Cost & Revenue Survey 2003

With the collaboration of
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Duke University Global Capital Markets Center

December 2004

WORLD FEDERATION OF EXCHANGES

WFE Members

(as of December 2003)

American Stock Exchange
Athens Exchange
Australian Stock Exchange
Bermuda Stock Exchange
BME Spanish Exchanges
Bolsa de Comercio de Buenos Aires
Bolsa de Comercio de Santiago
Bolsa de Valores de Lima
Bolsa de Valores do São Paulo
Bolsa Mexicana de Valores
Borsa Italiana SpA
Bourse de Luxembourg
Bourse de Montréal
BSE The Stock Exchange, Mumbai
Budapest Stock Exchange Ltd.
Chicago Board Options Exchange
Colombo Stock Exchange
Copenhagen Stock Exchange
Deutsche Börse AG
Euronext Amsterdam
Euronext Brussels
Euronext Lisbon
Euronext Paris
HEX Integrated Markets Ltd.
Hong Kong Exchanges and Clearing
Irish Stock Exchange
Istanbul Stock Exchange
Jakarta Stock Exchange
JSE Securities Exchange, South Africa
Korea Stock Exchange
Kuala Lumpur Stock Exchange
Ljubljana Stock Exchange
London Stock Exchange
Malta Stock Exchange
*NASD**
National Stock Exchange of India Limited
New York Stock Exchange
New Zealand Exchange
Osaka Securities Exchange
Oslo Børs
Philippine Stock Exchange
Shanghai Stock Exchange
Shenzhen Stock Exchange
Singapore Exchange
Stock Exchange of Tehran
Stock Exchange of Thailand
Stockholmsbörsen
SWX Swiss Exchange
Taiwan Stock Exchange Corp.
Tel-Aviv Stock Exchange
Tokyo Stock Exchange
TSX Group
Warsaw Stock Exchange
Wiener Börse AG

** NASD responses concerned its subsidiary NASDAQ*

WFE COST AND REVENUE SURVEY 2003

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1. INTRODUCTION AND SUMMARY OF FINDINGS

The World Federation of Exchanges' annual member Cost and Revenue Survey, established in 1991, provides an overview of member expenses and revenues while analyzing data to discover larger trends. Information is collected and organized according to exchange legal status, geography, and size. Comparison of 2003 to 2002 data exhibits effects of changes in the economic, legal, and accounting context in which the exchanges operate.

Unlike both demutualized exchanges and listed exchanges, not all member-owned exchanges are run for profit. Consequently, review of WFE member data necessitates first, a breakdown by exchange legal status. Overall, this annual report analyzes data in three ways: by legal status, geographic region, and 10 largest exchanges versus all others.

Some key observations that are included in the report:

- Member-owned, limited company exchanges is the fastest growing of the five categories over the past year.

- Total equity capital across all exchanges increased from $15.4 billion[1] in 2002 to $16.2 billion in 2003, a 5% change after correcting for US dollar depreciation over the period.

- Profitability varies considerably among exchanges, whether sorted by legal or geographic categorization, indicating that both local (idiosyncratic) and global factors have an impact on ROE.

- Most exchanges showed increases in both earnings and net income.

- The industry overall shows evidence of considerable polarization, so that a small number of the larger exchanges account for the lion's share of both equity capital and revenues among all WFE member exchanges.
    - Two European exchanges alone account for approximately 30% of the equity capital across all WFE member exchanges.
    - For equity and derivatives trading, the 10 largest exchanges dominate, accounting for 71% and 60% of all product revenues, respectively.
    - The 10 largest exchanges also account for approximately 50% of transaction-related revenues across all WFE member exchanges.

- Total revenues in 2003 were $6.41 billion, a 4% increase from 2002. The most important source of revenue for all exchanges is from trading, accounting for 38% of total revenues. Services (including information dissemination, clearing and IT sales) comes a close second, at 35%.

- Trading revenues in derivatives grew sharply by volume in 2003, while trading revenues in equities was slightly reduced, which might have been expected to coincide with lower

[1] *Otherwise expressed, $15.4 billion means $15 400 million.*

trading volumes and fees. Trading in equities is the historical basis for this industry, and of membership.

- The most important products traded across all exchanges are equities, accounting for just over 50% of all exchanges' trading revenues. Derivatives account for about 35% of trading revenues. The European and Asian exchanges both show nearly as much revenue from derivatives as from equities, while in the Americas, almost all of the revenue comes from equity trading.

- Total trading revenues across all products and exchanges in 2003, at $2.36 billion, was almost unchanged from 2002 at $2.39 billion.

- The vast majority (about 80%) of trading revenue fees are generated by transaction fees, while membership/access fees account for about 15%, and IT fees the remaining 5%.

- The largest portion of costs across exchanges is compensation (salaries and benefits), accounting for approximately 35% of costs. Costs have remained relatively stable across the industry between 2002 and 2003.

This survey is based on the responses of the following 50 Federation Member Exchanges. The authors have relied on numbers provided to us by each of the exchanges as well as disclosures from publicly listed and demutualized exchanges which are readily available in the public domain.

American Stock Exchange
Athens Exchange
Australian Stock Exchange
BME Spanish Exchanges
Bolsa de Comercio de Buenos Aires
Bolsa de Comercio de Santiago
Bolsa de Valores de Lima
Bolsa de Valores do São Paulo
Borsa Italiana SpA
Bourse de Montréal
BSE The Stock Exchange, Mumbai
Budapest Stock Exchange Ltd.
Bursa Malaysia
Chicago Board Options Exchange
Colombo Stock Exchange
Copenhagen Stock Exchange
Deutsche Börse AG
Euronext
HEX Integrated Markets Ltd
Hong Kong Exchanges & Clearing
Irish Stock Exchange
Istanbul Stock Exchange
Jakarta Stock Exchange
JSE Securities Exchange, South Africa
Korea Stock Exchange
Ljubljana Stock Exchange
London Stock Exchange
Luxembourg Stock Exchange
Malta Stock Exchange
Mexico Stock Exchange
NASD
National Stock Exchange of India Ltd.
New York Stock Exchange
New Zealand Exchange
Osaka Securities Exchange
Oslo Børs
Philippine Stock Exchange
Shanghai Stock Exchange
Shenzhen Stock Exchange
Singapore Exchange
Stock Exchange of Tehran
Stock Exchange of Thailand
Stockholmsbörsen
SWX Swiss Exchange
Taiwan Stock Exchange Corp.
Tel Aviv Stock Exchange
Tokyo Stock Exchange
TSX Group
Warsaw Stock Exchange
Wiener Börse AG

While this report endeavors to exhibit a broad and comprehensive survey of the relative costs and revenues of member exchanges, certain limitations must be noted. To begin, the survey does not include financial information from the American Stock Exchange, The Chicago Board Of Trade (CBOT) or the Chicago Mercantile Exchange Holdings (CME) and therefore underestimates the relative size of the "Americas" exchanges and may additionally misstate certain relative profitability data between different geographic areas.

Additionally, comparison of financial figures among exchanges may be influenced by the use of different accounting systems. Some members adhere to IAS standards, while others follow national GAAP standards.

Further, the financial data reported in this presentation are given in US dollars. When comparing between 2002 and 2003 data, we take account of the impact of significant dollar depreciation over the period by using 2003 exchange rates throughout. Where relevant, we also consider how these numbers differ when using dollar exchange rates that applied in each year.

	2003						2002					
$(billion)	**member**	**demut**	**listed**	**assoc**	**other**	**Total**	**member**	**demut**	**listed**	**assoc**	**other**	**Total**
Revenues												
Listing: Initial & Annual	0,358	0,266	0,295	0,050	0,018	**0,987**	0,345	0,272	0,271	0,060	0,016	**0,963**
Trading	0,327	0,556	1,063	0,408	0,077	**2,431**	0,312	0,495	1,023	0,375	0,064	**2,268**
Services	0,516	0,430	1,118	0,182	0,028	**2,274**	0,524	0,347	1,100	0,213	0,025	**2,209**
Financial Income	0,085	0,075	0,277	0,238	0,039	**0,715**	0,097	0,096	0,205	0,233	0,099	**0,731**
Total	**1,287**	**1,327**	**2,753**	**0,878**	**0,162**	**6,407**	**1,277**	**1,210**	**2,599**	**0,881**	**0,203**	**6,171**
Costs												
Compensation	0,667	0,710	0,653	0,150	0,051	**2,231**	0,671	0,687	0,677	0,151	0,048	**2,234**
IT	0,270	0,372	0,313	0,113	0,005	**1,072**	0,217	0,339	0,304	0,119	0,005	**0,984**
Admin	0,125	0,381	0,313	0,057	0,020	**0,895**	0,134	0,518	0,339	0,046	0,023	**1,060**
Dep/amort	0,127	0,272	0,232	0,074	0,014	**0,719**	0,126	0,275	0,231	0,089	0,013	**0,735**
Reg. costs	0,176	0,044	0,060	0,003	0,011	**0,294**	0,174	0,049	0,050	0,002	0,007	**0,281**
Fixed costs	0,211	0,234	0,045	0,019	0,031	**0,539**	0,256	0,240	0,043	0,025	0,024	**0,588**
Total	**1,576**	**2,013**	**1,615**	**0,415**	**0,132**	**5,751**	**1,578**	**2,108**	**1,643**	**0,433**	**0,120**	**5,881**
Equity Capital	**2,251**	**3,979**	**7,410**	**1,933**	**0,628**	**16,201**	**2,159**	**3,800**	**6,983**	**1,902**	**0,555**	**15,398**

The tables in this report which list exchanges by their legal form use the following abbreviations:

Member	→	Member-owned, limited companies
Demut	→	Demutualized, but not listed exchanges
Listed	→	Listed exchanges
Assoc	→	Associations, mutuals
Other	→	Other legal group exchanges

2. LEGAL ASPECTS OF EXCHANGES

a. *By Legal Form*

1. Member-owned, limited companies (11 bourses):

Bursa Malaysia
Chicago Board Options Exchange
Colombo Stock Exchange
Irish Stock Exchange
Jakarta Stock Exchange
Ljubljana Stock Exchange
Luxembourg Stock Exchange
New York Stock Exchange
Shenzhen Stock Exchange
Tel Aviv Stock Exchange
Wiener Börse AG

2. Demutualized, but not listed Exchanges (14 bourses):

American Stock Exchange
BME Spanish Exchanges
Borsa Italiana SpA
Bourse de Montréal
Budapest Stock Exchange Ltd.
Copenhagen Stock Exchange
HEX Integrated Markets Ltd.
Mexico Stock Exchange
NASDAQ
National Stock Exchange of India Ltd.
Osaka Securities Exchange
Oslo Børs
Taiwan Stock Exchange Corp.
Tokyo Stock Exchange

3. Listed Exchanges (13 bourses):

Athens Exchange
Australian Stock Exchange
Bolsa de Valores de Lima
Bolsa de Comercio de Santiago
Deutsche Börse AG
Euronext
Hong Kong Exchanges & Clearing
London Stock Exchange
New Zealand Exchange
Philippine Stock Exchange
Singapore Exchange
Stockholmsbörsen
TSX Group

4. Associations, mutuals (6 bourses):

JSE Securities Exchange, South Africa
Korea Stock Exchange
BSE The Stock Exchange, Mumbai
Bolsa de Valores do São Paulo
Shanghai Stock Exchange
SWX Swiss Exchange

5. Other legal group Exchanges (6 bourses):

Bolsa de Comercio de Buenos Aires
Istanbul Stock Exchange
Malta Stock Exchange
Stock Exchange of Tehran
Stock Exchange of Thailand
Warsaw Stock Exchange

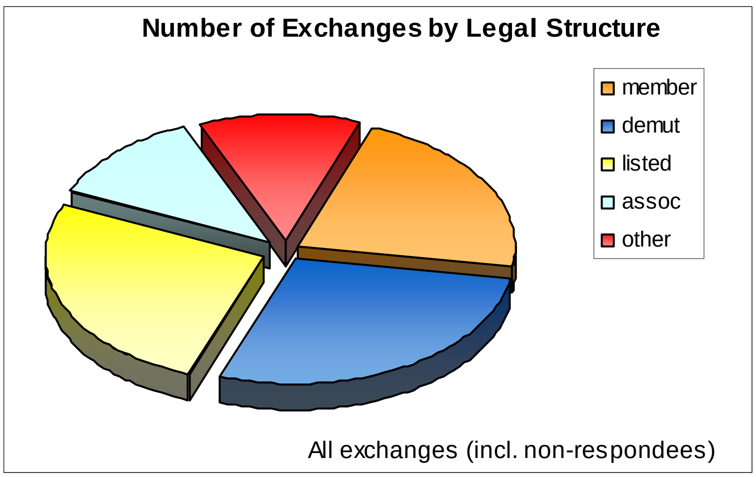
➢ Member-owned, limited company exchanges are registered as private companies, often complete with paid-up share capital. Generally, intermediaries are almost always the sole owners of the exchanges. Their ownership, intermediation rights and activities are strongly linked.

➢ Demutualized is the largest exchange category, and features exchanges which are registered as private, limited companies, but which are not listed companies. Demutualized exchanges are always for profit.

➢ Publicly listed exchanges, the third category, list their own share on the exchanges they operate. These shares are freely traded and represent negotiable securities.

➢ Associations or mutuals generally have no share capital, and access to membership is restricted.

➢ The fifth and final category includes all exchanges with an "other" legal status. This includes, but is not limited to, exchanges owned by the state and/or featuring a government or semi-government agency structure.



b. *Ownership of Exchanges*

➢ Demutualized exchanges still represent the largest legal group in 2003, but they are closely followed by member-owned limited companies and listed exchanges.

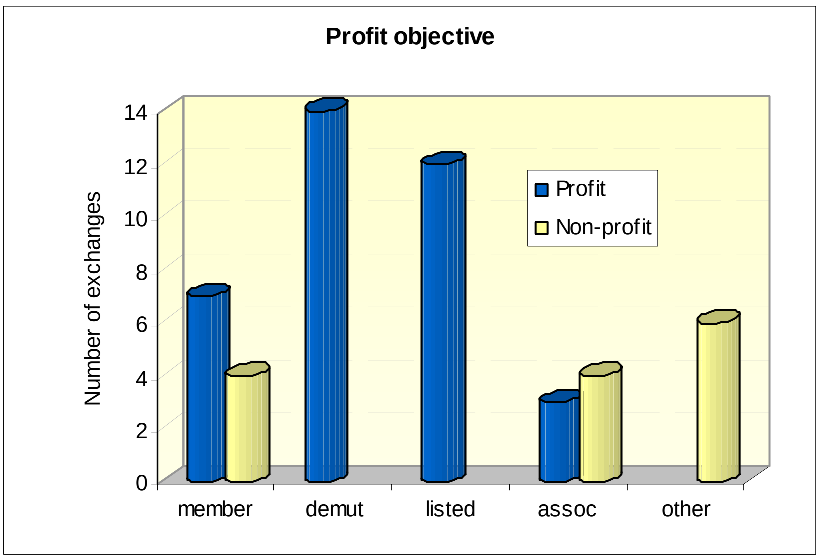
➢ Several exchanges have changed their legal structure over the past years to member-owned status.

- Colombo Stock Exchange and Shenzhen Stock Exchange changed from mutual to member-owned,
- Copenhagen Stock Exchange changed in 1996 from semi-public to demutualized,
- BME Spanish Exchanges represents a merger of several Spanish exchanges and is included in the list of demutualized exchanges,
- New Zealand Exchange (formerly an association) and the Philippine Stock Exchange (formerly demutualized) are now both listed exchanges.

- For-profit versus not-for-profit:
  - The majority of member-owned, and all demutualized and listed exchanges, are now for-profit institutions.
  - Most associations and other legal structures retain not-for-profit status.

c. Profit as a Business Goal

About two-thirds of all exchanges report having a profit objective, with all demutualized and listed exchanges having profit as a business goal. The majority of member-owned exchanges and approximately half of the associations also report being for-profit; only the "other" legal form exchanges are all not-for-profit.

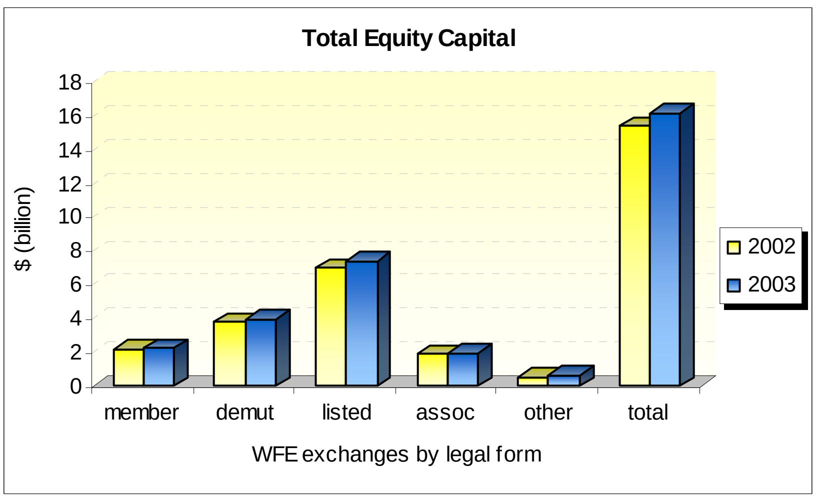


3. FINANCIAL PERFORMANCE

All of the financial data reported in this presentation are given in US dollars. When comparing 2002 and 2003 data, we take account of the impact of significant dollar depreciation over the period by using 2003 exchange rates throughout.[2] Where relevant, we also consider how these numbers differ when using dollar exchange rates that applied in each year.

Total equity capital across all exchanges increased from $13.4 billion to $15.5 billion between 2002 and 2003. These numbers represent a 15% increase in total equity capital; however if we correct for exchange rate moves between 2002 and 2003 we find an increase in equity from $15.4 billion in 2002 to $16.2 billion in 2003, which represents only a 5% change.

a. *Equity Capital*



By Legal Form

The listed companies represent nearly 50% ($7.4 billion) of equity capital among all exchanges, with demutualized as the second largest group representing approximately 25% ($4 billion). Member-owned and associations represent approximately 10% ($2.3 billion and $1.9 billion, respectively), with the remaining 5% ($0.6 billion) being held by other exchanges. These distributions remained relatively constant between 2002 and 2003. Overall, equity capital increased approximately 5% between 2002 and 2003 (after correcting for dollar depreciation over the period).

By Geography

The European exchanges alone account for nearly 50% of all of the equity capital on exchanges worldwide. This category is dominated by two exchanges, Deutsche Börse (with almost $3 billion in equity) and Euronext (with $2 billion), which combined account for 65% of the equity

[2] *The US dollar depreciated by about 17% versus the Euro, 10% versus Pounds Sterling, and 11% versus the Yen between 2002 and 2003.*

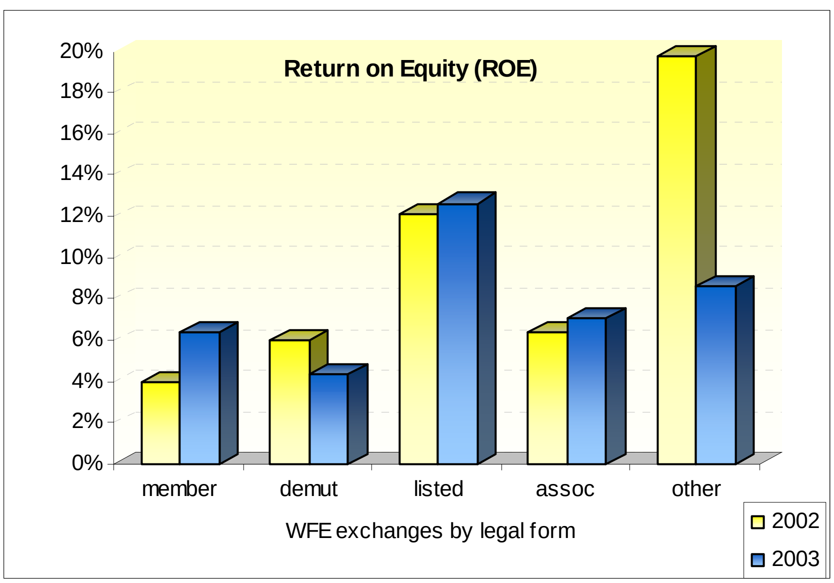
capital of all European exchanges, and nearly 25% of the equity capital across all exchanges worldwide.

The Americas exchanges show a similar pattern of being dominated by two exchanges, NASDAQ and New York Stock Exchange, which combined account for 75% of the $2.8 billion in equity capital among Americas exchanges which are members of the WFE. In Asia, however, there is less dominance by a small number of exchanges. The largest four Asian exchanges are Shanghai (with $797 million in equity), Hong Kong ($722 million), Taiwan Stock Exchange Corp. ($681 million), and Tokyo Stock Exchange ($680 million), which among them account for less than 50% of all Asian exchanges' equity capital, a total of $5.9 billion.

By Size

Members responses have been regrouped by revenues, share trading value, and market capitalization, in order to see which would figure in the top 10 by each of these categorizations. In all three groupings of the 10 largest exchanges, each accounts for approximately 60% of all equity capital across exchanges. In fact, the four largest exchanges by equity capital -- Deutsche Börse, Euronext, NASDAQ and New York Stock Exchange—account for 70% of equity capital among the top 10 exchanges, and almost 45% of equity capital across all exchanges worldwide. These results make it clear that this is an industry which is highly concentrated in relatively small number of large exchanges.

b. Profitability (ROE)



Return on equity across all exchanges worldwide has remained relatively stable at around 9% from 2002 to 2003. This stability is not the case when we look at groups of exchanges based on different sort criteria, however.

By Legal Form

There is considerable variance in profitability between different legal categorizations. Listed exchanges show the greatest ROE, at around 12% (remaining consistently at this level between 2002 and 2003), with "Others" the next most profitable, at around 8.5% (down from a dramatic 20% in 2002, although this decrease is caused almost entirely by one outlying response). While most exchanges' profitability increased between 2002 and 2003, the demutualized and other exchanges showed a net decrease in profitability.

In fact, there is no consistent pattern of either increase or decrease in profitability within these legal groupings; the variance in profitability is quite wide in all cases. It is also important to note that the 2002-2003 period exhibited weak market conditions in general, and this is reflected in many industries' low profitability over the period. We must also remember that changes in exchange rates make it hard to assess the true profitability of non-US dollar exchanges.

By Geography

When we sort by region, we find a similar pattern of relative stability in ROE on a region-by-region basis, with great variability within each region. The European exchanges show by far the greatest profitability, at around 12% in both 2002 and 2003. Within Europe, Stockholmsbörsen reports 35% profitability in 2003 versus Budapest Stock Exchange Ltd.'s 2.5%. In the Americas, again we see a wide range, from TSX Group's 35% profitability in 2003 to almost zero profitability by NASDAQ, and -9% ROE from Bolsa de Comercio de Buenos Aires.

By Size

Once again we see considerable consistency both over time and between groups: among the 10 largest exchanges by revenue, ROE is at around 8.5% in both 2002 and 2003; the remaining exchanges show similar numbers in both years. As noted above, within each category there is considerable variance: for example, NASDAQ shows almost zero (-0.4%) ROE in 2003, while the London Stock Exchange (a top 10 exchange by all three rankings: revenues, share trading value, and market capitalization) has 14% ROE in the same period.

c. Pre-tax Earnings and Net Income

General Observations

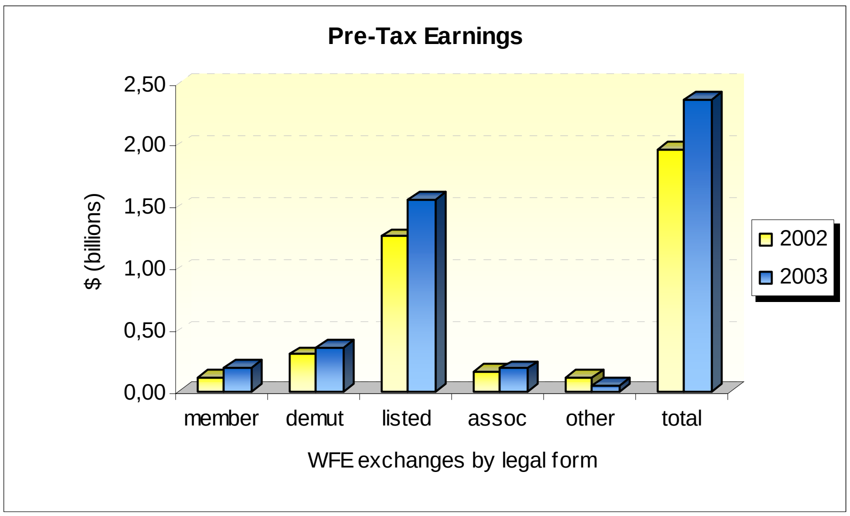
While pre-tax earnings show a 20% increase between 2002 and 2003, from \$1.96 billion to \$2.36 billion (net of exchange rate changes), net income only shows a 4% increase over the same period (from \$1.39 billion to \$1.44 billion). We will see that these results are driven by a few of the larger exchanges.[3]

[3] *The only information available relating to charges on earnings are amortization and exceptional charges, which are not nearly sufficient to account for the differences between pre-tax and post-tax income. Hence it is not possible to provide a more detailed analysis of this item.*

By Legal Form

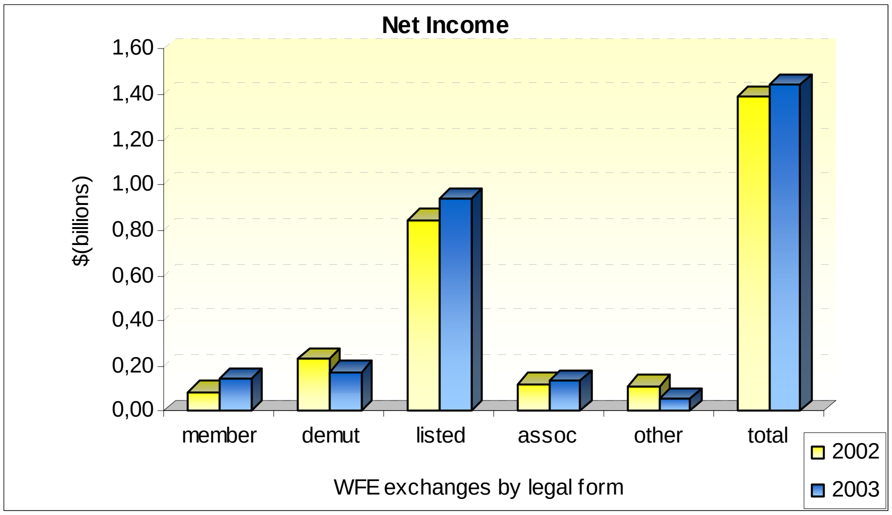
As with equity capital, the listed exchanges dominate, with 65% of all pre-tax earnings, and approximately the same percentage of net income among all the exchanges. The next largest category is the demutualized exchanges with approximately 15%, with the other three categories sharing the remaining 20%.

The listed exchanges showed a much bigger increase in pre-tax earnings than in net income (24% and 11%, respectively). The big impact in this category is from Deutsche Börse AG, which showed almost 30% increase in earnings (from $443 million to $570 million), but only 4% increase in net income over the period (from $297 million to $310 million). The next largest exchanges in this category are Euronext with 30% increase in both earnings and net income (earnings went from $349 million to $455 million, while net income went from $209 million to $267 million) and Hong Kong Exchanges & Clearing (25% increases: reporting $83.3 to $103.7 million for both earnings and net income).



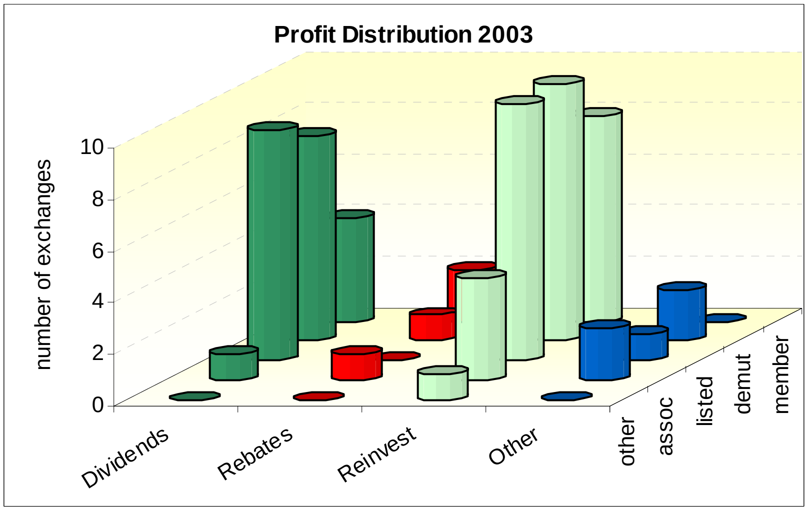
Meanwhile the demutualized exchanges showed a 21% increase in pre-tax earnings but a 24% *decrease* in net income. These results are heavily affected by a few of the larger exchanges in this category, whose earnings and net income numbers show considerable disparity. For example, NASDAQ reports negative earnings in both 2002 and 2003, as a result of significantly lower trading volumes and delistings following the burst of the dot-com bubble in 2000. Meanwhile, Tokyo Stock Exchange shows a 180% increase in earnings on a relatively small base (from $26.7 million to $75.4 million after correcting for exchange rate moves over the period), and 50% increase in net income over the period, and Taiwan Stock Exchange Corp. shows negative changes in both earnings and net income.

Among the three smaller legal groups: member-owned, associations, and others, all showed similar changes in pre-tax earnings and net income between 2002 and 2003: member-owned firms and associations showed increases in both items over the period, while the "other" category of exchanges showed decreases.



d. Use of Profits

The most common uses of profits reported by exchanges is distribution in the form of dividends, rebates, or retaining them for internal reinvestment. This pattern holds reasonably well across exchanges when sorted by legal form (with the exception of associations, which use rebates more commonly than issuing dividends), as well as by exchange size (top 10 versus other) and geographic groupings. We note that listed exchanges are the most profitable, in line with expectations. One of the main objectives of listed exchanges is the maximization of profits.



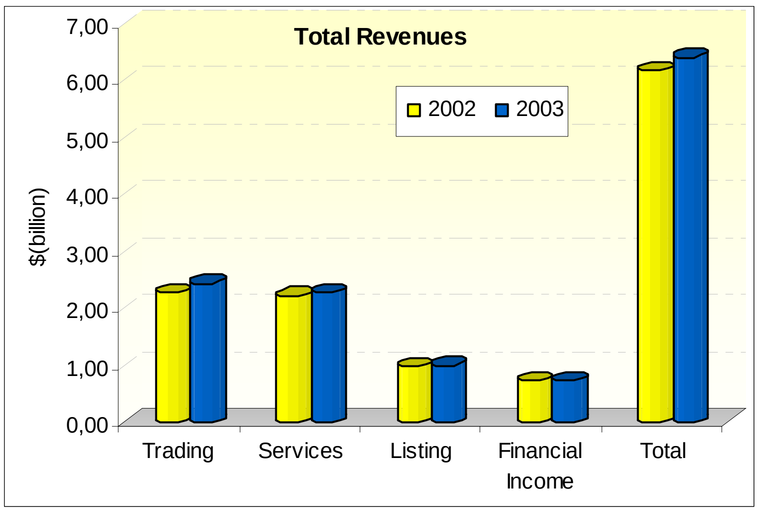
Summary

Given such widely variable outcomes, it is not possible to draw any general conclusions about changes in earnings and net income among exchanges. The picture is further obscured by relatively sharp changes in exchange rates against the dollar during the 2002-2003 time period, as well as differing business/economic conditions in different parts of the global economy.

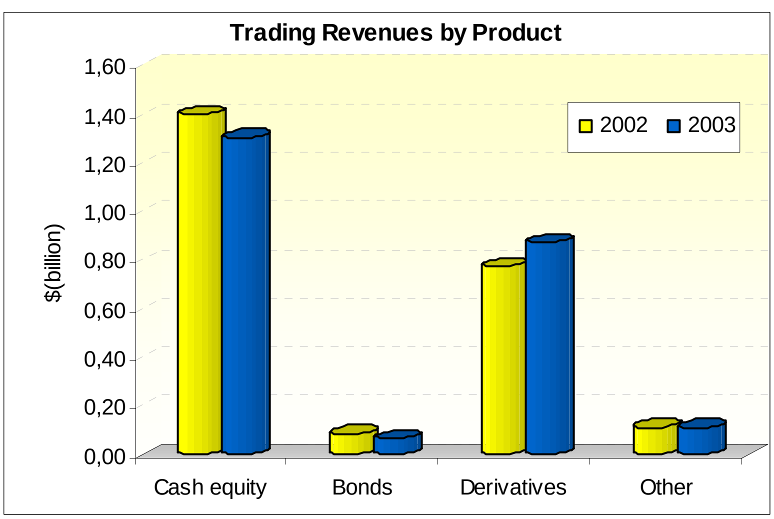
4. REVENUES

Overview

The most important source of revenue for all exchanges is from trading, accounting for 38% of total revenues, or $2.43 billion. By way of information, WFE exchanges processed $33 trillion[4] in cash equity trading in 2003. Services (which include information dissemination and IT sales) runs a close second in importance, at 35% ($2.27 billion). Listing and financial income represent less significant portions of overall revenues, at 15% ($1 billion) and 11% ($0.7 billion), respectively. Total revenues show a small increase of 4% between 2002 and 2003, from $6.17 billion to $6.41 billion.



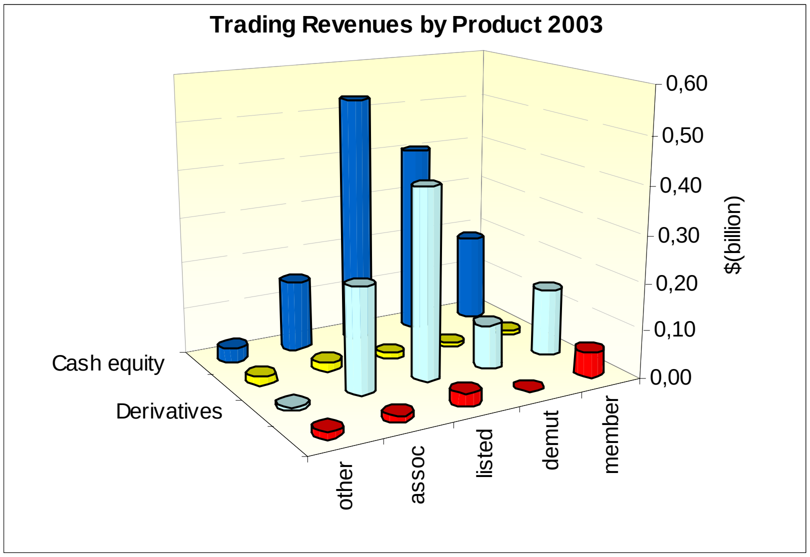
a. Trading Revenues by Product

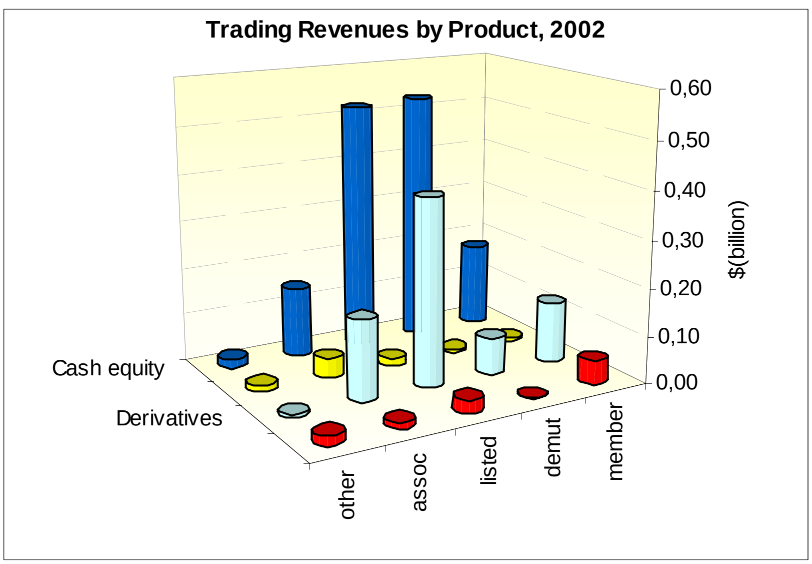


[4] *Otherwise expressed, $33 trillion means $33 000 000 million.*

General Observations Across All Exchanges

Trading revenue in derivatives grew sharply by volume in 2003, while trading revenue in equities was slightly reduced. The most important products traded across all exchanges are equities, accounting for just over 50% of all exchanges' trading revenues. Derivatives account for about 35% of revenues, and bonds contribute a small part of revenue for some exchanges, with a few exchanges reporting some revenues from other products.





By Legal Form

In the breakdown by legal form, we note that both listed and member-owned firms show a higher proportion of trading revenues from derivatives than the global average, while associations report more trading revenues from derivatives than from equities. This result is driven by the SWX Swiss Exchange, the second largest of the associations, which reports significant trading revenues from derivatives and almost none from equities. Demutualized exchanges, on the other hand, report far more trading revenue from equities than derivatives.

By Geography

When we compare trading revenues from equity versus derivatives, we note that the European and Asian exchanges both show nearly as much revenue from derivatives as from equities, while in the Americas, almost all of the revenues come from equity trading. Again most US derivative exchanges are not surveyed in the WFE membership.

Trading in derivatives is less widespread across exchanges; however, the vast majority of derivatives trading in Asia is limited to three exchanges, and similarly in the Americas. The majority of derivatives trading among WFE members is in Europe, where Euronext dominates in terms of product revenues, accounting for 60% of all European derivatives revenue.

We also note that in the Americas the majority of exchanges saw an increase in dollar revenue from equity. Across the European time zone we find that equity trading revenues are relatively flat in this geographic sector (an overall increase of only 4%). The same applies for the Asia region: the increase in equity trading revenues is approximately 6%.

In terms of bond trading, only the European exchanges are active, while both Asia and the Americas show some revenues from other products. Bond and other products trading revenue continues to represent only a small portion of overall product revenues, with European-exchanges accounting for 80% of global bond trading revenue. Other product revenues are distributed approximately evenly between the three regions.

Developed versus Emerging

The world's capital markets are concentrated in developed countries. Trading revenues from exchanges in developed economies accounted for nearly 85% of total trading revenues. It is interesting to note, however, that the proportions of trading revenues from each of the four product classes are rather similar between developed and emerging market exchanges: developed market exchanges have slightly greater weight on equities and derivatives and slightly less on bonds and other products.

By Size

- *Market Cap*

  We note that for equity and derivatives trading, the 10 largest exchanges dominate, accounting for 71% and 60% of all product revenues, respectively. Where bonds are concerned, however, the top 10 exchanges account for only 26%, with four of the smaller exchanges accounting for the lion's share of bond trading revenues (Tel Aviv Stock Exchange, Istanbul Stock Exchange, Shanghai Stock Exchange and Stockholmsbörsen).

The 10 largest exchanges by market capitalization in 2003

	Exchange	USD bn
1.	New York Stock Exchange	11 329
2.	Tokyo Stock Exchange	2 953
3.	NASDAQ	2 844
4.	London Stock Exchange	2 460
5.	Euronext	2 076
6.	Deutsche Börse	1 079
7.	TSX Group	889
8.	SWX Swiss Exchange	727
9.	BME Spanish Exchanges	726
10.	Hong Kong Exchanges & Clearing	715

- *Share Trading value*

The results for the 10 largest exchanges by share trading value are very similar to those of the 10 largest by market cap; however, these two categories are very similar, differentiated only by Taiwan Stock Exchange Corp. and Borsa Italiana SpA being among the largest 10 in terms of share trading value, while Hong Kong Exchanges & Clearing and TSX Group are among the largest 10 for market capitalization.

The 10 largest exchanges by share trading value in 2003

	Exchange	USD bn
1.	New York Stock Exchange	9 691
2.	NASDAQ	7 068
3.	London Stock Exchange	3 610
4.	Tokyo Stock Exchange	2 109
5.	Euronext	1 937
6.	Deutsche Börse	1 299
7.	BME Spanish Exchanges	933
8.	Borsa Italiana SpA	821
9.	SWX Swiss Exchange	610
10.	Taiwan Stock Exchange Corp.	592

- *Revenues*

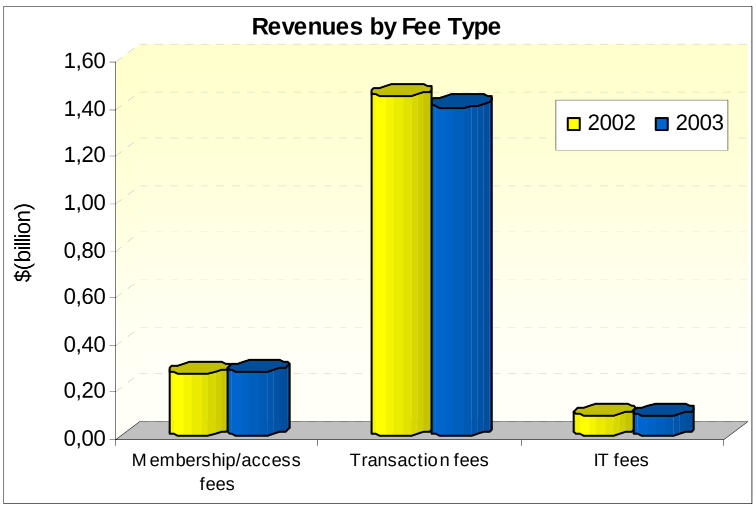
In terms of the 10 largest in revenues, Korea Stock Exchange and Borsa Italiana SpA replace TSX Group and BME Spanish Exchanges relative to market cap. In this breakdown, the significant derivatives revenue of Borsa Italiana SpA boost the weight of the 10 largest to 70% of all derivatives revenue, while the impact of the BME Spanish Exchanges dropping out reduces the bond trading impact of the 10 largest to only 17%.

Summary

In terms of total trading revenues across all exchanges, we see that there was very little overall change between 2002 and 2003, once we adjust for dollar weakening over the period. Total trading revenues across all products and exchanges in 2003 was $2.43 billion, as compared to $2.27 billion in 2002, an increase of approximately 7%.

b. Revenues by Fee Type

General Observations Across All Exchanges



The vast majority (about 80%) of revenues by fee type are generated by transaction fees, while membership/access fees account for about 15%, and IT fees the remaining 5%. The overall change in revenues by fee type between 2002 and 2003 is minimal, with a small increase spread relatively evenly between the three fee types (membership/access fees, transaction fees, and IT fees). When we drill down to look at how revenues by fee type vary within individual exchanges, however, we find a somewhat different story.

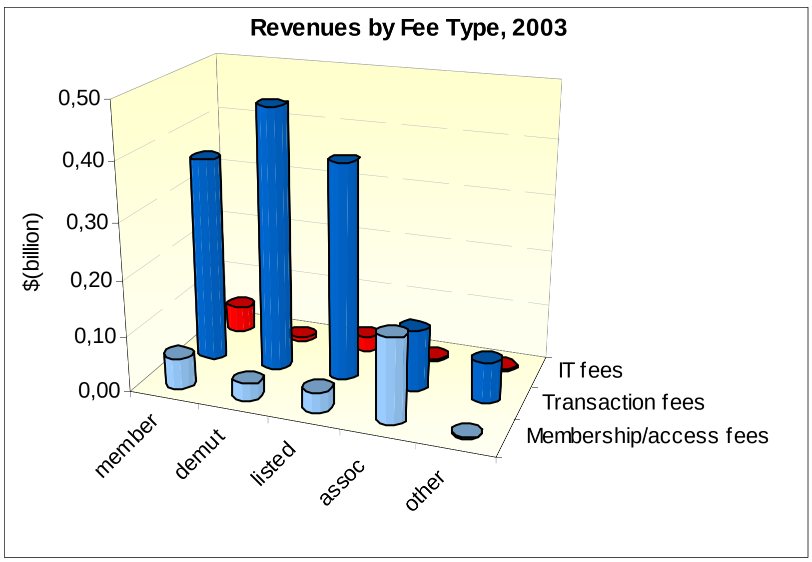
By Legal Form

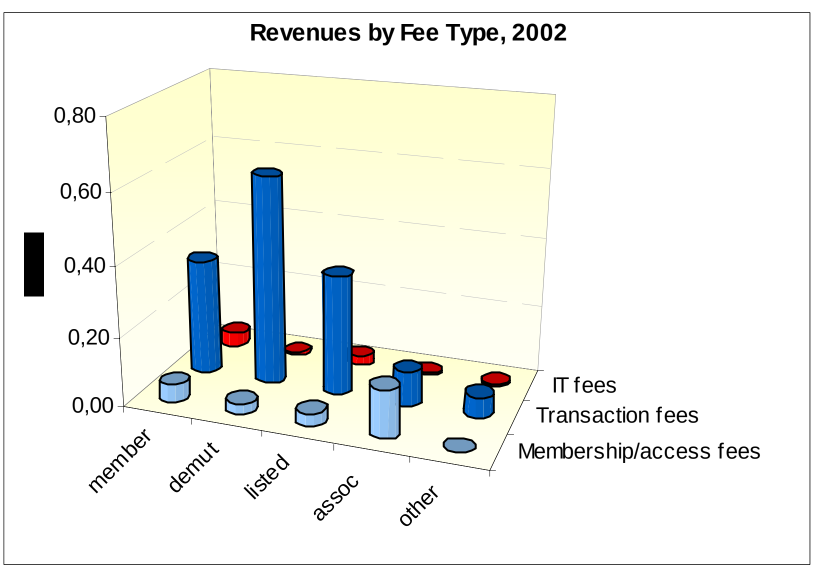
Comparing revenues by fee type between 2002 and 2003 among different legal forms, we see that there is a significant (20%) *decrease* in these revenues among the demutualized exchanges, while member-owned and association exchanges show approximately a 10% increase. Meanwhile, listed exchanges show a 12% increase, and the other legal category shows nearly a 24% increase in these revenues.

The decrease in transaction fees for demutualized exchanges is driven almost entirely by the NASDAQ, which shows approximately a 40% drop in such revenues between 2002 and 2003. Taiwan Stock Exchange Corp., which represents about 15% of transaction fees, showed a small reduction of around 5%. Since the NASDAQ accounts for approximately 50% of transaction fee revenues across all demutualized exchanges, this loss outweighs the many exchanges in this category that had significant gains (notably Oslo Børs, Bourse de Montréal, BSE The Stock Exchange, Mumbai, and Osaka Securities Exchange).

Among the member-owned exchanges, CBOE and New York Stock Exchange both show increases in transaction fee income (17% and 3%, respectively), accounting for most of the 10% increase in transaction fees for this exchange type. Among the listed exchanges, Hong Kong Exchanges & Clearing shows a 45% increase, most likely as a result of the continuing rise in the issuance of the Chinese H shares in the Hong Kong market over this period.

Both membership/access and IT fees remain a small and relatively constant proportion of overall revenues by fee type (accounting for 20% of the total $1.76 billion). Membership/access fees for associations are an exception; they increase by 10% between 2002 and 2003. This is generated entirely by a 10% increase in Korea Stock Exchange's significant membership/access fees.





By Geography

The Americas show an overall reduction in trading fees, caused almost entirely by the 40% drop in transactions fees on NASDAQ (partially offset by the CBOE and New York Stock Exchange increases). The European time zone members show a net increase, although there is considerable variance between individual exchanges. Almost all exchanges in the Asia-Pacific region show considerable increases in this category of fees.

By Size

The 10 largest account for approximately 50% of both transaction and IT fees. On the other hand, membership/access fees are significantly impacted by whether Korea Stock Exchange is included in the top 10 largest exchanges, which is only the case when sorting by revenues. Korea's membership fees represent almost 50% of all such fees across exchanges.

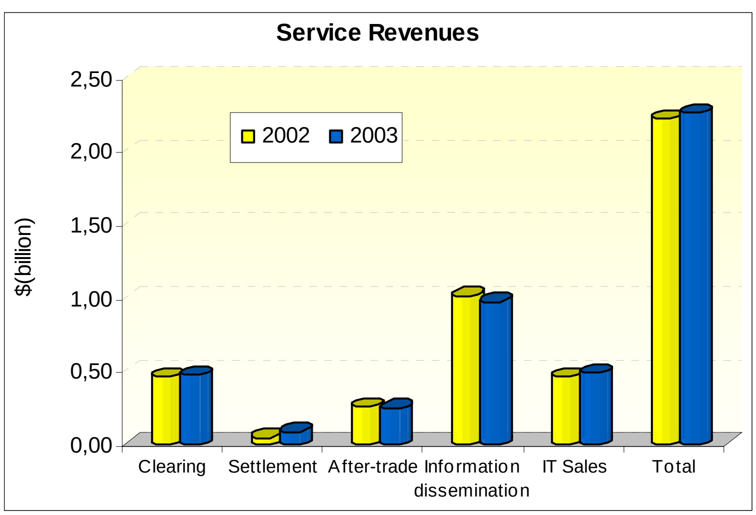
Summary

There is considerable variability on revenues by fee type across member exchanges, reflecting differences in economic and regulatory climates across the exchanges. Thus it is hard to draw any general conclusions in this category; each exchange has both market-related and idiosyncratic features, both of which have significant impact on these revenues.

c. Service Revenues

General Observations Across All Exchanges

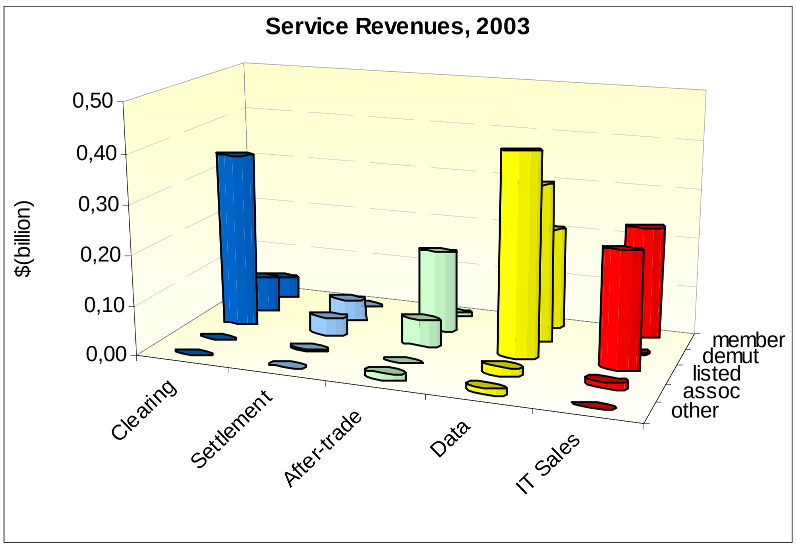
Revenues from services account for 35% of total exchange revenues, amounting to $2.27 billion in 2003. These revenues are dominated by dissemination of information, garnering almost 50% of all service revenues. IT sales and clearing services generate most of the remainder, although note that US exchanges do not have clearing and settlement revenues, since by law other companies handle these services. Revenues from services are stable between 2002 and 2003.

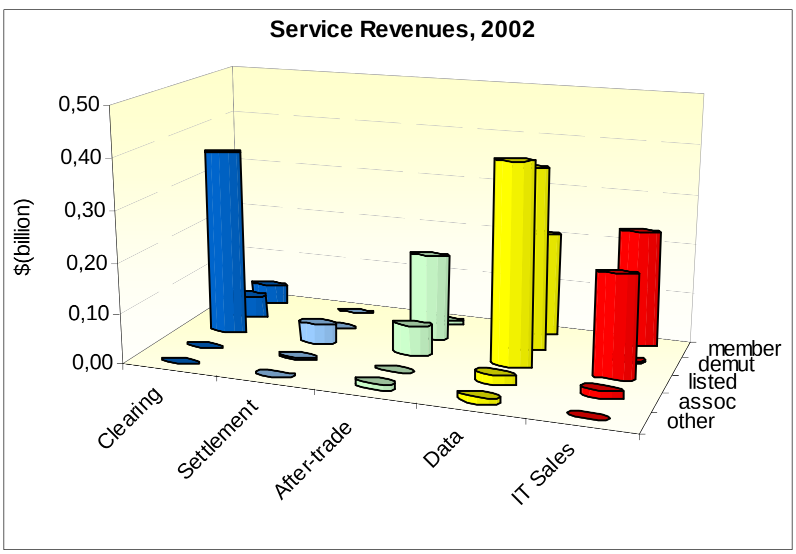


By Legal Form

When broken down by legal form, we note that there is little change in service revenues within each grouping (especially after correcting for exchange rates), with the exception of the demutualized group, which shows a sharp increase in clearing and settlement revenues, almost all of which is generated by Borsa Italiana SpA. In fact, in 2002 Borsa Italiana SpA shows zero settlement revenues, but $44 million from settlement revenues in 2003, as a result of the launch of the first phase of a new net settlement service. Borsa Italiana SpA has recently completed the purchase of Monte dei Titoli, the market depository which also performs clearing services. This purchase has enabled the exchange to offer after-trading services, explaining the considerable increase in revenue.

In terms of information dissemination, the demutualized group shows a sharp *decrease*, caused almost entirely by a 30% drop reported by NASDAQ, which accounts for more than 50% of all information dissemination revenues among demutualized exchanges. This substantial decrease results from reduced printing fees for trades which are reported elsewhere.





By Geography

While the Asia-Pacific region and European time zone members show generally increasing revenues from services, in the Americas we see a net decrease, driven largely by NASDAQ's drop in revenues from information dissemination.

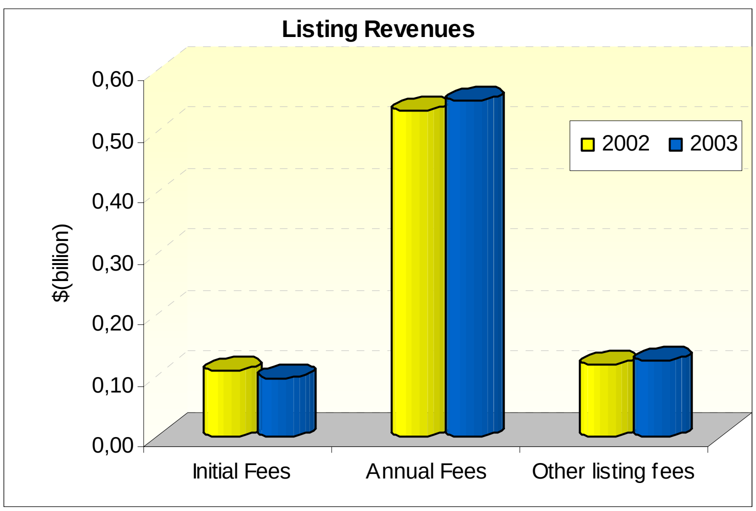
Summary

Service revenues are, in general, relatively stable across exchanges, with the exception of a couple of two exchanges. Changes in service revenues reported by Borsa Italiana SpA and NASDAQ dominate the results in this section, as discussed above.

d. Listing Revenues

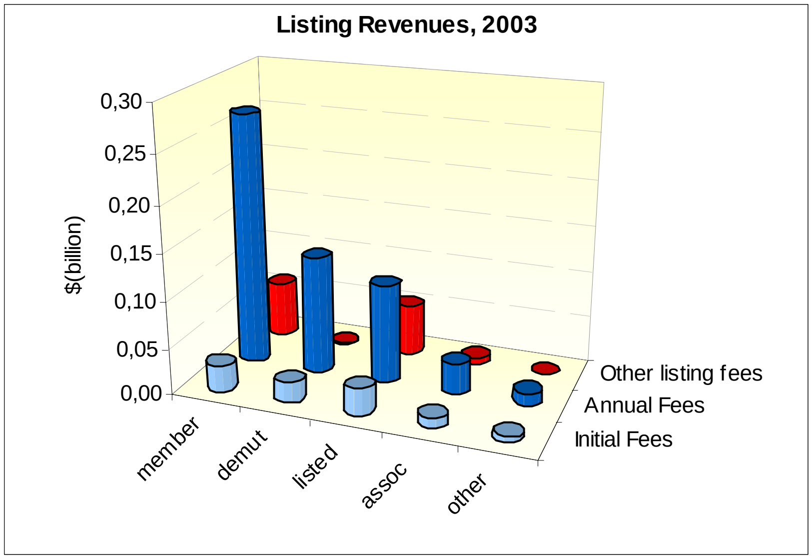
General Observations Across All Exchanges

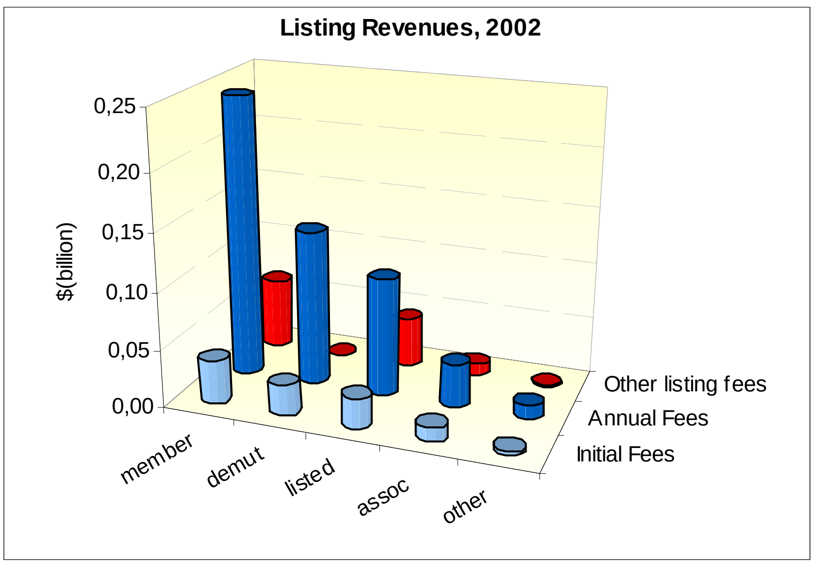
Revenues from listing fees have remained relatively stable over the last two years across all exchanges, with a small percentage increase from annual fees and a small percentage decrease from initial fees.



By Legal Form

There is little to report in the way of change from listing revenues between different legal groups. Annual fees have increased somewhat for member-owned and listed exchanges. As noted above, there has been some increase in other listing fees, especially among the listed exchanges.





By Size

- *Market Cap*

When measured by market capitalization, the 10 largest exchanges account for approximately 64% of total listing fees. Annual and other listing fees represent the large majority of total listing fees. Initial fees for the top 10 exchanges represent only 40% of the initial fees across all exchanges. What stands out in this categorization is the significance of TSX Group's "other" listing fees, which account for 41% of "other" listing fees across all exchanges. TSX Group is a top 10 exchange by market capitalization, but not one either by revenues or share trading value.

- *Share Trading Value*

When measured by the 10 most active equity markets, these exchanges account for approximately 54% of all listing fees, and in fact represent a smaller percentage of total fees in all three categories (initial, annual, and other). This is principally driven by the fact that Hong Kong Exchanges & Clearing does *not* rank among the top 10 in share trading value. The sum of their initial and listing fee revenues are approximately 7% of total initial and listing fee revenues across *all* exchanges ($42 million out of a total of $645 million). Note that Hong Kong Exchanges & Clearing was the leader in initial listings over this time period because of the substantial listing of Chinese H shares.

- *Revenue*

The addition of the Korea Stock Exchange to the top 10 list in terms of revenue causes a slight increase in the percentage of annual fees accounted for by the top 10 exchanges. In other ways, the top 10 exchanges by revenue account for similar percentages of listing revenues as the other top 10 exchange categories.

Summary

The most significant change over the last year has been a 10% decrease from initial fees. This is consistent with the continuing fall-off of IPO activity in 2003, during which 75% of the capital raised was from secondary offerings of listed securities.

e. Financial Income

General Observations Across All Exchanges

Across all exchanges, we see that financial income is relatively stable between 2002 and 2003. Financial income decreased 2% from 2002, from $730 million to $715 million. When we look at different subgroups of exchanges, we see a broad range of results.

By Legal Form

Among the five legal groupings, we note that three show decreases: -12% for member-owned exchanges, -22% for demutualized, and -60% for other exchanges. Listed exchanges and associations show increases of 35% and 2%, respectively. Note that there does not seem to be much correlation between those exchanges that show decreases in financial income, versus those that show decreases in revenues and/or equity capital. To put this in perspective, however, financial income is typically less than 10% of overall revenues, except in the case of Associations (where financial income accounts for 27% of total revenues) and exchanges in the "other" legal category (financial income is 23% of total revenues).

By Size

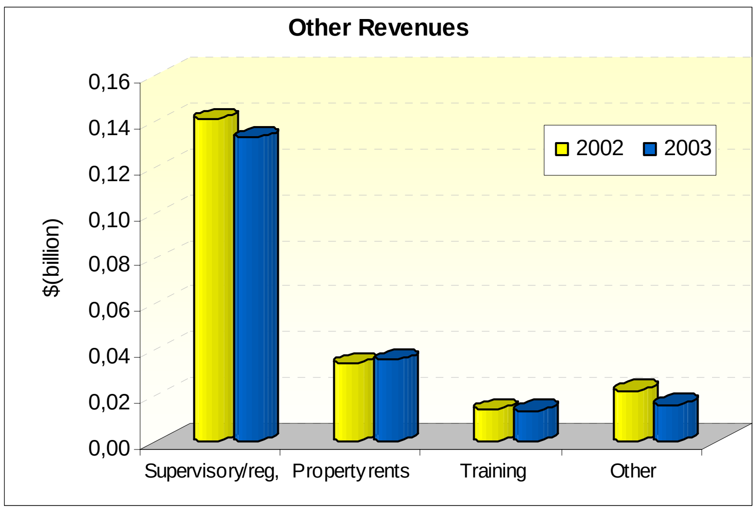
When we sort by size, we find that the top 10 exchanges show approximately a 10% increase in financial income, while the remaining exchanges show a decrease of about 70%. However, when we examine individual exchanges within these categories, we find wide disparities between changes in financial income. Hence, it is hard to draw any meaningful generalizations among exchanges in any particular grouping, where financial income is concerned.

f. Other Revenue

General Observations Across All Exchanges

Other revenue, which includes supervisory/regulatory, property rents, training, and other revenues, was down 6% between 2002 and 2003, from $210 million to $198 million. Other revenue accounts for only about 3% of total exchange revenues.

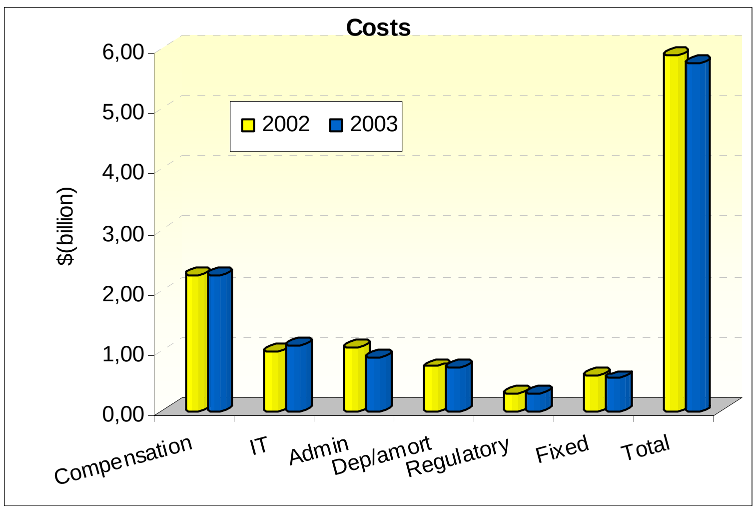
The other significant item in this category is regulatory/supervisory income. More than 80% of such income is reported by the New York Stock Exchange. In fact, the New York Stock Exchange's total income in this category (which also includes a small amount in rental income) accounts for approximately 50% of all other income reported by all exchanges.



5. COSTS

General Observations Across All Exchanges

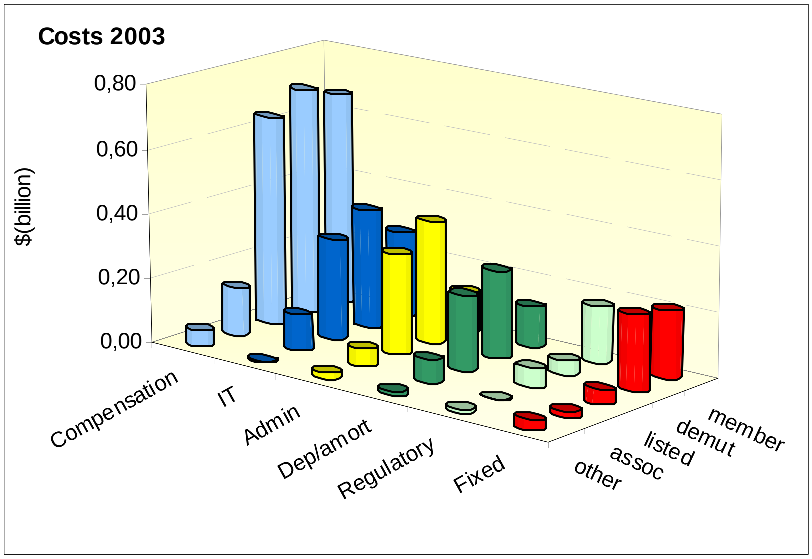
Total costs in 2003 amounted to $5.75 billion across all WFE member exchanges, versus $5.88 billion in 2002, representing approximately a 2% decrease. Not surprisingly, the largest portion of costs across exchanges is compensation (salaries and benefits), accounting for approximately 39% of costs. This is typical in most service industries. IT, administrative costs and depreciation/amortization account for 18%, 15% and 12%, respectively. Regulatory costs and fixed costs account for 5% and 9%, respectively. [5]

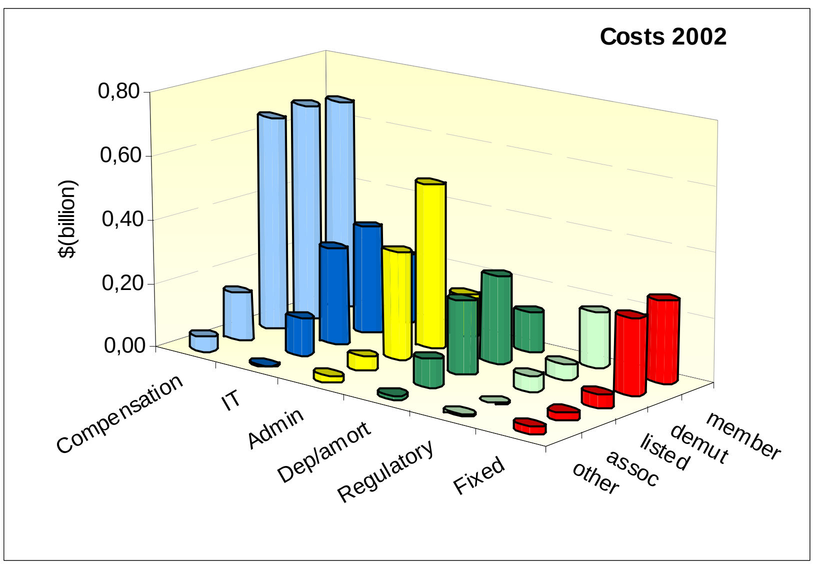


By Legal Form

Looking at compensation costs, we find that all groups have maintained relatively stable compensation from 2002 to 2003, while IT costs, the next largest category for most exchanges, have increased (except for Associations, whose IT costs have dropped by 5%). For administrative costs, we see exactly the opposite result; all legal groups' administrative costs have decreased, except for associations, where administrative costs have increased by approximately 20%.

[5] *Note, however, that Deutsche Börse reported all of its costs as a single line item, which given their relative size may have skewed these results.*





By Geography

From a geographic perspective, all three regions have maintained relatively stable overall costs. The biggest change is among the European time zone members, where costs increased approximately 6% between 2002 and 2003.

Summary

There is approximately a 2% decrease in overall costs between 2002 and 2003 (after accounting for exchange rates). Most of this decrease appears to come from reduced administrative costs related to some consolidation and cost cutting.

It is important to note that there is much less information available on the cost side of the balance sheet, which is true every year in this survey. The abbreviated questionnaire used to generate the data for this report is in conformity with the ongoing disclosure requirements of listed exchanges, and no further information could reasonably be requested.

6. CONCLUSION

In much of the above analysis, we find it difficult to determine any general trends within the industry as a whole. Differences in legal form, geography and size lead to a broad dispersion of results in terms of profitability and revenue generation.

We note that the industry is characterized by a small number of relatively large exchanges, so that industry averages may impart relatively little insight. Hence in many instances we examine results on an exchange by exchange basis.

Overall, we note that many of the conclusions of the WFE Cost & Revenue Survey 2002 still apply to this current survey:

- Trading revenues continue to be the principal source of revenue for most exchanges, although they account for a slightly smaller proportion of overall revenues in 2003 when compared with 2002 (38% versus 45%).

- The European time zone exchanges show greater diversity of products offered, with increases in trading revenue from derivatives. By contrast, in the other geographic regions revenue from equity trading dominates.

- Costs have remained relatively stable between 2002 and 2003. Compensation expenses represent 39% of total expenses in 2003.

- Increasingly, a for-profit business model is a principal objective of the majority of exchanges.

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