

Annex III: Cost of execution of retail equity trades in Europe in 2005 (Work in progress – May 2006)

1. Introduction

The purpose of this study is to investigate the differences in execution costs of equity trades by retail investors and to highlight the substantial cost differences between domestic and cross-border trades, using data available for 15 EU countries. To gather the necessary information, the help of major banks in each country is acknowledged.

As a first step, small-sized retail transactions, involving 100 “blue chip” shares (the equivalent to €1430) traded on an official stock exchange (e.g. Nokia), were considered. When dealing with small retail transactions, it is necessary to keep in mind that the costs charged for this type of transactions are significantly influenced by the differences among the minimum charges required by the domestic banks in various EU countries. Since these differences become less relevant as the transactions’ size increases, medium and large retail transactions (500 and 1000 shares) were also considered.

To further refine the comparison, we also included several online discount brokers. Interested parties are invited to provide further pricing details, especially as concerns equivalent trades carried out in the new Member States.

2. Analysis of the data

- 1) The term “cost” includes the overall fee paid by the final user for the trade (i.e. costs related to investors' accounts or cost stemming from holding securities are not included) for orders placed either at a bank's branch or over the phone. Banks usually offer the possibility of placing orders over the Internet, with fees that are lower than those for the two channels that were selected. However, the choice was made in order to capture a channel that is most widely available.
- 2) The information was gathered starting from the tariffs published on the official websites of the banks. Since published tariffs have different degrees of transparency, the information provided in the tables below is an approximation; in spite of this, several revealing details can be discovered.
- 3) Most of the data, with the exception of that for country F, which was received only in April 2006, was collected between July and September 2005. Due to this and the lack of data on fees for cross-border transactions, the average values calculated do not include data for country F.
- 4) The tables presented in this Annex do not take into account any taxes. Obviously these do have an impact on transaction costs for the investors, but this impact may be different for domestic and foreign securities. Moreover, local taxes and stamp duties fall within the responsibility of the public sector, and consequently do not form the object of this study.
- 5) Costs in non-EMU countries, after proper conversion, are shown in euro.
- 6) Given that the data on the fees is not publicly available, institutions and countries were relabelled in order to ensure their anonymity.
- 7) The comparison has been established on the basis of three fundamental dimensions:
 - a) across countries comparison – domestic transactions;
 - b) across countries comparison – cross-border transactions;
 - c) within countries comparison – domestic vs. cross-border transactions.

2.1. Small-sized retail trade (100 shares)

Value €1430	Domestic stock		Non-domestic stock		CB / domestic
	Fee structure	Fee amount (€)	Fee structure	Fee amount (€)	
A					
Bank A1	0.8%, minimum €22	22.00	0.8%, minimum €58.95	58.95	2.7
Bank A2	1.1%, minimum €30	30.00	€2.9 + 1.1%, minimum €30	30.00	1.0
B					
Bank B1	1.0%, minimum €32	32.00	1.3%, minimum €45	45.00	1.4
Bank B2	1.0%, minimum €25	25.00	1.15%, minimum €50	50.00	2.0
Bank B3	1.0%, minimum €50	50.00	1.3%, minimum €50	50.00	1.0
C					
Bank C1	1.0%, minimum €16.82	16.82	1.25%, minimum €60	60.00	3.6
D					
Bank D1	1.36% + €5, minimum €17.5	24.45	1.5% + €16.5, minimum €39.7	39.70	1.6
Bank D2	€4.78 + 1.32%, minimum €14.35	23.66	1.66%, minimum €110.03	110.03	4.7
E					
Bank E1	1.0%, minimum €29.99	29.99	1.0%, minimum €49.99	49.99	1.7
Bank E2	1.0%, minimum €24.90	24.90	1.0%, minimum €34.90	34.90	1.4
Bank E3	€13 + €9.95 up to €2,600	22.95	€13 + €36 up to €2,600	49.00	2.1
F					
Bank F1	1.0%, minimum €10	14.3	Not available	n.a.	n.a.
Bank F2	€15	15	Not available	n.a.	n.a.
G					
Bank G1	1.65%, minimum €100	100.00	1.65%, minimum €100 + €35	135.00	1.4
H					
Bank H1	0.185%, minimum €10.32 + €4.13	29.13	0.185%, minimum €10.32 + €4.13	29.13	1.0
I					
Bank I1	0.38%, minimum €25	25.00	0.9%, minimum €50	50.00	2.0
J					
Bank J1	1.0% + €16, minimum €19	30.30	1.0% + €16, minimum €50 + 0.2%, minimum €5	55.00	1.8
K					
Bank K1	0.8%, minimum €7	11.44	€1.32 + 0.80244%	12.79	1.1
L					
Bank L1	0.35%, minimum €3.01	5.01	0.5%, minimum €30.05	30.05	6.0
M					
Bank M1	1.0%, minimum €22.26	22.26	1.5%, minimum €37.10	37.10	1.7
Bank M2	€22.26	22.26	1.0%, minimum €20	20.00	0.9
Bank M3	€22.26	22.26	€59.36	59.36	2.7
N					
Bank N1	0.75%, minimum €26.84	26.84	0.75%, minimum €67.10	67.10	2.5
O					
Bank O1	0.5% + €0.54, minimum €21.69	21.69	0.95% + €13.56, minimum €21.69	27.14	1.3
EU (unweighted) average		28.09		50.01	1.8

As we can see in Table 1 above, there are significant differences across EU countries in terms of the fees applied to small retail equity transactions. As previously mentioned, the cost differences are largely determined by the respective individual minimum charges.

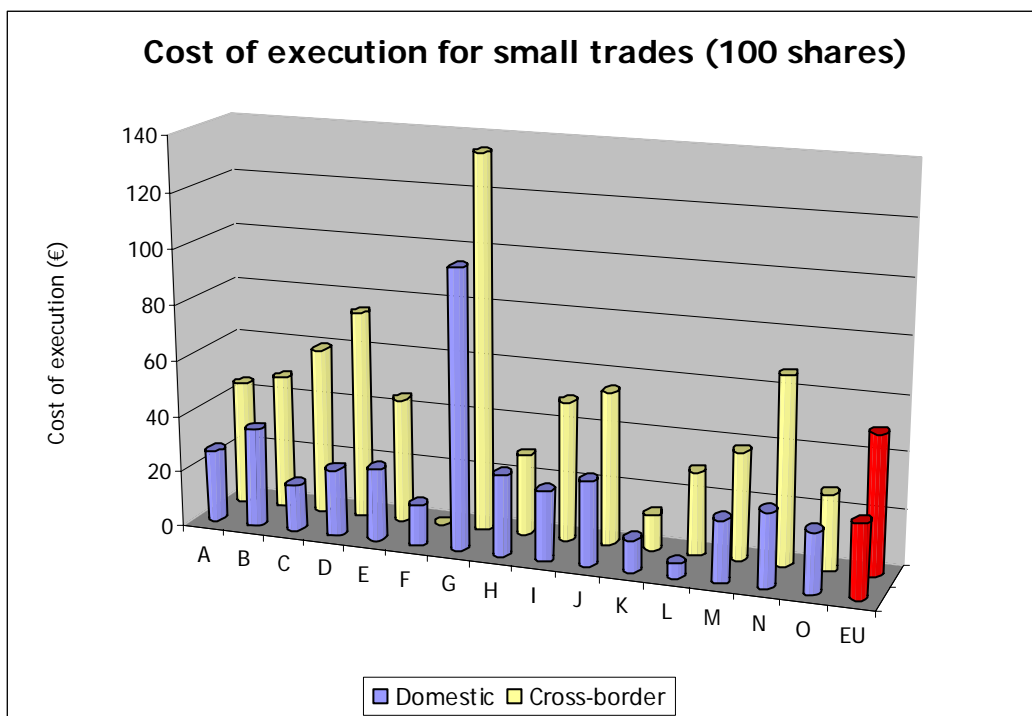
Using the methodology described above, the following conclusions can be drawn from data in Table 1:

Ad a) For domestic transactions, if we exclude the two biggest outliers (countries G and L), the variation in costs across Member States is relatively contained (most of the countries fall in the €20-30 range).

Ad b) In the case of cross-border transactions, the variation in costs is higher than in the case of domestic transactions, even after eliminating the outliers (again country G on the high end, and K on the low end).

Ad c) Table 1 also confirms the existence of significant differences in costs between domestic and cross-border equity transactions. In relative terms, the ratio between the costs for cross-border and domestic transactions ranges from 1 to 6. This confirms that cross-border transactions remain far from being efficient, when compared to similar domestic transactions.

In conclusion, for small retail trades, the differences between domestic and cross-border in terms of the fees charged are very high, confirming that an integrated financial market remains a distant goal. The following graph allows a synthetic overview of the primary analysis made so far.



2.2. Medium-sized retail trade (500 shares)

Value €150	Domestic stock		Non-domestic stock		CB / domestic
	Fee structure	Fee amount (€)	Fee structure	Fee amount (€)	
A					
Bank A1	0.8%, minimum €22	57.20	0.8%, minimum €58.95	58.95	1.0
Bank A2	1.1%, minimum €30	78.65	€2.9 + 1.1%, minimum €30	81.55	1.0
B					
Bank B1	1.0%, minimum €32	71.50	1.3%, minimum €45	92.95	1.3
Bank B2	1.0%, minimum €25	71.50	1.15%, minimum €50	82.23	1.2
Bank B3	1.0%, minimum €50	71.50	1.3%, minimum €50	92.95	1.3
C					
Bank C1	1.0%, minimum €16.82	71.5	1.25%, minimum €60	89.375	1.3
D					
Bank D1	1.36% + €5, minimum €17.5	102.24	1.5% + €16.5, minimum €39.7	123.75	1.2
Bank D2	€4.78 + 1.32%, minimum €14.35	99.16	1.66%, minimum €110.03	118.69	1.2
E					
Bank E1	1.0%, minimum €29.99	71.50	1.0%, minimum €49.99	71.5	1.0
Bank E2	0.9%, minimum €24.90	64.35	0.9%, minimum €34.90	64.35	1.0
Bank E3	€13 + €18.95 for amounts over €5,200	31.95	€13 + €45 for amounts over €5,200	58.00	1,8
F					
Bank F1	0.75%, minimum €10	53.63	Not available	n.a.	n.a.
Bank F2	1.0%	71.50	Not available	n.a.	n.a.
G					
Bank G1	1.65%, minimum €100	117.98	1.65%, minimum €100 + €35	152.98	1.3
H					
Bank H1	0.185%, minimum €10.32 + €4.13	32.73	0.185%, minimum €10.32 + €4.13	32.73	1.0
I					
Bank I1	0.38%, minimum €25	27.17	0.9%, minimum €50	64.35	2.4
J					
Bank J1	1.0% + €16, minimum €19	87.50	1.0% + €16, minimum €50 + 0.2%, minimum €5	101.80	1.2
K					
Bank K1	0.8%, minimum €7	57.20	€1.32 + 0.80244%	58.69	1.0
L					
Bank L1	0.35%, minimum €3.01	25.03	0.5%, minimum €30.05	35.75	1.4
M					
Bank M1	1.0%, minimum €22.26	71.50	1.5%, minimum €37.10	107.25	1.5
Bank M2	€37.10	37.10	€30 + 0.5% for amount over €3000, max €70	50.75	1.4
Bank M3	€37.10	37.10	€74.20	74.20	2.0
N					
Bank N1	0.75%, minimum €26.84	53.63	0.75%, minimum €67.10	67.10	1.3
O					
Bank O1	0.5% + €0.54, minimum €21.69	36.29	0.95% + €13.56, minimum €21.69	81.48	2.2
EU (unweighted) average		62.47		80.06	1.3

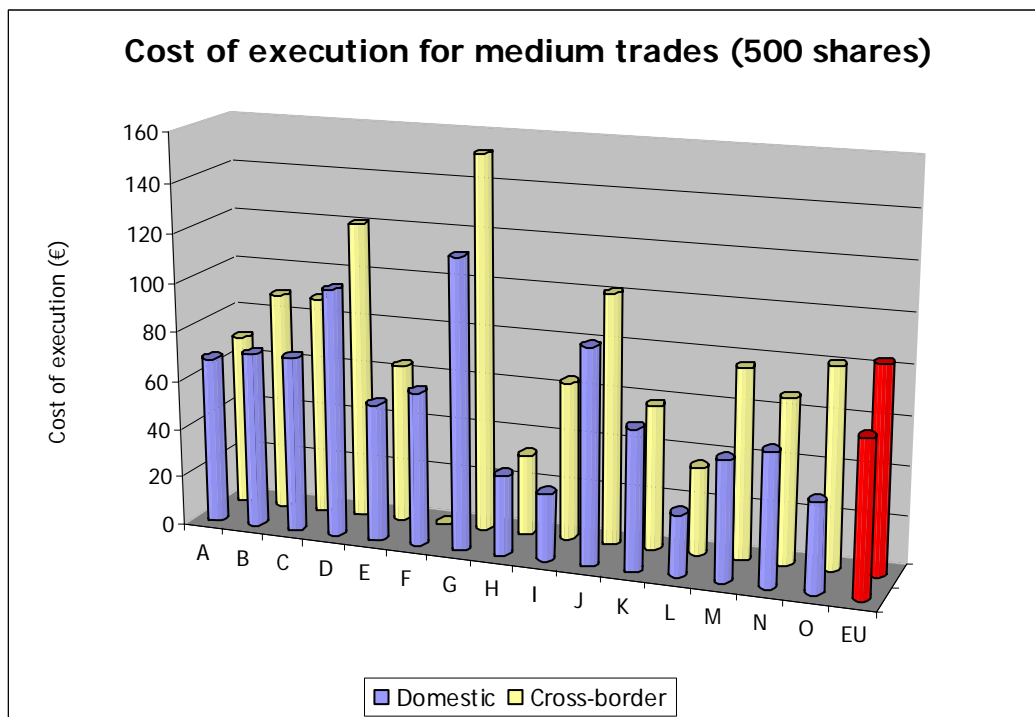
When considering medium-sized trades, the effect of minimum charges is reduced, allowing for a better comparison between countries. Re-applying the scheme used for small-sized trades, one can report the following:

Ad a) After eliminating the outliers, one can observe that the variation of fees increases when compared to that of small-sized trades.

Ad b) The variation in fees for cross-border transactions is somewhat smaller than for domestic ones, though greater than in the case of the one reported for small-sized trades.

Ad c) Although the cost differences between cross-border and domestic trades remain relatively high, they are substantially smaller than in the case of small-sized trades (they are greater than 2 only in two countries). This is because in the case of bigger transactions, the additional costs due to cross-border barriers exert smaller influence on the transactions' execution costs, with declining cost differences between domestic and cross-border transactions.

This evidence confirms that, as the transactions' size increases, the cost differences between domestic and cross-border become progressively smaller (i.e. economies of scale kick in). The following chart graphically illustrates the discussed situation.



2.3. Large-sized retail trade (1000 shares)

Value €14300	Domestic stock		Non-domestic stock		CB / domestic
	Fee structure	Fee amount (€)	Fee structure	Fee amount (€)	
A					
Bank A1	0.8%, minimum €22	114.40	0.8%, minimum €58.95	114.40	1.0
Bank A2	1.1%, minimum €30	157.30	€2.9 + 1.1%, minimum €30	160.20	1.0
B					
Bank B1	1.0% for amounts up to €10,000, an additional 0.85% for the part of amount over €10,000 (but below €25,000), minimum €32	136.55	1.3%, minimum €45	185.9	1.4
Bank B2	1.0%, minimum €25	143.00	1.15%, minimum €50	164.45	1.2
Bank B3	1.0%, minimum €50	143.00	1.3%, minimum €50	185.9	1.3
C					
Bank C1	1.0%, minimum €16.82	143.00	1.25%, minimum €60	178.75	1.3
D					
Bank D1	1.36% + €5, minimum €17.5	199.48	1.5% + €16.5, minimum €39.7	231.00	1.2
Bank D2	€4.78 + 1.2%, minimum €14.35	176.38	1.66%, minimum €110.03	237.38	1.3
E					
Bank E1	1.0%, minimum €29.99	143.00	1.0%, minimum €49.99	143.00	1.0
Bank E2	0.9%, minimum €24.90	128.70	0.9%, minimum €34.90	128.70	1.0
Bank E3	€13 + €18.95 for amounts over €5.200	31.95	€13 + €45 for over €5.200	58.00	1.8
F					
Bank F1	0.5%, minimum €10	71.50	Not available	n.a.	n.a.
Bank F2	0.65%	92.95	Not available	n.a.	n.a.
G					
Bank G1	1.65%, minimum €100	235.95	1.65%, minimum €100 + €35	270.95	1.1
H					
Bank H1	0.185%, minimum €10,32 + €4.13	61.33	0.185%, minimum €10,32 + €4.13	61.33	1.0
I					
Bank I1	0.38%, minimum €25	54.34	0.9%, minimum €50	128.70	2.4
J					
Bank J1	1.0% + €16 for amounts up to €10,000, an additional 0.6% for the part of amount over €10,000, minimum €19	141.80	1.0% + €16 for amounts up to €10,000, an additional 0.6% for the part of amount over €10,000, minimum €50	141.80	1.0
K					
Bank K1	0.8%, minimum €7	114.40	€1,32 + 0.80244%	116.07	1.0
L					
Bank L1	0.35%, minimum €3.01	50.05	0.5%, minimum €30.05	71.50	1.4
M					
Bank M1	1.0% on first €7420, 0.2% thereafter	87.96	1.5% on first €7420, 0.3% thereafter	131.94	1.5
Bank M2	€74.20	74.20	€30 + 0.5% for amount over €3,000, maximum €70	70.00	0.9
Bank M3	€51.94	51.94	€89.04	89.04	1.7
N					
Bank N1	0.75%, minimum €26.84	107.25	0.75%, minimum €67.10	107.25	1.0
O					
Bank O1	0.5% + €0.54, minimum €21.69	72.04	0.95% + €13.56, minimum €21.69	149.41	2.1
EU (unweighted) average		116.73		142.08	1.2

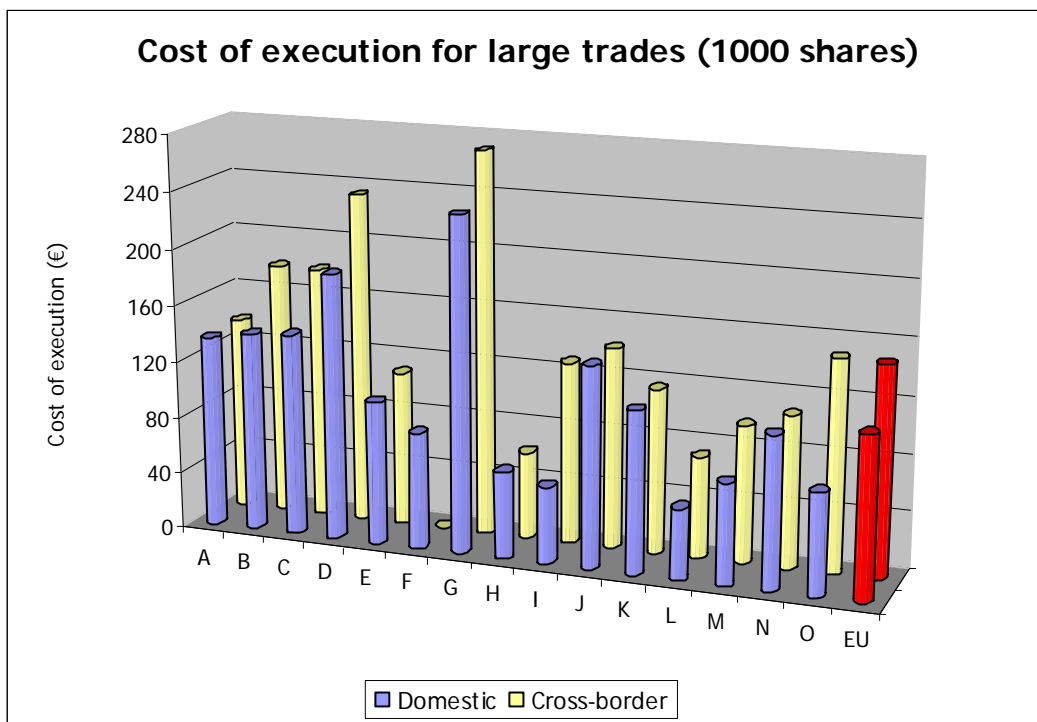
Finally turning to large retail trades (1000 shares), one observes how different tariff plans come into play in influencing execution costs:

Ad a) There remains a big variation in terms of fees for domestic transactions across countries.

Ad b) For cross-border transactions the variation is, on the other hand, not as big.

Ad c) The cost differences between international and domestic transactions remain relatively high, again with just two countries with a ratio above 2.

Although in the case of large-sized transactions, the ratio between domestic and cross-border fees is lower than the one for medium-sized fees, the decrease is only marginal, especially when compared to the decrease between small- and medium-sized trades. This may mean that there exist specific obstacles in the market, which are not completely overcome by economies of scale. The following graph illustrates the discussed situation.



3. Brokers

3.1. European discount brokers

To complete the analysis some discount brokers were added, more specifically Consors in Germany, Binck in The Netherlands, Keytrade in Belgium, Eurotrade in Luxemburg and Fineco in Italy.

Trade Size	Discount Broker	Fee structure	Fee (€)	Fee structure	Fee (€)
Small trade	Keytrade	€24.95 per block of €50,000, €14.95 for order up to €5,000	14.95	€24.95 per block of €50,000	24.95
	Consors	€20	20	€14.45 for transactions to Italy, €40 to Belgium, €20 for other States	n.a.
	Eurotrade	0.20% commission, minimum fee of €13.27	13.27	0.20% commission, minimum fee of €13.27	13.27
	Fineco	0.19% of the value traded	2.72	0.19% of the value traded for Germany and France, variable fees for other markets	n.a.
	Binck	€11.5 € per block of €100,000	11,5	€15 + 0.15%, minimum €25	25
Medium trade	Keytrade	€24.95 € per block of €50,000, €14.95 for order up to €5,000	24.95	€24.95 € per block of €50,000	24.95
	Consors	€20	20	€14.45 for transactions to Italy, €40 to Belgium, €20 for other States	n.a.
	Eurotrade	0.20% commission, minimum fee of €13.27	14.3	0.20% commission, minimum fee of €13.27	14.3
	Fineco	0.19% of the value traded	13.59	0.19% of the value traded for Germany and France, variable fees for other markets	n.a.
	Binck	€11.5 € per block of €100,000	11.5	€15 + 0.15%, minimum €25	25.73
Large trade	Keytrade	€24.95 per block of €50,000, €14.95 for order up to €5,000	24.95	€24.95 per block of €50,000	24.95
	Consors	€20	20	€14.45 for transactions to Italy, €40 to Belgium, €20 for other States	n.a.
	Eurotrade	0.20% commission, minimum fee of €13.27	28.6	0.20% commission, minimum fee of €13.27	28.6
	Fineco	0.19% of the value traded	27.17	0.19% of the value traded for Germany and France, variable fees for other markets	n.a.
	Binck	€11.5 per block of €100,000	11.5	€15 + 0.15%, minimum €25	36.45

By comparing the two tables above, it can be seen that, while the fees for an equity transaction carried out through a discount broker are substantially lower compared to transactions carried out through traditional bank branches, the differences between domestic and cross-border still remain.

3.2. US discount brokers

As concerns US discount brokers, the information research has been easier and more efficient. In particular, the transparency of US brokers is definitely higher with respect to their EU counterparts. The present analysis reports the fees charged by some major US brokers¹:

¹ In cases where many different fees could be applied to a trade, based on trade size, frequency of trading or other criteria, the highest fee was adopted.

<i>Trade Size</i>	<i>Discount Broker</i>	<i>Fee structure</i>	<i>Fee (\$)</i>
Small, medium and large trade	Investrade	Market orders for stocks \$7.95, limit orders \$11.95, for unlimited shares	7.95
	Trade Station	\$0.01 per share up to 500 shares, \$0.006 per share thereafter, min. \$1.00	1 / 6*
	Scottrade	Internet market and limit orders \$7, for unlimited shares	7
	Charles Schwab	Fees vary from \$9.95 to \$19.95 depending on account size and frequency of trades (for equity trades up to 1000 shares).	19.95
	E*trade	Fees vary from \$6.99 to \$12.99 depending on number of trades per quarter and account size	12.99
	Interactive Brokers	\$0.005 per share, min \$1, max 0.2% of trade value	1 / 5*
	Ameritrade	\$10.99 per trade, for unlimited number of shares	10.99
	Ameritrade Izone	\$ 5.00 per trade, for unlimited number of shares	5.00

* For a large trade.

<i>Trade Size</i>	<i>Discount Broker</i>	<i>Fee structure</i>	<i>Fee (\$)</i>
Small, medium and large trade	Investrade	Foreign stocks (no broker assist charge) \$39.00, unlimited shares	39.00
	Trade Station	Does not trade in European stocks	n.a.
	Scottrade	Does not trade in European stocks	n.a.
	Charles Schwab	Unknown.	n.a.
	E*trade	Commissions vary from \$6.99 to \$12.99 depending on number of trades per quarter and account size	12.99
	Interactive Brokers	0.1% of trade value, min. €4, max €29 (D, F, NL) min SEK 30, max SEK 300 (Sweden), GBP 6 (for less than 50000 GBP trade)	4 / 7.15 /14.3*
	Ameritrade	Does not trade in European stocks	n.a.
	Ameritrade Izone	Does not trade in European stocks	n.a.

* Small / medium / large trade on an euro area exchange, values in euro.

3.3. Comparison between EU and US discount brokers

Before comparing EU and US brokers, the meaning of the word “cross-border” needs to be further clarified. From a US perspective, cross-border means a US investor investing in Europe, while from an EU perspective cross-border refers to EU investors investing either in the US or in one of the other EU countries.

Examining the fees we can observe that, in absolute terms, US online brokers are cheaper than their EU counterparts for both domestic and cross-border trades. However, in relative terms (i.e. when looking at cross-border to domestic ratios) it can be observed that US brokers are more expensive than their EU counterparts. This most probably indicates the lack of scale in terms of cross-border retail transactions in the US.

4. Conclusions

The level of analysis presented in this annex is very basic. Nevertheless some very interesting conclusions can be drawn from its results:

- the cost of a small-sized "round-trip" trade (i.e. a purchase and a subsequent sale) can reach up to 20%, an extremely high amount that decreases the appeal of equity investment for retail investors;
- there seem to be very little efficiency gains when passing from medium- to large-sized trades;
- even in the case of large-sized trades, the costs remain too high (up to almost 4% of the value of a “round-trip” trade);
- while EU online brokers are cheaper than banks in absolute terms, some of them still display rather large domestic to cross-border ratios;

- in absolute terms, US online brokers are cheaper than their EU counterparts for domestic trades and in most cases also cheaper for cross-border trades. However, in relative terms (i.e. when looking at cross-border to domestic ratios) it can be observed that US brokers are usually more expensive than their EU counterparts.