Best execution

The data provided by GSCS Information Services is based on its global equity transaction cost measurement universe. This universe incorporates representative transactions from more than 150 investment management companies, using more than 400 institutional brokers. The total number of transactions in the universe grows at a rate of around 4 million per annum across more than 50 countries.

COUNTRY ANALYSIS – DEFINITIONS

Market impact
Market impact, expressed in basis points, is calculated based on a comparison between the execution price and the price of the security immediately before the trade was put in the market by the buy-side trading desk. This is commonly known as Release Time price.

Cost of delay
Cost of delay expressed in basis points represents the costs incurred as a result of delays between the decision to trade being made and the trade being put into the market.

Implementation shortfall
Implementation shortfall, expressed in basis points, reflects the difference of a paper portfolio versus the actual portfolio purchased. This is calculated based on a comparison between the execution price and the price prevailing at the time the decision to trade is made (or where this is not known, the open price on the trade date).

Opportunity cost
Opportunity cost represents the percentage of the market price movement across a three-day period (one day before trade date to one day after) that the execution 'captured'. A low or negative figure suggests that the timing of the execution was materially suboptimal. A high figure suggests that timing of trades was generally superior.

Average commission
Commission, expressed in basis points, reflects all trades (including program trades) that bear commission. However, it excludes any principal or zero commission trading activity.

% Zero commission
This shows the relatively low proportion of activity in most countries that is carried out by dealers acting as principal and not charging a commission to act as a broker on behalf of clients.

COUNTRY ANALYSIS

	Market Impact (bps)	Cost of Delay (bps)	IS* (bps)	Opportunity Cost Alpha Capture (%)	Average Agency Commission	% zero Commission (%)
Europe – major						
Finland	-6	35	28	100.0	19	23.2
France	11	9	20	100.0	14	20.0
Germany	8	16	24	100.0	16	14.2
Italy	14	27	41	100.0	15	9.8
Netherlands	10	20	30	57.8	16	3.4
Norway	16	14	29	31.3	20	3.1
Spain	14	7	21	100.0	18	5.1
Sweden	9	12	21	65.3	19	5.7
Switzerland	10	18	28	87.2	18	4.2
UK	12	6	18	72.1	14	4.5
North America						
Canada	18	11	30	26.3	14 (3.2 c/s)	5.8
US	11	18	29	100.0	11 (2.0c/s)	12.6
Asia – major						
Australia	15	5	20	0.0	21	7.8
Hong Kong	25	-1	24	99.0	21	52.9
Japan	6	30	36	36.7	13	0.9
Korea	24	3	27	100.0	26	29.2
Singapore	35	-3	32	100.0	29	25.5
Taiwan	36	-9	28	0.0	24	23.6
Other – select						
Brazil	94	176	270	0.0	48	5.0
Greece	23	31	53	100.0	28	3.9
Hungary	29	-17	11	58.1	43	1.4
Ireland	22	8	29	34.4	19	2.7
Malaysia	27	-5	22	3.9	30	32.6
Mexico	19	0	19	58.7	22	6.4
Poland	28	-7	21	0.0	48	34.3
Portugal	14	13	27	74.6	19	1.9
South Africa	14	18	32	98.0	22	12.4
Thailand	2	60	62	0.0	46	12.2

**IS = Implementation Shortfall*

Zero commission trading rises

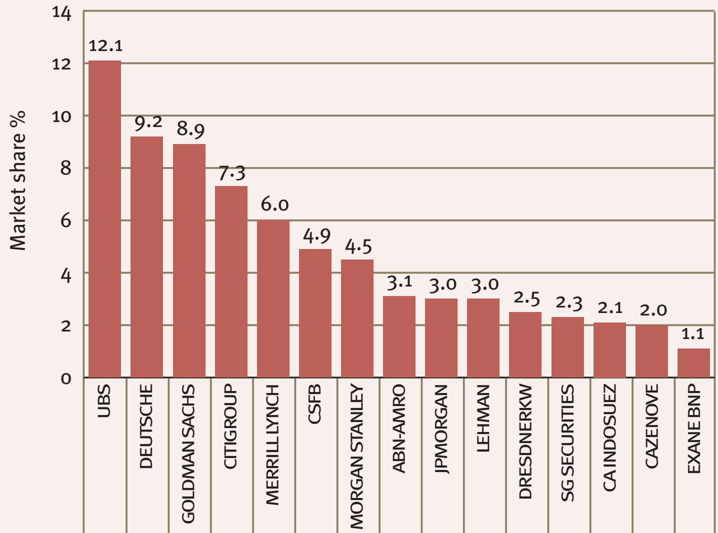
The most interesting development in the latest quarter is the growth in zero commission trading. There was also a gain in program trading. It seems unlikely that this is being driven by increased risk appetite on the part of dealers, most of whom believe they lose money on principal trades. Rather it seems to reflect the desire on the part of brokers and clients to reduce average levels of commission being paid without undermining the 'commission tariff' for full service. The latter does appear to have remained remarkably unaffected by competitive pressures. However, by doing more business at zero commission, average levels are being reduced. As well as reducing average commission being paid, managers performed significantly better in the area of short term 'alpha' capture. While the dynamics of the markets and the nature of the securities traded undoubtedly played a role, it would seem that buy-side traders are performing better in a number of countries.

Q2 2005 Broker execution

Global brokers: **UBS strength in commissions**

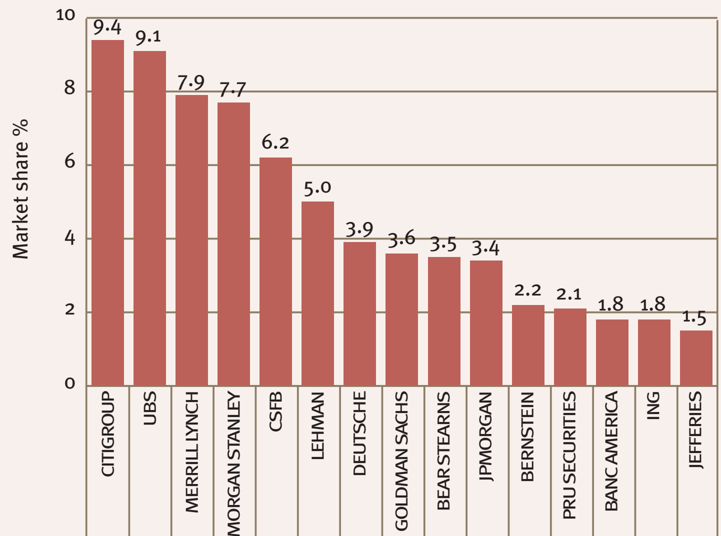
The leading brokers, whether measured by commission or total value traded remained quite consistent with previous periods. Globally, UBS continued to rank top in both categories but its market share in commissions suggests that it is not only doing more business than other brokers but is earning better rates. While Deutsche slipped to third in value, it retained second spot in the commission ranking, suggesting it too has not succumbed to pricing pressure as much as some competitors. It could be that Deutsche and UBS have fewer options available to them in terms of DMA and algorithmic trading and are 'missing out' on these fast growing but lower commission ways of doing business. Goldman Sachs has consolidated its position, but Merrill Lynch appears to have been struggling to maintain market share of both value traded and commissions. Joining the Top 15, Exane BNP appears to have established good momentum following the merger.

Q2 2005 LEADING BROKERS – TOP 15 RANKED BY COMMISSION



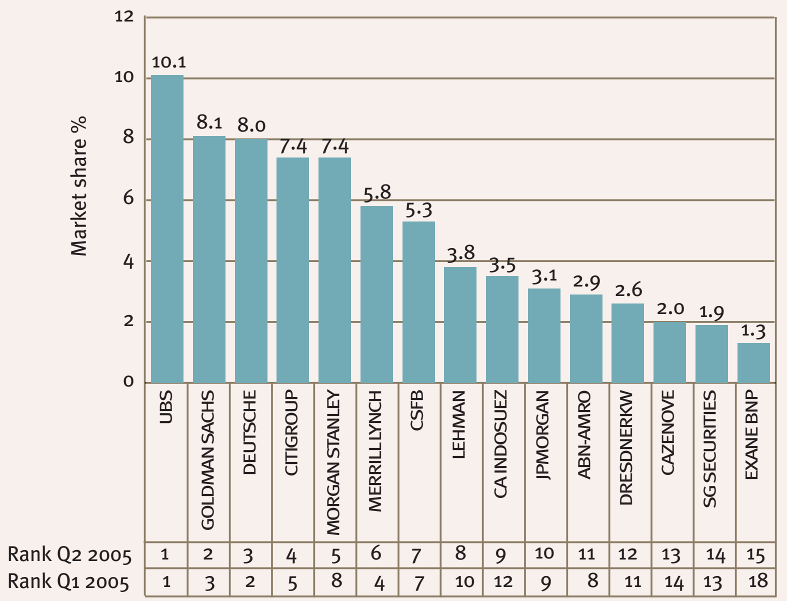
	UBS	DEUTSCHE	GOLDMAN SACHS	CITIGROUP	MERRILL LYNCH	CSFB	MORGAN STANLEY	ABN-AMRO	JPMORGAN	LEHMAN	DRESDNERKW	SG SECURITIES	CA INDOSUEZ	CAZENOVE	EXANE BNP
Rank Q2 2005	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rank Q1 2005	1	3	2	5	4	6	7	8	11	9	10	13	12	15	16

Q2 2005 LEADING US BROKERS – TOP 15 RANKED BY COMMISSION

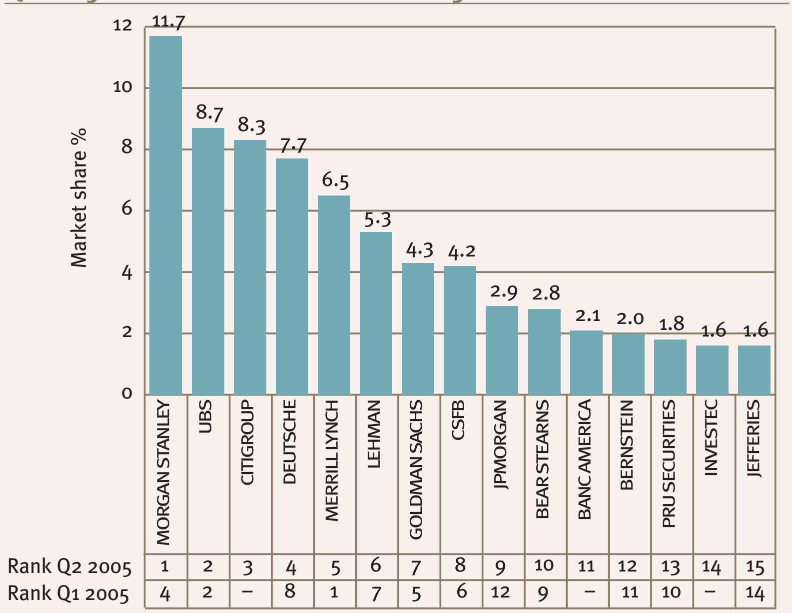


	CITIGROUP	UBS	MERRILL LYNCH	MORGAN STANLEY	CSFB	LEHMAN	DEUTSCHE	GOLDMAN SACHS	BEAR STEARNS	JPMORGAN	BERNSTEIN	PRU SECURITIES	BANC AMERICA	ING	JEFFERIES
Rank Q2 2005	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Rank Q1 2005	2	3	1	4	5	7	11	6	8	12	9	10	15	14	13

Q2 2005 LEADING BROKERS – TOP 15 RANKED BY VALUE TRADED



Q2 2005 LEADING US BROKERS – TOP 15 RANKED BY VALUE TRADED



US brokers: **UBS trails Citigroup**

In the US, Citigroup comes out top in terms of commissions, though UBS again performed very well. In contrast to the position in other countries, Deutsche does appear to be offering lower commissions to attract US business, but not UBS. Goldman Sachs position in the US is surprisingly a good deal weaker. Morgan Stanley by contrast performed exceptionally well, leading the way in value traded and ranking fourth in commissions. Both positions were much stronger than in the global analysis.

BROKER RANKINGS – DEFINITIONS

Market share 'by value traded' is calculated based on the level of trading completed across all global equity markets. The share 'by commission' reflects the combination of both the value traded and the average commission rates charged. It is reasonable to assume that where market share by commission exceeds market share by value, above-average levels of commission are generally being charged.

Q2 2005 Broker execution

Scandinavian match for traders

In the latest period, Scandinavia saw a couple of interesting moves in terms of individual securities. It seems everyone wanted to buy Swedish Match, which was the third most heavily traded security in the market and more than 90% of trades by value were purchases. Given the share price has gained more than 15% from its level in early May, it would seem that the investment decision was good but not spectacular as yet. At the same time, DnB NOR was being aggressively sold by many investors within the GSCS universe. Of the leading stocks traded it had the highest sell/buy ratio with sellers outnumbering buyers by a factor of 7 to 1.

In general, telecom stocks remained very active but banks disappeared off the most active stocks in the UK. In seven out of ten European markets an oil stock featured as one of the three most actively traded. All were in demand except for Total in France, where sellers outnumbered buyers. In the US, buyers favoured Bank of America but the reverse was true at Citigroup.

LEADING STOCKS

	Market Impact (bps)	*Cost of Delay (bps)*	*IS* (bps)*	*Buy/Sell (%)*	*Leading Brokers*
US					
Exxon	-6	20	14	59.1/40.9	MStanley/Lehman/Deutsche
GE	9	-3	6	57.5/42.5	Deutsche/MStanley/ISI
Pfizer	-5	-25	-30	61.4/38.6	Bernstein/Deutsche/MStanley
Microsoft	0	7	7	43.1/56.9	Deutsche/Lehman/Citigroup
AIG	-19	80	61	40.9/59.1	Deutsche/CSFB/Bernstein
Citigroup	3	8	11	41.7/58.3	SFerretti/MLynch/MStanley
IBM	-4	32	28	45.5/54.5	Goldman/MStanley/UBS
Bank of America	19	26	45	73.4/26.6	WMBlair/MStanley/Deutsche
Johnson & Johnson	-4	-4	-8	62.5/37.5	Deutsche/JPMorgan/Goldman
Wal-mart	8	15	23	40.1/59.9	MLynch/Lehman/PruSecurities
Canada					
Ace Aviation	28	1	29	64.9/35.1	UBS/CIBC/RBC
Barrick Gold	57	44	101	47.7/52.3	UBS/RBC/MStanley
CIBC	-3	0	-3	16.3/83.7	CIBC/RBC/Nesbitt
Finland					
Nokia	-33	24	-9	58.8/41.2	MStanley/ABN AMRO/Goldman
Fortum	8	19	27	67.6/32.4	MStanley/MLynch/CAIndosuez
Neste Oil	8	66	74	61.7/38.3	MStanley/MLynch/Citigroup
France					
Total	-3	-5	-8	42.8/57.2	FIMAT/Goldman/UBS
France Telecom	15	34	49	74.9/25.1	MLynch/FIMAT/CAIndosuez
Sanofi Aventis	8	29	37	49.5/50.5	Goldman/FIMAT/UBS
Germany					
EO.N	-4	-7	-11	66.4/33.6	MStanley/ABN AMRO/MLynch
Deutsche Telecom	6	15	21	53.0/47.0	MStanley/Deutsche/MLynch
Siemens	3	9	12	38.3/61.7	CAIndosuez/MLynch/UBS
Italy					
Unicredito	7	39	46	46.8/53.2	UBS/Goldman/CSFB
ENI	6	26	32	44.9/55.1	CSFB/Intermonte/UBS
SanPaolo IMI	5	-7	-2	59.6/40.4	Goldman/UBS/CSFB
Netherlands					
Royal Dutch	6	22	28	75.9/24.1	Neonet/MLynch/Deutsche
ING	5	14	19	56.8/43.2	UBS/Goldman/CAIndosuez
Unilever	29	71	100	48.1/51.9	Citigroup/Lehman/ABN AMRO
Norway					
Telenor	0	-19	-19	44.0/56.0	Citigroup/CAIndosuez/SG Secs
Statoil	16	35	51	66.4/33.6	Goldman/MStanley/DresdnerKW
DNB Nor	80	48	128	12.6/87.4	Enskilda/Cazenove/CAIndosuez

Broker execution Q2 2005

LEADING STOCKS

	Market Impact (bps)	Cost of Delay (bps)	IS* (bps)	Buy/Sell (%)	Leading Brokers
Spain					
Telefonica	11	19	30	64.8/35.2	MStanley/UBS/Citigroup
BBVA	7	30	37	56.8/43.2	Goldman/UBS/Citigroup
Repsol	5	14	19	52.8/47.2	ABN AMRO/CAIndosuez/UBS
Sweden					
Ericsson	2	19	21	69.0/31.0	Enskilda/Carnegie/ABN AMRO
Volvo	-9	-21	-30	60.0/40.0	MStanley/Goldman/CSFB
Swedish Match	12	5	17	90.9/ 9.1	Carnegie/Goldman/Deutsche
Switzerland					
Nestle	9	31	40	70.4/29.6	CSFB/Lehman/Goldman
Novartis	8	29	37	60.9/39.1	CSFB/Goldman/UBS
CSuisse	-2	19	17	33.2/66.8	Goldman/ABN AMRO/Lehman
UK					
Glaxo SmithKline	17	31	48	69.6/30.4	Lehman/CSFB/UBS
Vodafone	10	23	33	42.7/57.3	Goldman/UBS/Cazenove
BP	8	11	19	59.6/40.4	Deutsche/UBS/Citigroup
Australia					
BHP	3	12	15	59.6/40.4	Citigroup/UBS/CSFB
Telstra	-5	-3	-8	78.7/21.3	Macquarie/UBS/Citigroup
Commonwealth Bank	28	34	62	69.9/30.1	Citigroup/CSFB/Deutsche
Hong Kong					
Esprit Holdings	12	-27	-15	79.3/20.7	MStanley/Citigroup/JPMorgan
China Mobile	12	21	33	75.1/24.1	Citigroup/MStanley/Deutsche
Petrochina	36	32	68	36.4/63.6	HSBC/Goldman/MStanley
Japan					
Mitsubishi Tokyo	5	28	33	66.9/33.1	Goldman/CA Indosuez/MLynch
Toyota	0	20	20	65.9/34.1	Deutsche/UBS/Goldman
Hoya Corp	6	26	32	65.8/34.2	Goldman/UBS/Macquarie
South Korea					
Samsung	13	13	26	37.7/62.3	UBS/MLynch/JPMorgan
Kookmin Bank	17	40	57	34.7/65.3	MStanley/Macquarie/UBS
Hana Bank	7	24	31	53.2/46.8	MStanley/CA Indosuez/Deutsche

**IS = Implementation Shortfall*

LEADING STOCKS – DEFINITIONS

For each of 10 European major markets plus the US, the three most widely traded securities during the last quarter are identified. The 'Buy/Sell (%)' indicates the value of buys and sells as a percentage of the total value traded. It indicates the extent to which institutional investors as a whole were adding to their position during the period. The table identifies the three brokers that handled the highest proportion of trading activity in stock.

Q2 2005 Broker execution

An easier life for traders

Movement in markets did not produce as negative a position in terms of momentum of securities being traded as was seen in the previous quarter. However, it remains the case that traders continue to be confronted with the reality that portfolio managers tend to want to buy stocks that are going up and sell them into a falling market.

Unfavourable momentum trades accounted for 45.1% of the total in this quarter against 48.2% in the previous period. Most important, the decline in the total was accounted for almost entirely by a quite sharp reduction in the 'very unfavourable' category (down from 10.5% of the total to only 7.1%). This certainly makes life easier for traders. There was a decline in the 'very favourable' category as well however – from 4.8% to 3.3% – and very unfavourable trades still outnumber very 'favourable' ones by a factor of 2.15 times, essentially unchanged from the previous quarter.

MOMENTUM TABLE

ALL	*Q2*	*Q1*
Very unfavourable	7.1	10.5
Quite unfavourable	11.4	12.0
Somewhat unfavourable	26.6	25.7
Neutral	23.8	21.7
Somewhat favourable	21.0	17.9
Quite favourable	6.8	7.4
Very favourable	3.3	4.8

"Unfavourable momentum trades accounted for 45.1% of the total in this quarter against 48.2% in the previous period."

Neutral trades

On balance therefore trading was no easier overall, but perhaps just a little less frenetic in terms of market involvement. What is perhaps surprising is that 'neutral' trades, where essentially very little is happening to the stock on the day it is traded, still account for less than one-quarter of all trades. Clearly, portfolio managers like to trade on news and market movements create their own interest and enhance market activity. Of course, it has always been that way but from an investors and traders perspective it might be better if it were not.

MOMENTUM TABLE – DEFINITIONS

To compile the 'Momentum table' GSCS considered price changes in each security being traded on the date the trade was completed and compared closing and opening prices. To the extent that the difference was less than + or – 0.33%, the market was considered neutral in terms of its impact on trading. A movement of between 0.33 and 1.33% was considered somewhat favourable (if the manager was buying a stock whose price fell by an amount in that range) or somewhat unfavourable (if the manager was buying a stock whose price rose). A daily movement in the range of 1.33% to 2.33% was considered quite favourable or unfavourable, while if the movement was greater than 2.33% then the momentum was considered as very favourable or unfavourable.

The chart shows the results in terms of the value of trades falling into each category. It shows the position across all trades across Q1 and Q2 2005.