IBM Response to CESR

Section C, Progress Report on the Role of the Officially Appointed Mechanism (Article 17 1a) and the Setting up a European Electronic Network of Information about Issuers (Article 18) and Electronic Filing.

January 2005

A European Listed Companies Information Database (ELCID)

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Attention M. Fabrice Demarigny

Secretary General
Committee of European Securities Regulators
11-13 Avenue Friedland
75008 Paris

January 28th 2005

Dear M. Demarigny

IBM is pleased to have the opportunity to respond to The Committee of European Securities Regulators (CESR) consultation paper on "Advice on Possible Implementing Measures of the Transparency Directive Part 1: Dissemination and storage of regulated information".

1.1 Specific Terms of Reference

IBM's response is focussed on Section C, Progress Report on the Role of the Officially Appointed Mechanism (Article 17 1a) and the Setting up a European Electronic Network of Information about Issuers (Article 18) and Electronic Filing.

In regard to Section B1, on Dissemination of Regulated Information by Issuers and on Conditions for Keeping Periodic Financial Reports Available, IBM endorses the concepts currently promoted by CESR.

1.2 Context

IBM's response is made in the context of the Lisbon Agenda, the prime driver for the whole FSAP process. These objectives have been further emphasised by Charlie McCreevy - European Commissioner For Internal Market And Services – in his speech "The Lisbon Strategy: Why Less Is More" to the European Policy Forum, in London, on 24 January 2005.

1.3 IBM's response, as global issuer and global technology provider

CESR's draft progress report has highlighted the significant effort that will be required to create a Central Storage Mechanism for regulated information, and the ways in which it could be funded. IBM is responding in two capacities:

- as a major global issuer of securities that both seeks and needs a fair and cost effective relationship with its investors, promoted by a level playing field of price sensitive information (psi) and regulated information; and
- as a leading global technology provider with proven practical experience of delivering complex solutions directly for the information market space which the Transparency Obligations Directive (TOD) affects.

In both capacities, IBM supports the goals set by the European Union during the Lisbon summit, which aims to make the Single Market of Europe the most efficient and competitive capital market globally. This goal and our expertise in building similar solutions (e.g. SEDAR in Canada, the System for Electronic Document Analysis and Retrieval) has driven our response so that we can help CESR to define the best result for Europe. Therefore we have also analysed the infrastructures of other markets and made recommendations herein which enable Europe to be more cost effective and competitive. Suffice to say if our recommendations are adopted, CESR will have created a synergy between the goals of an issuer, the challenges facing the stakeholders responsible for the delivery infrastructures and the regulators of markets.

Two years ago IBM launched a concept, then codenamed ELCID, a European Listed Companies Information Database. Since then various enabling concepts suggested by IBM have been adopted, either by law (e.g. the use of IAS, now IFRS) or by market standardization (e.g. XBRL). The advance in technology allows IBM not only to confirm the technical and commercial feasibility of ELCID, but also to extend it into an end-to-end corporate information solution, including the integration tools needed by listed companies.

We trust you find our response to be interesting, innovative and practical. We are available to discuss it with you and other industry stakeholders in order to help progress discussions and lead to a fully viable implementation.

Yours sincerely

Piet Van de Velde

Global Head Markets Infrastructure

IBM Global Financial Markets

2 Preface - Why is IBM replying?

There are three main reasons why IBM is responding to the CESR TOD consultation:

1. To help deliver the goals set by the Lisbon agenda, which will directly help to lower the cost of capital of all issuers.

2. To provide added value based on the experience of IBM being:

    1. a major global issuer,
    2. a global technology provider
    3. and a party in shared services utilities serving the finance industry.

3. IBM is independent – it is not a market participant in the industry, nor is it a provider of market information. We are therefore offering not only a European but also a global view, recognising that European capital markets are reliant on global capital flows to a very large extent.

2.1 Credentials

Regulators around the world, including competent authorities in Member States, in the US, Japan, and other countries are increasing their oversight of the internal controls and reporting by listed companies in producing information for their investors and potential investors. IBM has created and delivered to customers successful solutions, which integrate enterprise data from the widest possible array of sources into a single repository, providing compliance reports and associated audit trails for the amalgamation of such data, thereby securing long term evidential data. Markets infrastructure solutions using IBM technology distribute vast quantities of regulated data to financial market users within Europe today, deploying complex algorithms to maintain fair markets, under service level agreements. This has given IBM first hand experience of the challenges faced by issuers in regulatory reporting compliance. Hence, this submission is provided from a position of experience and strength.

2.2 Structure of Document

IBM has submitted a comprehensive response within this document. This document begins with an executive summary, then summarises the business drivers that are pertinent to the role of an Officially Appointed Mechanism and the infrastructures required for a European Electronic Network of Information about Issuers (Article 18) and Electronic Filing. It then considers some of the stakeholder issues, recognising that Europe is not starting from a clean sheet and therefore must build on existing infrastructures. This analysis then leads neatly into a summary of the relevant governance models that IBM considers are appropriate for the European Central Storage Mechanism. IBM has provided an independent opinion on an appropriate corporate governance architecture that would be practical and logical for Europe for the Central Storage Mechanism in section 6 on page 10. IBM has then summarised some of the key implementation considerations setting out recommendations for a feasible solution. Europe does not need a “white elephant” and as we explain, this is far from that. The description of an appropriate end-to-end technology solution is based on proven case studies.

The whole document is supported by Appendices, containing further details of the TOD, relevant to this response and, where IBM’s response to the questions raised by CESR in section 10 on page 20.

3 Executive Summary

IBM is pleased to offer CESR its views on identifying viable solutions to creating and maintaining an accessible database of information. Having invested in the design and delivery of relevant specific solutions in this area for the last decade, IBM believes that it has a contribution to make in bringing together disparate potential contributors to a lower cost, fairer, more efficient and standardised flow of information from issuers to investors. These contributors may include exchanges, the existing financial information industry, networks, professional associations and many other stakeholders.

IBM is a strong supporter of the overall goal of the Transparency Obligations Directive (TOD) in achieving a single market in financial services and increasing capital flows. It supports the idea that a well-informed market is an excellent 'regulator', creating a level playing field for all investors – institutional and retail.

As always there is a balance between achieving these aims, and imposing additional financial and administrative burdens on the market participants while ensuring investments in existing infrastructures are protected where they continue to provide financial and administrative efficiencies.

One of the key challenges of the draft progress report proposed by CESR in Part B 1 of the of Consultation Paper published in October, is the "governance model"; how should the underpinning systems of the communications process be funded, governed and overseen? This question underlies the majority of the questions posed in the consultation paper.

IBM has evaluated the three options proposed by CESR together with a range of business drivers and stakeholder considerations. IBM tables a fourth option for consideration. This recommendation is made on the basis that this option may become a contributor to achieving the Lisbon agenda. In summary, this fourth option provides that the Central Storage Mechanism is delivered by an organisation as a utility, using a hybrid governance model based on a "Private contractor : competent authority oversight". This utility would create, deliver and operate a single Pan European Central Storage Mechanism, the use of which for public issuers would be mandated within national competent authority requirements. The Central Storage Mechanism would be operated under licence granted by a dedicated body set up for that purpose by EU competent authorities (possibly encouraged by the public sector). We perceive the utility would be licensed as it would be providing a regulated service and licensing would be a pre-requisite of its launch.

As a utility, the operation of the Central Storage Mechanism would be on a cost plus basis by an independent contractor to standards set by the EU competent authority(ies). Basic data would be accessible by all at no cost through the web, funded by raw information sales to added value providers, and by other sources of cost recovery revenue, such as advertising income. Additionally, this utility would still be able to provide a single national storage mechanism, thus delivering the economies of scale embedded in option III (paragraph 54 of Part C of the Consultation Paper). Also, the potential exists to extend the depth and breadth of the information contained to unlisted companies and national registries referred to in Article 18; then to reference data, corporate actions and other industry specific requirements.

To meet the goals of the Lisbon Agenda, it would be advisable that the service be delivered under competitive service level agreements, in order to differentiate it against other models. Precedent would suggest that the set up costs would be funded by a private placement and the on-going research and development costs could be accrued through information sales and other revenues such as advertising revenues.

However, no matter which governance model is ultimately chosen, IBM believes that the technology and standards choices will be the key to its successful and speedy implementation, and IBM is pleased to answer directly the technical and data control issues raised in the consultation paper.

IBM is a strong advocate of full, cost-effective and fair disclosure to the investing public – a concept that underpins the TOD and one that continues to be championed across the world.

IBM trusts you find that the following detailed response to be both innovative and practical. The embedded universal access to comparable financial information will support the IFRS transparency objectives in addition to facilitating the goals of the Lisbon Agenda. IBM has considered these issues very carefully, and has therefore provided a set of recommendations for a way forward.

4 Business Drivers

We have summarised below the key business drivers that lead to our conclusions including:

1. The Lisbon agenda
2. Equal and Fair Access
3. Lower cost of capital
4. Transparency
5. Level playing field
6. Reduced market abuse

Each is discussed below, briefly.

4.1 The Lisbon Agenda

The Lisbon agenda has a goal of making the EU "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." To achieve this goal, an overall strategy was adopted, including preparing the transition to a knowledge-based economy and society by better policies for the information society and R&D, as well as by stepping up the process of structural reform for competitiveness and innovation and by completing the internal market. To achieve this, Europe needs to commoditise and standards a lot of the infrastructures as this will lead to lower cost, more liquid markets, promoting capital raising and secondary markets.

4.2 Equal and Fair Access

Equal and fair access to both price sensitive and regulated information issued by listed companies to financial markets is an important element in encouraging investor participation, including retail investors. Equal and fair access embraces many concepts including timeliness of information collection and dissemination. It is an especially important consideration for investors who are remote from that market, investors from other European Union Countries and from outside of the European Union. The current mechanisms do not achieve equal and fair access across the whole EU.

4.3 Lower cost of capital

The more transparent the market, the lower the risk weighting from an investor and capital raising perspective, which in its turn results in a lower cost of capital. Markets with a lower risk premium attract greater numbers and a wider range of both constituents.

4.4 Transparency

Equal and fair access to corporate information on listed instruments, particularly price sensitive market information, is a critical element in establishing the transparency of that market. Transparency enhances the credibility and reputation of individual markets and exchanges, which in consequence attracts investors and issuers wishing to raise capital through listing on that market. Transparency and timeliness of information distribution from issuers also demonstrates better corporate governance.

4.5 Level playing field

A pan-European financial market comprises the individual financial markets and exchanges. It will only fully justify adoption of that term, when there is a level playing field. A level playing field is achieved if each of the constituent markets and exchanges provides fair and equal access and treatment for all investors through a consistent and consolidated set of regulations, including those pertaining to market information.

4.6 Reduced market abuse

It is self-evident that possibilities and opportunities for market abuse arise when price sensitive information (psi) is issued or available in disparate forms, at disparate times and in disparate locations. This challenge is magnified, when the objective is to build a pan-European financial market and establish broad pan-European Financial regulation of Markets and Exchanges which constitute that Market.

5 Recognition of Stakeholders

The needs of different stakeholders vary significantly. Therefore these needs can be difficult to accommodate. However, IBM's in-depth understanding allows us to demonstrate how to overcome these challenges.

5.1 Issuers

Today, pressures on issuers are intense. The "corporate governance movement" including investors, employees, customers and academics, is demanding ever higher standards of compliance, especially in financial regulatory compliance. Rewards, however, for those who meet these standards are high, with evidence emerging of higher total return to investors, for those companies practising excellence in corporate communication.

Inevitably, these standards come at a cost, and, therefore, a key objective has to be making the processes of disclosure as simple and cost effective as possible. This means a critical success factor for Europe is the commoditisation, standardisation and enforcement of the market information dissemination methodology, throughout every step of the process between the issuer and the investor. Evidence suggests that a system of competing operators as collectors of regulated information has benefits such as the downward price pressure that is exerted in markets such as Germany and the UK, where such competition exists.

5.2 The existing supply chain

A substantial financial media sector has evolved to support the complex financial analysis and decision making by investors. There are broadly three revenue models for these information companies:

1. **Issuer fees** (the listed company paying to achieve wider recognition);
2. **Subscription fees** (the user of the information paying to access it); and
3. **Advertising fees** (the existence of a large body of information attracting relevant advertising, or transaction fees).

The 'map' of these services includes:

- National registries – whose role is to store and make accessible information provided by companies – both private and public. The ease of access and value added is widely varied.
- Exchanges – who have created "company information centres", to enable their issuers to be more widely understood and hence generate investor interest, liquidity in the market and the revenue streams generated by this. Again, there are several business models at work – issuer funded, subscription or advertising driven.
- Added value analytics – whose business model is to source information from or about the issuer, and subsequently to offer additional analysis of the listed company on a subscription basis.
- "Profilers" – whose remit is to collect basic information on as many companies – listed and private – as possible, and offer companies the option of additional coverage, thus enhancing investors' understanding.
- Annual report distribution services for listed companies, which collect and disseminate either hard copy or electronic annual reports, thus saving the issuer – for a fee - the task of responding to individual requests for copies.
- "Consolidators" – companies who's online services aim to capture as much third party news, comment, content and analysis as possible, and make it easily accessible to subscribers.

Harnessing the above to act as a unified Central Storage Mechanism is both attractive and possible using existing technologies, albeit at some expense. However, it does create oversight challenges. This is discussed further in the next section.

6 Governance and Business Considerations

Today Europe lacks an enforced information standard for the submission, storage and distribution of structured regulated information by listed companies. If the EU competent authorities are able to migrate to common information standard the solution to this consultation would potentially are any of the three options identified in the Consultation Paper. However, the issues of time-stamping and simultaneous access to all participants would still need to be addressed.

In the absence of a resolution to implement the common information standard, the governance and funding models become vital to the implementation of the Central Storage Mechanism. The key considerations are how to achieve the stated objectives of the TOD, whilst not only limiting the cost impact on issuers but also lowering the cost of capital, and simultaneously:

- ensuring equal and free access to basic information to investors;
- harnessing the existing information supply chain (above);
- providing standards and an appropriate regulatory oversight;
- creating a single pan European access point for regulated information.

Whilst this goal may seem challenging IBM's experience shows that recent technical and standards developments do offer a number of ways forward.

CESR identifies 3 broad options:

1. Storage by type of regulated information or category of issuer;
2. Multiple mechanisms storing all regulated information;
3. One single central (national) storage mechanism, operated by the Competent Authority.

Each is discussed below. But recognising the lack of the above mentioned common information standard, the time-stamping and simultaneous access issues and the cost effectiveness of the Single Market, IBM would like to table a fourth option.

6.1 Storage by type of regulated information or category of issuer

This model implies the use of the existing (fragmented) information industry to achieve accessible information. Subject to the issues raised above, evidence suggests that such option may prove difficult to achieve, because of the following:

1. Linking these different services, creating standards of submission and storage would be a significantly more complex task from a time, cost and risk perspective than starting from scratch.
2. The variety of business models that underpin these existing businesses is so diverse, that winning their cooperation may prove difficult. To achieve CESR's objectives, many stakeholders would have to completely redesign their business models.
3. It would not create a single location where investors could find regulated information; it would link to multiple systems, each operated under different rules, with different technical and operating standards. This would compromise fairness in the comparison with the US markets.
4. Operators submitting the regulated information would be required to maintain a multiplicity of submission formats, increasing cost for issuers, particularly where the issuers are targeting a cross border market within Europe.
5. Consolidation of information will be repeated by more than 7,500 issuers and 11 mn retail investors (source Proshare) within Europe, a very expensive prospect.
6. This model promotes a structural failure across Europe in that the costs of storage and retrieval of information domestically is significantly cheaper than the cross border storage and retrieval, defeating the objects of the Single Market.

6.2 Multiple mechanisms storing all regulated information

This implies sending ALL regulated information to ALL national storage mechanisms. Subject to the issues raised above, such option currently may prove difficult to achieve, for the following reasons:

1. Linking these different services, creating standards of submission and storage would be a significantly more complex task for the listed companies.
2. The variety of business models that underpin these existing businesses is so diverse, that winning their cooperation would be a difficult, protracted and complex initiative. To achieve CESR's objectives, many stakeholders would have to completely redesign the way they work.
3. It would not create a single European location where investors could find regulated information; it would link to multiple systems, each operated under different rules.
4. Operators would be required to maintain a multiplicity of submission formats, increasing cost for issuers.
5. To all intents and purposes the majority of issuers would retain their domestic focus.

6.3 One single central storage mechanism, operated by the Competent Authority

Subject to the issues raised above, this option currently may prove difficult to achieve for the following reasons:

1. History shows that such services deteriorate over time, and not being subject to commercial imperatives, costs tend to rise.
2. With no other income source, costs on issuers would rise.
3. Single national storage mechanisms, even linked together, will not necessarily provide a common access to users. Inevitably, standards will vary, making one set of information more accessible than another, contrary to the purposes of Article 17.1a.

In considering the challenges surrounding options 1 to 3 in the current environment, IBM has examined existing examples of hybrid public/private co-operation models, and would like to table a **fourth alternative**.

6.4 Option 4 – Hybrid Model

Specifically, this option assumes a "Private contractor" licensed and supervised by "EU Competent authority(ies)". This option is based on creating a single Central Storage Mechanism, mandated by national competent authorities. To achieve this, the EU competent authorities would create a dedicated Central Storage Mechanism Committee (CSMC) of national competent authorities, tasked with creating and monitoring the standards of operation of the Central Storage Mechanism. The licence would potentially be granted on a cost plus basis to an independent contractor to CSMC standards body. These standards would define the key delivery, security and access criteria, making basic data accessible by all at no cost through the web. The operation of the CSM would be funded by raw information sales to added value providers, and other sources of revenue, such as advertising income, information sales and issuer fees.

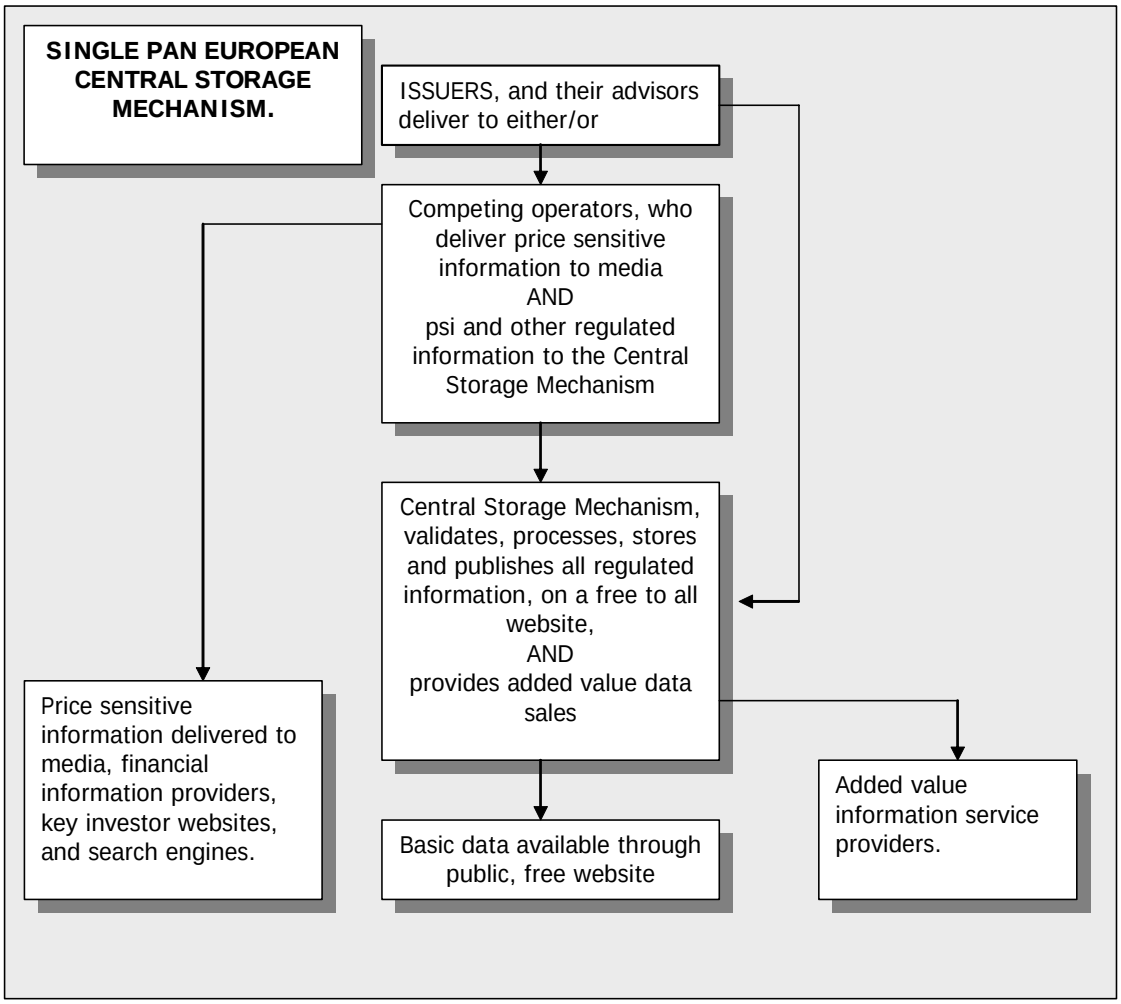

Figure 1 - The Central Storage Mechanism

We believe the advantages of this option include:

- **Issuers** would be mandated through national competent authority requirements to submit their regulated information to the Central Storage Mechanism either directly, or through an Operator. In practice, we believe that the Operators (whose role is foreseen in the real time dissemination of price sensitive news) would add the capabilities for this on a price competitive basis. For example, the Exchange Reporting System requirement introduced in Germany has spawned numbers of service providers, many already providing value added services to issuers in other ways.
- **EU Competent Authorities** would create a Central Storage Mechanism Committee (CSMC) of national competent authorities, whose functions would be to:
  - **Adopt and enforce standards** for implementation in Member States. The standards should include the format of the submission to the Central Storage Mechanism, the speed, controls etc.
  - **Licence a single pan European contractor** to:
    - **Operate the (single) Central Storage Mechanism** in accordance with parameters laid down by the national competent authorities.
    - **Create a central website** through which basic information on all issuers is made available at no cost to investors.
    - **Operate, potentially, on a cost plus basis** to make a return over and above the operating expenses and any re-investment requirements to enhance the operating model, subject to pricing oversight.

  - **Earn revenues,** to be offset against the costs, from sales of raw information to the added value information industry, from added value services created by itself, and from other sources of revenue such as advertising.
- **The financial media industry (described above)** would benefit from a reliable flow of basic company information, reducing their costs of collection of the raw data. This would potentially include the 'corporate actions' data market, where collection costs are a significant inhibitor to achieving faster settlement.
- **Investors** would benefit a) from a free, basic service, and b) from more complete and reliable added value information services for professionals, with less vulnerability to market abuse;
- **The single market for European financial services** would gain from significantly enhanced transparency at a lower overall cost, thereby meeting the goals of the Lisbon agenda.

Given the wide variation in the spread of listed companies throughout the European Union, (see chart below), providing a single access point for information would avoid any imbalance, with one country's storage mechanism having more use than another's. Smaller companies in countries with fewer issuers, would benefit from the wider investor access.

Table 1 - No. of listed companies

FESE Monthly Statistics

December 2004

Athens Exchange	321
Borsa Italiana	278
Bratislava Stock Exchange	300
Budapest Stock Exchange	48
Copenhagen Stock Exchange	185
Deutsche Börse	819
Euronext	999
Iceland Stock Exchange	34
Irish Stock Exchange	65
Ljubljana Stock Exchange	140
London Stock Exchange	2,837
Luxembourg Stock Exchange	234
OMX Helsinki Stock Exchange	137
OMX Stockholm Stock Exchange	276
OMX Vilnius Stock Exchange	43
Prague Stock Exchange	55
Spanish Exchanges (BME)	n/d
Warsaw Stock Exchange	216
Wiener Börse	121

  - Source Federation of European Stock Exchanges.

6.5 Reference models

In reaching the above recommendation, we examined existing models including American Bankers Association ("ABA")/ CUSIP, Committee on Uniform Security Identification Procedures. The CUSIP numbering system for identification of listed securities in the US has been endorsed by all major segments of the financial community. The CUSIP Board of Trustees controls the operation of the CUSIP numbering system. Through the work of the CUSIP Legal and Agency Subcommittees, the CUSIP standards were established, and Standard & Poor's was awarded the contract to function as the CUSIP Service Bureau, the operational arm of the system, which is responsible among other

functions for the storage, compilation and publication of the CUSIP data. We believe that this is a highly successful model of public private cooperation, which can be adapted, as above.

Other examples we examined included:

A. Omgeo

   Omgeo provides technology and services that improve the management of post-trade pre-settlement operations. It is operated as a global joint venture of the Depository Trust & Clearing Corporation (DTCC) and Thomson Financial combining the mutualised goals of industry representation with profit making shareholder goals.

B. CLS

   CLS (Continuous Linked Settlement) is a means of settling foreign exchange transactions. It was created as a response to regulatory concern about systematic risk. CLS is owned by CLS Bank, which itself is owned by the market participants, has membership from its customers, and is regulated by the Federal Reserve Board. CLS Bank's operating infrastructure was co-developed with IBM and is operated by IBM.

The critical distinction between the various models above is that Omgeo and CLS were a response to industry demands in a homogeneous industry sector. The reason that IBM is proposing a different public – private governance model is that the TOD requirements in the context of the Lisbon agenda needs to be driven in the first instance as a regulatory demand in order to launch the right solution. The private sector seems not organised to launch Option 4 and options 1 to 3 will have difficulty to support the Lisbon agenda directly. By contrast, looking at the CUSIP example, the ABA has regulatory powers, not perhaps in the same sense that competent authorities have, but membership of ABA is obligatory for banks operating in the US. It sets standards, and applies rules on banks. In 1964 this "regulator" set up the CUSIP bureau, in response to the growing use of computers in banks. - i.e industry demand. They decided then - and since - to contract with an independent provider to 'manage' the database. The regulatory push for such an initiative is therefore what is needed in Europe to deliver the CSM.

7 Implementation Considerations

There are a number of ways to approach the implementation of a central information repository. Whilst there is no single prescribed method, there are a number of considerations that need to be taken into account when assessing possible implementation options. The following sections will detail standards and technology considerations whilst assessing different options.

7.1 Technology Considerations

The implementation of a central information repository poses a number of challenges in the acquisition, storage, validation, analysis and dissemination of information. Some of these challenges are technical in origin:

- how to aggregate information from sources using different technology platforms;
- how to analyse data sourced from one technology platform using tools designed for a different technology;
- what level of granularity is expected to be exchanged in electronic format. Both pdf and XML are electronic documents, the former being flat document and the latter detailing atomic data points:
- if an atomic level electronic document is to be exchanged, such as an eXtensible business reporting language (XBRL) instance document, who will preside over the standard (ergo taxonomy) and its subsequent versions to ensure document source control
- if multiple electronic standards are adopted how can information be aggregated, what mechanism would ensure an accurate mapping between definitions in one standard with the ones of another; and
- how to capture and redistribute information to multiple users without giving any one of those users a time advantage over any other user.

The choice of submission and dissemination mechanisms is a technical issue and can be solved with the deployment of different technologies (such as web services or adaptors). IBM and its partner companies have built information integration technologies which allow the merging of multiple data sources with standard “adaptors” while giving access to that merged data to most standard analytical or querying tools. Related technologies have been developed which can capture and redistribute massive data flows to multiple users in “real time”, ensuring equal access to, for instance, price sensitive market data.

7.2 Standards and Definitions

Other challenges are more fundamental and go to the heart of the meaning of the specific terms used in the underlying information sources: exactly how for example to compare “profit” reported in one jurisdiction with “profit” in another and over time. IBM recognises that much of the information held in the Central Storage Mechanism will always be textual in nature, and will require continuing presentation as documents to human readers for interpretation and use.

However, the introduction of XML and its derivatives has facilitated the tagging of data elements at the atomic level, enabling them to manifest themselves as ‘live’ information that can be queried, validated, manipulated by computer systems. There are a number of benefits that can be obtained by the use of XML technologies. These fall under the remit of efficiencies in data collection, validation, storage, query, analysis, and dissemination. For such automated use, data then need to be structured within a relevant framework, which is enforced by relevant authorities as a standard. Furthermore, as principles and disclosure requirements change over time, so do information structures.

In the case of financial data, the work of the IASB and the regulations around IAS/IFRS have given companies regulated under the TOD (alongside countries adopting IFRS) a common language in which to report their financial results and status. There is a growing demand in related commercial regulatory areas to establish other standard financial terminologies. This standardisation has enabled technologies to be developed which significantly facilitate the use of such information in automated search and analytical tools. Notable amongst these technologies have been derivatives of XML such as RiXML – a standard "mark-up language" for financial research reporting –, NewsML – providing standards for price sensitive news communication- and, especially XBRL. XBRL, via the use of published taxonomies, adds the authoritative framework to enable each piece of regulated information to be used and compared with others. It also ensures that as requirements change over time, these will be incorporated in a timely fashion in the published taxonomies.

IBM therefore proposes the industry adopts XBRL at the outset as the key mandated standard, as described in the answers for questions 23 and 24. We understand, however, that a solution may encompass a number of different information standards, as well as a range of disparate submission and distribution mechanisms.

Any form of translation from standard to standard will include some level of interpretation of the data in order to fit it to a target information model, thus performing data manipulation or enrichment. The adoption of XBRL as the sole standard would ensure that interpretation of the information against the accounting principles are performed by the issuers and that the CSM would not manipulate the data in any manner. Issuers, CSM and users would all comply to published XBRL taxonomies, decoupling the role of the CSM from one of defining information standards and accounting policies to the one of administering regulated information in a central storage location.

Another compelling reason for the adoption of XBRL is the ability of displaying information in multiple languages, independently of the language of the original submission. Again, XBRL decouples need to interpret each element against an accounting definition by incorporating multiple language labels as part of a taxonomy.

7.3 IBM as implementation partner

Given that the implementation challenges are multidisciplinary, both regulatory and technical stakeholders will need to collaborate to deliver an optimum Central Storage Mechanism. IBM has much experience of such collaborative system developments and operations. It has also been in the forefront of utilising evolving XML standards with the information integration technologies described above, and has many large scale implementations which we believe demonstrate the inherent feasibility of the type of centralised information repository envisaged by CESR. Critically these technologies are flexible enough to accommodate many different types of information in the same repository: images of paper documents for instance could co-exist with XBRL data for example. We would argue that the long-term aim should be to have the data in the repository as "structured" as possible since such information in turn enables the easy deployment of automated analysis and surveillance technologies. However, we recognise that the starting point of the facility will need to accommodate different levels of data structure, and will need to allow an evolution towards the ultimate goal. We set out in Figure 2 - ELCID Architecture on page 17 below a conceptual architecture for such a facility.

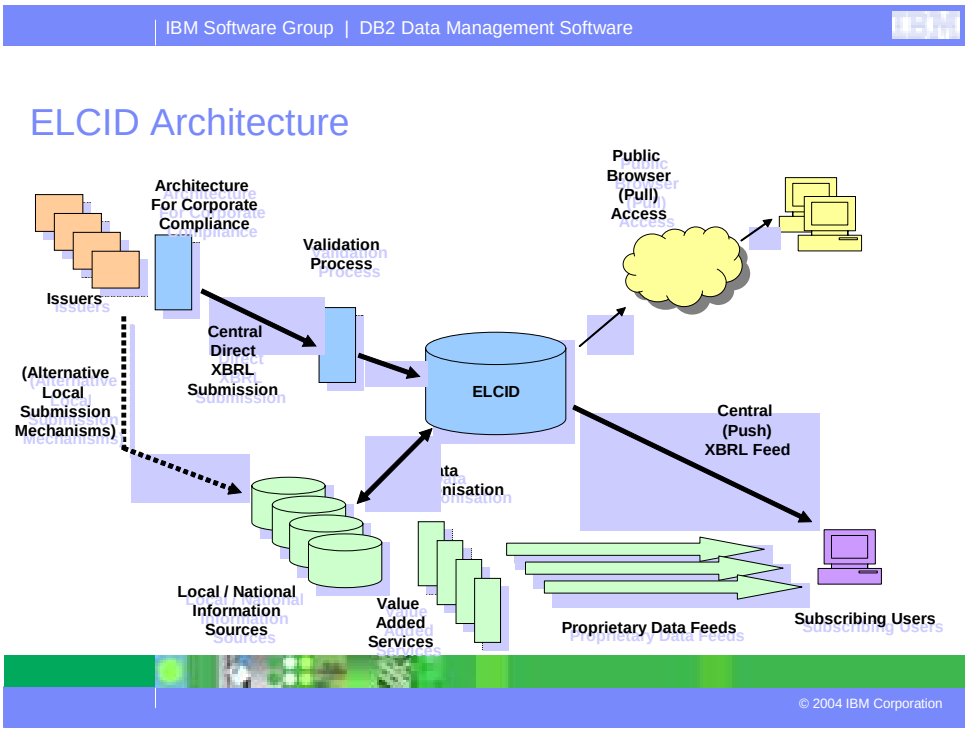

Figure 2 - ELCID Architecture

8 Conclusion

IBM believes that this response presents an opportunity for the quantum leap forward in delivering one of the important components of a pan-European financial markets infrastructure. At the core of the business and technical analysis is the overriding objective:

- implementing a major regulatory element of a pan-European Capital Markets, the Transparency Obligations Directive (TOD).

IBM suggests that the concepts and components highlighted in this response can yield an efficient and we believe long-term cost-effective solution. A solution which uses proven technology, deploys a proven business model and demonstrates an understanding and appreciation of the nature of the risks the project would encounter. Equally critically, it is sensitive to the aspirations of the current stakeholders who access, analyse and distribute data from and about issuers and instruments listed on European Exchanges.

9 Appendix 1 – Scope of Paper: Articles 17 and 18 of TOD

The scope of Articles 17 and 18 are the following:

Articles 17 and 18 apply to issuers of securities that are admitted to trading on a regulated market or to the persons who applied for admission to trading on a regulated market without the issuer's consent.

The term “securities” includes all transferable securities as defined by article 2 (18) of the Directive 2004/39/EC on markets in financial instruments with the exception of money market instruments, as defined in article 2 (19) of the Directive 2004/39/EC on markets in financial instruments having a maturity of less than 12 months, for which national legislation may be applicable.

The information to be disseminated and stored under Article 17 (1) and (1a) is all Regulated Information 1), i.e.: Information to be disclosed under the Transparency Directive, namely:

- Annual financial reports (Article 4);
- Half-yearly financial reports (Article 5);
- Interim management statements (Article 6);
- Major shareholdings information (Articles 11 (4), 11 b and 11 c);
- Additional information (Article 12); and
- Information for shareholders and bondholders which is to be made public under Articles 13 and 1

Any other information required to be made public by the Home Member State in accordance with Article 3 (1). 3 - Information which is to be disclosed under the Directive 2003/6/EC on Insider Dealing and Market Manipulation, (the “Market Abuse Directive” or "MAD"), namely:

- Inside Information (Article 6 (1) of the MAD); and
- Directors Dealings (Article 6 (1) of the MAD).

Article 18 is wider in scope, as its objective is to facilitate public access also to information to be made public under the Directive (2003/71/EC) on the Prospectus to be published when Securities are offered to the Public or admitted to Trading and amending Directive 2001/34/EC (the “Prospectus Directive”), which is namely:

- The prospectus, either as a single document or consisting of a registration document, a securities note and a summary note (Article 5) and any supplements thereto (Article 16); and
- The annual information document (Article 10).

A number of publicity requirements based on company law provisions also apply to issuers. These company law obligations are separate from the Transparency Directive requirements and should remain so.

There is a particular temptation to confuse the company registers as provided for under Article 3 of the First Company Law Directive (68/151/EEC) with the storage mechanism under Article 18 of the Transparency Directive. CESR considers it necessary to maintain a clear distinction between these two pools of information even if Article 18 contains a proposal to create linkages between these two. The benefits and disadvantages of this proposal are discussed in more detail in paragraphs 223 to 230 of the Progress Report regarding Article 18.

10 Appendix 2 - Formal Response

Table 2 – Question by Question Formal Response

CESR Question	Draft response
10.1 **Basic Principles**	
QUESTION 1 Do you agree with CESR's interpretation of the requirement of Article 17.1.a that central storage does not necessitate physical storage in one place? Please give reasons.	Yes. IBM believes that Article 17a does not set any prescribed means of meeting the objectives and, indeed, that it would have been unhelpful to do so. There is great latitude for creation of an appropriate technical solution, which meets the needs of the market. However it must be recognised that a devolved structure presents significant challenges in ensuring simultaneous availability of data to all users (whilst maintaining market fairness) and that centralised physical storage is likely to be the least costly option.
10.2 Storing Information	
QUESTION 2 Do you consider storage of regulated information by type to be a viable option? QUESTION 3 How do you consider the difficulties set out above could be overcome? QUESTION 4 Are there any advantages or disadvantages to this option that have not been set out above. If so, please give details.	As using existing service providers to deliver part of an overall, integrated solution appears attractive, there still remain many difficulties to currently implement such model, including those you mention. In addition to these, the commercial model used by many of the providers (as described in the introduction), does not lend itself to a mandatory requirement. Hence, at this stage, this option may prove difficult to be implemented. The challenge for CESR would be to create an integrated, obligatory solution whilst maintaining these commercial imperatives for the providers. Further, many of these service providers operate on an international basis, and hence asking them to be run 'at a national level' may be unattractive to them. Unless, as alluded to above, a common standard is mandated, the variety of data, the types of systems, collection and storage standards, the variations in frequency and security of update make these different storage systems difficult to combine into one coherent presentation of data.

CESR Question	Draft response
QUESTION 5: Do you consider a multiple storage mechanism regime to be a viable option? Please give reasons. QUESTION 6: Are there any advantages or disadvantages to this option that have not been set out above, that are necessary for CESR to consider? If so, please give details.	We believe that this option potentially misunderstands the basis of the existing "primary information providers ("pip") / secondary information providers ("sip") structure. Under this arrangement in place for price sensitive information "psi" in UK, Germany and other member states, issuers are obliged to submit "psi" to *one of* a number of primary information providers, not to all of them. The information comes together at the secondary information provider, thus providing the complete picture. Consequently, it seems this option would impose a significant burden on the issuer.
QUESTION 7: Do you consider having one central storage mechanism to be a viable option? Please give reasons. QUESTION 8: Are there advantages or disadvantages or disadvantages to this option that have not been set out that are necessary for CESR to consider. If so, please give details.	We believe that the inherent advantages of easier technical integration, clarity for issuers and investors make this the most effective option of those identified. However, in the absence of an enforced industry information standard, and given the issues of time-stamping and simultaneous access to all participants as outlined in our response, the governance model is key (see below) to managing the disadvantages of loss of quality over time and cost on issuers. We believe it would be right to consider creating a single *European* central storage mechanism, into which all issuers throughout the EU would be required to submit information. IBM has tabled a fourth, hybrid model option in its response that could be highly effective for such a prospectively large- scale project. From a technical standpoint, we believe that running a single project, under an appropriate governance structure, would achieve the objectives most effectively, and quickly. In summary, if Europe is aiming for a Single Market, which optimises liquidity and promotes fairness, it will require that network latency of the distribution of regulated information is kept to a minimum, which by definition leads to the optimal solution being a single physical Central Storage Mechanism.

CESR Question	Draft response
10.3 Distribution Of Information To Investors	
QUESTION 9: Which of the above options do you prefer? Please explain the reason(s) for your choice. QUESTION 10: Do you consider there to be any disadvantages to regulated information being accessible through a Competent Authority's website. If so, please give details.	IBM would like to table a fourth option in the form of a hybrid model which has extensively been commented in our response and which seems the most realistic option in this current environment (given the lack of an European enforced information standard and the issues of time-stamping and simultaneous access to all participants) We believe that the display of regulated information and the collection and storage of regulated information are potentially separate projects. Evidence suggests that the latter – collection and storage - is not a core function of a competent authority, and that the competent authority would be reliant on third party technology providers for research and development. On the other hand, display of regulated information on competent authority websites as part of the wider accessibility – is appropriate. As noted in our response, the existing information industry is well positioned to add value to "vanilla" information', and competent authority websites should be part of that.

CESR Question	Draft response
10.4 Delivering Information To CSM	
QUESTION 11: Which of these options do you prefer? Please explain the reason(s) for your choice. Are options missing? Please explain which ones. QUESTION 12: Do you consider it necessary for CESR to prescribe one particular option? Please explain your reasons.	The key to this question is for the EU Competent Authority(ies) to embrace standards as has been achieved in other industries. Standards need to be defined, mandated and enforced and there needs to be a regulatory requirement for issuers – either directly or through their chosen Operator, Document Handling Service to use them. Once standards are established in terms of formatting, speed, security, non-repudiation and certainty of publication, issuers should be free to use whatever systems they feel are most effective for their individual circumstances. Non compliance with the standards could be made a violation of listing rules. An issuer that chose to use an Operator would look for reassurance (either in the form of Competent Authority approval, or an accreditation statement that the Operator's system was compliant). CESR does not need to prescribe a particular standards methodology, instead it is suggested it needs to undertake two other tasks: • authorise EU Competent Authorities as standards authorities, to set standards and service level agreements by which standards continually evolve, are maintained and enforced; and • mandate the use of the standards by issuers within listing agreements. In financial services today there are no standards authorities that are monitored with service level agreements, which protect users, completeness of standards, time to market and the like and as a result so far, the industry has not fully benefited from standards. Our experience gained with other industries would be invaluable in this instance, as evidence seems to suggest that the adoption and evolution of industry standards in this context may help to lower the cost of capital.

CESR Question	Draft response
QUESTION 13: When should an issuer's responsibilities to send information to a central storage mechanism be considered fulfilled? Please explain your reasons.	Assuming a single Central Storage Mechanism, run to agreed standards overseen by EU Competent Authorities or an equivalent supra national body, the issuer should receive an acknowledgement that the information has been received. This would act as the sign off that the issuer has complied. The terms of the contractor's licence would establish standards of publication deadlines and would ensure technologies are employed to guarantee message delivery by the issuer and the contractor, thereby ensuring the principles of a fair market are up held.
QUESTION 14: Should all price sensitive information be made available in real-time by the central storage mechanism to moderate the affect of "black holes" resulting from the dissemination process?	We do not agree that the "black holes" as such need to exist. If the breadth of dissemination is sufficiently wide, and the "connections" mentioned in Part B, 6 (a) are well defined to include all the media used by investors, access to real time "psi" will become uniform. However, we believe that ALL regulated information should be available through a single resource as a matter of record, and as a fail safe. Hence we agree that "psi" should ALSO be directed to the Central Storage Mechanism.
QUESTION 15: Do you agree that non-price sensitive regulated information does not need to be made accessible by a central storage mechanism to the same deadlines as price sensitive regulated information? Please explain your answer. QUESTION 16: To what time deadlines should a central storage mechanism be required to make regulated information available?	No, there is not the same requirement for non "psi" to be delivered in real time, given the wide spread distribution foreseen under Article 17.1. Rather, issuers should have 5 business days in which to submit the information. However, practically, it is likely that Operators would simply add the Central Storage Mechanism as a destination on the distribution in the same way as other 'media'.

CESR Question	Draft response
QUESTION 17: Which of the above options or combination of options do you consider to be most desirable? Please give reasons. QUESTION 18: Are there any other options that have not been identified above that you consider to be desirable? If so, please give details.	As noted in our introduction, we believe the key to a successful Central Storage Mechanism is a combination of regulatory oversight with commercial sector involvement. We believe therefore that an appropriate governance structure, with oversight from EU Competent Authorities, and operation of the Central Storage Mechanism by a prime contractor from the IT industry (with substantial experience and a proven track record) provides a workable solution. See our response. CESR has presented 3 key alternatives for the governance. IBM has presented a fourth alternative.
10.5 Operating The CSM	
QUESTION 19: Which of the above do you consider to be the best option? Please give reasons for your answer. QUESTION 20: Do you consider there to be any other advantages or disadvantages to a Competent Authority or a commercial taking on the role of the central storage mechanism that have been discussed that are necessary for CESR to consider? If so, please give details.	We believe that in the current environment, a contractor as described in the fourth, hybrid model option tabled in our response would provide a workable solution We do not think it is necessary for the Central Storage Mechanism to be operated (run on a day to day basis) by CESR or EU Competent Authorities. The long established, highly proficient commercial entities in existence should have the skills and project infrastructure in place to manage this project.

CESR Question	Draft response
QUESTION 21: Which of the above options do you prefer? Please give reasons. QUESTION 22: Do you think it is necessary to make the status of the stored information as reviewed or not reviewed by the regulator transparent in the storage mechanism? Please give reasons.	We believe that in terms of checking it is important to separate the *content* of the regulated information from its *format (and delivery mechanism(s))*. The contractor for the Central Storage Mechanism should have clear guidelines to follow as to the minimum standards of *formatting and delivery*. It should be responsible for monitoring adherence to those standards. However, as pointed out, issuers would be responsible for the *content* of their "psi", as disseminated to the market in real time. The contractor for the Central Storage Mechanism should have validation processes in place to filter information at its input level and create exception reports where appropriate, thus enabling the issuers submitting the information to obtain higher quality levels in terms of accuracy and timeliness. However, the issuers would ultimately remain responsible for the content they provide. To subject other, non "psi" regulated information to additional checking may result in adding cost and delays. Consequently, it would have to be a balanced decision whether or not, in terms of content, there would be value in identifying the status of information as reviewed or not reviewed (cost/benefits).

CESR Question	Draft response
QUESTION 23: Do you consider that it is necessary for CESR to mandate the standard to which all regulated information should to be transmitted? Please give reasons. QUESTION 24: Do you consider that the standard to which all regulated information should to be transmitted is something that should be left to some point in the future, after the Directive has been implemented? Please give reasons.	As an issuer, IBM believes that a standard that facilitates and speeds up the processes of comparability between issuers in different Member Sates (and available and accessible to those outside the European Union) is highly desirable. There is a strong drive towards convergence and harmonisation of definitions both in the EU area, and globally. The need to compare information means that standards in definitions and policies are a requirement today. To this avail, we are assisting such bodies as the International Accounting Standards Board (IASB) and Commission of European Banking Supervisors. In this context, the ability to exchange, aggregate, validate and analyse information in a timely and efficient manner is paramount. IBM believe that these objectives can only be realistically obtained if an electronic standard is defined on the onset, focusing market participants, both regulator and regulated, to work within defined parameters. It is also important to note that the wide adoption of a standard is in itself the only real critical success factor of standard. IBM supports the use of XML as the chosen electronic protocol for the exchange of regulated information and more specifically supports the use of XBRL for this application. There is no doubt that both market and regulators worldwide are focusing on the adoption of XBRL for the exchange of business reporting information. The adoption of XBRL by CEBS will further strengthen this trend benefiting both CESR and other initiatives (national, EU and global) in the wide adoption of a single electronic reporting standard. IBM is a supporter of XBRL and is actively working with market initiatives such as IFRS and CEBS-COREP for the definition of XBRL taxonomies. Professionals from IBM have founded the XBRL Basel II working group for the promotion of XBRL in banking. CESR has a unique opportunity to adopt a standard to achieve these objectives. IBM is a supporter of the XBRL standards, and believes that in recent months numerous examples of adoption by regulators and others, together with support from the accounting profession, investors, and technology suppliers for taxonomy creation, combine to make XBRL's widespread use inevitable. CESR has an opportunity significantly to enhance the useability of issuers' financial information.

CESR Question	Draft response
QUESTION 25: Do you agree that security measures relating to the processing of unpublished regulated information are better dealt within the standards set out for operators than standards set for central storage mechanisms? Please give reasons.	We believe that security measures need to exist at both the operator's and the Central Storage Mechanism in order to achieve end-to-end non-repudiation of all regulated information. There is a role for the national competent authorities to set the security standards in order to achieve the market integrity objectives.
QUESTION 26: Do you consider that a central storage mechanism should be obliged to ensure that the regulated information it holds is complete and unedited? Please give reasons. QUESTION 27: Are there any other issues relating to security that you think CESR should consider? Please give details.	IBM believes that between the operator's and the Central Storage Mechanism a valid process should exist to ensure the information sent is complete, and un-edited. There is a role for the national competent authorities to set the security standards in order to achieve the market integrity objectives. Since this infrastructure will become a key source of market significant data it must be protected from unauthorised access, therefore requiring the highest levels of security. Security is a core business of IBM and has extensive material and experience on this topic and will be happy to share it at the appropriate time.
QUESTION 28: Do you believe that a central storage mechanism should be obliged to ensure that the regulated information it receives is from an authentic source? Please give reasons.	For the reasons laid out in answer to question 25, we believe that this is necessary.
QUESTION 29: Do you believe that a central storage mechanism should be obliged to record the date and time on which it receives regulated information in order that its performance may be measured? Please give reasons.	Yes. Clarity as to when regulated information is received is an essential standard for performance measurement.
QUESTION 30: Do you believe that a central storage mechanism should be obliged to record the date and time on which it receives regulated information for the purposes of investors? Please give reasons.	Yes. Clarity as to when regulated information is received is an essential standard to demonstrate transparency to the investor. Only then would it be possible to create a proper audit trail in the context of surveillance in general and of potential insider trading probes in particular.
QUESTION 31: Do you believe that a central storage mechanism should be obliged to hold all regulated information in an electronic format? Please give reason.	Yes. Given the stated objectives of easy access to all investors across the European Union, electronic storage and delivery is essential.

CESR Question	Draft response
QUESTION 32: Do you believe that a central storage mechanism should be obliged to record all the above reference data for each piece of regulated information? Please give reasons.	Yes. It should also include the following: • Identity of the person or entity submitting regulatory information; • Security validation details; • Medium in which regulatory information is received; • Embargo details (if relevant); • Details of any changes made to a document by the prime contractor during processing; and • Date and time the regulatory information is released. All of the above are essential for any review of breaches of the requirement to publish regulated information.
QUESTION 33: Do you believe a central storage mechanism should be obliged to offer its internet based services in all native languages of every Member State? Please give reasons.	We believe that the controls governing the accessibility of the regulated information should be in multiple languages. There are examples of language tools on many search engines, and these should be used to ensure that all investors can identify the existence of (and access) regulated information. A balanced decision will be needed (cost/benefits) as to whether all languages of all member states will need to be implemented in the Central Storage Mechanism. Alternatively, it may be that commercial services will arise which help those investors with translation of the content of their regulated information.
QUESTION 34: Do you consider a central storage mechanism should be obliged to offer its services on a continuous basis 24 hours a day 7 days a week? Please give reasons.	Yes. Investors' rights to access regulated information should not be limited to fixed periods, especially since the benefits of such Central Storage Mechanism (the provision of comparable company information throughout Europe and its potential benefit to trigger liquidity in European listed companies) will span the globe and all its time-zones.
QUESTION 35: Should central storage mechanisms and/or Document Capture Services be obliged to have systems in place to confirm the receipt of regulated information? Please give reasons for your reply	Yes. As noted in previous responses, we believe that issuers should be provided with time-stamped notifications that a successful submission has been made, and they are compliant with their obligations. The notification should be sent electronically and securely, to the originator.

CESR Question	Draft response
QUESTION 36: Do you believe issuers should be obliged to submit regulated information in hard copy form, if the electronic services of a central storage mechanism or Document Capture Service for the receipt of regulated information are unavailable. Please give reasons for your reply QUESTION 37: Do you believe that a central storage mechanism should be obliged to provide access to regulated information in hard copy form, if its electronic systems are unavailable? Please give reasons for your reply	There are many reasons why hard copy form of submission should be used only in extremis, such as the time of processing, the potential for error, the increased costs of transcription. Hence, electronic submission is to be preferred in every case. Our tabled concepts and components for ELCID include the requirement for a complete redundancy of systems. Hence, even in the unlikely event of a catastrophic failure at the Central Storage Mechanism, the proper use of back-up and recovery technologies which are currently available would allow such extreme condition to be avoided. Much more likely would be failure at a submitting Operator, or at the issuers' own offices. In these events, issuers should make arrangements for electronic submission through a competing Operator. Hard copy submission should therefore be included only as a last resort (back-up or minimal business continuity procedure). We would suggest that a proper use of currently available technology may be the best solution to avoid having to deliver regulated information in hard copy form. In the unlikely event that a properly equipped Central Storage Mechanism would know prolonged failure to deliver electronic information, we would suggest that the delivery in hard copy would necessarily mean that the timeframe in which the different requesters of information can receive hard copies would infringe on the principle of simultaneous access.
QUESTION 38: Do you believe that a central storage mechanism should be obliged to provide technical and customer care service support helpdesks? Please give reasons for your reply	Yes. Every form of technical help for issuers should be available, *other than* advice on the business content and style of regulated information. The latter should remain outside the role of the contractor.
QUESTION 39: Do you believe that a central storage mechanism should be obliged to clearly distinguish regulated information from other types of information it may hold? Please give reasons for your reply.	Yes. Clarity in the Central Storage Mechanism – and its 'downstream' clients displaying the regulated information - is essential. This should include the ability for the user to distinguish between regulated information and further analysis – in the form of comment etc.
QUESTION 40: Do you believe that a central storage mechanism should be obliged to make the amount of its fees transparent to investors? Please give reasons for your reply.	Under the fourth, hybrid model option IBM has tabled in its response we suggest the Central Storage Mechanism should adopt a "utility" model, which would request transparent pricing of the services delivered to all categories of users.