Pricing policy of central post-trading service providers
Main conclusions and recommendations (May 2006)

Context and objectives of the study:

The objective of this study was to evaluate with a representative panel of users (1) the pricing policy and level of prices of the main securities post-trading central providers in the EU (CCPs, CSDs, ICSDs) and to recommend possible progress areas. It complements the existing initiatives related to the evolution of securities post-trading activities (2) by focusing on the perception and needs of users of these infrastructures related to the issue of prices.

Although infrastructure costs are considered only to represent 10 to 20% of total post-trading transaction costs, as shown by the existing cost studies (3) users consider they are essential to be looked at since:

- Central infrastructure activities like securities clearing, settlement and safekeeping activities are generally not open to competition in the EU (4) unlike all other post-trading activities (local or global agent activities, custody, cash and securities financing…) which operate under strong competition
- Certain CSDs and the 2 ICSDs offer an extended range of services which means that the impact of their pricing strategy goes beyond the limited 10 to 20% proportion that stems from settlement fees. In addition a certain number of indirect costs described in the following pages should be taken into account. (5). In addition safekeeping costs that represent significant spendings for custodians should be taken into account.

The scope of this study covers the post-trading central providers (CCPs, CSDs and ICSDs) of a representative group of EU countries: UK, Germany, France, Belgium, NL, Italy, Spain, Switzerland, Poland, Austria and is focused on Eurobonds, domestic bonds and equities.

Concerning ICSDs our analysis is focused on the services for which ICSDs act as infrastructures (settlement and safekeeping of Eurobonds) and the impact that the banking services they provide (cash and securities financing in particular) can have on the pricing of these activities.

This study was monitored by a representative group of post-trading central provider users: Bank of New York, BNP Paribas, Citigroup, Crédit Agricole (CACEIS), HSBC, JPMorganChase, Société Générale, Unicredito / HVB / BankAustria CreditAnstalt and chaired by Andrew Crockett.

In the course of this study we looked at 3 main issues:

- What conclusions can be drawn from the analysis of financial statements of central providers and of the historical evolution of prices ?
- Are present post-trading central provider costs considered by users as reasonable and equitable ?
- Is pricing information sufficiently transparent and are users sufficiently involved in the pricing decisions of the central providers part of the scope ?

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(1) Intermediaries such as global / local custodians and investment banks / brokers

(2) CESAME / lifting of the Giovannini barriers, debates on the evolution of the structure of the industry, study on governance, evaluation of the extra costs due to the fragmentation of the EU post-trading industry…

(3) This proportion can be found in the AFTI study performed in 2002 for example.. Infrastructure post-trading costs neverthess represent significant costs in absolute terms, as the total incremental post-trading costs for equity cross-border transactions (settlement and custody costs) were estimated to be around 2 BE per year by Deutshe Börse based on adjusted McKinsey/JPMorgan estimates.

(4) With the exception of Eurobonds for which 2 ICSDs ensure the settlement and central deposit as central providers

(5) This point will be further illustrated in the document

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Main conclusions of the study:

1. The total costs incurred by different types of users of post-trading central providers need to be taken into account when analyzing the prices of post-trading central providers:

Users buy different types of services from post-trading central providers depending on their positioning in the value chain.

Investment banks for their proprietary activity and broker dealers for their clients buy mainly transaction related services (ie clearing and settlement). Custodians on the other hand buy mainly safekeeping services that represent 60 to 80% of their spendings.

In addition investment banks and broker dealers buy cash and securities financing services, when they are provided by ICSDs and CSDs (fail coverage / securities borrowing, triparty repo…) (1).

Direct infrastructure costs represent only a limited proportion of the total external costs incurred by a large number of users in particular for CSDs and ICSDs.

Total costs incurred by users are the result of direct and indirect external infrastructure costs and internal back office costs that all need to be taken into account when evaluating total post-trading costs. To the direct clearing, settlement and safekeeping fees of CCPs, CSDs and ICSDs must be added in particular:

- Indirect fixed or variable fees: membership, reporting and queries, connectivity,… (membership and connectivity fees can represent up to 40 to 50% of the total CSD costs of a small or medium sized player)
- Cost of capital or collateral needed to operate with a CCP, CSD or ICSD: cost of collateral (costs related to the specific fees charged by CCPs and ICSDs or to Central Bank accounts for CSDs), overdraft costs (ICSDs), opportunity cost due to the non-remuneration of cash balances (2)
- Additional opportunity costs related to the lack of compensation by most central providers for mistakes made for which intermediaries often have to compensate their own customers (3)
- For investment banks, the costs of securities financing services that are estimated to represent 50 to 60% of their total external costs within an ICSD (1).

As a result, direct infrastructure fees (settlement and safekeeping fees) are considered to only represent 30% of the average total external costs incurred by investment banks within ICSDs (1) (4)..

Beyond these direct and indirect infrastructure external costs, direct participants also incur internal back office costs (5).

Given this users arbitrate for a given market between 2 main solutions depending on their business model, the total costs incurred (6), the needs of their clients and the instruments traded:

- Direct membership of the local central provider which involves investing in the required back office organization and compliance with local membership requirements
- Using an intermediary to access the central provider: a local or global custodian bank or an ICSD bank (access through the ICSD is mandatory for Eurobonds).

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(1) ICSD banks provide cash and securities financing services (fail coverage / securities borrowing, triparty repos) as agents mainly. These services are also provided by the major banks. In addition certain CSDs provide technical processing services related to securities financing (eg: Crest) that are estimated to represent between 10 and 30% of average external costs for investment banks within providers offering these services.

(2) Users can nevertheless mitigate this through efficient cash management on their behalf

(3) Certain providers (eg: Crest) nevertheless mention in their standard conditions that they permit liability in some circumstances for fraud, negligence or wilful default

(4) This is less the case for large custodian banks who buy mainly safekeeping services (60 to 80% of spendings) although cash financing fees and collateralisation of credit lines are charged to all ICSD clients

(5) Related to communication with the central providers, follow-up of matching and settlement processes, follow-up of margin calls…

(6) Total costs incurred are the result of a mix of different types of transactions and of the consumption of different services that can be quite different from one type of user to another

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2. Prices of central providers part of the scope have generally not been significantly reduced for users over the last 3 to 5 last years despite processing optimizations and partial consolidation:

Infrastructure prices are observed to have remained generally stable in the main markets part of the scope of the study between 2000 and 2005 (1).

Between 2000 and 2005, prices of the Euronext / LSE zone central providers have generally remained stable with certain focused increases and decreases. Furthermore fees have not been harmonized despite capitalistic consolidation. In parallel, average transaction prices in Germany are considered by users to have gone up by 11% between 2002 and 2004 (2) and appear to have remained stable between 2004 and 2005 despite the progressive generalisation of netting. .

This shows that:

- Economic benefits from the consolidation of central providers in the form of price reductions are not automatic or immediate (based on the examples of LCH Clearnet and Euroclear CSDs). It is worth noting that these consolidation movements are usually justified by potential reductions of back office costs for direct participants but that these are difficult to evaluate.
- "Silo-type organizations" can lead to maintain prices since the prices of the different components of post-trading processes can be rebalanced across the different layers of services (eg clearing and settlement) more easily over the years than in an organization where these activities are separate as shown by the example for Deutsche Börse / Clearstream mentioned above.

Prices are considered by users to have remained generally stable within ICSDs during that period. However certain focused strong reductions were observed for example for Euronext equities external settlement fees within Euroclear Bank.

3. The profits made by the central providers surveyed appear to be quite high for companies that run a relatively low risk business in a centralized way and users consider that they do not benefit at present sufficiently from these profits:

Publicly available financial information for 2004 (2005 annual reports) shows that profits (Net operating profit ratio and ROE (3)) of post-trading central providers can be considered on average as high for companies that run a relatively low risk business in a centralized way (which should lead to significant economies of scale):

- The CSDs part of our scope have an average Net operating profit ratio of 29% and an ROE of 30% and the CCPs an average Net operating profit ratio of 26% and an ROE of 10%. For ICSDs Euroclear Bank is the only reference we have with a Net operating profit ratio of 36% and an ROE of 8% (4).
- The average Net operating profit ratios of these providers are in line with average EU stock exchanges ratios (30%) and significantly higher than the ratios obtained by DTCC (7%) and payment card networks (13%). They are also higher than average telecom and electricity company ratios (13 to 17%) that are of course not directly comparable but present certain similar characteristics (network industries, provision of utility services).
- The ROE of CSDs are significantly higher than returns obtained by other companies looked at.

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(1) Users are aware of certain recent price reductions decided in 2006 (for example reduction of Eurobonds safekeeping fees by Euroclear)

(2) Evolution of the average transaction prices for clearing, settlement, communication, connection of German banks between 2002 and 2004 according to the comments made by ZKA the joint committee of the German banking industry on the White paper of Deutsche Börse published in February 2005

(3)Net operating profit ratio = Net profit before taxes / total operating revenues
ROE Return on equity = Net profit / Total equity

(4) Clearstream Group does not publish detailed accounts of its subsidiaries

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Users consider that they do not benefit at present sufficiently from the profits made through direct price reductions or rebates:

- Direct and indirect fees have not significantly gone down on average as seen previously
- User rebates are only distributed by a limited number of providers (Euroclear bank, Crest, LCH-Clearnet, KDPW, OeKB) and most users usually prefer upfront price reductions rather than deferred rebates when possible.
- The surplus profits distributed to shareholders in the form of dividends cannot be considered as a direct cost reduction factor for users as ownership and usage are not aligned: in most cases only part of the users are shareholders, when dividends are distributed at Group level (eg EOC, DBG, Iberclear) they do not necessarily reflect the volume of services used for each entity of the Group and within listed companies (eg DBG) the shareholding expands further than users.
- Post-trading central providers are generally engaged in or saving up for ambitious development programs (new platforms, consolidated platforms,…) that require massive investments. Users consider that the positive impacts for them usually presented by infrastructures as potential back office cost reductions (1) are difficult to evaluate and are at least partly offset by the investments required to adapt their back offices (2).

In this context it is interesting to point out that only 1/3 of the central providers part of our scope declare themselves as "not-for-profit" organizations and that the level of profit made by the "not-for-profit" providers is similar to that of the "for-profit" providers. (3)

4. Users consider not to benefit from enough information or leverage on pricing decisions at present to have an impact of the level of prices charged by post-trading central providers:

Since post-trading central providers were set up as infrastructures to operate in the market they serve users expect them to give them sufficient information to evaluate the reasonableness and equitability of prices charged.

We have found no official pricing policy published by the central providers part of the scope (ie description of the way prices are calculated, of tariff methodology or of the correlation between costs incurred by the central providers and prices charged to users).

Users part of our panel consider not to be sufficiently involved in the pricing decisions of the central providers surveyed. There seems to be no formal regular price consultation process with users led by the providers we surveyed and user groups when they exist are at best informed of price changes but not consulted let alone involved in the price determination process (4). Certain providers (eg Euroclear France or LCH Clearnet) were mentioned to consult representive users or user groups on specific price changes but this is not a widespread practice.

The main pricing decisions are made by the management and submitted for approval to the board but this process does not seem to be sufficient to take into account the user perspective: boards only represents part of the users in most cases, the mandate of board-members is to act in the interest of the provider and its shareholders and not necessarily in the interest of the user they may represent and there can be a strong asymmetry of information between management and board members.

Among the providers part of our scope only one provider (Euroclear) is claiming to be "user-governed" but it is not considered to be much more transparent than other providers by the users involved in the study. Iberclear is considered to be effectively user-governed without necessarily claiming it. LCH Clearnet is said to have a mixed status (partly shareholder governed and partly user governed)..

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(1) There are some exceptions eg LCH Clearnet (for example LCH Clearnet has projected a 21% reduction of prices upon completion of its integration)

(2) Investments are also partly financed by savings in the processing costs of the central providers

(3) It is worth noting that "not-for-profit" does not mean that the provider does not make profits.This notion refers to the way profits are distributed: a "not-for-profit" organisation means that profits are not for distribution to the shareholders or to the management

(4) In certain markets (ex: SIS) a consultation process exists but limited to the main shareholders

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The financial information published by the central providers part of the scope of the study is not sufficiently detailed to enable users to assess the reasonableness and equitability of prices. In most cases there is a breakdown of aggregated revenues and costs (1) but no breakdown of revenues and costs according to the main services provided (2). In addition it is not always easy to distinguish recurring costs from costs related to specific projects and investments (to be confirmed). This would enable to:

- Analyze the correlation between revenues and costs for these different services and identify potential cross-subsidies and resulting equitability among users according to the average consumption of services by each type of user
- Benchmark more easily across providers revenues and costs related to similar types of services and assess the operating margin independently from the investments performed.

A certain number of post-trading providers part of larger financial groups do not publish separate financial statements: Clearstream, Iberclear, OeKB.

In the present situation, comparing the post-trading central provider prices across different markets for similar services based on pricing schedules presents several stumbling blocks that limit the impact of this potential approach significantly:

- The size of the different markets and the scope of services provided (in particular for CSDs) is very variable leading to potentially strong differences in the economies of scale and scope.
- The structure of pricing schedules is variable from one market to another

As mentioned above total fees paid by users being the result of a complex mix of services consumed means that different users are not impacted in the same way by a given pricing schedule and that analyses require complex simulations and comparisons of total costs incurred by users with similar needs, positions in the market and activities (3). This could be facilitated by creating standard fee categories and schedules.

5. It can also be argued that the competitive advantage enjoyed by ICSDs in the form of a de facto duopoly regarding infrastructure activities (such as Eurobonds settlement and central deposit) provides an advantage also in competitive markets (ie commercial services).

The two ICSDs have a de facto duopoly of the settlement and central deposit (4) of Eurobonds and are considered to have a significant market share in some domestic government bonds (5). This has allowed them to have all counterparties in their books for these markets.

This puts ICSDs in a favourable position to sell to their customers (who buy settlement services) securities financing services (6) for which they compete with banks.

This could potentially lead to cross-subsidies between the activities where ICSDs act as central providers with a de facto duopoly (settlement and central deposit) and the commercial activities they sell (cash and securities financing services).

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(1) Breakdown of revenues in fees / interests / other income and of costs in administrative costs / amortization / other

(2) Settlement / safekeeping / reporting / connectivity / securities finance / cash management

(3) A certain number of price comparisons were made based on the public pricing schedules but these showed that conclusions were difficult to draw based on this information:
-To compare settlement costs total costs need to be taken into account, part of which are indirect or opportunity external costs and internal costs incurred by the users as described in page 2
- Safekeeping prices for Eurobonds and domestic bonds were compared between ICSDs and CSDs. These show that the prices charged by ICSDs are significantly higher but that this can at least be partly explained by the mark-up on the cost of common depositaries for Eurobonds and local CSDs for domestic bonds and by the stronger complexity of Eurobonds

(4) The safekeeping is outsourced to common depositaries

(5) German Dutch, Portuguese, Danish or Irish bonds markets

(6) Fail coverage / securities borrowing, triparty repo…

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Recommended actions that could have an impact on the pricing policy of post-trading central providers:

We have focused our recommendations on proposals that could have a strong impact on prices independently from potential changes in the structure or overall governance of the market or from progress made in the lifting of the Giovannini barriers.

As a result our recommendations are mainly focused on increasing the transparency of central providers and on increasing the involvement of users in decision processes related to pricing.

Our recommendations are divided in two main categories: recommendations that have an impact on pricing and that should be technically and politically feasible in the short term and additional recommendations that would have a significant impact on pricing but that are considered as more difficult to implement and for which further feasibility assessment would be required to better define the conditions required for their implementation.

1) Recommendations considered feasible in the short term:

Increasing the transparency of central providers related to pricing:

- Generalizing the public availability of fee schedules to all including non-members (with a historical perspective)
- Generalizing the availability of pricing policies to all including non-members describing the pricing methodology and rationale and articulating any principles of equitability between different user segments based on usage of services
- Systematic disclosure of the breakdown of revenues by main services provided (eg settlement, safekeeping, connectivity, reporting, membership fees and other services (1))

Improving the involvement of users in pricing decision processes:

- Setting up a formal consultation process within each central provider involving representative users to (i) validate pricing schedules and (ii) discuss specific decisions that impact prices and infrastructure costs with the related business case; This consultation could take place either through existing user groups or user groups to be set up and would require the clarification of the governance of user groups related to pricing issues (mandate, member selection criteria, decision-making rules, conflict resolution processes).

2) Recommendations considered feasible in the medium / long term recognizing potential technical or political feasibility issues:

Increasing the transparency of central providers related to pricing:

- Disclosure of the breakdown of costs by main services provided and of the breakdown between recurring costs and investments (2)
- Transparency of the rebates distribution policy (calculation and allocation) and of the balance between rebates and dividends distributed

Improving the involvement of users in pricing decision processes:

- Clarity in the policy of board composition and selection
- Clarity in the roles of the management, the board and users in the determination and validation of prices

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(1) To be detailed further if necessary

(2) Users part of the panel acknowledge that this recommendation raises significant feasibility issues that need to be investigated further. In particular an appropriate and transparent methodology and commonly accepted accounting principles need to be developed and disclosed to produce figures that accurately reflect the reality.

If the feasibility issues mentioned above can be solved users consider it would be possible and useful that central providers publish P&Ls by main standard activities eg infrastructure services (clearing, settlement, safekeeping) and other services.