

Key trends in the market data sphere

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In this talk I'm going to look at the factors that are currently driving the market data industry, the trends that are evident as a result, and survey the competitive landscape for exchanges – still the main providers of market data, despite the rapid changes that I will describe. In particular, I'll look at the implications of the global search for liquidity, and address the issue of how we can maintain market quality when things are changing so fast.

I've identified four key industry drivers at the present time: the related issues of 'network effects' and liquidity; technology; regulation; and globalisation.

The network effect identified by economists is the phenomenon whereby a service becomes more valuable as more people use it. In the case of an exchange, we can see that more users results in a larger pool of liquidity. This makes it easier to match orders, which results in lower bid/ask spreads, which in turn attracts more users – and so on. This virtuous spiral is one that every exchange or trading location aims for and it shows that, for an exchange, liquidity is critical to success. We'll come back to this issue later.

The rapid changes in technology have had and are having many effects. Key among these are the shift from floor-based trading to electronic trading. Other effects made possible by new technology have included the growth of cross-border trading alliances, improved clearing and faster, cheaper settlement. These changes have helped to encourage increased volume and reduced trading costs.

At the same time, exchanges and their customers are having to cope with the effects of regulation, which has tended to become more far-reaching as the authorities strive to rebuild faith in the markets. This can affect an exchange's ability to operate cross-border because of the expense of complying with different domestic regulatory regimes. Regulators may dictate the trading information that must be disclosed by exchanges – with obvious effects on the availability of market data. Regulators may also impose restrictions on the ability of customers to use trading systems outside the principal markets, such as ATs and ECNs. The growth of such systems, and the many other changes taking place in the markets, present significant challenges for the authorities – and it would not be surprising if they sometimes struggled to keep up with the pace of change.

Finally, globalisation is inevitably affecting how exchanges operate. Many exchanges are pointing out to companies the advantages of a foreign listing, such as raised profile and an increased investor base. The NYSE and LSE have been the most successful in attracting foreign companies in numerical terms, whilst Euronext and Deutsche Börse have the highest proportion of foreign listings. Other aspects of globalisation have been the trend towards cross-border trading and global tie-ups between different exchanges.

So what are the current trends in the industry? I've picked out three. First, the rapid move amongst previously mutual organisations owned by their members to a corporate structure, ownership by shareholders and, ultimately, to a stock exchange listing. Second, the phenomenon of disintermediation. And third, the entry of new players. I'll also look at the response of existing industry participants to these changes.

First demutualisation, which has grown rapidly in popularity since the Stockholm SE took this course in 1993. Many of the largest European exchanges have taken this route, and the US exchanges are starting to follow suit. The effect of this has been to increase competition, especially cross-border as exchanges seek to expand outside of their home markets to increase volume and liquidity. The same pressure is keeping the lid on listing fees and trading costs – but this in turn increases the pressure on exchanges to increase their income from other sources.

Disintermediation is the process whereby the need for brokers is being eliminated by direct access trading systems. This move has been facilitated by technological changes, and by demutualisation – exchanges that are no longer answerable to their members do not have to consider the interests of those (former) members when introducing new systems that compete with them. This should reduce trading costs. But it also encourages the larger intermediaries to fight back by establishing systems to settle deals in competition with the exchanges. This also has implications for market data, as we'll see later.

Exchanges have also had to cope with the emergence of new players, especially during the boom days at the end of the last decade. By 2001 alternative trading systems (ATSS) and electronic communication networks (ECNs) had captured over 30% of the volume in Nasdaq-listed stocks. This early rapid growth was followed by a period of consolidation, and the bear market has reduced the number and influence of these new systems. Moreover, the new systems have had less impact in Europe where the equity markets were already largely automated.

So how have the existing markets responded to these changes? One response has been consolidation, as seen by the merger of the Amsterdam, Paris, Brussels and Lisbon exchanges to form Euronext, or the formation of TSX Group from the Canadian cash exchanges. Other exchanges have diversified. Deutsche Börse now has a derivatives arm in Eurex and a clearing arm in Clearstream; Euronext has also expanded its derivatives business by acquiring LIFFE. Finally, exchanges have invested yet more heavily in automation and new technology, speeding the move from floor-based to electronic trading.

So given these rapid changes, what does the competitive landscape look like at the moment? Nasdaq still lists the largest number of companies, followed by London, New York and Tokyo. But in terms of capitalisation, New York is a long way ahead, with Tokyo, Nasdaq and London evenly matched. Volumes have fallen on all exchanges – especially on Nasdaq – but the decline has been nowhere near as dramatic as the drop in index values.

As mentioned earlier, the new trading systems are now in a period of consolidation after their former rapid growth. Internalisation, however, may be a growing threat and, by reducing the order flow through exchanges, may affect the distribution of market information. What the EU's proposed Investment Services Directive calls multilateral trading facilities (MTFs) are most common in Europe where there is no established exchange. Many are devoted to bond trading, and in equities tend to offer services not provided by the organised exchanges such as out-of-hours trading.

At present, many exchanges act as consolidators and distributors of data from their participants (the investment firms). They pass the information from these participants to information vendors, who in turn make it available to market participants. The exchanges are able to charge participants for contributed prices, trades executed and trade reporting, and to charge vendors for supplying the information to them.

In the future, there is likely to be a wide range of distribution options, potentially bypassing the exchanges. Investment firms and other entities that have trade information from ECNs or MTFs that they operate, or from internalisation of orders, will be able to distribute information through an exchange – but they will also be able to do so directly to a vendor, or directly to market participants through their own distribution channels. In principle, they could make charges for this information to the exchange, vendor or end user.

What effect will this have on liquidity? As we have seen, technological advances, permitting development of systems such as MTFs, and regulatory changes, such as the new ISD, are combining to facilitate the development of more trading locations, and hence more data producers. The danger of this is that liquidity will be fractured, split between many different locations. This is likely to cause increased problems for investors, who must check in several locations to be sure of finding the best price, and increased costs for the industry.

We see combating this problem as being one of the key roles for companies such as Reuters in the coming years. Data vendors and integrators such as ourselves will combine price and trading information from many sources into ‘pools’ of liquidity, so that investors can obtain all the information they need from a single source.

Reuters may be able to address the information problems arising from these changes. But what can be done to ensure that market quality is maintained? MTFs and similar systems may not call themselves exchanges – but in effect that is what they are. As such they will (correctly) attract the attention of the regulators and will need to be able to demonstrate that they are operating effective surveillance systems, that they are able to monitor and regulate trading, and that they can spot potential market abuse.

There will also be implications for the vendors who are distributing the information from these trading locations. As a recent draft proposal from the UK FSA suggests, the regulators may impose responsibilities in the areas of, for example, data storage and monitoring the quality of the data received. All these changes are likely to increase costs for the industry.

So what are the options for maintaining market quality? The obvious solution is for every data producer to implement its own surveillance system, as exchanges do at the moment. However, with potentially tens of new trading locations, this will be expensive to implement, and expensive for the regulators to monitor.

An alternative approach, made feasible by modern information and communications technology, is to set up a centralised, hosted surveillance system. This would utilise a common infrastructure while allowing each exchange or MTF to establish its own trading rules and administer its own trading. Such a solution would give each trading location flexibility and independence, while maintaining market quality and reducing costs for the industry as a whole. Australia’s own SMARTS Ltd is one of the companies developing products and services in this area.

But how well placed are today's main data providers, the conventional exchanges, to meet these new challenges? Let's look at where they get their revenue from, and where it goes in costs.

Exchanges derive their revenue in a number of ways. Traditionally their main sources of income have been listing fees and fees for cash trading. More recently some exchanges have expanded into derivatives trading and provision of clearing and settlement services. In some cases the sale of systems, and the consulting and licence fees that go with these, have proved important. And then of course there are information products and the sale of market data.

It is interesting to see which exchanges are exploiting these opportunities. Looking at five of the largest exchanges – New York, Nasdaq, Deutsche Börse, Euronext and London – all earn revenue from listing fees and cash trading. Of this group only Deutsche Börse and Euronext have significant income from derivatives, clearing, settlement and systems – but all sell data.

Looking at a wider group of exchanges emphasises the importance of information as a source of revenue. Of the 15 exchanges shown here, 9 receive more than 10% of their revenue from information products, and 4 receive a quarter or more.

On the other side, the cost streams for exchanges fall into four main areas. Staff costs are driven by volumes and the level of automation, giving exchanges limited flexibility in the short term. Rent costs are determined by location and facilities, with flexibility limited to the medium and longer term. System costs are driven by innovation and competitive pressure, and of other costs, depreciation is driven by accounting policies. In summary, exchanges' ability to reduce their costs in the short term is severely constrained.

In this context, it is interesting to look at the recent trends in exchange revenues.

Over the five years from 1996 to 2001, trading and transaction revenues at 56 exchanges grew by 64%, with their share of total revenues increasing from 36% to 41%. However, the key driver of these revenues is trading volume, and these revenues have been hit substantially by the downturn in the market.

Service revenues, derived from clearing, settlement, information products and systems, also grew over the same period though by a somewhat lower 54%. Their share of total revenues increased slightly from 31% to 33%. However, of these, revenues from clearing and settlement are also driven by market volumes, and the scope for further growth is likely to be limited.

Looking at revenues from market information over the last three years confirms that this is a key part of revenue for many exchanges – especially for London.

So where does that leave the market data sphere today?

There's no doubt that the current economic environment is tough for everyone. A common response in such a situation is to try to expand into new areas – but strong competition makes such a response easier to plan than to make a success. To take one example, we only have to look at Nasdaq's decision last year to pull out of Nasdaq Europe and NQLX, formerly Nasdaq LIFFE.

This competition is only likely to grow, with technological advances and regulatory changes resulting, at least in the short term, in increasing numbers of trading locations and hence data producers.

The challenge for the industry is to protect the interests of investors and data consumers, in three ways:

- By countering the fracturing of liquidity which might arise from these changes and which would handicap investors in their efforts to find the best price.
- By ensuring that market quality is maintained across all trading locations.
- By minimising the additional costs of these changes, which would otherwise need to be passed on to our customers.



Key Trends in the Market Data Sphere

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Australian Financial Markets Association

2004 Financial Markets Conference

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REUTERS 

Developments in market data

- Industry drivers
- Trends
- The competitive landscape for exchanges
- The global search for liquidity
- Maintaining market quality

Industry drivers

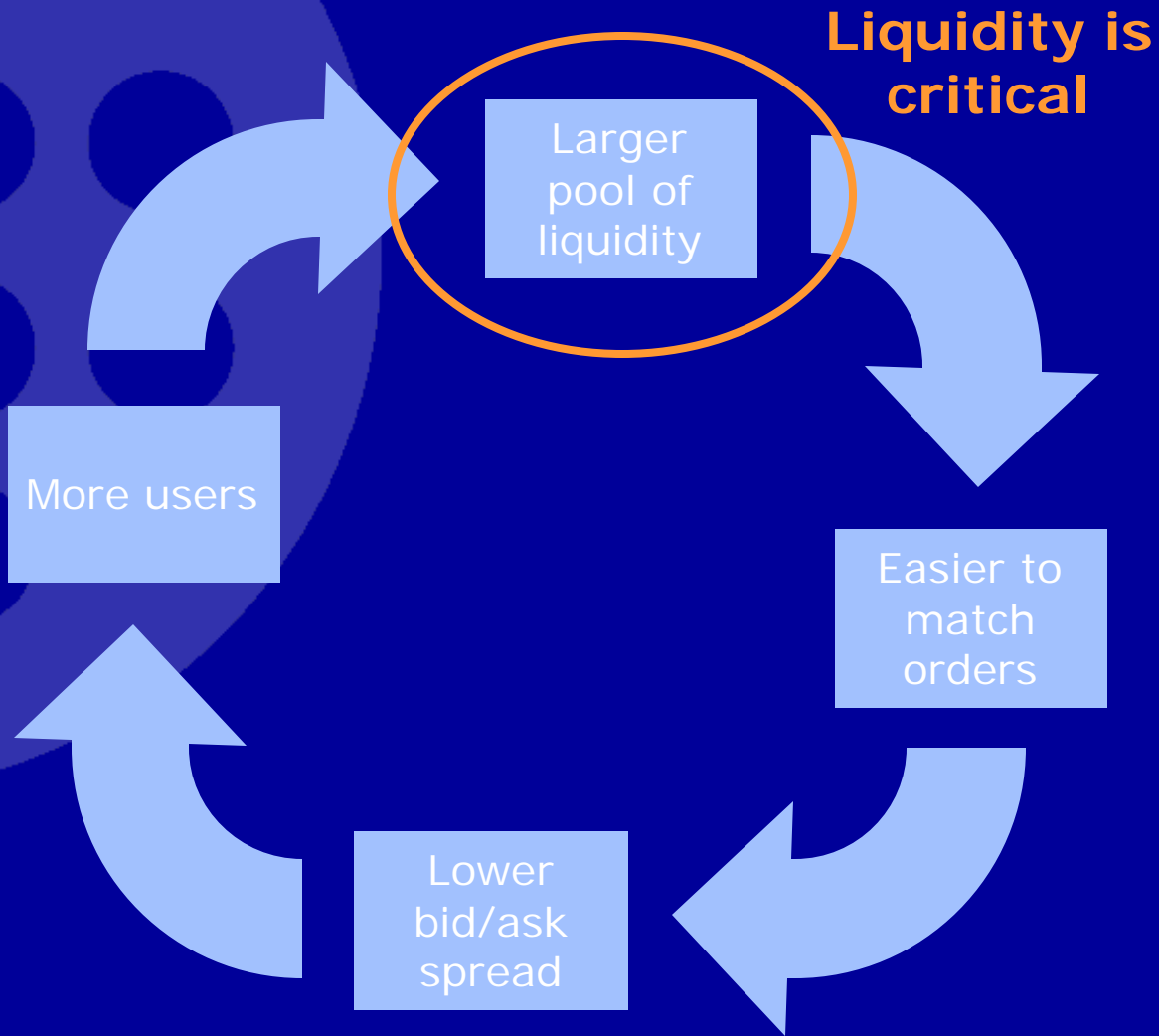
Network
effect/liquidity

Technology

Regulation

Globalisation

Network effect/liquidity



Technology

- Move from floor trading to electronic trading
- Growth of cross-border trading alliances
- Improved clearing
- Faster, cheaper settlement
- Increased volumes
- Reduced trading costs

Regulation

- Restricts cross-border operation due to expense of complying with different domestic regimes
- Dictates information that must be disclosed
- Affects freedom to use ATs/ECNs as well as regulated markets
- Rapid changes present challenges for authorities

Globalisation

- Exchanges actively encouraging foreign listings
 - Raises profile of listing company
 - Increases potential investor base

<i>Exchange</i>	<i>Number of foreign listings 2002</i>	<i>Foreign companies as % of total listed companies</i>
NYSE	472	19.9%
LSE	419	14.8%
Nasdaq	381	10.4%
Euronext	371	24.9%
Deutsche Börse	219	23.4%
Singapore Exchange	64	16.6%

Globalisation

- Exchanges actively encouraging foreign listings
 - Raises profile of listing company
 - Increases potential investor base
- Cross-border trading
- Global tie-ups

Trends in the exchanges industry

Corporatisation,
demutualisation
and listing

Disintermediation

New players

Response of
incumbents

Corporatisation, demutualisation and listing

Year of demutualisation/public offering

1993 Stockholm Stock Exchange

1995 Tradepoint/virt-x (created); Helsinki Stock Exchange

1996 Copenhagen Stock Exchange

1997 Amsterdam Exchanges; Borsa Italiana

1998 Australian Stock Exchange

1999 Iceland Stock Exchange; Athens Stock Exchange; Stock Exchange of Singapore; SIMEX; LIFFE

2000 Toronto Stock Exchange; Sydney Futures Exchange; New York Mercantile Exchange; Hong Kong Stock Exchange; London Stock Exchange

2001 Deutsche Börse; Oslo Exchanges; Euronext

2002 Chicago Mercantile Exchange (listed)

Corporatisation, demutualisation and listing

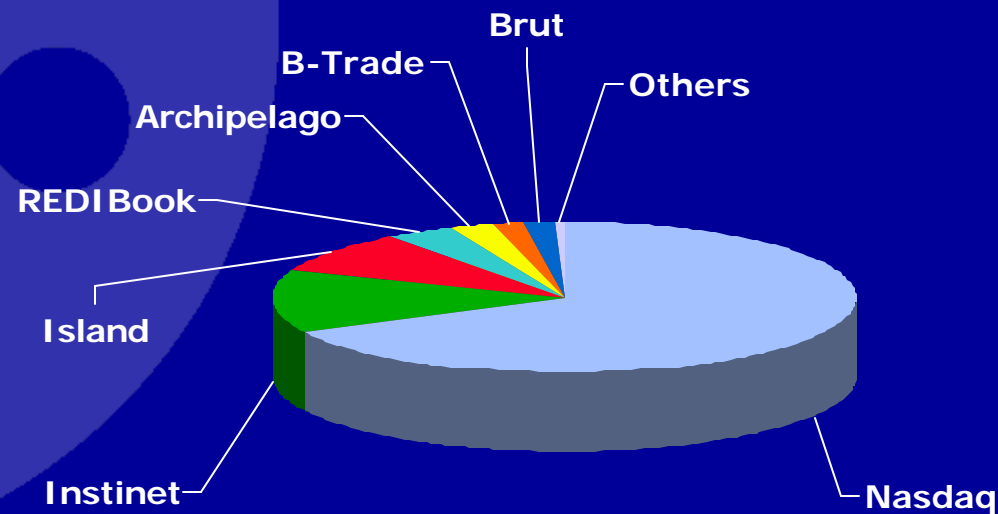
- Increased competition
 - Especially cross-border, focusing on maximising volume
- Downward pressure on listing fees, trading costs
- Exchanges must maximise income from other sources

Disintermediation

- Replacement of brokers by direct-access trading systems
- Facilitated by
 - technological advances
 - demutualisation – exchanges do not have to consider interests of members
- Should reduce trading costs
- Encourages larger intermediaries to compete with exchanges

Emergence of new players

- ATSS/ECNs
- Traded over 30% of Nasdaq-listed stock volume in 2001



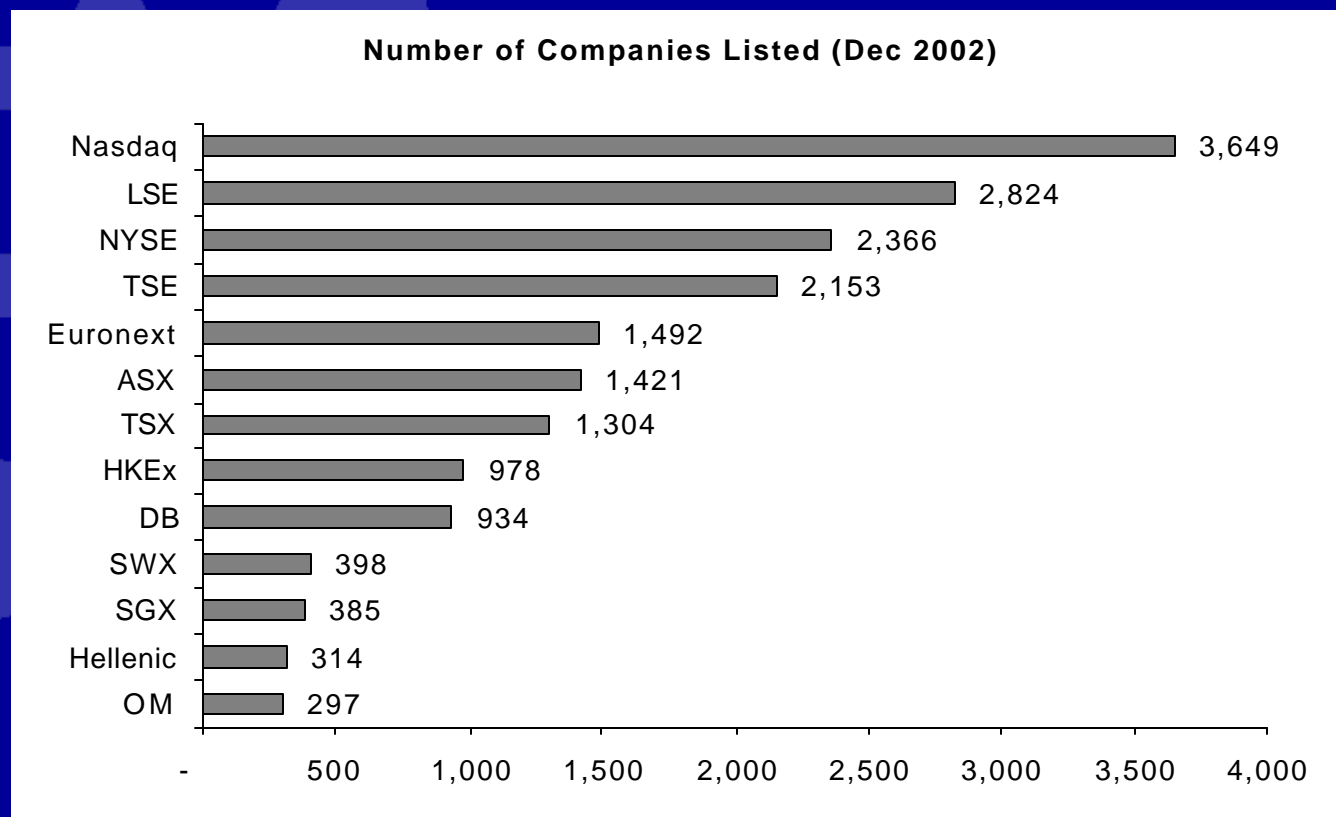
- Early rapid growth in US followed by consolidation
 - Bear market reduced numbers, influence
- Less impact in Europe
 - European equity markets already largely automated

Response of incumbents

- Consolidation
 - Euronext
 - TSX
- Diversification
 - Deutsche Borse + Eurex + Clearstream
 - Euronext + LIFFE
- Automation
 - Floor-based to electronic trading

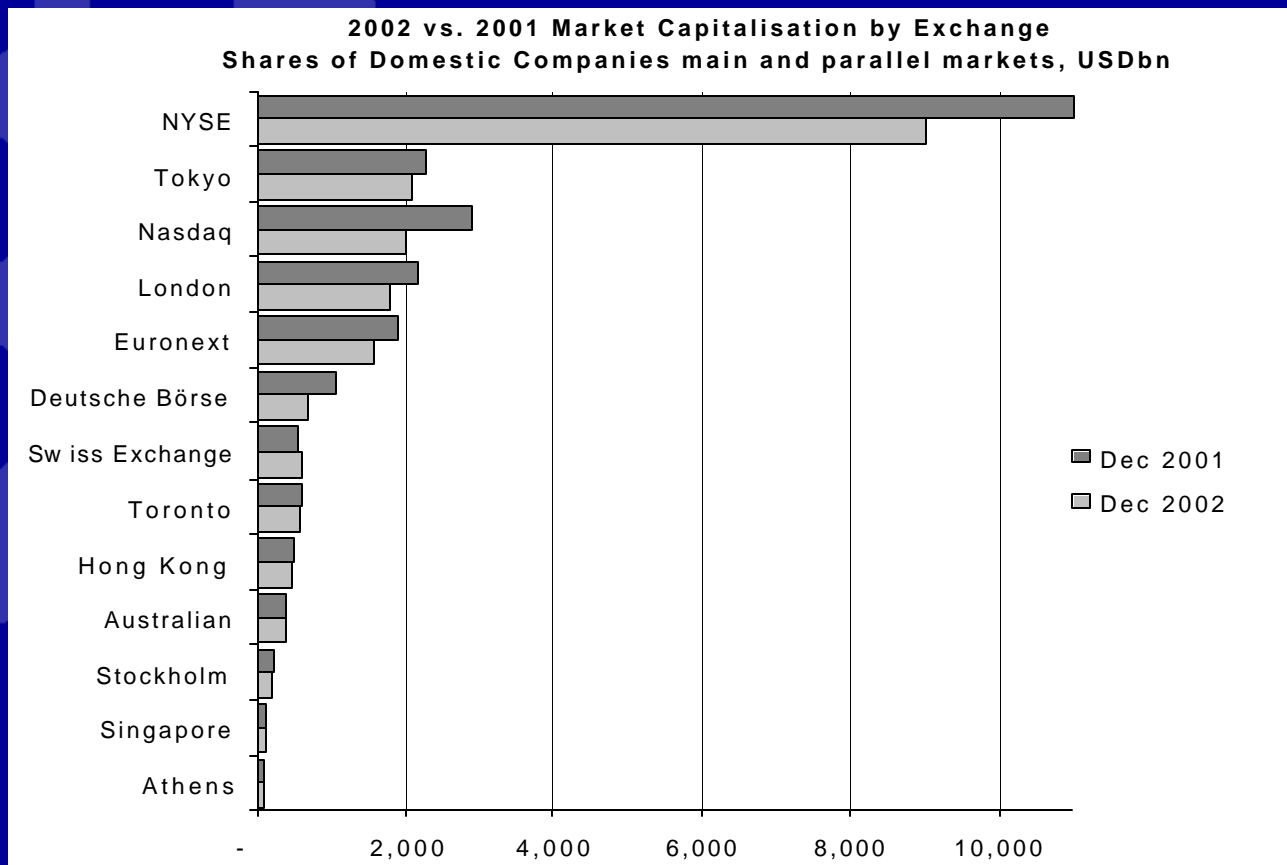
Competitive landscape

- Nasdaq lists the most companies



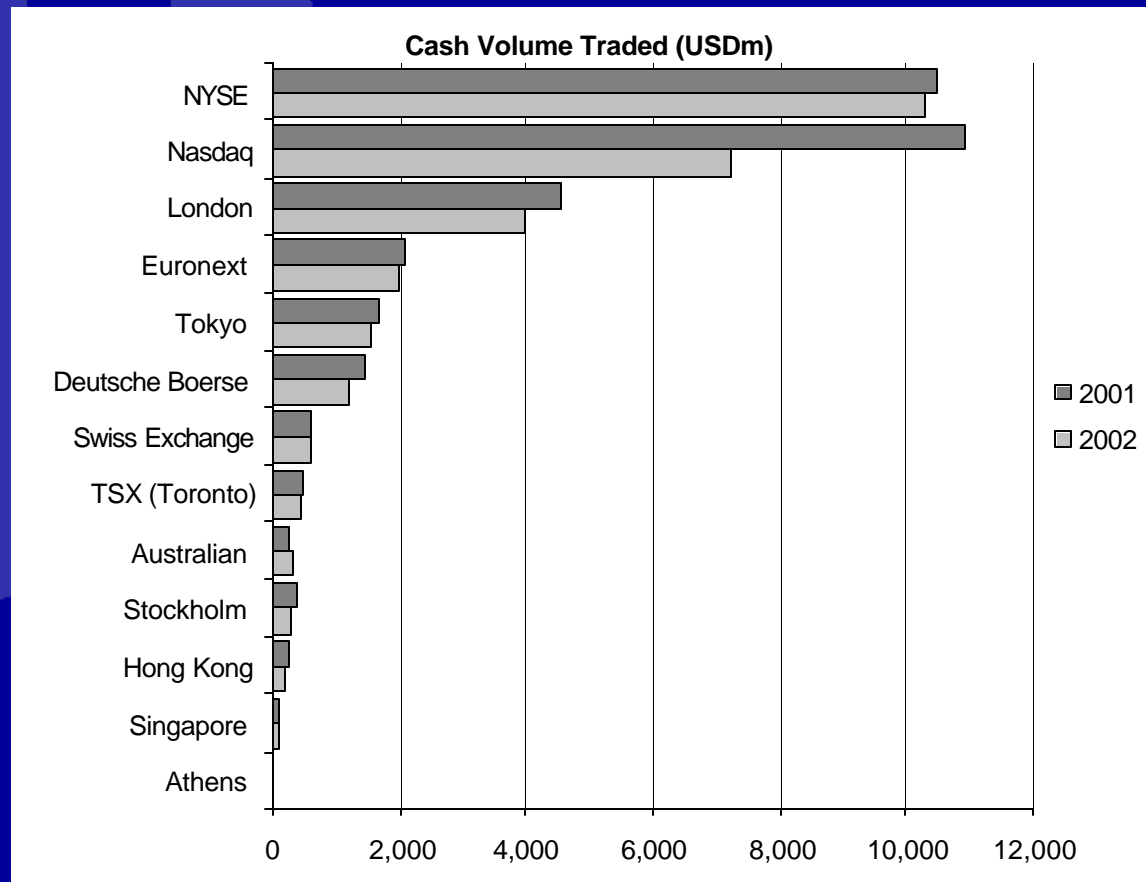
Competitive landscape

- NYSE has by far the highest capitalisation



Competitive landscape

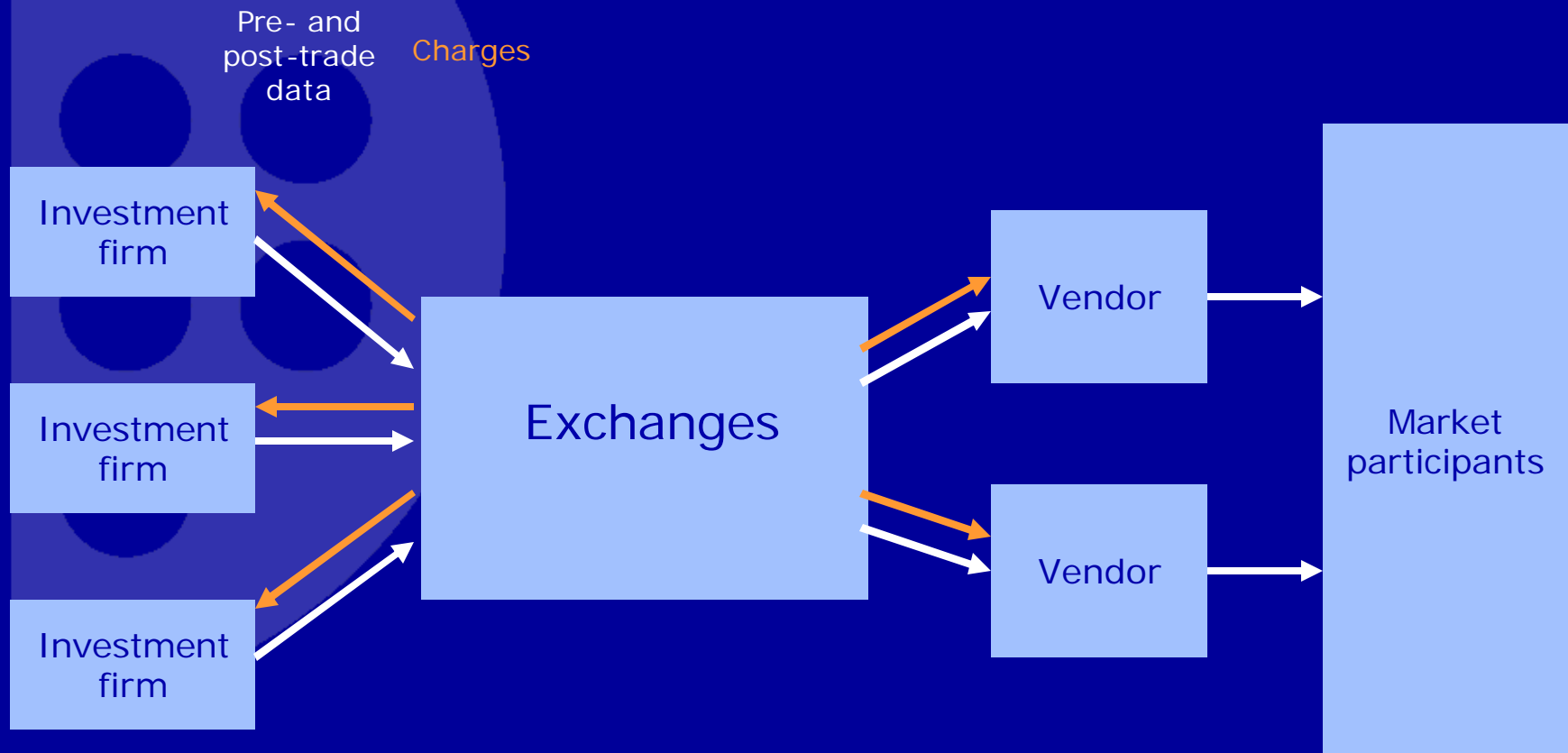
- Volumes have not fallen as fast as the markets



Internalisation

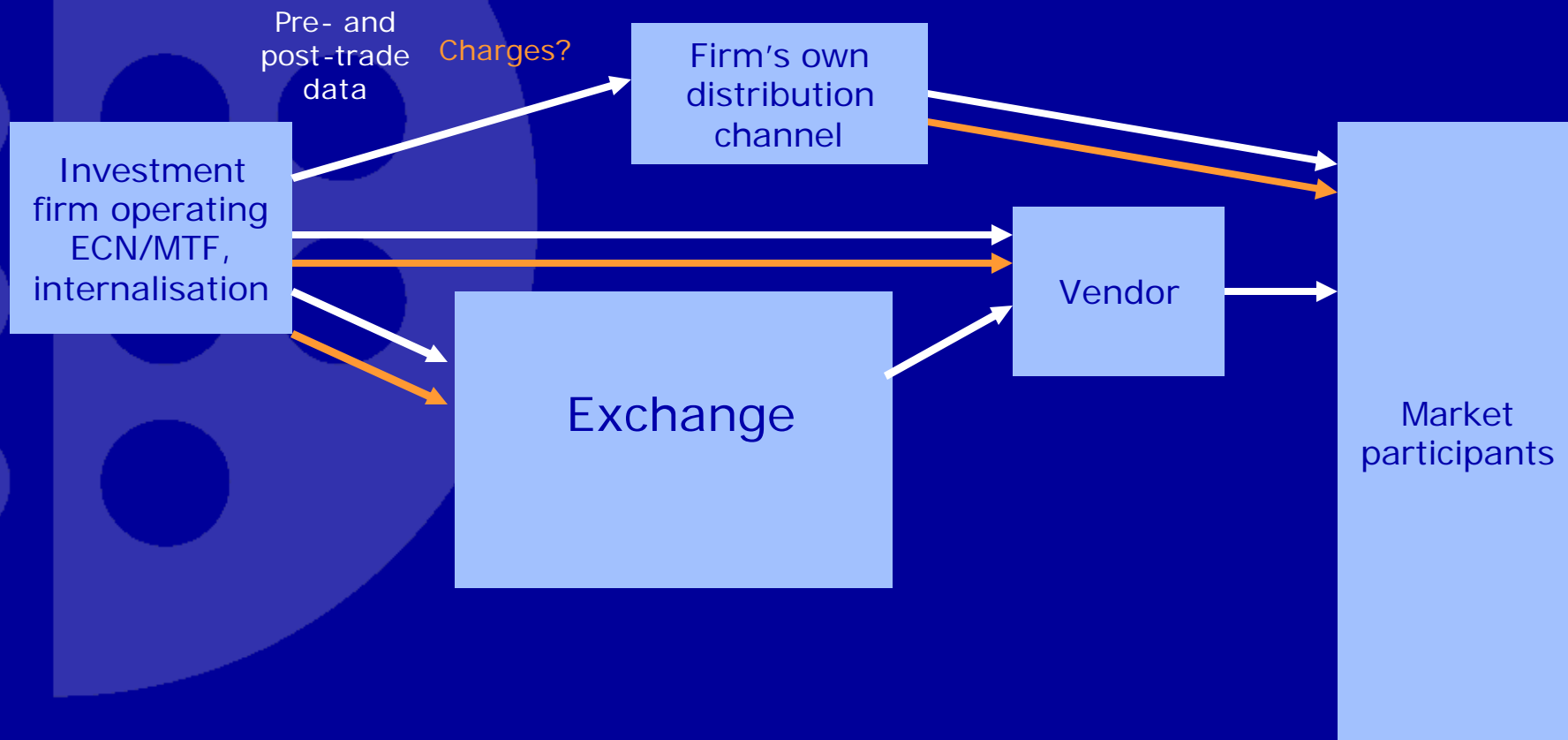
- Matching of buy/sell orders in-house at major banks, brokerages
- Another threat to exchanges
 - Reduce order flow
- MTFs most common in Europe where no established exchange
 - Many devoted to bond trading
 - In equity trading, tend to offer services not provided by organised exchanges

Changes in information distribution: the situation now



Current system:
Exchanges act as consolidators and distributors of data

Changes in information distribution: the future



Future system:
Wide range of distribution options, potentially
bypassing exchanges

The importance of liquidity

Liquidity is critical

Technological advances
(eg MTFs)

Regulatory changes
(eg ISD)

More trading locations,
data producers

Larger pool of
liquidity

More users

Easier to
match
orders

REUTERS 

The importance of liquidity

Liquidity is fractured

Technological advances
(eg MTFs)

Regulatory changes
(eg ISD)

More trading locations,
data producers

Increased costs for
industry

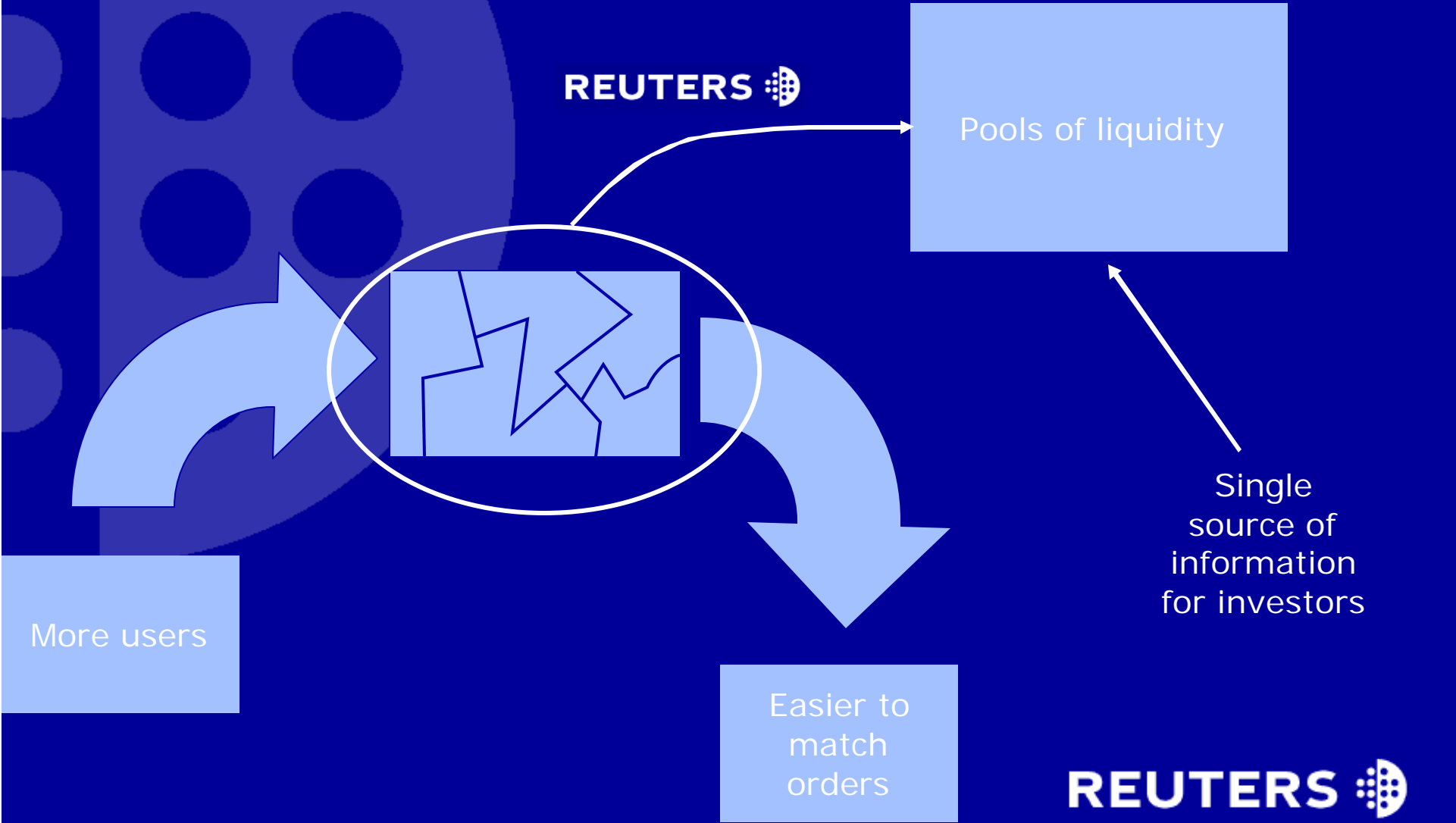
Increased problems for
investors

More users

Easier to
match
orders

REUTERS 

The importance of liquidity

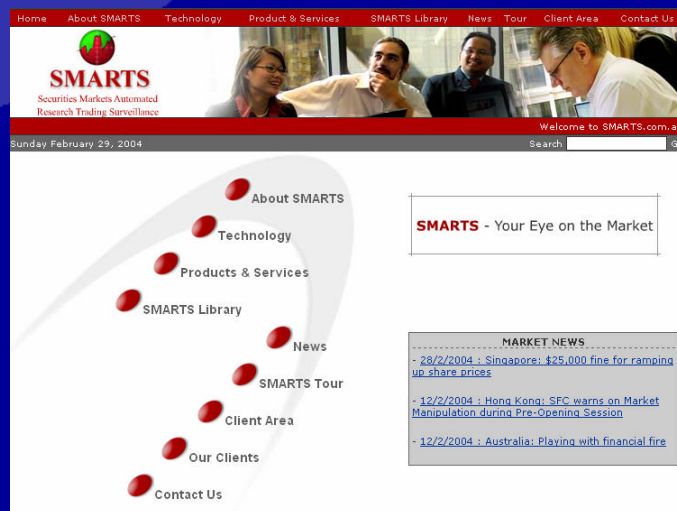


Maintaining market quality

- MTFs are *de facto* exchanges
- Must satisfy regulators
 - Effective surveillance
 - Ability to monitor and regulate trading
 - Ability to spot potential market abuse
- Increased responsibilities for vendors
 - Data storage
 - Monitoring data quality
- Increased costs for industry

Maintaining market quality: options

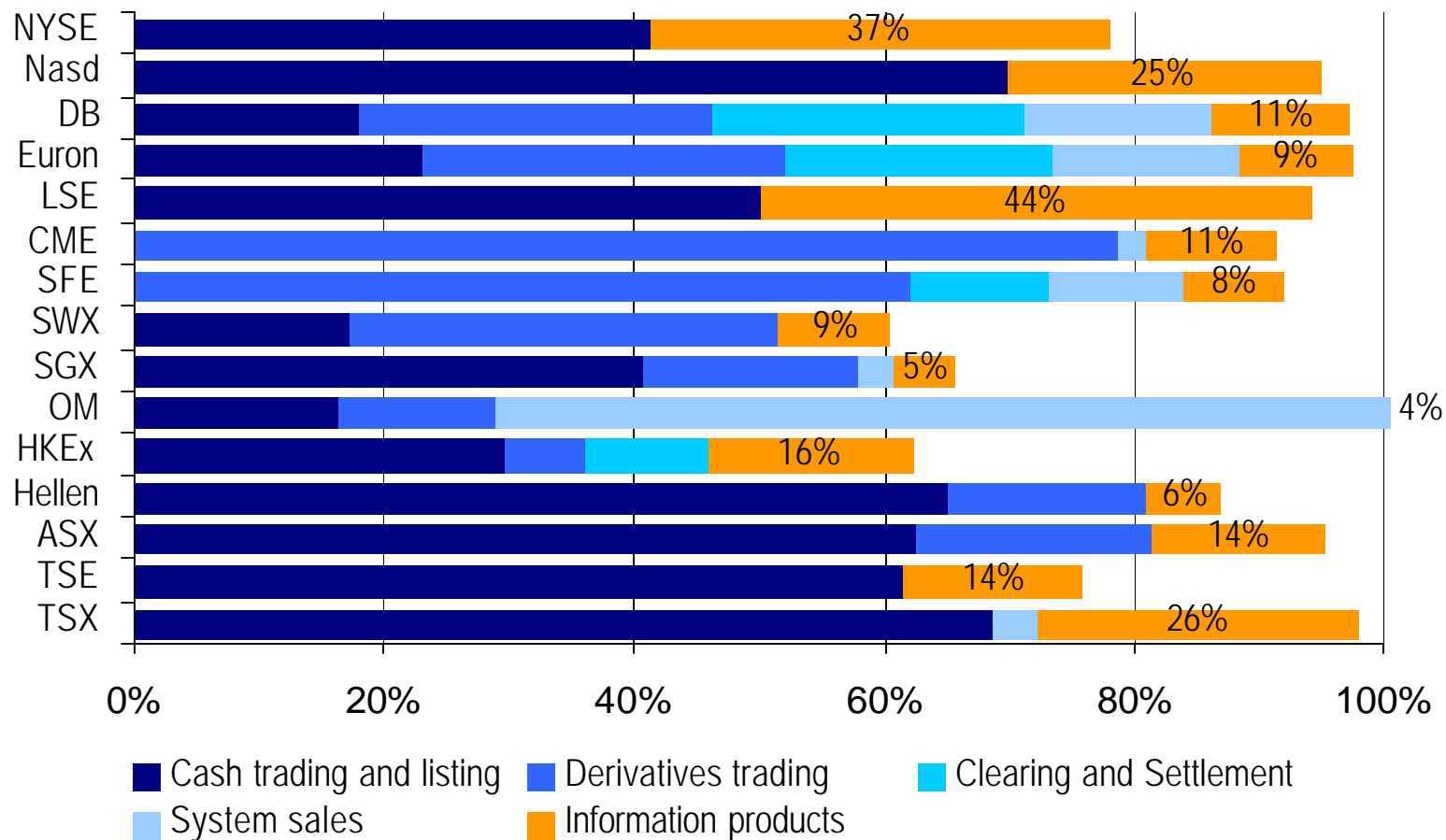
1. Each data producer implements own surveillance systems
 - Expensive to implement
 - Expensive for regulators to monitor
2. Centralised hosted surveillance system
 - Utilises common infrastructure
 - Each exchange/MTF establishes own rules
 - Reduced costs for the industry as a whole



Exchanges: Key revenue streams

	NYSE	Nasdaq	Deutsche Börse	Euronext	London
• Listing fees	✓	✓	✓	✓	✓
• Cash trading	✓	✓	✓	✓	✓
• Derivatives trading	✗	✗	✓	✓	✗
• Clearing	✗	✗	✓	✓	✗
• Settlement	✗	✗	✓	✓	✗
• Systems – Consulting and licence fees	✗	✗	✓	✓	✗
• Information products – Sales of market data	✓	✓	✓	✓	✓

Exchanges: Key revenue streams



Other sales omitted

Exchanges: Key cost streams

- Staff

Driven by volume, level of automation – limited short-term flexibility

- Rent

Driven by location, facilities – no short-term flexibility

- Systems

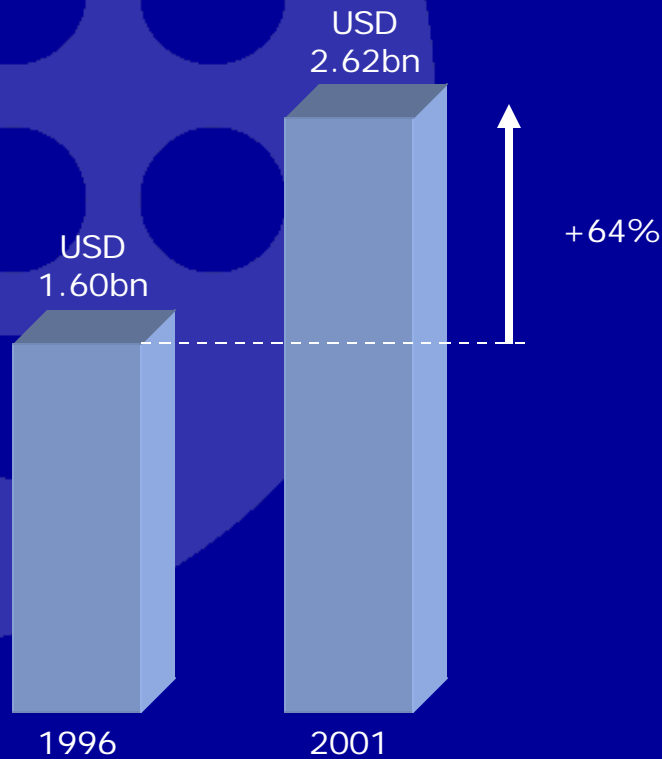
Driven by innovation, competitive pressure – limited flexibility

- Admin, depreciation, other

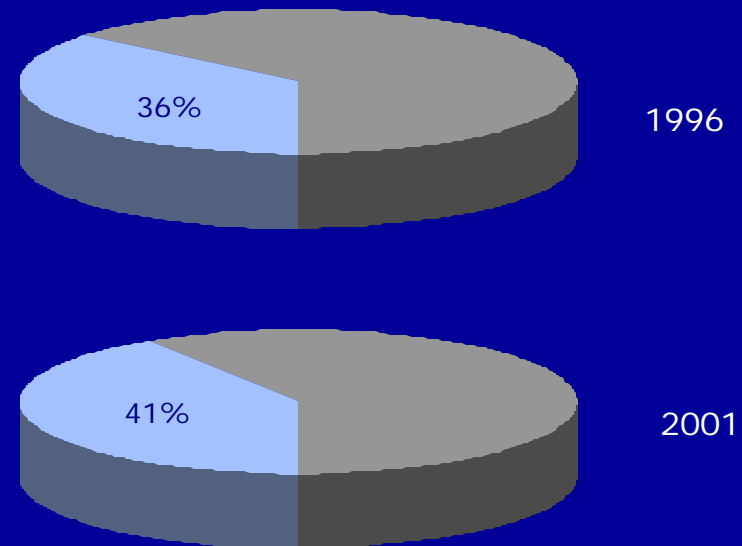
Largely driven by accounting policies - limited flexibility

Trends in exchange revenues

Trading/transaction revenues (cash & derivative)



Trading revenues



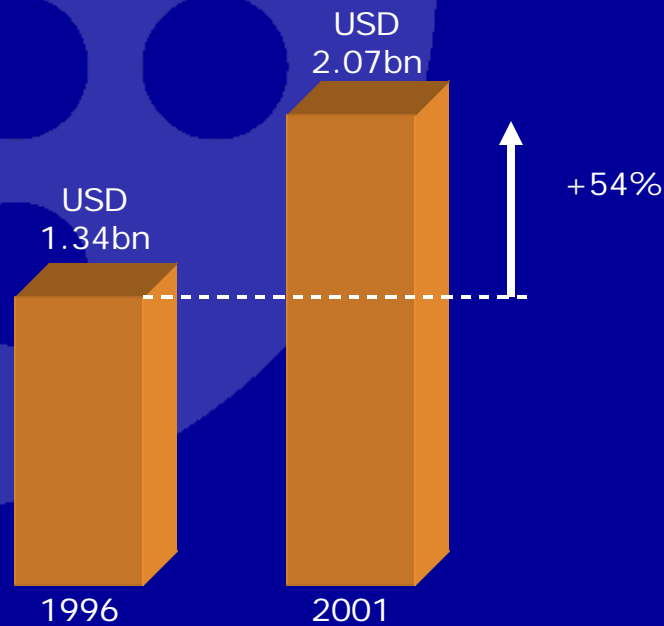
Share of total revenues

**Key driver: Trading volumes
– hit by market downturn**

Source: Cost and Revenue Survey 2001 of 56 exchanges, conducted by World Federation of Stock Exchanges

Trends in exchange revenues

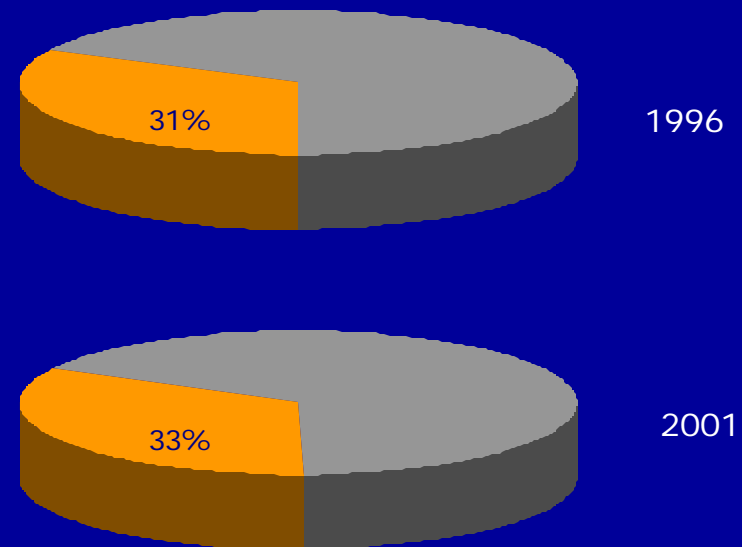
Service revenues (clearing, settlement, information products and systems)



1996

2001

Service revenues



1996

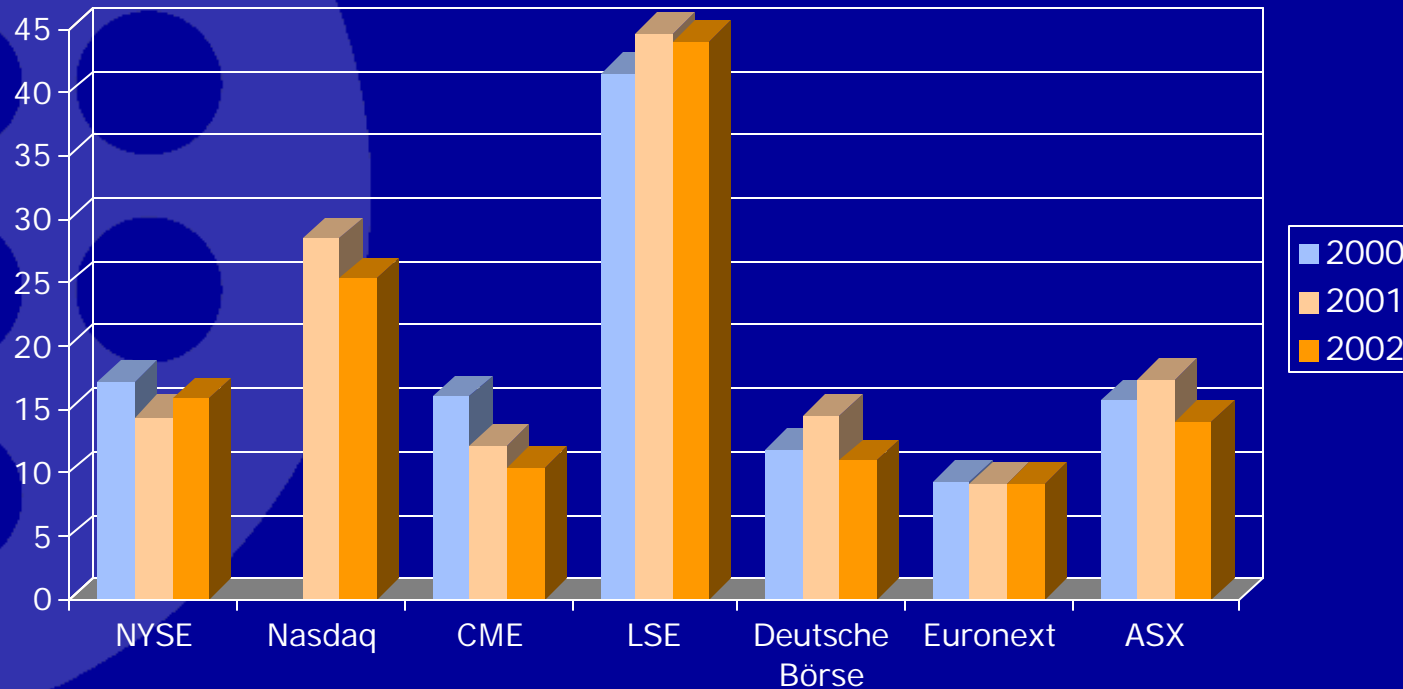
2001

Share of total revenues

Clearing, settlement revenues driven by trading volumes – scope for further growth?

Revenues from market information

% of total revenue



- Market information is a key part of revenue for many exchanges ...
- ... especially for London

Summary: Where market data is now

- Tough environment for everyone
- Common response is to expand into new areas
- ... but strong competition makes this difficult

Nasdaq's Greifeld Outlines Refocused Business Mission Following Strategic Review - Nasdaq Europe Closed - Pulls Out Of NQLX

The screenshot shows a website interface. On the left is a navigation menu with items: Home, About the book, Order the book, Order Online Handbook, Login, Current news, News archive (highlighted), and Exchange News. The main content area has a green header with the title 'The Handbook of World Stock, Derivative & Commodity Exchanges'. Below this is an 'Archive news' section with links for 'Headlines', 'Next story', and 'Mail to a friend'. A news article is highlighted with a red box, featuring the title 'Nasdaq's Greifeld Outlines Refocused Business Mission Following Strategic Review - Nasdaq Europe Closed - Pulls Out Of NQLX' and the date '26-Jun-03'. The article text begins: 'The Nasdaq Stock Market, Inc. (NASDAQ®), the world's largest electronic stock market, today outlined the results of a strategic review of its business initiatives, products and services.' To the right of the article is a small image titled 'The World Exchanges Report' showing logos for AMEX, CBOE, NASDAQ, and NYSE.

Summary:

Where market data is now

- Tough environment for everyone
- Common response is to expand into new areas
- ... but strong competition makes this difficult
- Likely to see increasing number of trading locations/data producers
 - Technological advances
 - Regulatory changes
- Challenges for industry:
 - Avoid fracturing of liquidity
 - Maintain market quality
 - Minimise additional costs