A Press as of June 2, 2006

NYSE Group Inc. has agreed to merge with Euronext (Dutch stock exchange formed as a result of the merger of the Paris, Amsterdam and Brussels Bourses). Value EUR 7,473m

Source: M&A press Mergermarket.com as of May 25, 2008; January 1, 2007; October 25 and June 2, 2006;
Conclusion.

- Competition between stock exchanges is important to keep down transaction costs and to rise the pressure for innovations.
- Development of a multipolar world – New global players beside USA, Europe and Japan.
- Cross consolidations beyond continents and asset classes: transatlantic merger, merger of derivatives and cash markets, alliances of European and US exchanges with Asian exchanges.
- Rising pressure on small and medium-sized stock exchanges.
- More transparency and safety for investors (new legal frameworks).
- Closer price spread.
- Rising variety of trading platforms.
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World Federation of Exchanges

Annual Report 2007
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