European Securities and Markets Authority

Consultation Paper

Consultation Paper on the Regulatory Technical Standards on the European Single Electronic Format (ESEF)

25 September 2015 | 2015/ESMA/1463

Responding to this paper

ESMA invites comments on all matters in this paper and in particular on the specific questions summarised in Annex 1. Comments are most helpful if they:

- respond to the question stated;
- indicate the specific question to which the comment relates;
- contain a clear rationale; and
- describe any alternatives ESMA should consider.

ESMA will consider all comments received by **24 December 2015.**

All contributions should be submitted online at www.esma.europa.eu under the heading 'Your input - Consultations'.

Publication of responses

All contributions received will be published following the close of the consultation, unless you request otherwise. Please clearly and prominently indicate in your submission any part you do not wish to be publically disclosed. A standard confidentiality statement in an email message will not be treated as a request for non-disclosure. A confidential response may be requested from us in accordance with ESMA's rules on access to documents.[1] We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by ESMA's Board of Appeal and the European Ombudsman.

Data protection

Information on data protection can be found at www.esma.europa.eu under the heading Legal Notice.

Who should read this paper

All interested stakeholders are invited to respond to this consultation paper. In particular, comments are sought from issuers, auditors, investors, other users of financial information and other electronic reporting stakeholders at large who are affected by Directive 2004/109/EC of December 2004 as amended by Directive 2013/50/EC.

[1] *http://www.esma.europa.eu/system/files/2011_MB_69___Decision_on_access_to_documents_rules.pdf*

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List of abbreviations

AFR – Annual Financial Report

CBA – Cost Benefit Analysis

CESR – Committee of European Securities Regulators

COREP – Common Reporting

CP – Consultation Paper

DSDs - Data Structure Definitions

EBA – European Banking Authority

ebXML - Electronic Business using eXtensible Markup Language

EC – European Commission

ECB – European Central Bank

ECCBSO - European Committee of Central Balance-Sheet Data Offices

EDI – Electronic Data Interchange

EEA – European Economic Area

EEAP – European Electronic Access Point

EIOPA – European Insurance and Occupational Pensions Authority

ESEF – European Single Electronic Format

ESMA – European Securities and Markets Authority

EU – European Union

FINREP – Financial Reporting

GAAP – Generally Accepted Accounting Principles

HTML - HyperText Markup Language

IASB – International Accounting Standards Board

IFRS – International Financial Reporting Standards

iXBRL – Inline Extensible Business Reporting Language

NCA – National Competent Authority

OAM – Officially Appointed Mechanism

PDF – Portable Document Format

RTS – Regulatory Technical Standard

SDMX - Statistical Data and Metadata eXchange

SEC – Securities and Exchange Commission

SME – Small and Medium Enterprises

TD – Transparency Directive 2004/109/EC

TDA – Amended Transparency Directive 2013/50/EU amending Directive 2004/109/EC

XBRL – Extensible Business Reporting Language

XHTML – eXtensible HyperText Markup Language

XML – Extensible Mark-up Language

List of definitions

ESMA Regulation	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC.
Transparency Directive	Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are traded on a regulated market and amending Directive 2001/34/EC including subsequent amendments.
Amended Transparency Directive	Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC.
Accounting Directive	Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertaking, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC, including subsequent amendments.
Audit Directive	Directive 2006/43/EC of the European Parliament and of the Council of 17 May 2006 on statutory audits of annual accounts and consolidated accounts amending Council Directives 78/660/EEC and 83/349/EEC and repealing Council Directive 84/253/EEC, including subsequent amendments.
Transparency Directive implementing directive	Directive 2007/14/EC, of 8 March 2007, laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC on the harmonisation of transparency requirements in relation to information about issuers whose

	securities are admitted to trading on a regulated market.
Equivalence Regulation	EC Regulation No 1569/2007 of 21 December 2007 establishing a mechanism for the determination of equivalence of accounting standards applied by third country issuers of securities pursuant to Directives 2003/71/EC and 2004/109/EC of the European Parliament and of the Council
IAS Regulation	EC Regulation No 1606/2002 of 19 July 2002 of the European Parliament and the Council on the application of international accounting standards
Issuer	A natural person, or a legal entity governed by private or public law, including a State, whose securities are admitted to trading on a regulated market. In the case of depository receipts admitted to trading on a regulated market, the issuer means the issuer of the securities represented, whether or not those securities are admitted to trading on a regulated market.
Regulated information	All information which the issuer, or any other person who has applied for the admission of securities to trading on a regulated market without the issuer's consent, is required to disclose under the Transparency Directive, under Article 6 of the Market Abuse Directive, or under the laws, regulations or administrative provisions of a Member State adopted under Article 3(1) of the Transparency Directive (transposition of the Transparency Directive).

1 Executive Summary

Reasons for publication

The European Securities and Markets Authorities (ESMA) is publishing this Consultation Paper (CP) in order to comply with the requirements set out in the amended Transparency Directive 2013/50/EC whereby ESMA is required to develop and submit the draft Regulatory Technical Standards (RTSs) for the development of the European Single Electronic Format (ESEF) to the European Commission (EC) by the end of 2016.

According to Articles 10 and 15 of Regulation (EU) No 1095/2010 of the European Parliament and of the Council establishing ESMA (ESMA Regulation), ESMA must conduct a public consultation before submitting a draft RTS to the Commission. Therefore, this CP seeks stakeholders' views on proposals for such RTS. The input from stakeholders will help ESMA finalise the draft RTS. Respondents to this CP are encouraged to consider the costs and benefits that the draft RTS would imply and provide the relevant data to support their arguments or proposals.

Contents

This consultation paper includes an assessment of current electronic reporting; an analysis of the policy objectives included in the Transparency Directive and explores ways forward with regards to the establishment of an ESEF by taking into account technical developments in financial markets and telecommunication technologies. Section 3 discusses the policy objectives of ESEF. The current practices regarding the publication and filing are described in section 4. Section 5 describes possible options and scenarios to move toward the implementation of electronic reporting in the European Union (EU) and a description of the various options available while section 6 provides for the preferred option based on the preliminary Cost and Benefit Analysis (CBA) included in Annex III).

Summary of preliminary main conclusions

The scope of ESEF extends to the Annual Financial Report (AFR) required by the Transparency Directive. The AFR, containing the individual and consolidated audited financial statements (depending on the situation of the issuer), the management report, and other statements made by the persons responsible within the issuer, is disclosed together with the audit report. These parts differ in their suitability for being reported in a structured electronic form. Whereas the primary financial statements lend themselves well to transformation in a structured electronic format other parts of the AFR such as the

management report are of a particularly narrative nature and a very limited defined structure.

While such requirement is not specifically included in Recital 26 from where the policy objectives have been identified, ESMA considered the overall context and use of financial reporting as well as the fact that in the EU, to have legal effectiveness and admissibility in legal proceedings, a document has to be in human-readable format (such as PDF, Microsoft Office Word or paper). In addition to that ESMA believes that some end-users, in particular retail investors, might continue to rely on documents in PDF format as they might not have the means to consult information in a structured format, in case its rendering is not provided for free. ESMA proposes therefore to require filing and publishing the AFR mandatorily in the format of a PDF file to answer the need of having a legally binding document. The PDF technology is considered as being the most suitable on the basis of the fact that it does not entail any further adaptation or requirements. In addition to that the PDF format is either required or accepted in all Member States to disseminate the AFR to the public and store them on the OAM.

Structured electronic reporting depends on taxonomy and the development of a taxonomy for the narrative parts poses significant problems. Taxonomy generally exists for financial statements or information for tax authorities, but not for the audit or management reports. In the countries where electronic reporting of structured data is required, that covers mainly the financial statements. In view of the above, ESMA has not envisaged to give further consideration to the creation of a taxonomy for elements which are outside financial statements but included in the AFR.

While the use of IFRS is mandatory for consolidated financial statements of entities listed on regulated markets within the EU, the use of IFRS is not permitted in some jurisdictions for individual financial statements (as mandated by Article 5 of the IAS Regulation). Furthermore issuers from third countries are allowed to prepare their financial statements according to third country GAAPs if they are deemed equivalent to IFRS as endorsed in the EU. Therefore a significant number of sets of accounting standards are used for the preparation of financial statements contained in the AFR of issuers in the EU. The fact that structured electronic reporting depends on taxonomy and a different taxonomy is necessary for each set of accounting standards leads to significant complexity. If all financial statements should be published in a structured electronic format, taxonomies must be developed and/or maintained for IFRS, national GAAP for those Member States that require or permit preparation of individual financial statements according to national GAAP and for third countries GAAP equivalent to IFRS.

ESMA therefore reckons that a nuanced approach should be followed depending on the

types of financial reporting frameworks used by issuers publishing AFRs under the TD. Full comparability of the financial statements of different issuers across the EU is only possible when these are prepared under the same set of accounting rules. ESMA therefore believes that requiring the publication in a structured electronic format is most beneficial for consolidated financial statements which are all prepared using IFRS as required by the IAS Regulation.

For financial statements prepared under national GAAP, ESMA considers either development of taxonomies at national level or development of a EU core taxonomy on the basis of the Accounting Directive. However, currently there do not exist taxonomies for all national GAAPs under which individual financial statements can be prepared according to the national law of the Member States and the development of a EU core taxonomy should be preceded by a technical study assessing the related technical feasibility issues and whether the benefits really exceed the costs attached to it. In view of these limitations and uncertainties related to the taxonomies on national GAAPs, a phased approach seems to be appropriate. ESMA proposes in the draft RTS requiring that the consolidated financial statements should be made public in a structured electronic format. Until either taxonomies for all national GAAPs or a EU core taxonomy are available, individual financial statements should be allowed, but not required, to be made public in a structured format.

The table below indicates the approach suggested by ESMA[2]:

	Option A (Full AFR in pdf only)	**Option B (Full AFR in pdf + financial statements in structured format)**	**Option C (Full AFR in pdf + full AFR in structured format)**
IFRS consolidated financial statements		required	allowed if already in place in a MS
National GAAP and IFRS individual financial statements	required	allowed if already in place in a MS	allowed if already in place in a MS
3rd country GAAP deemed equivalent to IFRS financial statements	required	allowed if already in place in their country: (e.g.: US)	allowed if already in place in their country (e.g. U.S.)

[2] *The Options A, B and C are presented in section 6.2.2*

ESMA believes that by limiting the requirement for a structured format to the information which is used most for analysis of data (financial statements) and for which comparability across Europe can be achieved easiest (consolidated financial statements according to IFRS), the cost for issuers (for drawing up that information) and other parties (e.g. by developing a national taxonomy) could be reduced while the main benefits of ESEF can be realised.

As required by the Transparency Directive ESMA carried out a Cost-Benefit Analysis (CBA) of the technologies to specify the European Single Electronic Format (ESEF). However the questionnaire achieved a very low response rate with a lack of representativeness from major markets and users of financial information. Hence, this small number of respondents prevented ESMA to perform a complete analysis which results could be adequately interpreted. In order to complement this analysis, ESMA decided to reach out for input and ask several questions related to the CBA. ESMA would therefore not only appreciate any comments and answers from stakeholders on the questions contained in the Consultation Paper but also on the questions relating to the CBA.

For your convenience, the questions on the Consultation Paper (CP) and on the CBA are summarised in annex II.

Next Steps

ESMA will consider the feedback received in relation to this consultation when finalising the draft RTSs and the impact assessment and submit the RTS to the EC by 31 December 2016.

2 Background

1. ESMA's objectives include fostering investor protection and contributing to the establishment of high-quality common regulatory and supervisory standards and practices. In particular, ESMA achieves this aim by providing opinions to the Union institutions and by developing guidelines, recommendations and draft regulatory and implementing technical standards based on the legislative acts referred to in Article 1(2) of the ESMA Regulation, which include the 2004 Transparency Directive.

2. The Transparency Directive requires issuers with securities listed on regulated markets to provide investors with annual financial reports (AFR) which content is defined in article 4.2 of the Transparency Directive. However, the Transparency Directive did not

define which file formats should be used by issuers when disseminating the AFR to the public. Several attempts have been made in the past to identify possible alternatives for the format of the AFR, notably taking into consideration the technological developments and the digitalisation of the information.

3. The Competitiveness European Council conclusions of 22-23 November 2007 agreed to the EC Communication of 10 July 2007 on the simplification of company law, accounting and auditing, and called for the optimisation of the use of electronic means taking into account the possibilities offered by 'available technological instruments and business reporting computer languages'.

4. The 21 May 2008 Resolution of the EP on a simplified business environment for companies in the areas of company law, accounting and auditing [3] notes the advantages of XBRL and urges the EC to actively promote the use of electronic means in relations between undertakings and public administrations. The EP Resolution of 9 October 2008 on Lamfalussy follow-up: future structure of supervision called on the Level 3 Committees to design common reporting standards, preferably in a multipurpose format such as XBRL, and urged the EC to submit adequate legislative proposals.[4]

5. A call for evidence on the use of a standard reporting format was published in October 2009 by ESMA's predecessor, the Committee of European Securities Regulators (CESR) (CESR 09-859). The 39 responses received indicated split views. Concerns were voiced over possible costs of XBRL reporting and the lack of real market demand for it. On the other hand, those supporting XBRL reporting argued that XBRL would allow improved comparison and analysis of issuers.

6. In 2010, a majority (70% as per Mazars/EU study) of users of financial reports considered that the media used by issuers to make available financial information was satisfactory. In 2011, at the time of the start of the review of the Transparency Directive, there was no sufficient evidence about the US adoption of electronic reporting.

7. In August 2010, CESR announced its intention to conduct a cost-benefit analysis on a possible transition to mandatory XBRL filing within a period of five years. This period would cover a preparation time of three years and a voluntary filing programme of two years prior to the start of the mandatory filing requirement. The requirement was

[3] http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2008-220&language=EN&ring=%0BA6-2008-0101

[4] http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P6-TA-2008-0476&language=EN&ring=%0BA6-2008-0359

intended to cover consolidated financial statements prepared in accordance with International Financial Reporting Standards (IFRS) as endorsed in the EU. As a final position, CESR considered that more experience from countries where XBRL is used is necessary before providing recommendations.

8. In order to foster transparency and comparability of financial information, the EC decided to revise the 2004 Transparency Directive requirements. Negotiations with the European Parliament following the publication of the Commission's proposal resulted in amendments with regards to the format of the AFR. In consequence the amended Transparency Directive modifies and introduces new requirements for issuers with securities on regulated markets within the EU. Amongst others, article 4.7 of the amended Transparency Directive requires issuers to prepare the AFR in an ESEF with effect from 1 January 2020 and empowers ESMA to specify the electronic reporting format that should be implemented.

9. Due to the late introduction of ESEF in the legislative process, made at the request of the European Parliament, the EC has not performed any impact assessment on the provision. While the original proposal for the revision of the Transparency Directive did not include any reference to the CBA, the amended Transparency Directive specifies that ESMA shall make a thorough assessment of the potential impacts of the adoption of the different technological options. It seems to be unclear whether the requirements to provide for a CBA apply only to the assessment of the technological options or more largely to the requirement of having an ESEF for all issuers under the amended Transparency Directive scope.

10. Following further analysis, it has been concluded that when conducting the CBA, ESMA shall take into account the importance of introducing a single electronic reporting format at Union level for transparency purposes, as developed in Recital 26 of the amended Transparency Directive. This does not exclude the possibility that the CBA may reach conclusions which are not in favour of the establishment of the ESEF. If this will be the case, ESMA has no powers to amend the legislative policy decision regarding the introduction of the ESEF. However, ESMA shall bring the results of the CBA to the attention of the EC for a potential re-assessment of the relevant provisions of the amended Transparency Directive.

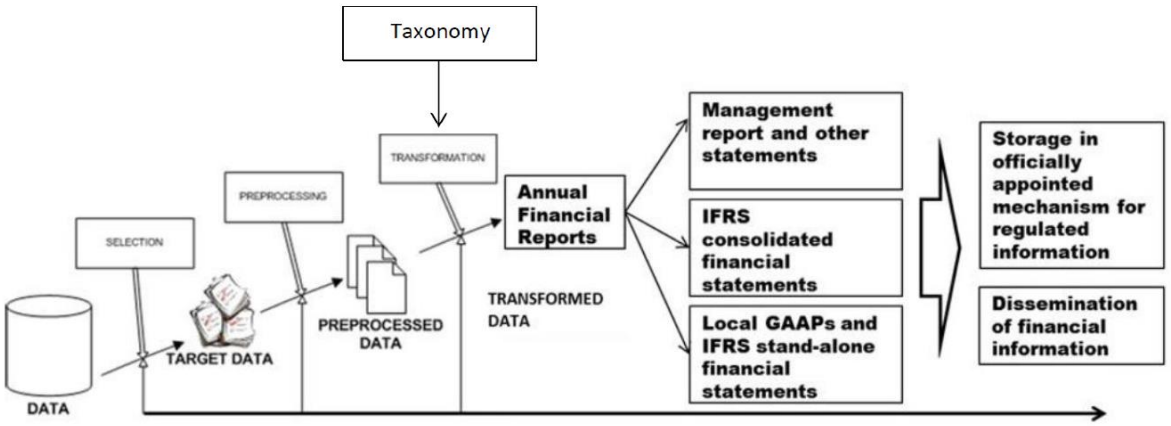
11. Regarding the specification of electronic reporting format, the wording of the second sub-paragraph of paragraph 7 of Article 4 is rather broad. In this respect, the reference to 'current and future technological options' leaves room for interpretation. In addition, Recital 26 of the Amending Directive provides an example to XBRL, but does not limit the choice of technological options.

12. On this basis, ESMA has decided to conduct a CBA at the level of the technologies. In addition, in order to get a broader view on the impact of the introduction of a 'single electronic format' for all issuers under the scope of the amended Transparency Directive, ESMA also included more general questions in relation to the scope. A description of the baseline scenario is also presented in the section describing the scenarios.

13. It is worth mentioning also that the mandate conferred to ESMA in drafting RTS should not have any impact on the content of the AFR or the basis of preparation from the point of view of accounting standards. On the other hand, two elements have an impact on the possible definitions of single electronic format: the different nature of the elements composing the AFR and the different basis of preparation that can be used for the financial statements, as allowed or required by the amended Transparency Directive. These elements are further discussed in Section 4.

14. A further element which has been considered is whether the obligation of introducing a single electronic format should be read as replacing today's conventional ways of filing the AFR for regulatory purposes, which is currently done in either paper or PDF format with an identifiable signature. As such developments have not been considered in any area, the work that ESMA has done with respect to developing RTS on the ESEF should not alter or impact the format of documents used for legal purposes. Therefore, this CP refers to the ESEF as an obligation for issuers without addressing the need for removing the format of AFR required for issuers to fulfil their legal obligations.

15. The following figure illustrates the scope of the requirements that ESMA has in drafting the RTS on ESEF:



Question 1: The provisions included in the amended Transparency Directive requiring a single electronic format were not subject to a formal impact assessment by the European Commission. While from a legal point of view ESMA could not address in this CP whether there is a need for the provisions included in the amended Transparency Directive, do you believe that a wider assessment should be performed on the requirements of introducing a single electronic reporting format in Europe?

Please indicate your opinion and provide arguments.

3 Policy objectives

16. The basis for including the provision on ESEF can be found in the Recital 26 of the amended Transparency Directive which refers to a harmonised electronic format, points out to a solution for a 'single electronic format' and outlines the following objectives which should be achieved for the benefit of issuers, investors and competent authorities:

- The electronic reporting should be easier for issuers compared to the current practices;
- The electronic reporting should facilitate accessibility to investors;
- The electronic reporting should facilitate analysis for investors and competent authorities;
- The electronic reporting should facilitate comparability of annual financial reports; and
- The electronic reporting for banks, financial intermediaries and insurance companies should take into account the specific characteristic of those sectors.

17. ESMA has analysed these policy objectives and identified core requirements that the ESEF should fulfil in order to achieve those objectives. The core requirements are detailed thereafter:

Policy objective 1: **The electronic reporting should be easier for issuers compared to the current practices.**

18. Electronic reporting is subject to developments as a result of changes in technologies. Current practices are diverse in the EU as they are based on practices allowed or required at national level. This objective should thus aim at ensuring that by standardising the electronic format, reporting should become easier for issuers, in

particular in the context where issuers are seeking listing in a different jurisdiction of the EU.

Policy objective 2: The electronic reporting should facilitate accessibility to investors.

19. In order to facilitate accessibility to investors, the ESEF should take into account the latest standards in relation to communication of financial data and open technologies to ensure cross-border access to information. In addition, accessibility should not be negatively impacted by high costs and frequent changes in the electronic standards used.

Policy objective 3: **The electronic reporting should improve analysis for investors and competent authorities.**

20. Improving analysis for investors and competent authorities should be seen from slightly different angles. The main objective of the amended Transparency Directive is to ensure that financial information is provided to the investors for decision making purposes. By providing information to investors in an electronic interactive format, their capacity to analyse data might be increased compared to providing them with data in traditional (static) format.

21. This objective should not be seen with regard to a shorter time frame for submitting the AFR, as the timeframe was not subject to revision in the amended Transparency Directive, but rather as increasing the users' capacity of analysis by using electronic means to capture data. In this context, it is important to identify whether all parts of the AFR have the same importance for the investors and if data is used in the same way. It should also be highlighted that the provision of figures from AFR without explanations gives only partial information and that improved analysis based on electronic format data might be less significant in this respect.

22. Improving analysis for competent authorities should be read in connection with the duties of enforcers with respect to AFRs, and in particular the task of checking compliance of the AFR with the provisions included in the Transparency Directive and other relevant pieces of legislation related to its application, such as the Accounting Directive and the IAS Regulation. The ESEF can be seen as a vehicle for technologies which automate certain labour-intensive and error-prone manual tasks. However, as the enforcers' analysis of data goes beyond the mere receipt of data in a certain format, electronic reporting might not have a major impact in the analysis of the compliance of accounting treatments with accounting requirements.

Policy objective 4: The electronic reporting should facilitate comparability of annual financial reports.

23. In order to better understand this objective, two dimensions have to be considered: the content and the format. While the content of the AFR in terms of type of documents is relatively similar, due to the fact that at least a minimum list of documents is defined in the Transparency Directive (please refer to paragraph 34 of the CP), comparability from the pure point of view of the content is limited. In that context, comparability can only be analysed on the basis of the minimum common content of the AFR. The ESEF should not have any impact on the accounting policies and their application. It cannot increase the comparability as such, but only make the process of comparison of AFRs more efficient.

24. Comparability should be put in balance with the fact that the AFR should include entity-specific requirements. The Transparency Directive foresees the use of different accounting principles/rules for different categories of issuers. The objective of comparability should thus be interpreted in the context whereby financial statements are prepared using different Generally Accepted Accounting Principles (GAAP). Going beyond that and forcing comparability between two different GAAPs would not be beneficial and would mislead investors when analysing financial information prepared under different accounting frameworks. Furthermore, comparability might be less important than expected within every financial reporting framework because of the principled-based standards, options and flexibility in presenting the financial information.

25. Consequently, this objective has been analysed by ESMA by declining it at the level of different categories, and mainly by distinguishing between the financial statements prepared under IFRS and those prepared under national GAAPs. Analysis of this part is further included in Section 4.1.2 .

26. However, because the national GAAPs have as the starting point the Accounting Directive, in trying to develop a common format, ESMA has analysed whether the common basis in the Accounting Directive can constitute a sufficient basis for increasing comparability between the various GAAPs.

27. There are only limited benefits available when comparing financial information prepared on the basis of different sets of accounting standards; however there would be at least comparability at national level, if financial information prepared under national GAAP would be provided in a structured format.

Policy objective 5: The electronic reporting for banks, financial intermediaries and insurance companies should take into account the specific characteristic of those sectors.

28. The European legislation contains various additional reporting requirements for banks, financial intermediaries and insurance companies, based on the specific role that these institutions play in financial markets. In some cases, the financial statements included in the AFR constitute the starting point for reports prepared for prudential supervisors or other regulators (e.g FINREP).

29. Recently, prudential reporting and reporting for Solvency II purposes, moved to electronic format and requires financial data to be provided in a structured format using XBRL. However, it should be borne in mind that those reports do not have the same scope and therefore only limited synergies would arise. In addition to that the electronic reporting for financial institutions subject to regulatory reporting requirements is not mandatory. Therefore not all financial institutions could benefit from synergies. Further, those reports are mainly used for supervisory purposes by competent authorities and usually intend to feed in aggregated data for the banking and insurance sector. Therefore, in developing further this objective, ESMA took into consideration the different nature of financial reporting and its use.

30. **Other considerations**: Finally, while not specifically mentioned as an objective, the introduction of new requirements on the AFR in relation to electronic reporting should not have an adverse impact on the status of the AFR and its use for legal purposes in the sense that there is a need for a legally binding document.

31. While such requirement is not specifically included in Recital 26 from where the policy objectives have been identified, ESMA considered the overall context and use of financial reporting as well as the fact that in the EU, for legal purposes, a document has to be in human-readable format (such as PDF, Microsoft Office Word or paper). This is in line with the provisions of article 32 of the Accounting Directive which require that where the annual financial statements and the management report are published in full, they shall be reproduced in the form and text on the basis of which the auditor has drawn up his opinion.

32. In ESMA's view there is currently no legal obligation to require an auditor to verify and audit data presented in a structured electronic format. As such elements are going beyond the mandate included in the TDA, ESMA has not addressed them in this CP.

33. Overall, it seems from the policy objectives indicated above would point out in the direction of having some structured data. On that basis, functional requirements have been included in section 6.1.

Question 2: Do you agree with the description of the policy objectives as included in this section? Are there any further elements that you believe should be analysed? If yes, please indicate them. Question 3: Do you believe that the introduction of electronic reporting should serve as a basis for further debate on auditing of electronic structured data? Please explain your reasoning.

4 Reporting process

4.1 Scope of the ESEF

4.1.1 Content of Annual Financial Reports

34. The scope of the ESEF, as referred to in Article 4 of the Transparency Directive refers to AFR which are defined in article 4.2 and include:

    a. the individual and consolidated audited financial statements (depending on the situation of the issuer) which are disclosed together with the audit report;

    b. the management report; and

    c. the statements made by the persons responsible within the issuer that the annual financial report is a true and fair view of the assets, liabilities, financial position, profit or loss, of the development and performance of the business, and the position of the issuer together with the main risks and uncertainties.

35. When an issuer is required to prepare consolidated financial statements, the AFR shall include in addition to the individual financial statements also the audited consolidated financial statements prepared in accordance with IFRS or other GAAP which have been declared equivalent with IFRS in accordance with the Equivalence Regulation. When an issuer is not required to prepare consolidated financial statements, the individual annual financial statements are prepared in accordance with the national GAAP or, in some cases, the IFRS (if required or allowed). Equivalent GAAPs as defined by the Equivalence Regulation, and corresponding updates, include Canadian GAAP, Chinese GAAP, Indian GAAP, Japanese GAAP, Korean GAAP and US GAAP.

36. When prepared using IFRS, a complete set of financial statements (for both individual and consolidated) comprises:

- a statement of financial position as at the end of the period;
- a statement of profit or loss and other comprehensive income for the period;
- a statement of changes in equity for the period;
- a statement of cash flows for the period; and
- notes, comprising a summary of significant accounting policies and other explanatory information.

37. For financial statements prepared under the national GAAP the same structure applies, but a waiver can be given for the statement on cash-flows and/or changes in equity, options which are at the discretion of the Member States when implementing the requirements of the Accounting Directive.

38. The four statements mentioned above are typically referred to as 'primary statements'. The audit report which accompanies the financial statements is usually referred to as a separate item, as its content is the responsibility of and is signed by the auditors.

39. The content of the management report, as mandated by Article 19 of the Accounting Directive, shall include, amongst others, a corporate governance statement. While some elements related to its content are prescribed in the Accounting Directive, the degree of harmonisation at European level is limited.

40. The statements made by the persons responsible within the issuer are usually prepared based on the requirements included in the Transparency Directive and the related implementing legal acts at national level and are mainly of narrative nature.

41. According to the Transparency Directive requirements, issuers have to disseminate their AFR in a non-discriminatory way and make them available to the OAM of their home Member State. In 15 jurisdictions, the Officially Appointed Mechanism (OAM) is a direct or indirect entity of the regulator, while in 13 jurisdictions, the OAM is a separate private or public organisation.[5]

[5] http://www.esma.europa.eu/page/oams

4.1.2 Categorisation of financial statements included in the AFR

42. The preparation of the financial statements for issuers under the scope of the Transparency Directive is governed by various pieces of legislation depending on the situation of the issuer, such as: the IAS Regulation, the Equivalence Regulation, the Accounting Directive, sector-specific EU legislation and other national legislation for the implementation of the Accounting Directive or additional national provisions which go beyond the provisions of the Accounting Directive. The latter led in practice to the existence of accounting standards created at national level (in this paper referred to as 'national GAAPs'), with a common basis in the Accounting Directive.

43. As a consequence, while the use of IFRS is mandatory for consolidated financial statements of entities listed on regulated markets, the use of IFRS is not permitted in some jurisdictions for individual financial statements (as mandated by Article 5 of the IAS Regulation).

44. In its public consultation on the evaluation of the IAS Regulation, the EC included a table on the options used by the Member States to allow or require the use of the IFRS for financial statements outside the IAS Regulation scope.[6]

Application of IFRS for undertakings listed on regulated markets

	Application of IFRS for individual financial statements
Austria	Not permitted
Belgium	Required for some*
Bulgaria	Required for some*
Croatia	Required for all
Cyprus	Required for all
Czech Republic	Required for all
Denmark	Required for some/permitted for some
Estonia	Required for all
Finland	Permitted for some
France	Not permitted
Germany	Not permitted

[6] http://ec.europa.eu/finance/accounting/docs/legal_framework/20140718-ias-use-of-options_en.pdf

	Application of IFRS for individual financial statements
Greece	Required for all
Hungary	Not permitted
Ireland	Permitted for all
Italy	Required for some*
Latvia	Required for some*
Lithuania	Required for all
Luxemburg	Permitted for all
Malta	Required for all
Netherlands	Permitted for all
Poland	Permitted for all
Portugal	Required for some, permitted for all others
Romania	Required for some
Slovakia	Permitted for all
Slovenia	Permitted for all
Spain	Not permitted
Sweden	Not permitted
United Kingdom	Permitted for all

* otherwise not permitted

45. IFRS is required for individual financial statements of publicly-traded undertakings of all industries in seven Member States (Croatia, Cyprus, Czech Republic, Estonia, Greece, Lithuania, and Malta) and in others with some restrictions (Bulgaria, Italy, Latvia, Portugal, Romania).[7] The requirement for use of IFRS is limited in Belgium and in Denmark.[8] In addition to these requirements, Denmark allows the use of IFRS for certain undertakings only.[9]

[7] ***Bulgaria***: *exemption for SMEs and newly established enterprises and for entities in liquidation or declared bankrupt;* ***Italy***: *requirement applies to all companies, except to insurance companies which also produce consolidated financial statements;* ***Latvia***: *for undertakings listed on the main market only;* ***Portugal***: *except when there are consolidated financial statements published****; Romania:*** *credit institutions and non-financial sector.*

[8] ***Belgium***: *closed ended real estate funds only;* ***Denmark***: *non-financial undertakings except when there are consolidated financial statements published*

[9] ***Denmark***: *non-financial undertakings only*

46. The use of IFRS is permitted in individual financial statements of listed undertakings of all other countries except in Austria, France, Spain, Sweden and Hungary – the latter having plans to permit or require IFRS for certain undertakings. In Finland, the use is permitted only for certain undertakings.[10] In Germany, listed undertakings have to prepare individual financial statements based on national GAAP. However, for publication requirements these companies may publish IFRS financial statements.

47. For the purposes of this CP, ESMA analysed the types of financial statements that are included by issuers in the AFR which are published across the EU, in accordance with the TD requirements and other legal acts that are applicable at EU or national level and identified the following 4 categories:

    a. consolidated financial statements prepared under IFRS;

    b. individual financial statements under IFRS;

    c. individual financial statements under national GAAP;

    d. individual and consolidated financial statements under a third country GAAP deemed equivalent to IFRS as endorsed in the EU.

48. The table below was prepared on the basis of data provided by NCAs. It provides quantitative information on financial statements published as of 31 December 2014 by issuers whose securities are listed on regulated markets for all reporting frameworks applicable to listed issuers including: IFRS as endorsed by the EU for consolidated financial statements, IFRS as endorsed by the EU or national GAAPs when applied to individual financial statements and finally third country accounting standards for non-European issuers, if deemed equivalent to IFRS as endorsed in the EU.

49. It should be borne in mind that, except for limited cases, issuers publishing consolidated financial statements are also preparing individual financial statements either in IFRS or in national GAAP. However, some issuers only prepare individual financial statements. As such, the combined number of individual financial statements is higher than the number of consolidated financial statements.

[10] ***Finland:*** *all undertakings but insurance companies*

TABLE: Number of financial statements on regulated markets by financial reporting framework according to National Competent Authorities (data as of 31 December 2014)

	Consolidated Financial Statements (IFRS)	Individual Financial Statements (IFRS)	Individual Financial Statements (national GAAP)	Individual and consolidated Financial Statements (third country GAAP equivalent to IFRS)
Austria	131	0	145	0
Belgium	117	19	119	0
Bulgaria	143	576	0	0
Croatia	77	163	0	0
Cyprus	84	104	0	0
Czech Republic	39	39	0	2
Denmark	137	112	113	0
Estonia	15	1	0	0
Finland	130	0	130	0
France	662	12	700	10
Germany	436	57	474	0
Greece	203	240	0	0
Hungary	48	1	76	0
Iceland	19	18	16	0
Ireland	36	73	21	19
Italy	234	245	0	1
Latvia	15	9	14	0
Lithuania	22	13	9	0
Luxemburg	72	139	127	23
Malta	23	14	9	0
Netherlands	180	0	280	20
Norway	258	0	258	12
Poland	339	372	36	0
Portugal	56	31	29	0
Romania	30	80	0	0
Slovakia	20	14	61	0

	Consolidated Financial Statements (IFRS)	Individual Financial Statements (IFRS)	Individual Financial Statements (national GAAP)	Individual and consolidated Financial Statements (third country GAAP equivalent to IFRS)
Slovenia	49	40	29	0
Spain	161	0	762	1
Sweden	295	0	301	5
United Kingdom	1,281	0	1,281	47
TOTAL	5,343	2,670	4,733	155

50. In conclusion, a significant number (around 8 000) of financial statements are prepared using IFRS for consolidated and/or individual financial statements. The number of financial statements prepared using national GAAP is still high (approximately 4 700), while the number of financial statements using 3rd country equivalent GAAP is very limited, and most of them are prepared under US GAAP.

4.1.3 Considerations related to the audit reports and management reports

51. Audit reports are documents which are accompanying the financial statements and are prepared by the statutory auditors, as required by the applicable professional standards and the Audit Directive. The minimum content is set out in the Audit Directive. The audit report has to identify the entity whose financial statements are subject of the statutory audit, the date and period they cover and the financial reporting framework that has been applied in the preparation of the financial statements. It includes amongst other things a description of the scope of the statutory audit and an opinion whether the financial statements give a true and fair view in accordance with the relevant financial reporting framework. Member States may lay down additional requirements in relation to the content of the audit report.

52. The audit report is often following a standardised format. However it is narrative in nature and especially in cases where the statutory auditor is expressing a qualified or an adverse opinion or refers to any matters to which the auditor drew attention by way of emphasis of matter, the audit report does not lend itself well to transformation into a structured electronic format. Furthermore the application of new requirements introduced by the audit reform is supposed to lead to some changes to the audit report's contents.

53. The management report is an integral part of the AFR. Minimum requirements are included in the Accounting Directive. The management report is not restricted to the financial aspects of the issuer's business but also includes an analysis of environmental and social aspects of the business or a corporate governance report. However the content of the statements in management reports varies widely and large parts of the management reports are narrative in nature so it has to be concluded that there is no standardised presentation of the management report.

54. Other statements included in the AFR vary depending on the national requirements.

4.1.4 Format of Annual Financial Reports: current practices

55. Current practices refer to the fact that issuers prepare their AFR in a specific format for the purposes of the Transparency Directive, disseminate their AFR for the attention of the investors and the public at large and store them on the OAM. In some cases the OAM is operated by the national enforcer.

56. ESMA has collected information on the types of format required or accepted in various Member States as provided below:

    a. Format 1: Submission of paper document which is subsequently scanned and transformed into PDF documents in order to be stored on the OAM. This format is either required or accepted in about half of the jurisdictions of the EU.

    b. Format 2: Submission of PDF documents which are stored on the OAM. This format is either required or accepted by all jurisdictions in the EU. The dissemination of regulated information can also be carried out by publishing a press release referring to the storage on the OAM of the document containing regulated information.

    c. Format 3: Submission of documents in XML format: This filing is implemented through an XML form in which issuers input some basic data related to the issuer's name, year- end reported, entity, the fiscal year, the auditor's opinion and some basic financial indicators. This format is required in three jurisdictions[11] and accepted in other three.

[11] *In Germany, as a rule, financial statements are to be submitted by issuers to the OAM in a structured electronic format (XML/XBRL). However, issuers can also submit data in a non-structured format (PDF) that is subsequently converted to XML/XBRL.*

d. Format 4: Submission of documents in XBRL format. This is implemented through an XBRL file on either the primary financial statements or the full content of the financial statements. This format is required in two jurisdictions and accepted in two.

e. Other formats: different combinations exist in several countries. In Spain, issuers submit their primary statements in XBRL and the notes in PDF for the half-yearly financial reports, so that electronic financial data of issuers can be either displayed in separate PDF files or downloaded in XBRL in order to be re-used.

57. The table below shows the distribution of the various formats by countries and where the format is required or accepted. Additional information is included in Section I of the CBA.

	Accepted format	Required format
1. Paper	Bulgaria, Cyprus, Estonia, Ireland, Lithuania, Luxembourg, Netherlands, Spain	Malta
2. PDF	Bulgaria, Cyprus, Estonia, Germany, Ireland, Italy, Latvia, Lithuania, Netherlands, Poland, Slovakia, Spain, Slovenia, UK	Austria, Belgium, Croatia, Czech Republic, Finland, France, Greece, Hungary, Luxembourg, Malta, Portugal, Romania, Sweden
3. XML	Estonia, Italy, Spain	Bulgaria, Germany, Poland,
4. XBRL	Estonia, Italy	Germany, Spain
5. Other electronic formats	Belgium, Bulgaria, Cyprus, Estonia, Germany, Luxembourg, Netherlands, Poland, Slovakia, Slovenia, Spain	Croatia

58. Based on the analysis made by ESMA on the format used in a number of jurisdictions outside the EU, it seems that most countries require electronic reporting in PDF or HTML format, but other jurisdictions have explored the possibility of moving to more structured data in an electronic format, such as Canada, Israel, South Africa, Australia and the US. Additional relevant information is included in section 1.1 from the CBA (Annex III to this CP).

59. It can be concluded that there is no uniformity across the EU jurisdictions, but all Member States either accept or require PDF format. For these reasons, this format was considered as the common basis or the baseline for the purposes of this CP.

4.2 Rendering and use of data

60. While there is limited evidence on how data is consumed by users based on the current format, many of indicators about the performance of an entity are mainly built on the figures from primary financial statements. Thus, it could be concluded that users are more interested in having data from primary financial statements in a structured format while that does not necessarily apply for financial information included in the notes to the financial statements, the audit report and management report.

61. From an investor protection perspective, information included in the notes is necessary for the full understanding of the financial information included in the primary financial statements for decision purposes. We found some evidence in a paper published on the use of XBRL in the US which indicates that a majority of respondents from the users category wanted and used information contained in the notes[12].

62. The approach taken in this CP was to not differentiate between these parts of the financial statements. In addition, legal constraints linked to the mandate included in the amended Transparency Directive might apply.

63. The use of data depends amongst others on the characteristics of the data available for users. Depending on the format identified as described above, a distinction can be made between data provided in non-structured format (format 1 or 2) or structured format (format 3 and 4). A structured document is an electronic document where some method of embedded coding, such as mark-up, is used to give the whole, and parts, of the document various structural meanings according to a schema. Data in structured electronic format makes manipulation and extraction of data as well as the search for specific data strings on the documents easier. Unstructured electronic formats such as paper equivalents like PDF do not have a recognisable structure and are not made for the manipulation or extraction of data. In addition, it is also important to distinguish between data that is either rendered in a machine readable format (format 3 or 4) or human readable format (format 1 or 2).

64. In all EU MS non-structured data format (format 1 or 2) is available free of charge. There are currently different models in the EU in transforming non-structured data into structured data. In some countries the OAM is providing a service against a fee for

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12 http://www8.gsb.columbia.edu/rtfiles/ceasa/An%20Evaluation%20of%20the%20Current%20State%20and%20Future%20of%20XBRL%20and%20Interactive%20Data%20for%20Investors%20and%20Analysts.pdf

structuring the data, while in other cases the structured data is prepared by the issuers when submitted. In one jurisdiction, the enforcer developed an online tool[13]for data comparison of financial statements based on the files submitted by issuers which allows users not only to download but also to analyse and compare the information. In some MS, but also outside the EU, there are private companies, usually known under the name of 'data aggregators' that are providing such services as well.

65. While the Article 21 of the TDA is not meant to deal with the way OAMs may provide services, the question remains at which level such costs will be incurred with the related issue on lack of harmonisation between the various MS. For more information on the access to regulated information and proposed new requirements please refer to the Consultation Paper on the European Electronic Access Point (EEAP).

4.3 Elements considered for analysis for the ESEF

66. From the elements presented above, ESMA identified that PDF format constitutes the baseline scenario in which issuers are required to store their AFRs. In its analysis of the available technological options, ESMA considered the following elements as relevant:

    a. For preparers:

        i. The scope of the single electronic format includes only making publicly available the AFR to stakeholders and shall not impose any further obligations with respect to the way information is prepared internally by an issuer.

        ii. AFR structure might include more elements than the minimum indicated in the TD based on the implementing act in each MS.

        iii. There are different sets of accounting standards used as basis for preparation of the financial statements, except for the case of consolidated accounts which are mandatorily required to be prepared under IFRS for all issuers across EU.

[13] *http://www.cnmv.es/ipps/default.aspx*
This tool consists of an on-line form which allows issuers to generate or validate their XBRL instances without a need to develop in house or purchase software vendor's applications.

b. For users:

i. the need of structured data can be seen as a logical step in moving the financial reporting forward, but the use of different sets of financial reporting standards across the EU has an inherent impact on the comparability of financial statements prepared using different basis.

ii. The extent of consumption of data might significantly differ depending on whether the information is provided in machine readable or human readable format.

Question 4: Are you aware of any further elements which are necessary to provide an accurate picture of the current reporting for the purpose of this CP?

5 Analysis of relevant elements for the development of the ESEF

67. This section includes elements analysed for the purposes of developing the ESEF. They refer to existent or possible ways of developing and describe options initially considered and whether they have been considered for further analysis as part of the CBA or not as well as the reasons for that. In particular, this section refers to the technological options selected and the existent possibilities for the taxonomy to be used for electronic reporting.

5.1 Study of available technologies

5.1.1 Baseline scenario

68. The introduction of information technologies has gradually replaced paper documents with electronic documents. Publications are now issued and stored electronically while paper formatted documents are being scanned, incorporated to databases and made available on internet. This technological development affects financial reporting, as data in structured format allows manipulation and extraction of data as well as the search for specific data strings in digital documents.

69. European NCAs have indicated that electronic paper based formats, such as the Microsoft Office Word and PDF are accepted or required in all jurisdictions. Hard copies or electronic files of AFR are filed by listed companies, published and stored by the OAMs. As presented in Chapter 3.3, there is one format, of PDF files, which are either accepted or required in all EU MS.

70. The Transparency Directive harmonises the financial reporting requirements of issuers of securities, even though it does not specify the format in which AFR should be disseminated to the public and stored on the OAMs. The provision introduced by the amended Transparency Directive should be interpreted for the progress towards a structured electronic format. Electronic paper equivalents do not allow the manipulation or extraction of data and would not make a significant breakthrough for the users of financial information. For that reason, eight options of technologies allowing structuring of data have been considered, out of which four have been included for further analysis in the CBA.

5.1.2 Options considered for structured reporting

71. The following four options have been considered the most appropriate for the purpose of harmonising the format of the AFR included in the scope of the Transparency Directive. Annex III provides for the detailed CBA conducted for the purposes of this CP.

Option 1: XBRL	XBRL is currently the only standard for financial reporting that is globally accepted. XBRL technology is an XML based open standard which provides machine readable only files.
Option 2: iXBRL	iXBRL is a technology for embedding XBRL into human-readable documents, such as XHTML Web pages. Filters will have more control over the format and the layout.
Option 3: New European standard based on XML	XML does not focus on business reporting but covers a broad-based specification applicable to any project requiring the structuring and electronic exchange of data. Implementing XML for AFR requires a custom and specific solution to meet the requirements of financial reporting.
Option 4: New European standard based on HTML/XHTML	XHTML/HTML is a fixed format designed to display data. It allows producing human readable files. However these standards do not contribute to obtain capabilities like advanced analysis and comparability of data and would require combination with other formats.

5.1.2.1 **Option 1: XBRL**

72. This option would require the use of eXtensible Business Reporting Language (XBRL) technology. XBRL is an XML-based (and therefore open) international standard for digital business reporting. XBRL provides a language in which reporting terms can be defined and subsequently used to represent the content of financial statements or other areas of business reports. This standard has been developed to facilitate automatic exchange and extraction of financial information among various software applications. It is expected to achieve enhanced analytical capabilities.

73. An XBRL-based digital financial report is a structured representation which is machine-readable. It can only be viewed in a human readable format through a rendering

process. XBRL allows the creation of reusable definitions, called taxonomies, in order to capture the meaning of the reporting terms used in a business report, as well as the relationships between those terms.

74. Being an XML-based standard, XBRL is an open and extensible format, so that those using it can easily meet specific requirements while avoiding incompatibility issues across different systems. XBRL files can be digitally signed and provide a high level of security for corporate reporting.

75. However, XBRL is not easy to use in its native form. Specifications and data structures are complex and require training to understand and manipulate data. In Europe, XBRL is currently required for financial statements in Spain and in Germany[14] and accepted in Italy. It has also been mandated by the US SEC for the filing of the 10-K reports (annual reports) and 10-Q reports (quarterly reports).

76. Other examples of the use of XBRL can be seen in: individual financial statements can be filed under XBRL with the Belgian Central Balance Sheet Office for several years; XBRL will be mandatory for the AFR of non-listed companies in the Netherlands starting with 2016; XBRL has also been introduced by the EBA for FINREP since 2015.

77. Therefore, ESMA concluded that this option should be considered for further assessment as part of the CBA.

5.1.2.2 **Option 2: iXBRL**

78. This option would require the use of Inline XBRL (iXBRL), a technology centered around electronic rendering of financial information encoded in an XBRL document in order to obtain human-readable electronic filings similar to paper copies.

79. iXBRL is implemented within eXtensible HyperText Markup Language (XHTML) documents, which are displayed by web browsers without disclosing XBRL metadata contained in a document. Preparers can create extensions, even though some level of connection should be maintained between taxonomies in order to avoid errors and misunderstandings.

80. Although filers have more control over format and layout, iXBRL does not cover the need to publish layouts. In practice, a preparer delivers a clean XBRL content, adds

[14] *In Germany, as a rule, financial statements are required to be submitted by issuers to the OAM in a structured electronic format (XML/XBRL). However, issuers can also submit data in a non-structured format (PDF) that is subsequently converted to XML/XBRL.*

formatting information and lets the browser produce a human-readable document. In many cases, regulators need to define a specific layout for reports and cannot do this directly within iXBRL. For the time being, iXBRL is not being used for the reporting of issuers in the EU.

81. The use of iXBRL would allow producing human-readable AFR. As such, it could be a viable solution that provides a minimum level of quality so that the data previously prepared in XBRL format is presented as an ordinary web page. Therefore, iXBRL may create an appropriate level of dependency between data and its visual representation.

82. Therefore, ESMA concluded that this option should be considered for further assessment as part of the CBA.

5.1.2.3 **Option 3: XML**

83. This option would require the development of a new European Standard based on Extensible Mark-up Language (XML). XML is a broad-based specification applicable to any project requiring the structuring and electronic exchange of data. XML is a 'meta-language' that can be used to create languages for specific applications in order to describe items and concepts contained in pertaining documents through adding tags that identify those concepts. XML files can be digitally signed and provide a high level of security for corporate reporting.

84. The XML specification alone only provides a single set of hierarchical relationships and it is not a standard mechanism to reference external sources. It is designed to improve the functionality of the web with flexible and adaptable information identification. It is extensible because it is not a fixed format, but rather a meta-language which allows users to design their own customised mark-up languages for different types of documents. The standardisation of the tags would allow computers to read and interpret data in a similar way.

85. The XML can easily adapt to new requirements, but does not focus on financial reporting. Developing the ESEF in an XML environment would imply the need to develop and maintain data structures, schemas, supporting documentation and materials for the accounting standards (IFRS and national GAAPs).

86. The use of XML would allow both human-readable (by providing the specific information for that purpose) and machine-readable annual financial reports. This

option is currently required in Poland, Bulgaria and Germany[15], while accepted in Spain and Italy.

87. Therefore, ESMA concluded that this option should be considered for further assessment as part of the CBA.

5.1.2.4 **Option 4: HTML/XHTML**

88. This option would require the development of a new European Standard based on Hyper-Text Mark-up Language (HTML) and Extensible Hypertext Mark-up Language (XHTML). These have been designed to display data with a fixed format and to focus on data presentation.

89. HTML is one of the basic languages that allow the creation of web pages. A list of tags describes the format and the content of the web page display.

90. XHTML extends HTML by combining the syntax for HTML, designed to display data, with XML, designed to describe data. It gives users control over the appearance and organisation of their Web pages, permits the display of information in a desired way with low-cost software and easy training. However, those pages conform to a stricter syntax and more uniform appearance across browser platforms than HTML.

91. The use of XHTML/HTML would allow producing human-readable files. However, these standards do not contribute to obtain additional capabilities such as advanced analysis and comparability of data. In order to meet the objectives of the amended Transparency Directive these standards should be combined with other formats, which would then overlap with other options (e.g. iXBRL).

92. Despite these shortcomings ESMA concluded that this option should be considered for further assessment as part of the CBA.

5.1.3 Abandoned technologies

93. ESMA has also analysed the technologies described thereafter, but decided not to include them as part of the CBA as the characteristics of these technologies make them either incompatible or unable to reach the policy objectives indicated in this CP.

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[15] *In Germany financial statements are required to be submitted by issuers to the OAM in a structured electronic format (XML/XBRL). However, issuers can also submit data in a non-structured format (PDF) that is subsequently converted to XML/XBRL.*

5.1.3.1 **Mark-up PDF**

94. This option would require the use of PDF, a multi-platform file format developed by Adobe Systems. PDF captures document text, fonts, images, and formats from a variety of applications. As indicated at the beginning of this section, PDF is the baseline scenario.

95. The use of PDF allows the display of human-readable AFRs. This technology is currently required or accepted in all EU Member States for the purpose of the Transparency Directive. However, this technology has not been adopted by any other institutions or regulators which moved to other technologies for reporting of structured data purposes (such as for example EBA and EIOPA).

96. However, mark-up PDF is still under development and it is not yet a mature technology. Therefore ESMA decided not to follow up on the future developments.

97. On this basis, the requirements of the amended Transparency Directive would not be fulfilled by this standard. The sole use of this option has been disregarded and ESMA concluded that this option should not be considered for further assessment.

5.1.3.2 **EDI/ebXML**

98. This option would require the use of Electronic Data Interchange (EDI), which is an electronic format often used as a paperless document transfer system. EDI goes further than the communication, as it encompasses the standards, message, format and software used to transfer data in a business-to-business context.

99. EDI is usually adopted on a peer-to-peer basis with the establishment of value-added networks (VANs) to facilitate both ends of the transaction. VANs receive and route transactions to the final recipient. EDI uses dedicated networks instead of the internet as a communication tool and is more secure than internet-based languages.

100. EDI would have some limitations if used for AFR, because it has a low extensibility and is not designed to track historical financial data. Its implementation involves high setup costs in terms of technology, education, and organisational restructuring.

101. Electronic Business using eXtensible Markup Language (ebXML) is a framework allowing the use of internet and especially XML language. It includes modular components for a complete business solution with business process definition, associated activities and the supply of a messaging system to provide a fast and safe transmission of the electronic documents to involved parties. ebXML is an open and

interoperable standard, designed to be implemented by an organisation at a relatively modest cost. However, ebXML has not reached full maturity and is not currently suitable for commercial adoption on a large scale like EDI.

102. The use of EDI and ebXML would only partially allow machine-readable AFR. As ebXML is a language primarily designed for e-business purposes and not for financial reporting, it shares the same limitations as EDI for the AFR.

103. No EU member state has adopted either EDI or EbXML for filing of annual financial reports. For these reasons, ESMA concluded that this option should not be considered for further assessment.

5.1.3.3 Statistical protocols

104. This option would require the use of statistical protocols such as the Statistical Data and Metadata eXchange (SDMX), a tool used by international financial organisations such as the European Central Bank (ECB) or the European Committee of Central Balance-Sheet Data Offices (ECCBSO). SDMX sets technical standards, IT architecture and IT tools to facilitate the exchange of statistical data and metadata, with an emphasis on aggregated data.

105. SDMX Technical Standards allow the exchange of data among statistical institutions based on known data structure definitions (DSDs). DSDs allow the mapping or translation of the exchanged data messages from and to internal statistical databases.

106. For example, the ERICA database of the ECCBSO is used amongst others to determine the IFRS financial indicators made available in European central balance sheet data offices' databases. ECCBSO focused on a limited number of data indicators to analyse data and assesses financial structure, fair value analysis, profitability and segmentation of turnover

107. These standards allow the use of similar concepts in various structure definitions. It allows for advantages in the interlinking of statistical information systems beyond technological or linguistic differences. The purpose behind the creation of these standards is the exchange and management of statistical data by central bank balance sheet offices worldwide.

108. However, the narrative parts of the AFR, such as the notes or the management report would not be compatible with SDMX. SDMX does not focus on the end user of financial information. No EU member state has implemented such standard for filing AFR.

109. The use of statistical protocols does not allow the display of human-readable AFR as it does not allow the inclusion of narrative sections of the annual financial reports. Therefore, ESMA concluded that this option should not be considered for further assessment.

Question 5: Do you agree with the description of the technologies included in the CP? Question 6: Do you agree with the choice of the technologies that we further analysed in the CBA? If not, please indicate which other technologies you would propose for further analysis.

5.2 Taxonomy

110. Moving from non-structured data to structured data reporting requires the existence of a taxonomy. A taxonomy is a given hierarchical structure which allows input data to be transferred into structured data.

111. For financial reporting, the taxonomy is a set of schemas and link-bases which follows specific semantic and syntax rules. In the context of ESEF, it should be taken into account that a taxonomy needs to be available for every set of accounting standards used in the EU as allowed under the Transparency Directive.

112. The process around taxonomy consists of both its development as well as subsequent updating. The process should also be well-governed in order to ensure the consistency and accuracy of taxonomy. Specifically, in order to ensure consistency, the taxonomy should be unique for each set of accounting standards.

113. As mentioned in *4.1.1 Content of Annual Financial Reports*, the AFR contains different parts: financial statements, management report and other statements and is disclosed together with the audit report. The availability of taxonomies for these parts and the different types of financial statements are analysed hereafter.

5.2.1 Taxonomy for financial statements

5.2.1.1 **IFRS taxonomy**

114. The International Accounting Standard Board, as the IFRS standard setter, has already developed and made public a taxonomy for the IFRS. As of today, the IFRS Taxonomy has not been incorporated in the body of the standards, but it has been published as a separate volume. The IASB is in the process of analysing and testing the possibility to better link the taxonomy with the standards and potentially integrate the taxonomy in

the body of each standard in the near future. While the timing of this is uncertain yet, for the purposes of this CP, this issue has been considered as an item which is solvable and should not raise major issues in terms of its content.

115. XBRL has been tested with the IFRS taxonomy in 21 countries (including Australia, Canada, China, Italy, Israel, and Japan) out of more than 120 allowing or requiring the use of IFRS.

116. The IFRS taxonomy is updated every year based on the latest standards and interpretations issued by the IASB. The latest version is the 2015 Taxonomy, issued on the 11 March 2015[16]. The content of the IFRS taxonomy is structured around the following categories[17]:

    a. Core disclosure requirement concepts – around 3,800 elements that must be reported according to IFRS;
    b. Implementation Guidance and example concepts – around more than 700 elements that may be presented as indicated in the examples if a company is in the situation indicated in the example;
    c. Common practice concepts – around 1,100 elements which may be included depending on the industry an entity is part of.
    d. Local, regulatory concepts – these are mainly extensions based on the elements above and are subject to development based on the needs of each jurisdiction; and
    e. Company concepts – these are extensions developed by issuers in the case of the use of an open reporting system and allow for customisation and therefore representation of more entity-specific elements.

117. The first two levels (a and b) correspond to the elements included in the IFRS as endorsed by the EU and explanatory guidance around those; thus, they may be considered as common to all issuers reporting under IFRS. The third level (c) is based on a test on the most common practice concepts.

118. Items (d) and (e) are parts of the taxonomy which are specific to a particular jurisdiction or a company and therefore not necessarily the same for all issuers and are usually referred to as 'extensions'. While they allow issuers to provide more entity-specific information or regulators to require elements specific for regulatory purposes, thus

[16] http://www.ifrs.org/XBRL/IFRS-Taxonomy/2015/Pages/IFRS-Taxonomy-2015-Information-and-Files-.aspx

[17] http://www.ifrs.org/XBRL/Resources/Documents/IFRS%20Taxonomy%202015/IFRS%20Taxonomy%20Architecture_FINAL.pdf

improving the use of data reported for specific purposes, they may be considered as decreasing the level of comparability between financial information reported by issuers.

119. It should be noted that there is not much evidence about the advantages of the use of extensions; it seems as if they have been generally rather perceived until now as additional factors facilitating inaccuracy in the use of taxonomy. In addition, allowing issuers to develop extensions might increase the burden of analysis for users without necessarily increasing the value of the information. However it has to be noted that this means that some company specific elements cannot be tagged and thus information contained in the financial statements would be lost in the course of the conversion to a structured electronic format.

120. Therefore, ESMA retains as a proposal for the draft RTS to mandate the use of the first three levels of the IFRS taxonomy as issued by the IASB, but not the use of the extensions related to 'local regulatory' concepts and 'company concepts'.

121. The IFRS taxonomy can be used with any technology, but has been tested by the IASB only in the XBRL environment using a sample of around 800 issuers listed on regulated markets in various parts of the world. A comprehensive overview of the use of IFRS taxonomy in various jurisdictions around the world is due to be published by the IASB in the course of 2015.

122. As a conclusion, on the basis of the above, for the purpose of this CP, it was considered reasonable to refer to the IFRS taxonomy published by the IASB in the context of electronic reporting of IFRS financial statements.

123. Additional consideration will be paid in relation to the legal tool to be used to endorse the IFRS Taxonomy in the EU, should this taxonomy be judged suitable as a result of the consultation.

Question 7: Do you agree with ESMA's proposal to use the IFRS taxonomy as issued by the IFRS Foundation for reporting under IFRS, subject to formal endorsement in the European Union? Question 8: Do you agree with ESMA's preliminary conclusions not to use regulatory and entity specific extensions? Please provide arguments in your answer in relation to the impact on issuers and users.

5.2.1.2 **Taxonomy for national GAAPs**

124. A number of EU jurisdictions have developed taxonomies for the national GAAP, notably Belgium, Estonia, Germany, Italy, Netherlands, Poland, Spain and United Kingdom. In some jurisdictions the taxonomy has been developed by the national organisations of XBRL (Germany and Italy, in Germany together with fiscal authorities) while in others this has been developed by the Ministry of Finance (Estonia) or the accounting regulator (Poland and United Kingdom). In some cases the national standard setter was associated with the process as well (United Kingdom). In the Netherlands the Dutch GAAP taxonomy was first developed as a government project. The Dutch GAAP taxonomy is now formally maintained by the national Business Register

125. A comparative study on the effort expended to the development of these taxonomies could not be performed because of the lack of sufficient data as well as the lack of comparability between the objectives foreseen and the extensiveness of taxonomies. Evidence from Spain indicate costs between 25 and 95 thousands EUR, but that relates only to the taxonomy for primary financial statements. Estimations carried out in Netherlands range the total cost of developing taxonomy between 30 and 200 thousands EUR. Because of the limited information available on the effort for developing the taxonomy no estimate could be prepared for the purpose of this CP.

126. ESMA identified two possibilities regarding the development of a taxonomy for other national GAAPs used in the EU:

    a. One way would be to consider the development of taxonomy for each of the national GAAPs at Member State level as well as to identify the appropriate institutions to perform this task.

    b. Considering that national GAAPs all have to conform to the Accounting Directive, creating a core taxonomy based on the elements included in the Accounting Directive. That taxonomy could be developed either based on the IFRS Taxonomy or by creating a completely new taxonomy.

127. ESMA believes that in the case where the first solution would be adopted, the taxonomy could only be developed at the national level and in the relevant language. The governance on the creation and maintenance should be organised at national level. However, such an approach is likely to entail development of different ways of structuring the taxonomy, resulting in poor level of comparability with other national GAAPs.

128. In the second case, a EU core accounting taxonomy could be developed by ESMA based on the Accounting Directive and sector-specific EU legislation. However, Member States which already have developed taxonomies for the national GAAP should be able to use those. Further, it should be possible that the core taxonomy is extended at national level, where desired. The governance of the core taxonomy would remain at EU level, except for the extensions. However, interactions between the two levels might be difficult to manage and feasibility still needs to be analysed. Finally, ESMA underlines that the existence of many options under the Accounting Directive may hamper comparability.

129. Based on a broad assessment, ESMA considered that the cost of developing a taxonomy would be lower if taxonomy for national GAAPs would be similar or built on the IFRS Taxonomy and that it would be much higher if the taxonomy was supposed to be more flexible and different from the one developed for the IFRS. However a detailed study on the cost of developing the taxonomy has not been conducted and thus such conclusion remains to be confirmed.

130. Bearing in mind the uncertainty relating to the cost and benefit of development of taxonomies for all national GAAPs based on a core EU taxonomy or not, ESMA proposes a phased approach as explained in section 6.3.2.

5.2.1.3 **Taxonomy for third countries GAAPs equivalent to IFRS**

131. ESMA has studied the existence of taxonomies for the third countries GAAPs equivalent to IFRS as endorsed in the EU and identified some GAAPs for which taxonomies exist, such is the case in China, India and the US. However, the statute of these taxonomies, their level of development and maintenance remain variable.

132. For US GAAP, the taxonomy has been developed by the US SEC in cooperation with the FASB (US standard setter) and the software provider of the selected technologic option (XBRL). The SEC has required listed issuers to report using the US GAAP taxonomy and currently there are 7,000 issuers reporting under XBRL. The size of the taxonomy is enormous as it includes about 20,000 concepts. The cost of the effort expanded to create the taxonomy is not public information, and could thus not be obtained, but the project ran over several years, using a phased approach. The yearly update of the taxonomy is formally the responsibility of the Financial Accounting Foundation, which oversees the US standards setter.

133. For the national GAAP converged to IFRS used in China, a taxonomy has been released in 2010 by XBRL China which also defines the basic requirements of preparing XBRL financial reporting. First time application took place in 2012 when the

Ministry of Finance required filing of 2011 annual financial reports in XBRL. The latest data available (2012) indicates that 82 large and medium-sized local state-owned enterprises, 18 financial institutions in the banking sector (including all of China's listed banks) and 14 large-scale central-administrated entities (of which 12 are listed on the US market) are using the XBRL taxonomy in their filings.

134. Australia, Canada and India have developed their respective XBRL taxonomies to conform to their local GAAP and national company laws. Australia has additionally built the required extension to the IFRS taxonomy facilitating the additional reporting requirements of Australian Accounting Standards, Corporations Act requirements and Stock Exchange Listing Rules. In India, the taxonomy has been developed by the Institute of Chartered Accountants of India (ICAI). In Australia and Canada, the taxonomy has been developed by a local XBRL working group, with the help from other contributors (regulators, accountants, banks, analysts, investors and management).

135. None of the jurisdictions mentioned above have introduced requirements for foreign private issuers reporting in IFRS to use electronic reporting yet. Having in mind the need of a due process around the existence and maintenance of a taxonomy and the interaction with the taxonomy established in a different jurisdiction, ESMA proposes to conduct no analysis at this stage but to study this issue further once the requirements for ESEF in the EU are finalised. This analysis shall take into account the development and maintenance of taxonomies for these third countries GAAPs and the process of governance which is in place in the respective jurisdictions.

Question 9: Do you agree with the proposed approach in relation to the taxonomies of third countries GAAPs deemed equivalent to IFRS?

5.2.2 Taxonomy for other narrative parts of the AFR

136. Currently, it seems that there are rare cases where taxonomy has been established for the other parts of the AFR, which are outside the financial statements (the Netherlands). It has to be noted, however, that some elements which are included in the financial statements are disclosed and discussed in the management report. Therefore, it can be argued that taxonomy might be usable for the purpose of the management report, even though, from an architectural point of view, new syntax and rules would be required.

137. Based on evidence obtained from jurisdictions outside Europe, taxonomy generally exists for financial statements or information for tax authorities, but not for the audit or

management reports. In the countries where electronic reporting of structured data is required, that covers mainly the financial statements.

138. In view of the above, ESMA has not envisaged to give further consideration to the creation of a taxonomy for elements outside financial statements but included in the AFR, as required by the TD. Naturally that implies that no structured data could be reported in the absence of taxonomy.

Question 10: Do you believe that taxonomy shall be developed for other parts of the AFR (outside financial statements)? If yes, please indicate which ones and explain why.

6 Proposed solution for the ESEF

6.1 Functional requirements

139. As ESMA's mandate does not cover the process of preparation of the financial reports, the draft RTS cannot refer to the eventual implementation of the technology along the reporting process, but only its end-use whereby an entity has to make public and file the AFR. Therefore, the preliminary functional requirements developed in this section only refer to publication and filing of AFR as an obligation derived from the Transparency Directive.

140. ESMA considers that the proposed option for the ESEF shall constitute a step forward from the current situation where end-users are limited in the way they can consume data and information included in AFRs.

141. ESMA believes that the ESEF should bring benefits to issuers in terms of an easier benchmarking with their competitors and improvement in their visibility among current and potential investors, which could in turn reduce the issuers' cost of capital. ESMA envisages that this will benefit all issuers, and in particular smaller issuers whose disclosures may not always receive the same attention as disclosures of larger issuers. However it has to be noted that ESEF will also have its limitations. One of the findings of the FRC's Financial Reporting Lab project report: "Digital Present – Current use of digital media in corporate reporting" published in May 2015 was that investors worry that analysis of financial data in a structured electronic format will miss the importance of nuance and context in interpreting financial information, something that can be gained only through careful analysis of the disclosures in the AFR.

142. For regulators and supervisors, ESMA expects that the ESEF will ease benchmarking of issuers' AFRs. For example, enforcers of financial statements prepared under IFRS

will benefit from easier cross-country comparisons of the application of a specific accounting standard by issuers active in a particular industry.

143. In order to ensure that the policy objectives included in section 3 are achieved, they have been assessed on the elements included in section 4.3 and on that basis further core functional requirements have been identified for consideration before the CBA has been performed. The table below summarises the core functional requirements based on the policy objectives.

Policy objectives	Functional Requirements for ESEF	Current issues and limitations
Make reporting easier for issuers	Opt for interactive structured data where possible and user friendly for issuers. Select technologies which can be further developed and are not too much dependent on specific environments. ESEF should be built on technologies that are as cost efficient as possible	Format of financial reporting is different in various Member States. Some entities have to use 2 different accounting standards (IFRS and national GAAP).
Facilitate access for users	The ESEF to adopt open standards to ensure cross-border access to information. Introduction of ESEF should not be more costly and require significant additional knowledge from users.	Lack of interoperability and re-use of data. Lack of data in open standards.
Improve analysis of annual financial reports	The ESEF to enhance the process of analysis by providing structured interactive data. Improve analysis by allowing easy access and manipulation of structured data. Improve data control and support for dynamic reporting.	There is not a unique system to provide data in the same structure to allow easy analysis Reporting is still subject to official language requirements in each Member State. Difficulty to transform the narrative parts of the AFR in a structured electronic format especially if the use of extensions would not be allowed
Improve comparability	The ESEF to use one single taxonomy	Currently, cross-sectional data

Policy objectives	Functional Requirements for ESEF	Current issues and limitations
of annual financial reports	for each set of standards.	analysis is difficult, labour-intensive, time-consuming and error-prone. Comparability is limited to the entities using the same accounting standards. However, accounting standards may allow different options, so that electronic format will only compare quantitative information whereas qualitative information is necessary to understand the financial statements.
The electronic reporting for banks, financial intermediaries and insurance companies should take into account the specific characteristics of those sectors	The ESEF should enable banks, financial intermediaries and insurance companies to re-use the financial data in structured electronic format with limited additional effort for their prudential reporting, if possible.	The reports prepared for supervisors are different in nature from the AFR. They mainly refer to quantitative data and not all of it is subject to public disclosure.

6.2 Defining the overall AFR format

144. It can be derived from the policy objectives and the core functional requirements together with the description of the technological options that the proposed solution for the ESEF should be based as much as possible on structured data format in order to enhance comparability of financial data prepared under the same accounting principles.

145. While the use of structured data format has the advantage of allowing easier manipulation of data and therefore increases the speed of analysis, it was considered that structured data format could be implemented using a nuanced approach, based on the differences in the nature of the documents which are contained in the AFR. As a reminder, the AFR contains not only financial statements but also management report, the audit report and various statements included by issuers (depending on the existent options in each Member State).

146. The AFRs encompass a great amount of data representing both qualitative and quantitative information, with some parts being particularly narrative and with only

limited defined structure, such for example the management report. In this regard, some parts of the AFRs are more suitable for being reported in the form of structured data than others, and thus it is opportune to take into account those specificities.

6.2.1 Structured and un-structured data

147. ESMA believes that some end-users, in particular retail investors, might continue to rely on documents in PDF format, as they might not have the means to consult information in a structured format in case its rendering is not provided for free.

148. Comparability and consistency with the format of half-yearly reports (which are outside the scope of the ESEF) is also an important factor in favour of keeping the PDF version as mandatory for the purpose of the amended Transparency Directive mandate on ESEF.

149. It is also important to ensure that enforcers continue to have enforcement power regarding the reports in PDF format as issuers will certainly continue to publish those documents (for instance on their websites) and these should be subject to reviews by the enforcer. A requirement to produce AFR only in a structured data format (and excluding, for instance, PDF), would negatively impact many NCAs which would probably lose the enforcement power and could create a loophole in the supervision.

150. Moreover IAS 1 'Presentation of Financial Statements' gives preparers of financial statements a certain degree of leeway concerning presentation of their financial statements. ESMA suggests not allowing the use of extensions in the taxonomy and therefore if the AFR would only be prepared in a structured format, preparers would be restricted in their presentation of financial statements and ESMA would thereby assume the role of a standard setter which is not its mandate.

151. As a conclusion, ESMA proposes to have a requirement to have mandatory PDF files. A PDF version of AFR should remain mandatory for the time being in order to answer the need of having a legally binding document. The PDF technology is considered as being the most suitable on the basis of the fact that is the baseline scenario and thus does not entail any further adaptation or requirements.

6.2.2 Options considered for the proposed ESEF

152. In making a proposal for fulfilling the policy objectives indicated in this papers, in order to implement the required ESEF the following options have been considered when deciding on the approach to be followed:

a. **Option A) Full unstructured data format for all parts of the AFR**. Such option would mean that the AFR would only be required to be presented in an unstructured data format such as PDF and no part of the AFR would be presented in a structured data format. This would represent a status-quo as it is equivalent to the baseline scenario, as presented in *Section 5.1.1.*

b. **Option B) Composed format**: While the entire AFR would have to be provided in PDF, this option would in addition to that require the financial statements to be provided in a structured format. This means that PDF or similar format will have to contain the full AFR, including the parts which are also provided under a structured format.

c. **Option C) Full structured data format:** This option implies that in addition to the PDF, all AFR components would have to be presented/included in a structured data format, irrespective of their nature. This option would require the existence of taxonomy for all parts. The structured data would cover the full AFR, thus containing the same information as the PDF version.

153. If Options B or C were followed users would have the choice to rely on the non-structured data (in PDF) and/or consult structured data. The question which of these approaches is most appropriate is crucial. The decision on this issue would determine how information will be available to the end-user (Policy objective 2).

154. Since some parts of the AFR are more suitable to be reported in the form of structured data than others, ESMA considers a combination of structured and non-structured electronic data formats to be appropriate (see also section 5.2.2)

155. Overall, without doing any further analysis, it seems fair to conclude that option C is more expensive than option B as it requires more data to be reported in structured format and thus also requires the development of a full taxonomy for those parts of the AFR that are less standardised. In practice, in the jurisdictions in which structured data is used, it is rare to have a full structured format yet, except for the financial statements.

156. Option B offers the benefits of increased comparability between issuers and consistency of the parts of the AFR filed and published in an electronic standard format. The combination of the electronic-paper equivalent and structured data solves the issue of visualisation of the information as the information could be read in at least one of the formats. Furthermore, there might be impacts and issues which were not addressed in this Consultation Paper, for example how to handle cases where additional requirements are set by national laws and regulations and are thus not harmonised at European level.

157. Audit reports, management reports and other statements, while not being less relevant for users of AFR, have a more narrative nature. While audit reports have generally the same structure of content, that is not the case for management reports which are quite extensive documents. ESMA believes that requiring these parts to be reported in a structured format will have little or no significant benefit in terms of analysis or comparability. Moreover, as the audit report is still subject to further changes due to the application of new requirements coming from the audit reform, as well as considering the lack of full harmonisation in the EU, ESMA suggests that the management report, and the other more narrative parts of the AFR as well as the audit report that is disclosed together with the AFR should not be subject to requirements for reporting in a structured data format at this stage, unless already required at national level.

158. Therefore, by limiting the requirement for a structured format to the information which is used most for analysis of data (financial statements including the notes), the cost for issuers (for drawing up that information) and other parties could be reduced while the main benefits of structured electronic reporting would nevertheless be realised.

159. In this scenario, entities would continue to prepare the financial statements as in the past using familiar IT programs and formats and then convert the final output of the financial statements into a structured format using a technology for structured format. In addition, keeping the obligation of providing the AFR in PDF would avoid any issue in relation to other regulated information that might be published.

Question 11: Do you agree that non-structured electronic reporting should be required for the entire Annual Financial Report? Do you agree that the format used shall be PDF?

If you disagree, please explain your opinion by providing arguments on the policy objectives and impact on the CBA.

Question 12: Do you agree with the proposed solution of a single electronic format composed of structured and non-structured data (option B)? If not, please explain your opinion as well as the impact on the CBA.

6.3 Structured data format – preferred solution

6.3.1 Choice for technology

160. As a result of the proposal indicated above, not all components of the AFR are likely to be produced with the same technology as structured languages will not be sufficient for

the time being to encompass all the elements that form an AFR. A mix of the existing technologies needs to be used.

161. In terms of comparability and re-usability, the numerical parts of the AFR such as the primary financial statements are easier to compare provided that there is some degree of standardisation in the taxonomy, whereas narrative notes are distinctive for every issuer, thus posing a challenge to comparability. Whatever the format chosen for the structured parts, a set of rules is needed to organise the meaning of different financial concepts as well as their existing relationship.

162. From the 4 options analysed in the CBA, ESMA selected XBRL and iXBRL as the most advanced, tested and/or used options in some of the main jurisdictions in the EU and abroad. For additional information in relation to the costs and benefits associated please refer to the CBA included in Annex III.

Question 13: Do you agree that iXBRL and XBRL are the most relevant options available for the ESEF? Question 14: Could you please indicate what is your preferred solution between iXBRL and XBRL? Please explain the reasons.

6.3.2 Choice for taxonomy

163. Structured electronic reporting depends on taxonomy and a different taxonomy is necessary for each set of accounting standards, leading to significant complexity. If all financial statements should be published in a structured electronic format universal taxonomies must be developed and/or maintained for IFRS, national GAAP for those member states that require or permit preparation of individual financial statements according to national GAAP and for third countries GAAPs equivalent to IFRS. ESMA therefore reckons that a nuanced approach should be followed depending on the types of financial reporting frameworks used by issuers publishing AFRs under the TD.

164. The IAS Regulation imposes the preparation of IFRS consolidated financial statements on all issuers which are subject to the TD requirements. Full comparability of the financial statements of different issuers from different MS is only possible for the consolidated financial statements according to IFRS. ESMA therefore believes that requiring the publication in a structured electronic format is most beneficial for consolidated financial statements according to IFRS. In addition to that the IFRS Taxonomy exists already and has been tested in a number of jurisdictions. ESMA suggests mandating the use of the IFRS Taxonomy, as issued by the IASB, for consolidated financial statements prepared under IFRS. The taxonomy should be

subject to formal endorsement in the European Union. The appropriate legal tool will be defined taking into account further developments that are taking place at the IASB level in terms of due process.

165. As a conclusion, ESMA proposes that all IFRS consolidated financial statements shall be reported under structured format. This requirement will have an impact on around 5 400 issuers which are preparing consolidated financial statements under IFRS.

166. For financial statements prepared under national GAAP to be reported in a structured format, the development of taxonomies for all national GAAPs would be required. For financial statements prepared under national GAAP, ESMA could consider a EU core taxonomy to be developed on the basis of the Accounting Directive. In order to ensure the highest possible level of harmonisation with the IFRS Taxonomy, if opted for, the EU core taxonomy could follow the architecture and rules of the IFRS Taxonomy wherever possible. In order to cater for the variations offered by the Accounting Directive, national authorities could be given the flexibility to extend the EU core taxonomy to accommodate specific national reporting and disclosure requirements.

167. However, the development of a EU core taxonomy should be preceded by a technical study assessing the related technical feasibility issues and whether the benefits really exceed the costs attached to it, considering the limited advantages of a high level EU core taxonomy based on the degree of harmonisation achieved by the Accounting Directive. The study should identify the developments already in place in some Member States in which taxonomy for the national GAAPs already exists on the basis that financial statements are submitted to business registers using that taxonomy.

168. In view of these uncertainties and limitations related to the taxonomies on national GAAPs, a two-step approach would be appropriate and until either taxonomies for all national GAAPs or a EU core taxonomy are available, individual financial statements should not be required to be made public in a structured electronic format. Apart from the absence of several of these taxonomies, ESMA believes that there would be limited benefits in terms of comparability and analysis for users because of the differences in the principles applied under the different national GAAPs. Therefore, the comparability would be limited to the national level.

169. However, once the necessary taxonomies are available, the RTS should in a second step be amended requiring making public also the individual financial statements prepared in accordance with the Member States' national law in a structured electronic format. This should be done to ensure that the users of financial statements prepared under national GAAP will also benefit from the advantages of an easier access to information, analysis of data and comparability, even though this would be limited at

national level. Such development may also be considered by the EC in the current development of the Capital Markets Union.

170. ESMA proposes in the first step to not require structured data reporting for financial statements prepared under national GAAP. However, in case structured data format reporting is already in place or is to be allowed by a MS at national level, the ESMA RTS shall not limit the possibility of using it.

171. The same problems concerning comparability and taxonomy as described above for national GAAP apply to third countries GAAPs equivalent to IFRS. The problem concerning taxonomy is even aggravated as there is the need for a due process for the creation and/or maintenance of the taxonomy which would be carried out in a different jurisdiction. Therefore ESMA proposes that no structured data format should be required for financial statements prepared under third countries GAAP equivalent to IFRS.

172. By limiting the requirement in the first step to the consolidated financial statements according to IFRS, ESMA believes that the main benefits can be obtained as full comparability of financial statements across Europe is only possible for consolidated financial statements according to IFRS while the cost for issuers and other parties (e.g. by developing a national taxonomy) can be kept as low as possible.

Question 15: Do you agree that structured reporting format should in a first stage be required for consolidated IFRS financial statements and eventually in a second stage for individual financial statements? Question 16a: Do you agree with a different approach for the financial statements under national GAAPs compared to IFRS on the grounds of the existence of a taxonomy? Question 16b: Do you agree with the proposed approach in terms of potential development of a EU core taxonomy to be used for national GAAPs in the future? Question 17: Do you agree that a single electronic format should not be required for financial statements under third country GAAP?

6.4 Considerations related to a phased approach for SMEs

173. Considering the need to use more than one technology in the implementation of the ESEF, a phased approach may be proposed in order to make a gradual progress starting from the traditional paper-based or PDF filings and further developing towards more elaborate formats. This would allow for a transition period until the adoption of a

full structured format for all issuers across the EU as well as time to address the specificities of smaller companies.

174. ESMA also considers that the ESEF could enhance the visibility of SMEs as the latter ones shall benefit from the improvements regarding access and analysis of their AFRs for investors.

175. In addition, through the implementation of the European Electronic Access Point (EEAP) end users will be able to access information disclosed by all issuers, including SMEs through a single electronic source. This will facilitate investors' search and access to the SME's AFRs. Other measures which might help increasing the visibility for SMEs and thus improve their access to capital were also considered in the preparation of the Green Paper published by the EC on Capital Market Union[18].

176. A phased approach would be advisable in order to tackle the specificities of SMEs. A transition period until a full structured format is adopted by all issuers across the EU could be allowed.

177. Some issuers prepare only individual financial reports, in accordance with the national GAAP of the Member State in which they are incorporated. Some of these issuers are SMEs for which structured electronic reporting might be too burdensome, due to staff and budget limitations. For these issuers, a simpler format would be preferable in terms of cost effectiveness (e.g. a simpler XML format would be preferable to XBRL).

178. ESMA is aware of the US experience as they encountered similar issues. The implementation of the electronic reporting has been done in a phased approach whereby only the primary statements have been reported in a structured format in a first phase while the notes have been adopted in a second phase.

179. While the results of the CBA could not provide relevant information in relation to the impact on the SMEs, it seems that in the US the cost of moving to structured data for SMEs was taken into account when deciding to propose a phased approach (different timeline and different scope). Further specificities of the US experience are provided in the Cost Benefit Analysis (Annex II).

Question 18: Would you be in favour for a phased approach for SMEs, if it would be allowed under the legal mandate? Would it be relevant in the context of the development of the Capital Markets Union?

[18] *http://ec.europa.eu/finance/consultations/2015/capital-markets-union/docs/green-paper_en.pdf*

6.5 Overall preliminary conclusions

180. As a conclusion, the following elements summarise the approach in developing this Consultation Paper on draft RTS on the ESEF:

a. When developing the concept of electronic format, a difference should be made between the need to report structured and non-structured data.

b. ESMA considered that the entire Annual Financial Report should be published in PDF for legal reasons, audit concerns and to ensure the adequate availability of relevant information to users unable to process structured electronic data. However some information should additionally be published in a structured electronic format. Therefore ESMA decided to split the content of the AFR between financial statements on one side and all other statements/components on the other side: management report, audit report, statements on corporate governance, etc.

   i. Only financial statements should be subject to requirements for being reported as structured electronic data.

   ii. The other elements should be reported in an electronic but non-structured format. The assessment of a need for structured format of these other elements will be performed in the future.

c. For the financial statements, a different approach has been envisaged depending on the sets of accounting standards used, in conjunction with the existence of taxonomies which are needed to be reported as structured data.

   i. The consolidated financial statements prepared under IFRS should be subject to reporting under structured format. The IFRS taxonomy, as issued by the IASB and subject to endorsement by the EC (through ESMA RTS or otherwise) should apply. ESMA proposes to mandate only the first three levels of the IFRS taxonomy without 'local regulatory concepts' or 'company concepts' (see paragraph 116).

   ii. The individual financial statements prepared under IFRS or national GAAPs should not be required to be reported under structured format, but in case structured data format reporting is already in place or is to be allowed by a MS at national level, the ESMA RTS should not limit the possibility of using it. The RTS should be amended in a later stage when taxonomies for all Member States' GAAPs or a core EU

taxonomy are available, to require that also the individual financial statements should be fully reported under structured format.

iii. For consolidated or individual financial statements prepared under 3rd country GAAPs equivalent to IFRS, structured format shall not be required.

181. In terms of technologies, ESMA considered that PDF should be used for the unstructured format. The decision was based on the fact that PDF is the format accepted or required in all EU jurisdictions. Based on the results of the preliminary CBA which is included in this paper, XBRL or iXBRL should be used for the structured data.

182. In addition, the CP explores the possibility to allow for a phased approach for SMEs, irrespective of the GAAP used. However, substantiating this proposal seems difficult at this stage because of a lack of evidence and data.

183. Finally, as only a preliminary CBA on the technologies has been performed by ESMA and the overall assessment has been challenging due to the limited level of accuracy, this might have an impact on the validity of the conclusions. Therefore the conclusions of the CBA are to be considered final only after receiving additional input from respondents to the CP. For that purpose, the CP includes a dedicated list of questions in relation to the CBA.

Question 19: Do you have any other comment to make?

7 Annexes

Annex I - Legislative mandate to develop regulatory technical standards

1. Regulation (EU) No 1095/2010 establishing the European Securities and Markets Authority empowers ESMA to develop draft regulatory technical standards where the European Parliament and the Council delegate power to the Commission to adopt regulatory standards by means of delegated acts under Article 290 TFEU.

2. Directive 2013/50/EC of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC inserted the following paragraphs into Directive 2004/109/EC (the Transparency Directive) conferring powers on ESMA to draft RTS regarding format of annual financial reports:

3. Article 4.7

   'With effect from 1 January 2020 all annual financial reports shall be prepared in a single electronic reporting format provided that a cost-benefit analysis has been undertaken by the European Supervisory Authority (European Securities and Markets Authority) established by Regulation (EU) No 1095/2010 of the European Parliament and of the Council.

   ESMA shall develop draft regulatory technical standards to specify the electronic reporting format, with due reference to current and future technological options. Before the adoption of the draft regulatory technical standards, ESMA shall carry out an adequate assessment of possible electronic reporting formats and conduct appropriate field tests. ESMA shall submit those draft regulatory technical standards to the Commission at the latest by 31 December 2016'.

Annex II – Summary of questions

Questions relating to the CP

Question 1: The provisions included in the amended Transparency Directive requiring a single electronic format were not subject to a formal impact assessment by the European Commission. While from a legal point of view ESMA could not address in this CP whether there is a need for the provisions included in the amended Transparency Directive, do you believe that a wider assessment should be performed on the requirements of introducing a single electronic reporting format in Europe? Please indicate your opinion and provide arguments.

Question 2: Do you agree with the description of the policy objectives as included in this section? Are there any further elements that you believe should be analysed? If yes, please indicate them.

Question 3: Do you believe that the introduction of electronic reporting should serve as a basis for further debate on auditing of electronic structured data?Please explain your reasoning.

Question 4: Are you aware of any further elements which are necessary to provide an accurate picture of the current reporting for the purpose of this CP?

Question 5: Do you agree with the description of the technologies included in the CP?

Question 6: Do you agree with the choice of the technologies to be further analysed as part of the CBA? If not, please indicate which other technologies you would propose for further analysis.

Question 7: Do you agree with ESMA's proposal to use the IFRS taxonomy as issued by the IFRS Foundation for reporting under IFRS, subject to formal endorsement in the European Union?

Question 8: Do you agree with ESMA's preliminary conclusions not to use regulatory and entity specific extensions? Please provide arguments in your answer in relation to the impact on issuers and users.

Question 9: Do you agree with the proposed approach in relation to the taxonomies of third countries GAAPs deemed equivalent to IFRS?

Question 10: Do you believe that taxonomy shall be developed for other parts of the AFR (outside financial statements)? If yes, please indicate which ones and explain why.

Question 11: Do you agree that non-structured electronic reporting should be required for the entire Annual Financial Report? Do you agree that the format used shall be PDF? If you disagree, please explain your opinion by providing arguments on the policy objectives and impact on the CBA.

Question 12: Do you agree with the solution of a single electronic format composed of structured and non-structured data (option B)? If not, please explain your opinion as well as the impact on the CBA.

Question 13: Do you agree that iXBRL and XBRL are the most relevant options available for the ESEF?

Question 14: Could you please indicate what is your preferred solution between iXBRL and XBRL? Please explain the reasons.

Question 15: Do you agree that structured reporting format should in a first stage be required for consolidated IFRS financial statements and eventually in a second stage for individual financial statements?

Question 16a: Do you agree with a different approach for the financial statements under national GAAPs compared to IFRS on the grounds of the existence of a taxonomy?

Question 16b: Do you agree with the proposed approach in terms of potential development of a EU core taxonomy to be used for national GAAPs in the future?

Question 17: Do you agree that a single electronic format should not be required for financial statements under third country GAAP?

Question 18: Would you be in favour for a phased approach for SMEs, if it would be allowed under the legal mandate? Would it be relevant in the context of the development of the Capital Markets Union?

Question 19: Do you have any other comment to make?

Questions on the CBA

For issuers

Please answer the questions 1-12 if you are an issuer of securities admitted to trading in a regulated market in EEA.

Q1. We would appreciate some information about your entity. Are you a large company/group of companies or a SME[19]? If you represent a credit institution please also tick the respective box (more than one selection is possible).

- ☐ Large company
- ☐ SME
- ☐ Credit institution
- ☐ Other (please explain below)

Q2. What kind of financial statements are contained in the annual financial report of your entity? Please tick the appropriate boxes (more than one selection is possible).

- ☐ Consolidated financial statements according to IFRS
- ☐ Individual financial statements according to IFRS
- ☐ Individual financial statements according to national GAAP
- ☐ Consolidated and individual financial statements according to a third country GAAP deemed equivalent to IFRS as endorsed in the EU

Q3. Considering the 4 technological options examined in the CBA, ESMA suggests that XBRL and iXBRL are the most appropriate solutions for the implementation of structured electronic reporting. What of the following is in your view the most appropriate solution? If other format, please explain.

- ☐ XBRL
- ☐ iXBRL
- ☐ Other format (please explain below)
- ☐ Don't know / No opinion

[19] According to Article 3(3) of the Accounting Directive (Directive 2013/34/EU) Small and medium-sized enterprises (SMEs) do not exceed the limits of at least two of the three following criteria:

Company category	**Employees**	**Turnover** or	**Balance sheet total**
SME	< 250	≤ € 40 m	≤ € 20 m

Q4. Has your company ever carried out an analysis to implement a structured electronic reporting format?

☐ Yes
☐ No
☐ Don't know / No opinion

Q5. Has your entity already implemented a structured electronic reporting format? If yes, please explain which format was implemented.

☐ Yes (please explain below)
☐ No

Q6 As presented in section 2.1 of the Cost Benefit Analysis, issuers considered implementing structured reporting through a built-in or a bolt-on approach. Which implementation approach has your entity followed or does intend to follow?

☐ Built-in approach
☐ Bolt-on approach
☐ Don't know / No opinion

Q7. Can you provide an estimate of the expected costs to set-up structured electronic reporting in your entity for XBRL and iXBRL?

a. What is your estimation of the relevant one-off costs (such as IT, staff and processing costs or consultancy fees)?

☒	0-100k €	100-250k €	250-500k €	500-1000k €	1000-2500k €	2500k+ €
XBRL	☐	☐	☐	☐	☐	☐
iXBRL	☐	☐	☐	☐	☐	☐

b. What is your estimation of the relevant on-going costs (such as IT, staff and processing costs or consultancy fees) **on a yearly basis**?

☒	0-100k €	100-250k €	250-500k €	500+€
XBRL	☐	☐	☐	☐
iXBRL	☐	☐	☐	☐

c. Please make an estimate by how much the projected cost above could be reduced if only the primary financial statements (balance sheet, income statement, statement of cash flows, etc.), but not the notes to the financial statements would be required to be presented in a structured format

☒	<20%	20%-30%	30%-40%	40%-50%	50%-60%	> 60%
One-off costs	☐	☐	☐	☐	☐	☐
On-going costs per year	☐	☐	☐	☐	☐	☐

d. How did you estimate these costs? Which factors did you take into consideration?

Q8. In your opinion, to what extent will the ESEF provide the following benefits?
Please rate each benefit from 1 to 5 according to the benefits expected by market participants (1 being the lowest amount of expected benefits and 5 the highest).

Benefits of ESEF	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessibility of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Simplification of the reporting process	☐	☐	☐	☐	☐	☐
Increase of synergies with other reporting processes	☐	☐	☐	☐	☐	☐
Easier access to capital markets	☐	☐	☐	☐	☐	☐
Facilitate cross border investment	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

Q9a. In your opinion, to what extent will the different technologies provide the following benefits?

Please rate the benefits for the technologies that after the CBA were deemed to be most appropriate (XBRL and iXBRL). Please rate each benefit from 1 to 5 (1 being the lowest amount of expected benefits and 5 the highest).

XBRL BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessibility of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Improvement of data quality	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Reduction in reporting burden	☐	☐	☐	☐	☐	☐
Process simplification for other stakeholders	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

iXBRL BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessibility of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Improvement of data quality	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Reduction in reporting burden	☐	☐	☐	☐	☐	☐
Process simplification for other stakeholders	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

(if the answer to Q3 was answered "Other format"):
Q9b. You answered in Q3 that in your opinion, there is a technological option that would be more appropriate for the implementation of structured electronic reporting than XBRL and iXBRL. Please rate to what extent will this preferred technology provide the following benefits? Please explain which technological option you would prefer.
Please rate each benefit from 1 to 5 (1 being the lowest amount of expected benefits and 5 the highest).

Other preferred standard BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessibility of data	☐	☐	☐	☐	☐	☐

Other preferred standard BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Improvement of data quality	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Reduction in reporting burden	☐	☐	☐	☐	☐	☐
Process simplification for other stakeholders	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

Q10. Do you believe that SMEs should be fully covered by the ESEF in the same timeline as the large entities? If no, please explain.

☐ Yes
☐ No (please explain below)
☐ Don't know / No opinion

Q11. Do you consider that the expected benefits would be different depending on the type of issuer?

Benefits for XBRL
☐ Yes (please explain below)
☐ No
☐ Don't know / No opinion

Benefits for iXBRL
☐ Yes (please explain below)
☐ No
☐ Don't know / No opinion

Q12. Do you believe that ESMA should have added other costs and benefits in the CBA?

If yes, please explain below.

☐ Yes (please explain below which costs and benefits)
☐ No
☐ Don't know / No opinion

Costs

Benefits

For users

Please answer the following questions if and only if you are a user of financial statements of issuers of securities admitted to trading in a regulated market in EEA.

Q13. Please specify as which type of Stakeholder you qualify? (please tick one as appropriate)

- ☐ Financial Analysts
- ☐ Retail investor associations
- ☐ Other stakeholders' associations
- ☐ Institutional investors
- ☐ Data aggregator
- ☐ Auditors/ Accounting bodies
- ☐ Others (please specify in the textbox below)

Q14. Do you believe that structured electronic reporting of financial information would be useful for your entity?

- ☐ Yes (please explain below)
- ☐ No (please explain below)
- ☐ Don't know / No opinion

Yes: Explain what benefits you would expect from structured electronic reporting

No: Explain why you believe that structured electronic reporting would not be useful for your entity

Q15. Does your entity plan to use data from structured reporting?

- ☐ Yes
- ☐ No (please explain below)
- ☐ Don't know / No opinion

Q16. Considering the 4 technological options examined in the CBA, ESMA suggests that XBRL and iXBRL are the most appropriate solutions for the implementation of structured electronic reporting. What of the following is in your view the most appropriate solution? If other format, please explain.

- ☐ XBRL

☐ iXBRL
☐ Other format (please explain below)
☐ Don't know / No opinion

Q17a. According to you, what are the expected benefits from structured electronic reporting for each of the suggested technologies?

Please rate each benefit from 1 to 5 according to the benefits expected by users (1 being the lowest amount of expected benefits and 5 the highest).

XBRL BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessability of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Process simplification	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

iXBRL BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessability of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐

iXBRL BENEFITS	1	2	3	4	5	Don't know / No opinion
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Process simplification	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

(if the answer to Q16 was answered "Other format"):
Q17b. You answered in Q16 that in your opinion, there is a technological option that would be more appropriate for the implementation of structured electronic reporting than XBRL and iXBRL. Please rate to what extent will your preferred option provide the following benefits? Please explain what technological option you would prefer.

Other preferred standard BENEFITS	1	2	3	4	5	Don't know / No opinion
Improved comparability of data	☐	☐	☐	☐	☐	☐
Increased accessability of data	☐	☐	☐	☐	☐	☐
Improved ability to extract data	☐	☐	☐	☐	☐	☐
Easiness to implement	☐	☐	☐	☐	☐	☐
Ability of technological standard to be integrated into an existing technological environment (interoperability) and/or to re-use old technology for the new standard (re-usability)	☐	☐	☐	☐	☐	☐
Process simplification	☐	☐	☐	☐	☐	☐
Any other. Please explain below	☐	☐	☐	☐	☐	☐

Q18. In your opinion, what would be the benefits of reporting the following parts of the financial statements in a structured format?

Please rate each benefit from 1 to 5 (1 being the lowest amount of expected benefits and 5 the highest).

Comparative BENEFITS of different parts of the financial statements in structured format	1	2	3	4	5	Don't know / No opinion
Primary financial statements (balance sheet, statement of comprehensive income, statement of changes in equity, statement of cash flows)	☐	☐	☐	☐	☐	☐
Notes to the financial statements, comprising a summary of significant accounting policies and other explanatory information	☐	☐	☐	☐	☐	☐

Q19. Do you have any estimate of the cost reduction that would be possible for your entity due to the implementation of structured electronic reporting for all issuers on regulated markets in the EEA?

☐ Yes (please explain below)
☐ No
☐ Don't know / No opinion

Q20. Do you believe that ESMA should have added other costs and benefits in the CBA?

☐ Yes (please explain below)
☐ No
☐ Don't know / No opinion

Annex III - Cost Benefit Analysis for the European Single Electronic Format (ESEF)

Glossary

AFR	Annual Financial Report
ASCII	American Standard Code for Information Interchange
CBA	Cost-Benefit Analysis
CP	Consultative Paper
EC	European Commission
EP	European Parliament
ESEF	European Single Electronic Format
ESMA	European Securities and Markets Authority
EU	European Union
HTML	HyperTextMarkup Language
IT	Information Technology
iXBRL	Inline eXtensible Business Reporting Language
MP	Market Participant
NCA	National Competent Authority
OAM	Officially Appointed Mechanism
PDF	Portable Document Format
RTS	Regulatory Technical Standards
TDA	Transparency Directive Amended
US SEC	United States Security and Exchange Commission
XBRL	eXtensible Business Reporting Language
XHTML	eXtensible HyperText Markup Language
XML	eXtensible Markup Language

Disclaimer

The information contained in this document is the result of the analysis performed on the answers provided to the questionnaires by Market Participants (MPs), National Competent Authorities (NCAs) and Officially Appointed Mechanisms (OAMs).

The questionnaires were sent to 28 NCAs, 28 OAMs[20] and a large number of MPs and responses were collected from 26 NCAs, 16 OAMs, 22 issuers and 12 users of financial information.

The European Securities and Markets Authority (ESMA) wishes to underline that the questionnaires sent to MPs achieved a very low response rate with a lack of representativeness from major markets and users of financial information. As such, this small sample of respondents prevented ESMA to perform a complete analysis whose results could be adequately interpreted.

Differences among the respondents may also have affected the interpretation of the questions and impacted the answers (e.g. their own experience and investment in Information Technology (IT), their knowledge of the technological environment, their opinions about the accounting integration process in the European Union (EU), sector in which they operate, other regulatory financial reporting obligations, size of the company/group, among others).

Therefore, it was difficult to obtain robust figures and draw conclusions based on the large range of values derived from the questionnaire. Precise figures contained in this report should be carefully considered to avoid misleading interpretations.

In order to complement this analysis, ESMA decided to ask further questions related to the Cost-Benefit Analysis (CBA) when stakeholders provide their answer to the Consultative Paper (CP). This will allow ESMA to obtain additional evidence and reach more robust conclusions on the costs and benefits of the ESEF.

[20] *Please note that Finland and Lithuania are represented by the same OAM (NASDAQ OMX)*

SUMMARY

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Executive summary

Under the requirements of the Amended Transparency Directive (TDA), the European Securities and Markets Authority (ESMA) is required to provide a Cost-Benefit Analysis (CBA) of the draft Regulatory Technical Standards (RTS) related to the establishment of the European Single Electronic Format (ESEF).

This CBA aims at analysing the preliminary list of the ESEF requirements drafted by ESMA, as well as at defining the costs and benefits related to the four options considered suitable for implementation of the ESEF.

The following 4 technological options have been considered for the purpose of this CBA:

- **Option 1:** this option would require the use of eXtensible Business Reporting Language (XBRL) technology. XBRL is an XML-based open international standard for digital business reporting. It provides a language in which reporting terms can be defined and subsequently used to represent the content of financial statements or other areas of business reports. This standard has been developed to facilitate automatic exchange and reliable extraction of financial information among various software applications.
- **Option 2:** this option would require the use of Inline XBRL (iXBRL), a technology centred around electronic rendering of financial information encoded in XBRL documents in order to obtain human-readable electronic filings similar to paper copies.
- **Option 3:** this option would require the development of a new European Standard based on the TDA and Accounting Directive requirements to fulfil the ESEF requirements using XML technology.
- **Option 4:** this option would require the development of a new European Standard based on the TDA and Accounting Directive requirements to fulfil the ESEF requirements using Extensible Hyper Text Markup Language (XHTML) technology.

When implementing reporting under structured format, different approaches have been considered. Some issuers considered the implementation of this requirement by addition of a final process step to generate electronic filings (bolt-on approach). Effective bolt-on solutions are available in the market and impose lower setup costs. Other issuers considered an integrated approach and a significant reorganisation of their reporting processes and systems in place (built-in approach). These two approaches were extensively considered, especially in the section on the results of the Cost-Benefit Analysis.

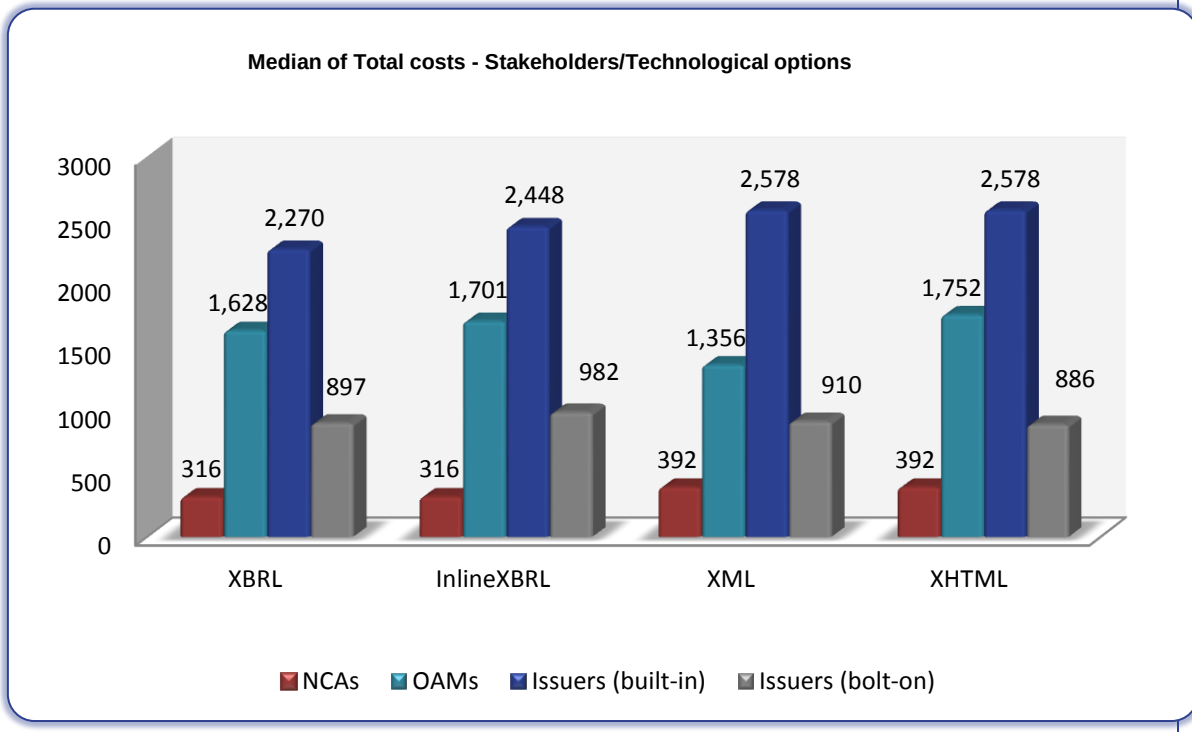
Assessing the impacts on the different categories of stakeholders involved in the process is crucial for the identification of the most suitable technological options for the ESEF implementation. Three questionnaires were sent to the National Competent Authorities (NCAs), Officially Appointed Mechanisms (OAMs) for storage of regulated information and Market Participants (MPs) with the aim to analyse the costs and benefits of the ESEF. The answers received constituted the key part of this report.

COST COMPARISON AMONG THE DIFFERENT TECHNOLOGICAL OPTIONS

The very small number of answers collected from MPs did not provide a complete picture in terms of costs of ESEF development, and large differences among the answers of respondents within the same categories prevented ESMA from drawing strong conclusions. This concern was partially addressed by separating the 2 possible approaches (bolt-on and built-in) that issuers can select when implementing the ESEF requirements.

The overall costs evaluation reveals that, within the same stakeholder category, no significant differences exist among the technological options that were considered. This conclusion can be drawn for all stakeholder categories.

COST EVALUATION (in '000 €)[21]



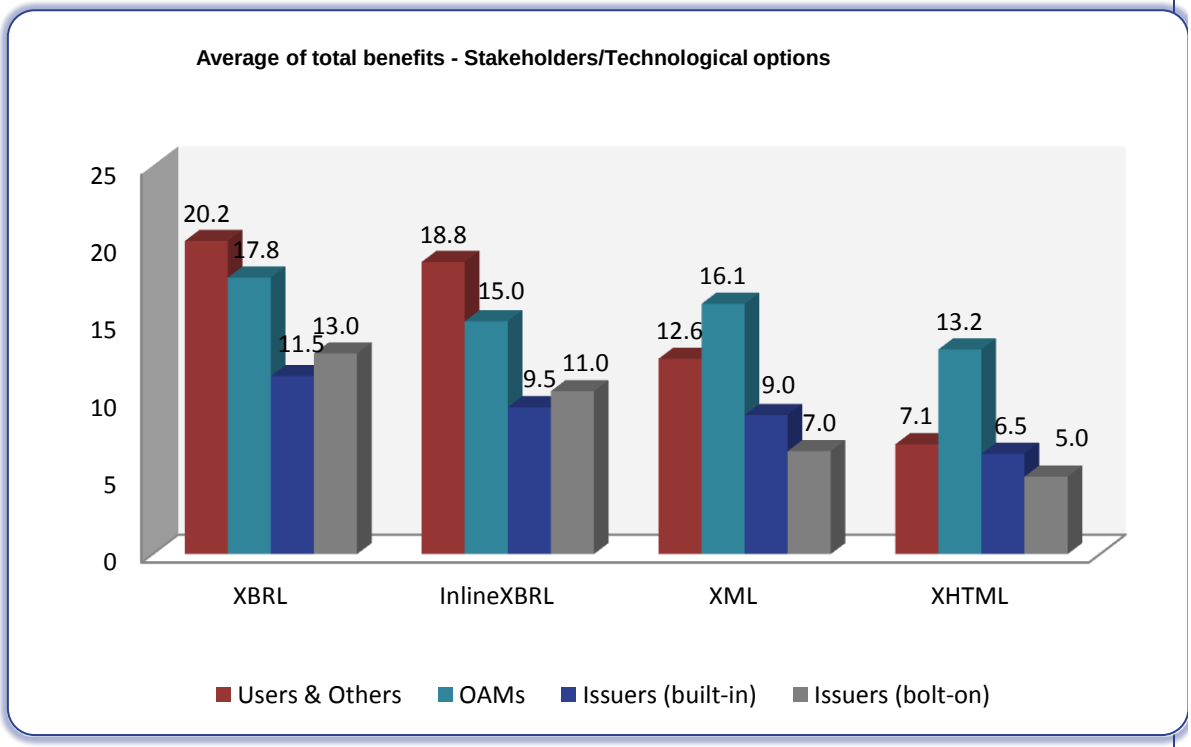
Across the different stakeholder categories, the collected data for the cost evaluation span on a wide range of values, as each category deals with different activities along the financial reporting process and sustains different costs.

BENEFIT COMPARISON FOR TECHNOLOGICAL OPTIONS

The overall benefits evaluation resulting from the questionnaire shows no significant differences among the stakeholder categories. This conclusion applies to all categories, although it is mainly supported by issuers, who assigned a closer score to the different technological options.

[21] *For the costs evaluation, please refer to the* ***Cost-Benefit Analysis – Methodology*** *in section II*

BENEFIT EVALUATION (score)[22]



In terms of benefits, all the relevant stakeholders expressed a preference for XBRL, compared to the other options. They also made some further observations:

- Overall, issuers selecting the bolt-on approach expressed a lower level of benefits for all the technological options as compared to the other categories;
- OAMs did not significantly discriminate one option among the different technologies and considered XBRL, iXBRL and XML to have broadly the same level of benefits, whereas the expected benefits of XHTML were considered to be lower;
- Users and other stakeholders expressed a stronger preference for XBRL and to a lesser degree iXBRL compared to the other categories because of the global prevalence of these technologies and the perceived technological facility.

[22] *For the benefits evaluation, please refer to the **Cost-Benefit Analysis – Methodology** in section II*

EVIDENCE FROM THE DATA ANALYSIS OF OTHER MARKETS

The information obtained from the Data Analysis of other markets was insufficient to rank the different technologies, as no country among those considered had performed a comparative analysis of the technological options under the ESEF evaluation.

XBRL appears to be the most widely used technological option among those considered for the ESEF scope, that would allow quality, accuracy, validation of data and greater comparability of Annual Financial Reports. As of today, no other harmonised electronic reporting format exists.

SUMMARY OF CONCLUSIONS

The results of the cost analysis do **not significantly discriminate** among the technological options considered for the ESEF evaluation.

The benefit evaluation showed that, although only **minor differences** were registered among the technological options, **XBRL and iXBRL appear to be the preferred technological option** for the ESEF evaluation.

Even if the results of the desk research do not contribute to the comparative analysis of the different technologies, they provide evidence supporting **XBRL as a "de facto" international standard.** In most of the countries analysed, XBRL was widely adopted for electronic financial reporting, while in one country (Israel) a mix of technologies (PDF and XBRL) was chosen.

Introduction

In accordance with its founding Regulation 1095/2010, the objective of ESMA shall be to protect the public interest by contributing to the short, medium and long-term stability and effectiveness of the financial system, for the Union's economy, its citizens and businesses.

In this context, where the European Parliament (EP) and the Council delegate power to the European Commission (EC) to adopt the Regulatory Technical Standards (RTSs), ESMA may be assigned the responsibility to develop these standards. Before submitting these standards to the EC, ESMA shall first conduct open public consultations on the draft RTSs and analyse their potential related costs and benefits. As such, ESMA is required to carry out a CBA on the RTSs that are under its responsibility.

Directive 2013/50/EU amending Directive 2004/109/EC of the EP and of the Council on the harmonisation of transparency requirements (TDA[23]) in relation to information about issuers whose securities are admitted to trading on a regulated market requires the mandatory preparation of Annual Financial Reports in a single electronic reporting format with effect from 1 January 2020, provided that a CBA has been undertaken by ESMA. ESMA is required to develop draft RTS and submit them to the EC for adoption after the accomplishment of an open public consultation and a CBA before 31 December 2016.

As part of the consultation on the RTS on the ESEF, ESMA prepared a CBA to identify and analysed possible technological options for the ESEF.

[23] *Directive 2013/50/EU of the European Parliament and of the Council of 22 October 2013 amending Directive 2004/109/EC of the European Parliament and of the Council on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market, Directive 2003/71/EC of the European Parliament and of the Council on the prospectus to be published when securities are offered to the public or admitted to trading and Commission Directive 2007/14/EC laying down detailed rules for the implementation of certain provisions of Directive 2004/109/EC.*

I. Financial electronic reporting format

1.1 Global electronic financial reporting practices

Electronic financial reporting has spread rapidly across countries with advent of the internet, allowing financial data to be rapidly and easily exchanged among users. Filing financial data electronically has become mandatory in several countries and different formats are required for the submission of information, depending on the specific regulations and guidelines of the public authorities.

Currently, HTML and PDF are the most popular formats adopted worldwide for electronic financial reporting, although new technologies are emerging to enable interactive data filing.

HTML is the main mark-up language for creating web pages and information that can be displayed in a web browser. It has been widely used since the 1990s for financial reporting and currently most digital representations of financial information are coded in this format.

XBRL is a new format that has been developed starting from the end of the 1990s and uses data tags to describe financial information.

The approaches adopted for the transition to electronic financial reporting differ widely in terms of scope of application, voluntary versus mandatory provision and supplementary versus exclusive submission of electronic formats. The most frequent approach foresees voluntary submission of financial information in a supplementary format as an addition to the one mandated by law. The United States Securities and Exchange Commission (US SEC) request the submission of financial reports in XBRL, while the Australian Securities and Exchange Commission and the Canadian Competent Authority only encourage voluntary submission of financial statements electronically as an addition to the traditional format (PDF).

Some countries have completed the transition to electronic financial reporting and abandoned alternative formats, such as Israel (where issuers file financial statements in XBRL and footnotes in PDF), Singapore, Taiwan, Japan, China and South Korea.

Other countries have not yet implemented electronic financial reporting, but are in a transition process, such as Indonesia or Malaysia, which plan to roll out XBRL-based financial reporting in the coming years.

In most countries, the transition to electronic financial reporting has been implemented through voluntary programs aimed at assessing the impact of the new format and testing the taxonomy. The Taiwan Stock Exchange launched in 2008 a demonstrational project allowing

issuers to voluntary file financial statements using XBRL, which became mandatory from 2010 for all listed entities.

With respect to the scope of electronic financial reporting, a phased approach to the transition has frequently been adopted and the application of the new format has gradually been extended to the financial statements of a larger number of issuers. The US SEC initiated a first phase of XBRL submission for large entities, followed by a second phase extending the requirement to all other listed entities. The Companies Commission of Malaysia implemented a first phase of XBRL submission for listed companies, followed by a second phase for their subsidiaries and a third phase for non-listed companies.

Figure 1 Countries implementing electronic financial reporting

Table 1 Countries undertaking electronic financial projects

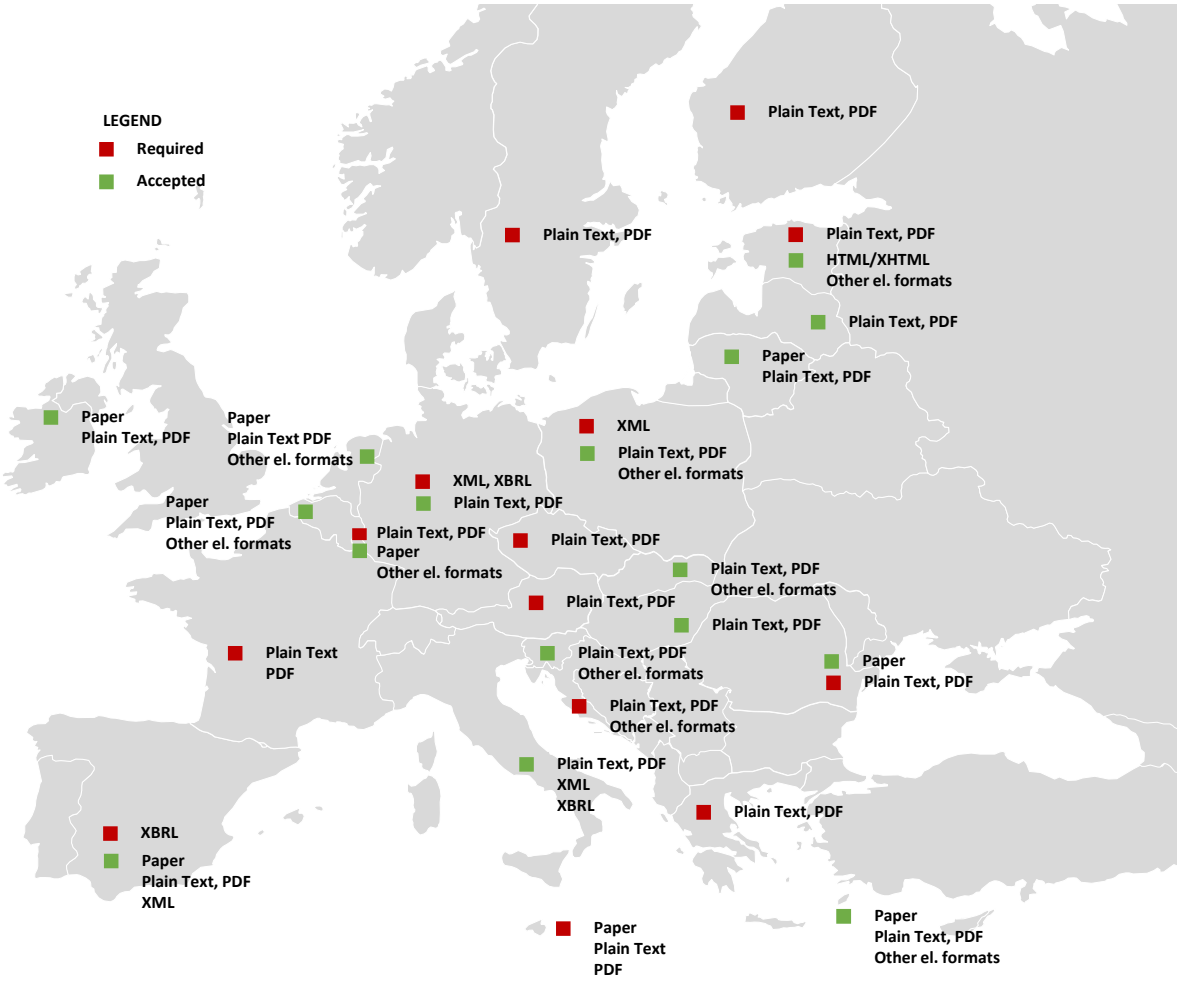
List of countries undertaking electronic financial projects			
Australia	India	Panama	Turkey
Brazil	Indonesia	Peru	United Arab Emirates
Cayman Islands	Israel	South Africa	Uruguay
Canada	Japan	South Korea	United States
Chile	Malaysia	Singapore	Europe (see next section)
China	Mexico	Taiwan	
Colombia	New Zealand	Thailand	

1.2 EU Member States financial reporting practices

The CBA for the implementation of the ESEF requires a preliminary assessment of the current electronic reporting practices existing in the EU Member States, as these practices will affect the magnitude of the related impacts and benefits.

NCAs responses to the questionnaire allow to assess the current financial reporting practices adopted by the EU Member States.

Figure 2 EU Member States financial reporting practices



Source: NCAs' questionnaire

The majority of European NCAs request issuers to submit their financial statements in PDF and plain text formats. Only Spain has implemented XBRL for half-yearly financial statements while a number of countries implemented a requirement to receive financial statements in a structured electronic format (such as XML/XBRL in Germany, HTML in Latvia, XML in Poland and Greece). However, the narrative part (management report, auditors report) of all reports is prepared in a non-structured format (PDF, Word).

1.3 Lessons learnt from other financial markets

The use of a specific technological solution for the submission of financial statements is currently mandatory in several jurisdictions, while its adoption is under evaluation in other

countries. Different studies, aimed at evaluating the benefits and the impacts of the financial electronic reporting implementation, have been carried out using different approaches and research methodologies.

In order to provide additional information for the evaluation of the different technological options, a Desk Research activity analyzed the projects undertaken in the countries which implemented electronic reporting. The projects considered for the ESEF CBA are outlined below.

Table 2 Electronic Reporting Standards implementation projects

Country	Year launched	Commissioned by	Purpose	Technology
Japan	2003	Bank of Japan	Banking report	XBRL
United States	2005	SEC	Company filing	XBRL
Canada	2007	Canadian Securities Administrators	Company filing	XBRL
Israel	2008	Israel Securities Authority	Company filing	Mix of technologies
The Netherlands	2010	Dutch Tax Authority	Tax filing	XBRL
Germany	2011	German Tax Authority	Tax filing	XBRL
United Kingdom	2011	HM Revenue and Custom[24]	Tax filing	iXBRL

[24] *This study refers to tax reporting*

United Arab Emirates	2011	Abu Dhabi Securities Exchange	Company filing	XBRL
Spain	2005 & 2008	CNMV Business Register	Interim financial reports Company filing	XBRL

As the financial reporting formats differ from one country to another, the impacts and/or the benefits arising from electronic reporting implementation could result in substantial differences. The main results derived from the Desk Research are the following:

- **Scope** – None of the countries considered performed comparative analysis of different technological options. Rather, ex ante and/or ex post studies were performed, aimed at providing evidence of the expected or assessed effects of the chosen technology on the electronic reporting process.

- **Technology** – XBRL is the preferred technological option among the countries considered for the ESEF development. Only two countries selected a different technology: UK chose iXBRL while Israel opted for a mix of technologies (XBRL for financial statements and PDF for footnotes).

- **Stakeholders** – each study has considered the impacts and benefits for users and issuers. The impact on NCAs has been thoroughly considered and analyzed, most of the studies being commissioned by the NCAs themselves. Auditors have been specifically considered in three cases, while impacts on the info providers have been highlighted only in two studies.

- **Costs –** costs for issuers have been directly or indirectly taken into account in all studies but it was difficult to make comparison of the different technological options based on the costs evaluation. However, except for the US SEC, the level of quantitative details about the implementation costs that have been disclosed is very low or missing. Based on this experience, it was found that the SEC had underestimated the cost for Issuers while the research revealed that most filers believed that costs outweighed benefits. Additionally, in some cases (Japan and UK), the costs for electronic reporting tools were sustained by the national authority by providing free software for filing and alleviating any relevant impact.

- **Benefits** – benefits have been analysed in more detail than costs and different kinds of benefits linked to the technological option implementation have been described[25]:

  - ✓ Simplification and integration of internal reporting process;
  - ✓ Time reduction in external financial reporting preparation and delivery;
  - ✓ Re-usability and interoperability of data;
  - ✓ Improvement of internal reporting processes by ensuring data availability.

  The most relevant benefits in relation to Users are briefly reported as follows:

  - ✓ Enhancement of data quality in terms of accuracy, validation etc.;
  - ✓ Comparability and Interpretation of data;
  - ✓ Easier access to financial information.

  Easiness of implementation has not been explicitly mentioned in the different studies, as this might become relevant only when a comparison among different technologies is conducted.

  According to data from academic literature, the benefits of XBRL are not expected to be immediate but will accumulate over time. For small and medium sized companies, benefits from XBRL are limited as the reporting requirements are relatively straightforward;

- **Taxonomy** evidence about costs or benefits related to the underlying taxonomies; however, each study only considered one taxonomy (built on IFRS or local GAAP, depending on the country), while none analyzed several different taxonomies (as might be the case for ESEF).

- **Impact on implementation –** the analyzed projects revealed that the implementation of electronic reporting has been carried out differently in each country.

  - ✓ In the US and Japan, the electronic financial reporting has been implemented in different stages in order to facilitate the transition process. In particular:

[25] *Readers should consider that these benefits have been described by the authorities or by third parties, which were directly involved or interested in the technological option implementation process.*

- In the US, filers were required to tag only their primary financial statements during the first year of the mandatory program, with accompanying footnotes and financial statement schedules filed tagged in block. From the second year, issuers were also required to tag quantitative data in their footnotes and supporting schedules;

- In Japan, between 2003 and 2013, filers were required to tag only primary financial statements. Footnotes tagging has been made mandatory from 2013.

✓ In several countries, the implementation of electronic reporting format envisaged a transitory phase of dual filing. The duration of the dual filing phase depends on the specific experience analysed:

- In the US, dual filing lasted for two years, during which interactive data documents were considered to be provided but not submitted. This stage was concluded in 2014, and HTML substituted ASCII;
- In Canada, the dual filing phase is still in place, as the Voluntary Program has not yet been concluded. Canadian issuers submit their financial statements in PDF format and issuers participating in the Program provide additional filing in XBRL;

- **Impact on the ESEF**

✓ XBRL seems to represent the main technological option considered and/or implemented in other countries;

✓ In several instances, other formats for electronic reporting in place based on low-level technology (e.g., ASCII or PDF) were already in place. For this reason, the additional costs and/or the benefits arising from the implementation of the electronic reporting format can hardly be generalised;

- **Other aspects**

✓ The general level of acceptance of the electronic reporting format introduction by the stakeholders seems to be quite good;

✓ The general level of knowledge of the electronic reporting format among the stakeholder categories seems to be quite low.

- **Impact on dimensions of the prototype**

  - ✓ The level of complexity of the European Market is unparalleled, involving different countries, jurisdictions, market sizes and languages. No other previous experience had to match so many different situations and practices (e.g., several different local GAAPs used in the preparation of annual financial reporting);

  - ✓ All other experiences aimed at testing costs and benefits of only one technological option (i.e., XBRL); therefore such analyses did not compare possible alternatives;

  - ✓ From the public documentation available, the other projects were significantly driven by the local regulator and did not try to build a multi-dimension CBA model encompassing all the different stakeholder categories (including NCAs and OAMs, in addition to Market Participants).

All of the above pose a significant limit when trying to fit data derived from the desk research into the dimensions of analysis of the ESEF CBA model.

However, the desk research provides valuable insight into the more qualitative aspects of the benefits (and, to a lesser extent, of the costs) associated with electronic financial reporting. The additional benefits highlighted include the following:

  - ✓ iXBRL presents the financial data in both a machine and human readable form (either on screen or in printed output). Other technological options require separate interactive data filing that could increase the discrepancies between the two different documents;

  - ✓ One of the elements to be evaluated in the selection of a technological option regards the effects on data quality process, in terms of accuracy, validation, etc. In this regard, different studies highlighted that XBRL could allow avoiding errors in the financial reporting preparation thanks to the possibility to use specific formulas;

  - ✓ One of the objectives of the electronic reporting format implementation is the possibility of improving the comparability of data at national and international levels. Setting a single technological standard ensures the maximum comparability of data across countries. Therefore, considering the extent to which a technology has emerged as the dominant standard and the benefits that could result from the convergence is of major importance. Currently, XBRL seems to be the most frequently adopted standard among the technological options.

1.4 Academic research on XBRL

An overview of structured electronic reporting benefits and impacts was derived from recent academic literature, especially the reviews performed by Muller-Wickop, Schultz and Nuttgens[26] on XBRL solution, and by Liles on Inline XBRL,[27]

XBRL Benefits (Muller-Wickop, Schultz and Nuttgens, 2012)	
Quality	Increased Comparability/Transparency
	Increased Accuracy
	Increased Analysis
Development	Improved Market Efficiency
	Advanced Standardisation
Efficiency	Time Savings
	Reduced Effort/Costs
	Improved Communication
Flexibility	System Flexibility
	Conceptual Flexibility

XBRL Issues (Muller-Wickop, Schultz and Nuttgens, 2012)	
Quality	Characteristic-based Issues
	Processing Issue
Uncertainty	Future Development
	Software Support
	Standardisation Issue
Adoption Effort	Infrastructure
	Knowledge

[26] *Niels Müller-Wickop, Martin Schultz and Markus Nüttgens, XBRL: Impacts, Issues and Future Research Directions, University of Hamburg, 2012*
[27] *Enhancing SEC Disclosure with Interactive Data, Jeremy Liles, Denver University Law Review, vol.91, April 2014*

1 Benefits

Quality

Increased Comparability/Transparency - The use of standardized taxonomies provides a common terminology for financial reporting, therefore increasing comparability of data. XBRL enables a consistent representation and an improved transparency, as the trail from an aggregated element to the underlying business transactions can be traced by the help of the XBRL General Ledger taxonomy (true only for built-in approach).

Increased Accuracy - XBRL potentially reduces errors arising from re-keying of information due to incompatible applications and encourages the development of homogeneous reporting processes and more accurate audit process as the auditors can access and process financial data in a standardized and timely manner.

Improved Analysis - The literature analysed agrees that XBRL eases the access to relevant financial information resulting in a significant increase of search, manipulation and analysis capabilities.

Efficiency

Reduced Effort - XBRL is widely seen as vehicle for significant effort reductions in the processing of financial information for all stakeholders. The basic financial information only needs to be prepared once and is available in a machine-readable format so that automated processing and access is facilitated. Some authors state that the effort reduction also results in a decrease of costs for the preparation of financial information. Some authors argue that XBRL also improves audit processes as relevant information is always up-to-date and can be easily processed. As mentioned earlier, in this way XBRL enables the concept of continuous auditing.

Time Savings - The reduced effort related to the electronic creation, processing and exchange of financial information via XBRL leads to a decreased cycle time of financial reporting processes.

Improved Communication - There is a broad consensus on the fact that XBRL significantly improves the distribution of financial information among stakeholders. The basic financial information only needs to be prepared once and can be provided in a wide range of formats and languages through different communication channels (e.g. web reporting).

Development

Improved Market Efficiency - Due to the improved quality of financial information induced by XBRL, several authors see an indirect effect of XBRL on the reduction of information asymmetries on financial markets.

2 Issues

Literature also discusses the issues related to usage of XBRL as integral part of the reporting supply chain, some of which accrue directly from XBRL properties.

Quality

Characteristic-based Issues – As data can be changed without leaving a trace, the exchange of information needs to be secured. Due to validation rules XBRL might be used to accrue the market's perception without guaranteeing a quality level.

Processing Issues - The main concern is related to the tagging process which is complicated but required in order to convert financial information into an XBRL document.

Adoption Effort

Knowledge - Several articles agree that the implementation of a complex process such as XBRL requires specific expertise and additional learning for different stakeholder categories (Issuers, auditors, etc.) so that they understand complex taxonomies, tagging procedures and extensions.

Infrastructure - Several articles point out the necessity of new infrastructure. All authors refer to software as needed infrastructure. Either software updates or new software tools are required in order to fully utilize the benefits of XBRL. Costs may also result from investments in design and maintenance of a web reporting or the implementation of continuous reporting due to increased expectations of intermediaries and addresses. Effort for the redesign of affected business processes must be considered.

Uncertainty

Uncertain Software Support - Comprehensive software support is a crucial success factor for the adoption and dissemination of XBRL. Benefits of XBRL can hardly be achieved without supporting software applications, even though a lack of adequate tool support prevents stakeholders from adopting XBRL.

Standardization Issues - Financial reporting, disclosure practices and legal aspects vary among countries and between industries. This leads to considerable national variation in calculation rules and dimensional structures as well as increased coordination effort for taxonomy design with complex interactions amongst diverse organizations. Regarding the extensibility of XBRL taxonomies, the trade-off between the comprehensiveness of a taxonomy that allows more firm-specific information and standardization that reduces firm specific content but improves on cross-sectional comparability are mentioned.

II. Cost-Benefit Analysis - Methodology

Following the assessment of the process status, an analysis of the costs and benefits of the different technological options for the ESEF implementation has been conducted through the following steps:

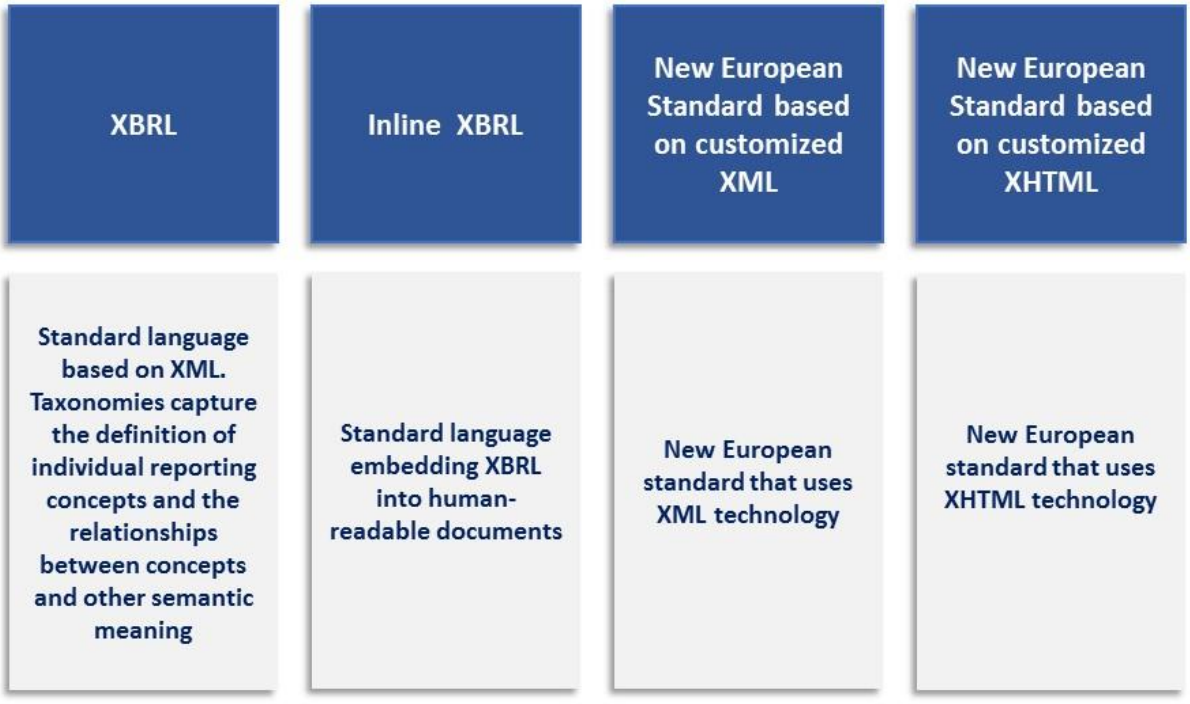
2.1 CBA model definition

In order to analyse the feedback received, a CBA model was designed for the evaluation of costs and benefits related to the technological options and to the stakeholder categories. The model is structured around four main dimensions:

a) Technology

All the technological options considered as alternatives for the ESEF implementation have been defined by ESMA and are reported as follows:

Figure 3 Technological options for the ESEF implementation



b) Stakeholders

The stakeholders affected by the ESEF target scenarios are:

- ✓ NCAs;
- ✓ OAMs;

- ✓ MPs divided into the following subcategories:
  - Issuers of securities
  - Users, including:
    - Business registers
    - Professional investors
    - Regulators
  - Other stakeholders
    - Auditors
    - Standard Setters
    - Stock exchanges
    - Others

c) Costs

Total costs related to the ESEF implementation are quantified by an economic (monetary) value and are reported under three subcategories:

- General costs: split into the following categories:
  - One-off costs - all the costs that are sustained once, excluding costs for extension and data quality, are analysed according to the following categories:
    - ✓ IT
    - ✓ Staff
    - ✓ Process
    - ✓ Consultancy
    - ✓ Others
  - Annual ongoing costs - all the costs that are sustained recurrently each year, excluding costs for extension and data quality, analysed by using the following categories:
    - ✓ IT
    - ✓ Staff
    - ✓ Process
    - ✓ Outsourcing
    - ✓ Others

- Data quality costs - split into different categories:
  - One-off costs - these cost categories represent new data quality costs that will occur only once. They are directly related to the ESEF implementation (e.g., quality assurance process) and will only occur during the implementation time.
  - Ongoing costs - these cost categories represent data quality additional costs, they will occur each year to guarantee the data quality process of the ESEF.
    Both one-off and on-going data quality costs include:
    - ✓ Accuracy costs - in terms of the formal correctness of information (e.g., date format compliance, controls on entering alphanumeric codes, taxonomy accuracy, etc.);
    - ✓ Validation costs - in terms of correctness of the information provided by verifying the significance compared to an acceptable domain or by verifying the consistency between the various data.

- Costs for extension: split into the following subcategories:
  - IT
  - Staff
  - Process
  - Outsourcing
  - Others

- Implementation approaches available to issuers
  When implementing reporting under structured format, issuers considered the implementation of the ESEF requirement by undertaking several approaches:

  - A bolt-on approach, which implies the addition of a final process step to generate electronic filings, in addition to the current reporting practice. Effective bolt-on solutions are available in the market and do not impose highly expensive setup costs.
  - A built-in and integrated approach, which implies a significant reorganisation of the record-to-report processes and systems of the issuer in an integrated approach to electronic reporting.

The approach for a bolt-on or a built-in solution is key to issuers. Built-in implies rethinking significantly the record-to-report processes and systems with a view to producing electronic reporting, whereas bolt-on means adding a final step in the existing process to generate electronic filings.

- Those two different approaches were not fully taken into account by some of the respondents.
- Issuers were asked whether they had already performed an Impact Assessment and which approach they planned to use.

d) Benefits

Benefits contain qualitative elements that are not measurable by using an economic value (for details on scoring methods, please refer to tables 05 to 06). The following benefits have been identified:

- Information improvement – defines the benefits from a user perspective and is divided into:
  - Extracting data -the possibility for the final user to get data from a report in order to export them in a different format/electronic support/source (e.g., can data be converted into another format easily? Can data be downloaded easily?)
  - Accessibility to data - the possibility for the final user to open/visualize and analyse data included in a report (e.g. is a web browser able to visualize the report? Are specific add-ons/or other software required?)
  - Comparability of data - the possibility for the final user to compare data from several reports compiled using the same technology (e.g., is it possible to simultaneously compare data from different reports?). It is divided into:
    - ✓ Standardisation - all processes, taxonomies and technological standards are the same for all issuers/countries.

- ✓ Harmonisation - all processes, taxonomies and technological standards are only similar or equivalent.

- Data quality divided into:
  - Accuracy - formal correctness of information (e.g., date format compliance, controls on entering alphanumeric code, etc.)
  - Validation - checking the correctness of the information provided verifying the significance compared to an acceptable domain or verifying the consistency among different data.
- Technological facility - defines the benefits from a technological/process perspective. It is divided into:
  - Easiness to implement - it reflects a general evaluation provided by the stakeholders about the implementation of a specific technological option;
  - Interoperability/Reusability - the ability of a technological standard to be integrated easily into an already existent technological environment (interoperability). In particular, reusability refers to the ability to re-use already owned technology in order to implement a new technological standard;
  - Reduction in reporting burden - it refers to the simplification of producing reports (for Issuers);
  - Process Simplification - it refers to simplification of the process in general for the other stakeholders (not Issuers).

2.2 Preparation of the questionnaires, launch of the survey and data collection

Taking into consideration the CBA data model and the main evidence resulting from the questionnaires for the NCAs, the costs and benefits dimensions have been translated into specific questions embedded into the questionnaires targeting OAMs and MPs.
Additionally, each questionnaire to be delivered to a specific stakeholder category (OAMs and MPs) included other relevant elements useful for the ESEF evaluation according to the TDA requirements, and structured into four different sections reported as follows:

e) Section I: Current electronic reporting practice
f) Section II: Views on future ESEF reporting
g) Section III: Identification of potential costs of various options for ESEF
h) Section IV: Identification of potential benefits of various options for ESEF

2.3 Data cleansing

After the collection, data screening was necessary in order to detect and correct inaccurate input.

2.4 Data analysis

Following data collection and cleansing, the CBA has been performed. Precisely, data gathered from the questionnaires was the input for the model and the total value of costs and

benefits has been calculated summing all the values of the costs and benefits subcategories resulting from the responses to the questionnaires.

Costs have been quantified in economic terms according to the calculation rules defined by the model, in particular:

- for the total amount of "**One-off costs**" (IT, Staff, Consultancy, Process and Other), the point value has been considered for the analysis on the basis of the actual figures provided by respondents;
- for the total amount of "**Ongoing costs**" (IT, Staff, Outsourcing, Process and Other), the NPV of the point value has been considered for the analysis on the basis of the actual figures from respondents. Ongoing costs were established on the basis of a 5 year-period and a discount rate of 4%;
- the quantification of total costs for extension and data quality have been performed according to the calculation rules specified below.

Savings and benefits were calculated on the basis of the model specified in the tables 5 and 6.

Table 3 Scoring rules - Costs for Extensions

	Costs for Extensions (in '000 €)									
	Level of Costs					Level of Savings				
Value range (in € '000)	>500	<500 and >250	<250 and >100	<100 and >50	<50	<50	<100 and >50	<250 and >100	<500 and >250	>500
CBA score (average value)	500	375	175	75	25	25	75	175	375	500

Regarding extension costs, the respondents were asked to provide an evaluation of the costs sustained for each subcategory by flagging the corresponding range (first row in the table above). For the purpose of the CBA, these ranges have been converted into a point figure calculated as the average value of the range (second row in the table above).

The same rules process applies to the scoring of the answers on data quality costs as illustrated below.

Table 4 Scoring rules - Data Quality Costs

	Data Quality Costs (in '000 €)[28]							
	Level of Costs				Level of Savings			
Value range (in € '000)	>50	<50 and >25	<25 and >1	0	0	<25 and >1	<50 and >25	>50
CBA score (average value)	50	37.5	13	0	0	13	37.5	50

The results of this process are overall values for each respondent of the costs for the different technological options.

The benefits have been quantified according to the calculation rules defined by the model and reported in the table below:

Table 5 Scoring rules - Benefits

	Level of Benefits					Level of Qualitative Costs				
Qualitative information	Very High	Medium High	Medium	Medium Low	Low	Low	Medium Low	Medium	Medium High	Very High
CBA Score	5	4	3	2	1	-1	-2	-3	-4	-5

Specifically, respondents were requested to provide an evaluation of the benefits arising from the different technological options using a qualitative scale, as illustrated in the table above (first row of the table). The answers were converted into the corresponding numerical value (second row of the table) to enable calculations and comparisons.

[28] Data quality costs are split into one-off and on-going costs and for the latter the NPV of the point value has been considered for the analysis

The minimum and maximum score that can be assigned to each benefit category are reported as follows:

Table 6 Minimum and Maximum scores to be assigned

Benefit category	Minimum score achievable	Maximum score achievable	Applicable to
Information improvement	**-20**	**20**	
Data Extraction	-5	5	OAMs – Issuers - Users
Accessibility to data	-5	5	OAMs – Issuers – Users
Comparability of data	-10	10	
Standardization	*-5*	*5*	OAMs – Issuers – Users
Harmonization	*-5*	*5*	Issuers – Users
Data quality	**-5**	**5**	Issuers
Technological facility	**-20**	**20**	
Implementation Easiness	-5	5	OAMs – Issuers – Users
Interoperability/reusability	-5	5	Issuers – Users
Reduction of reporting burden	-5	5	Issuers
Process simplification	-5	5	OAMs - Users

The final evaluation of costs and benefits for the ESEF development has been obtained by calculating for each technological option the median **of total costs and total value of benefits** provided by the considered respondents. In order to address the significant differences in the implementation cost faced by issuers, ESMA separated the issuers into two categories: bolt-on and built-in.

To evaluate the different scenarios for the ESEF implementation according to the objectives of the TDA, namely, obtaining the minimum level of costs and the maximum level of benefits for all the stakeholders involved, each technological option has been evaluated by considering:

a) Costs and estimations resulting from the questionnaires responses;
b) Benefits estimation resulting from the questionnaires responses;
c) Comments expressed by the respondents.

III. Views on future ESEF reporting

The TDA considers that the implementation of “a harmonised electronic format for reporting would be very beneficial for issuers, investors and competent authorities, since it would make reporting easier and facilitate accessibility, analysis and comparability of annual financial reports”.

The stakeholders’ views on the relevant aspects of taxonomies, extensions, impacts and benefits arising from a structured electronic reporting format were investigated and the results summarised in the following tables.

Table 7 Demand in the market for a structured reporting format

Is there a real demand in the market for a structured reporting format?	*Yes*	*Partially*	*No*	*No answer*
	14	10	9	1

Overall, demand for a structured reporting format is clear for central banks, business registers and stock exchanges but less clear for issuers and analysts. Most analysts use data provided by data integrators, whose data are provided by structured reports. Therefore, some analysts may not be conscious of these facilities.

The respondents which considered that there is a demand for structured reporting believed there are benefits in comparing data, as the current format is not comparable among issuers and among different countries. This would enable efficient and timely input of data into financial valuation models, higher benefits for internal purposes (e.g. reduce the cost for manual input), data check and validation, search functions, extraction and broader use (e.g. electronic treatment of data with an Excel spreadsheet). Listed banks consider that convergence of all types of reporting is needed, because diversity increases the structure and IT expenses.

Some respondents answered “partially” as they considered that the current non-structured format was sufficient and that simple improvements would be sufficient.

The respondents which consider that there is no demand believed that neither professional or institutional investors, nor analysts, nor individual shareholders had asked for structured electronic reporting. They believed that an additional intermediary tool will remove information from its context. In their view, the automatic production of data is not an adequate manner to generate meaningful information. Such technologies are not valid for

disclosing additional information or explanatory notes on the elements presented on the face of the financial statements. Information can also dismembered or presented out of context. IFRS are based on principles and can be applied and presented in various manners, thus reducing the comparability. Comparison has its inherent difficulties because it must go beyond the figures to understand the context for getting the right conclusions. Therefore, users could be misled that the data is comparable. Additionally, respondents commented that the specific information requested by investors is mostly qualitative and numbers can be easily managed without an electronic reporting format and pointed out that such demand may come mainly from quantitative asset managers, or companies providing data to third parties (Bloomberg, Reuters, etc.).

Potential benefits and potential risks

Some respondents believed that the ESEF would facilitate the access of issuers to regulated markets.

Divergent views were expressed on the adoption of this requirement by SMEs as a new reporting method. Some respondents feared this would lead to additional costs and hinder access to regulated markets. However, other respondents believed that SMEs currently lack visibility and electronic reporting will strengthen the issuer's ability to access regulated markets. For that reason, as large companies have already a large access to regulated markets, they may have less benefit than SMEs in this respect.

On the risk side, respondents considered that the ESEF will be an operational and costly burden for issuers, considering that non-structured electronic format already provides relevant information. The following risks were identified:

- Instability of IFRS;

- Standardization of narrative information;

- Inexistence of taxonomy for national GAAP for preparing statutory financial statements;

- Lack of flexibility of a structured electronic solution, which could lead to excessive standardisation of data or a rule-based approach, and render communication inflexible and not adapted to the specific characteristics of the company;

- Responsibility issues related to the consequences of using unsuitable taxonomies or languages that would not reflect the substance of their disclosure;

- Effects on the overall architecture of the IT system.

Table 8 Benefits to data accuracy and data validation processes/controls [29]

	No	*Partially*	*Yes*
Do you believe that the use of a structured electronic format would bring benefits to your data accuracy processes/controls?	8	1	12
Do you believe that the use of a structured electronic format would bring benefits to your data validation processes/controls? [7]	8	1	12

Twelve respondents agreed that the use of a structured electronic format would bring benefits to data accuracy processes/controls, while eight MPs disagreed. Those respondents, that did not find any benefit accruing to the data accuracy process, pointed out that no electronic format can replace manual checks before financial data is published, as the issuer is liable for its disclosure. One issuer expected no benefits in terms of data accuracy processes and controls due to its preference for a bolt-on approach. On the other hand, one user observed that fully automated controls on XBRL data are provided "out of the box" using taxonomy design and XBRL formula-based business rules, being no setup cost for issuers. Any bolt-on service would provide both data accuracy and data validation controls without extra cost. Any manual controls (fully-manual or hybrid) would result in persistent quality issues and would impose costs which could be likely to fall in the range of € 10,000-15,000.

Two participants agreed on the fact that benefits would arise partially, with the extent that this structured electronic format should be compatible with different reporting tools and other regulator/supervisors (e.g., EBA, ECB, etc.) and limited to the data accuracy but not to the process.

However, the significance of this data is quite low, given the large number of MPs that did not provide an answer to this question (13 out of 34).

With respect to the benefits of the data validation process/controls, the results are exactly the same as those concerning data accuracy. 12 respondents believe that some benefits may arise from the use of a structured reporting format, while 8 issuers stated that no such benefits are detected.

[29] *10 Users out of 12 did not provide an answer to this question. Therefore, these results mainly refer to Issuers.*

XBRL was indicated as the technology involving the least changes with the existing taxonomy, although several respondents were unable to answer this last question due to lack of information.

The majority of the respondents currently use IFRS taxonomy for consolidated financial statements and National GAAP for separate financial statements.

Table 9 Approach for the setup of the taxonomy

What approach would you prefer for the setup of the taxonomy?	*Use of the IFRS taxonomy, as issued by the IFRS foundation and endorsed by the EU*	*Use of the IFRS taxonomy embedded in the RTS by ESMA*	*Develop a new taxonomy at EU level based on the Accounting Directive and embedded in the RTS by ESMA*	*Other*
	24	4	3	3

The "use of IFRS taxonomy as issued by the IFRS foundation and endorsed by the EU" has been indicated as the preferred approach by the majority of MPs[30].

Table 10 Use of extensions

Do you believe it useful to allow companies to use extensions?	*Yes*	*No*	*Partially*
	21	4	9

The majority of respondents believed that allowing issuers to use extensions is useful and that the taxonomy should enable constrained extensions. Nevertheless, the strong preference for the use of extension is limited to the issuer subcategory, as the opinions of users were equally split across the 3 alternatives. Some respondents claim that the use of extensions challenges standardization and comparability, but admitted there are specificities in every sector that justify the use of extensions as a key to understanding the business-model and a company's financial situation and performance. One user observed that national extensions will reduce comparability but will have no cost impact on individual companies, whereas multinational groups will see staff costs associated with support for multiple national extensions. However, iXBRL supports "part tagged, part untagged" documents that allow filers to mitigate the costs of developing entity-specific extensions.

[30] *Please note that the other two options, the use of the IFRS taxonomy embedded in the RTS by ESMA and the development of a new taxonomy at EU level based on the Accounting Directive and embedded in the RTS by ESMA have found larger consensus among Users. In fact, these were the preferred alternatives for 3 and 2 Users respectively out of a total of 12 respondents.*

Most issuers considered that companies should have the opportunity to deliver additional information based on their own specificities. Structured reporting should allow understanding better the business model and the financial situation of the companies. This should be even more necessary for large issuers with complex accounting policies.

Respondents who disagreed considered that extensions reduce comparability, are difficult to manage and limit the possibility to develop cheap automated solutions for filing financial statements.

Table 11 Taxonomy to be implemented

Which kind of taxonomy would you prefer to implement for the ESEF?	*With constrained extension*	*Full extension allowed*	*Minimal taxonomy*	*Other*
	13	10	7	4

With respect to the taxonomy, the results differed between issuers and users. A majority of users expressed a preference for constrained extensions (7 out of 12 respondents), while a number of issuers pointed full extension as their preferred alternative (9 out of 22 respondents) [31].

Audit

Overall, the majority of the respondents believed structured electronic format adopted for the ESEF should be audited, as shown in the table below:

Table 12 Audit of electronic financial statements

In the case where ESEF would require a structured electronic format, do you believe that it should be audited?	*Yes*	*No*	*Partially*
	21	9	4

The majority of Users pointed out the need for auditing electronic financial statements (8) to ensure data integrity and the responsibility of the relevant actors.

The majority of those who indicated that no audit should be conducted are Issuers (6). They considered that it would be difficult to audit a structured file. The information presented would

[31] *One User expressed a preference for the full extension taxonomy, 2 for a minimal taxonomy and 2 indicated Other. 6 Issuers expressed preferences for constrained extensions, 5 for minimal taxonomy and 2 for Other.*

be dismembered or presented out of its context. The respective responsibility of the issuer and the auditor would also be difficult to establish. The comments also highlighted that the complexity of the process implied that audit would be extremely costly.

IV. Cost-Benefit Analysis - Results

4.1 Respondents analysis

In order to provide evidence of the significance of data resulting from the responses to the questionnaires and to ensure their correct interpretation, this section illustrates the results of the analysis of the data sample.

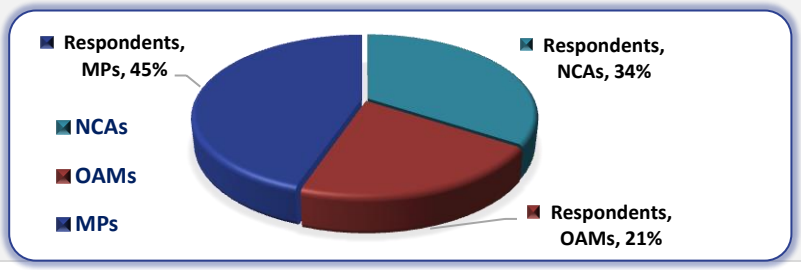
The ESEF questionnaires have been sent to three different categories involving a total of 484 stakeholders. 76 participants out of 484 submitted a complete questionnaire, resulting in an overall response rate of 16%. The differences in the response reflect a composition of the respondent's sample, which is significantly different from the selected sample. The sample of participants addressed by the questionnaires was composed of 28 NCAs, 28 OAMs and a significant number of MPs while the number of respondents was 26, 16 and 34, respectively.

The overall response rate (16%) is in line with the results obtained in similar surveys. Nevertheless, while the OAMs and NCAs questionnaires achieved a satisfactory response rate, a very narrow coverage has been registered for the MPs. Furthermore, only 14 out of 220 targeted issuers provided valid responses to the specific questions about costs, which comes to an even lower response rate (only 6.8%). The small number of answers collected does not provide a complete picture in terms of costs for the ESEF development and the large differences among the answers prevent ESMA from drawing strong conclusions. Therefore, this issue should be carefully taken into consideration when interpreting the results.

Figure 4 Distribution of respondents Audit of electronic financial statements

The sample of participants that submitted the questionnaire is composed of 26 NCAs, 16 OAMs and 34 MPs. The latter is the most represented category in the sample (45% of the total number of respondents), while NCAs and OAMs categories account for 34% and 21%, respectively.

Stakeholder category	Respondents	Percentage
NCAs	26	34%
OAMs	16	21%
MPs	34	45%
Issuers	*22*	*29%*
Users	*8*	*11%*
Others	*4*	*5%*
Total	76	100%



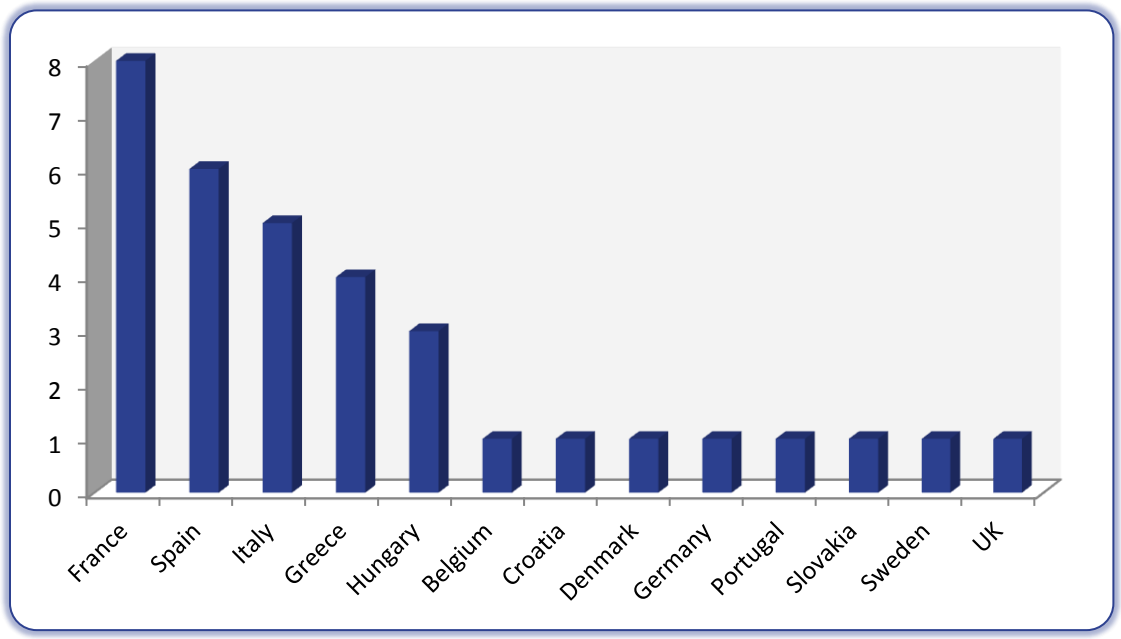
To enable a deeper understanding of the results of the analysis, the distribution of the responses was assessed among the different stakeholder categories.

4.1.1 Respondents analysis - Market Participants

The MPs questionnaire has been sent to a significant number of MPs and 34 responses were received.

The low level of responses achieved by the MPs may be due to the scarce knowledge of some technological options and the Issuers' inability to perform an assessment of the implementation of each technological option. Among the respondents, only 13 countries with at least one MP were represented.

Figure 5 Distribution of MPs respondents by country



France, Spain and Italy are the most represented countries, accounting for 56% of all responses. Germany and UK, the largest European markets which account for 35% of the EU's total number of issuers, are under-represented in the analysis, with only one MP per country submitting the questionnaire. Therefore, the results of the CBA should take into consideration that the potential impacts arising from the ESEF implementation could have been underestimated/overestimated as data on these large markets were missing.

Additionally, the MPs that submitted the questionnaire were further divided into three categories of respondents, representing issuers, users and other respondents.

Table 13 Number of responses by MP category

MP category	Respondents
Issuer of securities	**22**
Favouring a built-in approach	9
Favouring a bolt-on approach	13
Users	**8**
Business register	*3*
Professional investor	*3*
Regulator	*2*
Others	***4***
Auditor	*2*
Standard Setter	*1*
Stock exchange	*1*
Total	**34**

Issuers of securities account for the largest share of respondents with 22 submitted questionnaires, while users account for 8 respondents and 4 other stakeholders are represented in the sample. Additionally, the number of respondents within each subcategory is very low and, therefore, they will be aggregated and analyzed as “users & others” in the following sections of the document. Cost estimates have been provided by a limited number of issuers (15), whereas most users (10) and all issuers have given their assessment of benefits.

4.1.2 Respondents analysis - Officially Appointed Mechanisms

The OAMs questionnaire has been sent to 28 OAMs and 16 responses were received, leading to a 58% response rate. This response rate can be considered satisfactory.

4.1.3 Respondents analysis - National Competent Authorities

The NCAs questionnaire has been sent to 28 NCAs and 26 responses were received, leading to a 93% response rate. This response rate can be considered very satisfactory.

4.1.4 Respondents analysis - Sample of data used to perform the Cost-Benefit Analysis

This CBA has been performed after refining the collected data in order to ensure data completeness (i.e., link between answers and questions), accuracy (i.e., quality/meaningfulness of answers) and consistency (i.e., logical interrelation between answers is respected). Any invalid data or inaccurate/incomplete answers were discarded and/or amended and the final sample used to perform the CBA is composed as reported below:

- the costs evaluation has been based on the questionnaires submitted by 35 respondents (14 Issuers, 7 NCAs and 14 OAMs);
- the benefits evaluation has been based on the data provided by 50 respondents (22 Issuers, 12 Users & other respondents and 16 OAMs), while the data provided by the NCAs have not been scored with the CBA data model[32] but evaluated qualitatively.

The table below briefly summarises the data mentioned above:

Table 14 Sample of data used to perform the CBA

Stakeholder category	Costs respondents	Benefits respondents	Total respondents
NCAs	7	-	26
OAMs	14	16	16
Issuers (built-in)	9	8	9
Issuers (bolt-on)	5	14	13
Users	0	**8**	**8**
Other		**4**	**4**
Total	**35**	**50**	**76**

[32] *The CBA data model has been drafted after the launch of the NCAs questionnaire and the structure of the latter was not fully aligned with the model*

4.2 Collected Data Analysis

This section illustrates the main results from the survey, which were further integrated with data obtained from the desk research.

4.2.1 Comparative analysis - Costs

Within each stakeholder category, the analysis showed no significant differences among the options considered for the ESEF development. Large divergences were detected in the assessment of the three stakeholder categories, as each of them performs different activities along the financial reporting process.

The minimum and maximum values of the collected data set are summarized in the table below.

Table 15 Value ranges (in € '000) by technological option and stakeholder category

Stakeholder category	Technological options							
	XBRL		iXBRL		XML		XHTML	
	Min	Max	Min	Max	Min	Max	Min	Max
NCAs	78	2,027	78	2,027	45	1,307	45	1,307
OAMs	188	2,728	186	3,228	365	6,384	188	6,073
Issuers (built-in)	340	12,132	375	12,132	375	12,132	406	12,132
Issuers (bolt-on)	406	1,753	406	2,259	406	2,782	406	3,282

As shown in the table, data span on a wide range of values. NCAs expressed an evaluation ranging from a minimum of € 45,000 (for XML and XHTML) to a maximum of € 2 million (XBRL and iXBRL) for the implementation of the technology, while OAMs estimated a minimum expense of € 186,000 for the implementation of iXBRL to a maximum cost of € 6 million for the adoption of XML.

Issuers provided the most expansive range of figures for the evaluation. The analysis of their answers revealed that divergent figures were mainly due to a different understanding of the approach chosen by issuers and whether they preferred a built-in or a bolt-on approach. Value estimations ranged from € 400,000 to € 1.7 million for issuers who chose the bolt-on approach and decided to only comply with the minimum regulatory requirements. Value estimations ranged from € 300,000 to € 12 million for issuers which voluntarily chose to adopt a built-in approach and undertake a large transformation of their information systems.

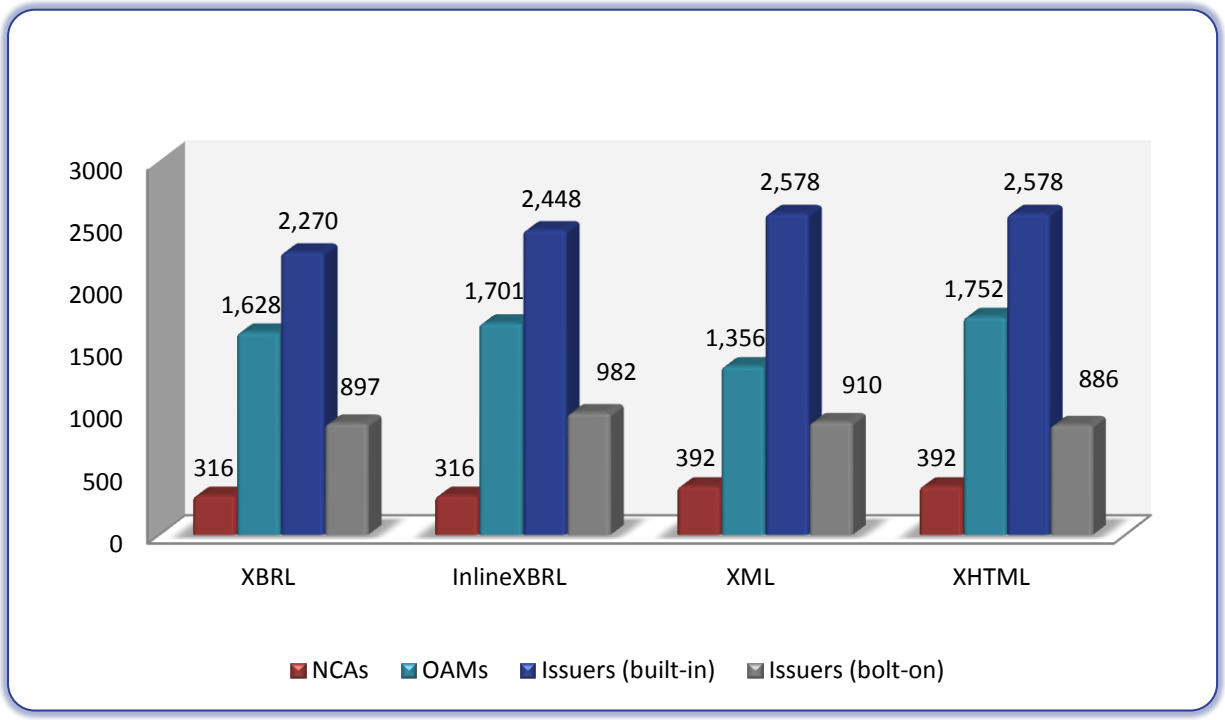
A number of issuers found it extremely difficult to provide the costs of solutions not yet developed whose scope had not yet been defined (main financial statements, notes, management forms) and whose technology and taxonomy should be clarified. 10 out of 22 issuers did not provide any estimates for one-off and on-going costs and as such were unable to decide whether the option should be bolt-on and built-in.

The bolt-on approach implies the addition of a final process step to generate electronic filings. MPs considered it was more flexible, adaptable, affordable and sufficient for financial reasons, as issuers could not afford to develop an extensive and expensive new financial information system. Respondents reported that effective bolt-on solutions are available in the market and do not impose highly expensive setup costs.

The built-in and integrated approach implied to significantly reorganise the processes and systems of issuers in a "built-in, integrated" approach to electronic reporting. One respondent considered that financial institutions will have to rethink their systems in order to fulfil the different reporting requirements to the different regulators.

Given the wide dispersion of data and the need to avoid situation whereby abnormally large or small observations affect the evaluation, the analysis was based on the comparison of the median value of the total costs for the implementation of different technological options.

Figure 6 Median of Total Costs in € '000s - Stakeholders/Technological options



The costs to be incurred by issuers for the implementation of the ESEF mainly relate to the conversion and the submission of financial reports in the required format, while OAMs and NCAs[33] carry-out the activities of storing and analysing data. Therefore, Issuers will bear the highest costs among all stakeholder categories, and this condition is reflected in the evaluation of the different options, as shown in the graph. The overall median estimate of the total costs for the different technological options expressed by the NCAs is significantly lower (€ 316,000 - € 392,000) as compared to the figures provided by the OAMs (€1.3 million - € 1.7 million) and issuers provided the highest values for the built-in approach (€2.3 million - € 2.6 million).

It is worth noting that the use of the average would have widened the range of values expressed by the different stakeholder categories. In fact, the average values of the total cost for the ESEF implementation expressed by issuers range from a minimum of €1 million for the bolt-on approach to a maximum of € 3.6 million for the built-in approach, whereas NCAs and OAMs provided a minimum and maximum evaluation of € 481,000 - € 630,000 and € 1.5

[33] *Please note that NCAs were not requested by the questionnaire to provide any evaluation of the data quality costs and costs for extension.*

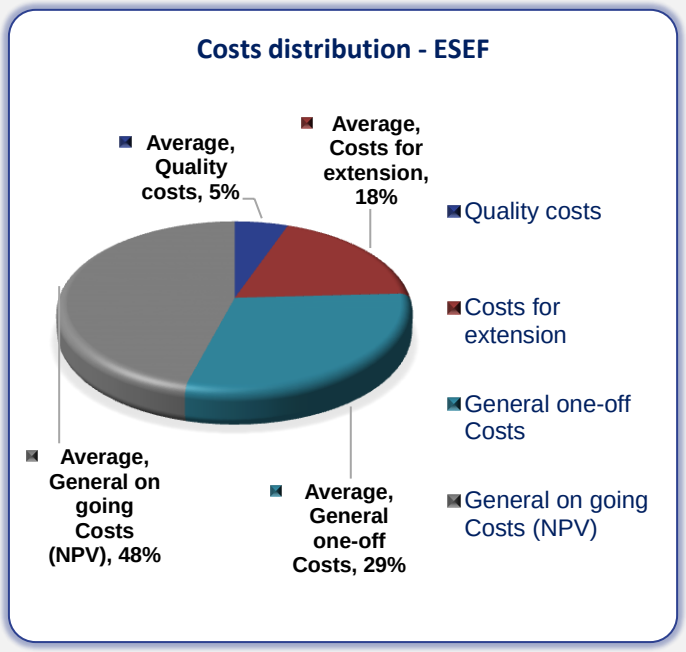
million - 1.9 million respectively. This finding can be explained by the answers of some outliers in the MPs distribution that are not reflected when calculating the median value.

4.2.2 Analysis by technological option - Costs

The following section provides a detailed illustration of the costs of the different technological options resulting from the aggregation and analysis of the assessment provided by each stakeholder category. The following graph illustrates the cost distribution for the ESEF implementation and provides an average cost for the different technologies, as no significant differences in the repartition were detected among the three stakeholder categories, as shown in the table below.

Ongoing costs have been calculated on the basis of the Net Present Value (NPV) of 5 years of costs.

Figure 7 Costs distribution - ESEF



On-going costs account for the largest share of total expenses, followed by one-off costs and costs for extensions. Quality costs represent a smaller share, from 5% to 6% of total expenses depending on the technology considered.

Technology solution	Costs for Extension	Quality costs	One-off costs	Ongoing costs (NPV)
XBRL	18%	6%	31%	45%
iXBRL	18%	5%	31%	46%
XML	17%	5%	29%	49%
XHTML	20%	5%	28%	47%

No significant differences occur among the stakeholder categories in terms of costs distribution for the ESEF development. The share of general on-going costs is slightly higher for XML than for the other technologies, while general one-off costs are higher for XBRL and iXBRL.

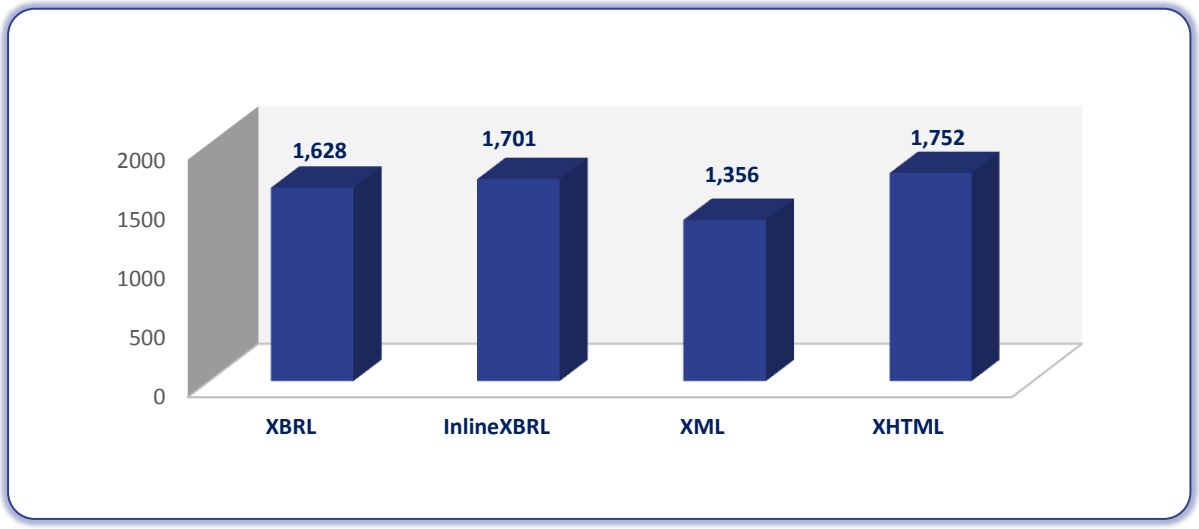
4.2.3 Analysis by Stakeholder category - Costs

In order to properly understand the costs data for the considered technological options, the evaluation provided by the different stakeholder categories must be analysed individually, as the three categories expressed significantly dissimilar value ranges. For this purpose, the evaluation of costs for the ESEF implementation has been broken down by stakeholder category.

4.2.3.1 Analysis of the OAMs questionnaire results

The current section illustrates the estimates of total costs for the ESEF implementation and the comparison among technological options resulting from the OAMs questionnaire. The following graph shows the median values of total costs for the different technological options expressed by OAMs.

Figure 8 Median of Total Costs in € '000 expressed by OAMs

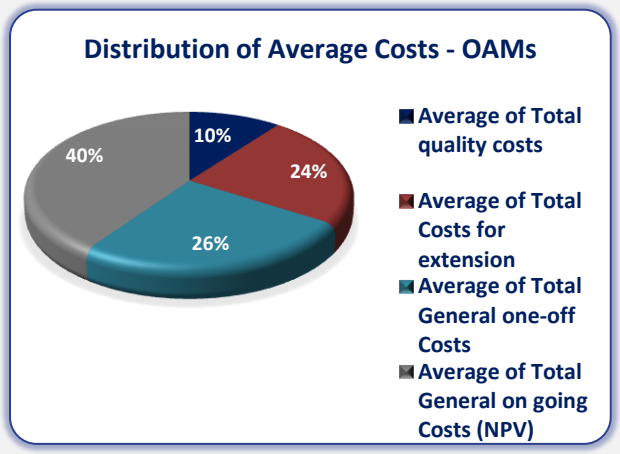


Among OAMs, XML is considered the most convenient solution at € 1.3 million, while XHTML seems to be the most expensive option at € 1.7 million. Overall, no significant differences can be observed among the different technologies and these results should be interpreted

taking into account that several respondents did not provide a quantitative assessment of the costs of the different technological solutions.

In order to investigate the impact of the different cost categories on the overall evaluation, the average[34] costs composition should be considered.

Figure 9 Distribution of Average Costs expressed by OAMs



In line with the previously illustrated average costs distribution for the ESEF, general on-going costs account for the largest share of total costs, followed by general one-off costs. Quality costs represent a larger share as compared to extension costs, and the two categories together account for one third of the total costs.

The composition and percentage ranges[35] for the costs subcategories expressed by OAMs are detailed as follows:

Table 16 Average costs expressed by OAMs (with distribution of reported estimates) - General Costs subcategories

General costs - OAMs			
66% (64%-68%)			
One-off	26% (24%-28%)	On-going (NPV)	40% (38%-42%)
IT	(10%-14%)	IT (annual cost)	(3%-4%)
Staff	(3%-4%)	Staff (annual cost)	(1%-2%)

[34] *The figure is obtained by averaging the cost compositions observed for the different technological options.*
[35] *Each range is calculated as a percentage of the total cost*

Process	(3%-4%)	Process (annual cost)	(2%-3%)
Consultancy	(4%-5%)	Outsourcing (annual cost)	(1%-2%)
Others	(0-1%)	Others (annual cost)	(0-1%)

Within general costs, as expected IT expenses account for the largest share (10%-14%), while Staff, Process and Consultancy/Outsourcing costs have a lower impact on the total value, both at initial and subsequent stages. While the contribution of Process, Staff and Other expenses remains stable over the period following the implementation, the share of IT category experiences the largest reduction after the initial stage.

Table 17 Average costs expressed by OAMs (with distribution of reported estimates) - Data Quality Costs subcategories

10% (10%-14%)	
One-off	(10%-14%)
On-going (NPV)	-
On-going	-

Table 18 Average costs expressed by OAMs (with distribution of reported estimates)- Extension Costs subcategories

24% (22%-24%)	
IT	(3%-4%)
Staff	(6%-7%)
Process	(6%-7%)
Outsourcing	(3%-4%)
Others	(3%-4%)

Data quality costs account for a significant share of total expenses (10%-14%).

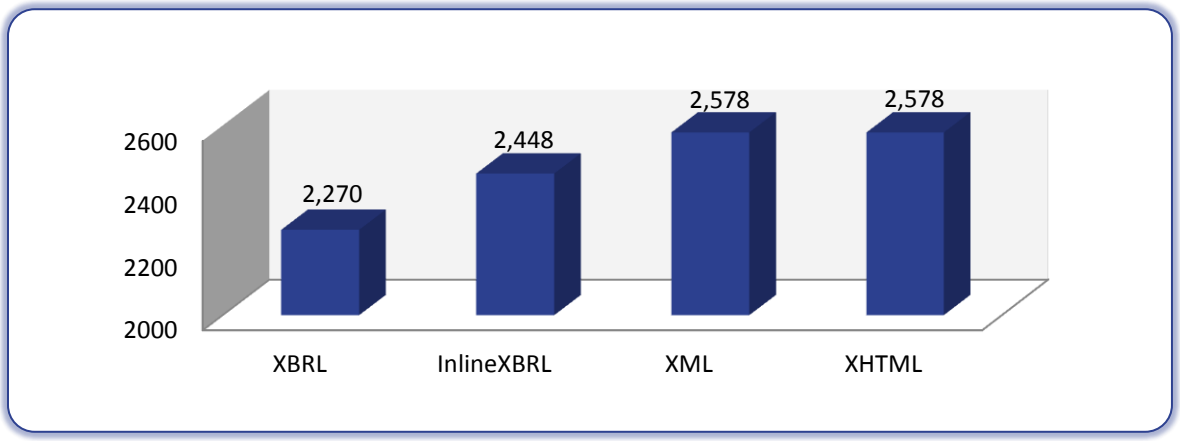
According to the OAMs, the extension costs account for a significant portion of the total expenses, although no relevant differences can be observed in terms of composition (IT, Staff, Process, Outsourcing and other costs are almost equally affecting the total value of expenses).

4.2.3.2 Analysis of the MPs questionnaire results

The current section illustrates the estimates of total costs for the ESEF implementation and the comparison among technological options resulting from the MPs questionnaire. Since responses on the quantitative evaluation of the different technological options are limited to the issuers' subcategory (the question was not mandatory for the other respondents), only the latter's results have been taken into account for the purpose of the analysis.

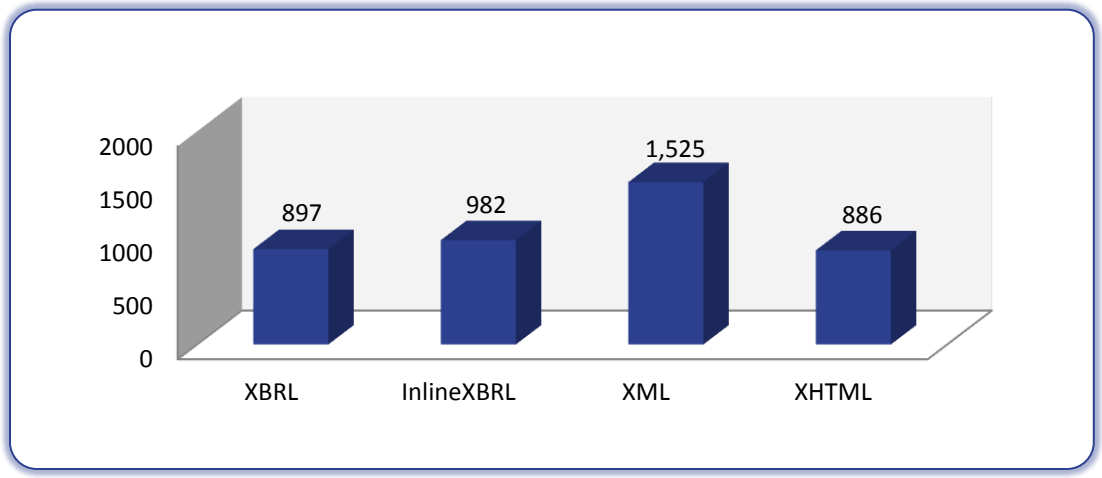
As previously illustrated, the cost evaluation expressed by issuers range from a minimum value of € 340,000 to a maximum value of € 12.1 million for the implementation of each of the considered options. Given the wide dispersion of data, the median value was used to perform the CBA to neutralize the effect of outliers on the figures provided. Furthermore, the following 2 graphs have been prepared according to the approach chosen by the issuers.

Figure 10 Median of Total Costs in €'000s expressed by issuers (built-in approach)



The assessment expressed by issuers which chose the built-in approach is relatively high, with XBRL being the least expensive option at € 2.2 million, and XML-XHTML evaluated as the most expensive alternative for a total cost of €2.5 million.

Figure 11 Median of Total Costs in €'000s expressed by issuers (bolt-on approach)



The assessment expressed by issuers which chose the bolt-on approach is much lower than the previous approach, with XBRL and XHTML being the least expensive option at about € 900,000, and XML evaluated as the most expensive alternative for a total cost of €1.5 million.

The distribution of the cost evaluation expressed by issuers for the different technological options is illustrated by the number of respondents whose answer fall in the considered range.

Table 19 Costs distribution per approach

Technological option	N. of responses per cost ranges (for a single Issuer favoring a built-in approach in '000 €)				
	400-1000	1000-2000	2000-4000	4000-6000	Over 6000
XBRL	4	1	1	2	1
iXBRL	4	1	1	2	1
XML	4	1	1	2	1
XHTML	4	1	1	2	1

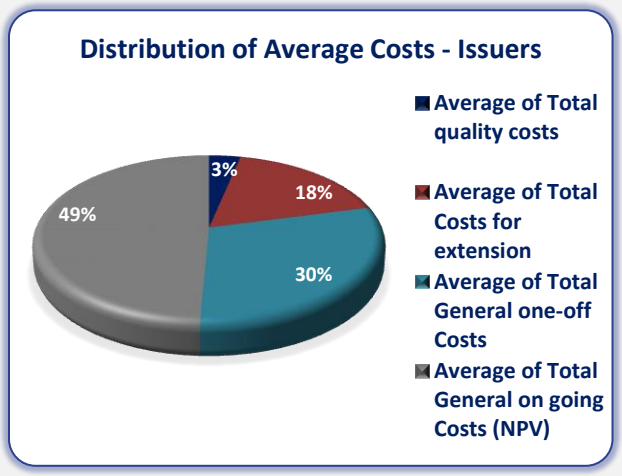
Technological	N. of responses per cost ranges(for a single Issuer favoring a bolt-on

option	approach in '000 €)				
	400-1000	1000-2000	2000-4000	4000-6000	Over 6000
XBRL	2	2	0	0	0
iXBRL	2	1	1	0	0
XML	2	1	1	0	0
XHTML	2	1	1	0	0

As shown in the table, the majority of Issuers estimate the costs for the different technological options in the range €400,000 to € 1 million, while among the other value ranges, responses were more equally distributed.

The overall distribution of average costs among the different categories is shown in the graph below.

Figure 12 Distribution of Average Costs expressed by Issuers



General on-going costs account for the largest share of total expenses, followed by general one-off costs. Extensions represent a smaller share of the total composition, accounting for 18% of the total costs.

Finally, quality is the less impacting cost category, accounting for only 3% of total costs.

The composition and percentage ranges[36] for the costs subcategories expressed by MPs are detailed as follows:

Table 20 Average costs expressed by MPs (with distribution of reported estimates) – General Costs subcategories

General costs - MPs			
79%			
One-off	30% (27%-31%)	On-going (NPV)	49% (47%-51%)
IT	(10%-14%)	IT (annual cost)	(3%-4%)
Staff	(5%-6%)	Staff (annual cost)	(2%-3%)
Process	(7%-8%)	Process (annual cost)	(1%-2%)
Consultancy	(2%-3%)	Outsourcing (annual cost)	(1%-2%)
Others	(2%-3%)	Others (annual cost)	(1%-2%)

Within General one-off costs, as for the OAMs, IT expenses account for the largest share (10%-14%), followed by Staff and Process costs. Consultancy and Others costs represent a significantly lower share of the total costs. Looking at the on-going costs, no significant differences can be observed among the different cost categories.

[36] *Each range is calculated as a percentage of the total cost*

Table 21 Average costs expressed by MPs (with distribution of reported estimates) - Data Quality Costs subcategories

Data quality costs - MPs	
3% (3%-4%)	
One-off	(0-1%)
On-going (NPV)	(2%-3%)
On-going	(0-1%)

Table 22 Average costs expressed by MPs (with distribution of reported estimates) - Extension Costs subcategories

Costs for extension - MPs	
18% (15%-19%)	
IT	(3%-4%)
Staff	(3%-4%)
Process	(3%-4%)
Outsourcing	(3%-4%)
Others	(3%-4%)

No relevant imbalances can be observed in the composition of data quality and extension costs.

Table 23 Impact on the overall risks related to each option

Could you evaluate the impact of the overall risks related to each different options?	Very low	Low	Medium	High	Very High
Option 1: XBRL	4	1	11	4	2
Option 2: Inline XBRL	3	1	11	5	2
Option 3: new European Standard based on XML	3	1	13	3	2
Option 4: new European Standard based on xHTML	4	0	12	4	2
TOTAL	14	3	47	16	8

Issuers believed that the main risk was linked to the implementation, but not to data accuracy. Among the different options, 3 issuers believed that the higher standardization of XBRL format allows more integrated validation rules that in turn limit the overall risks. They fear that having another format than XBRL would be costly and risky to maintain.

Therefore, the biggest data quality risks would arise from the new European standards, as the extension of the modelling mechanisms would be used to model and extend corporate financial data. It would duplicate the work put into the original XBRL, take a long time to

implement with no guarantee that the new mechanisms would at the end meet all the requirements.

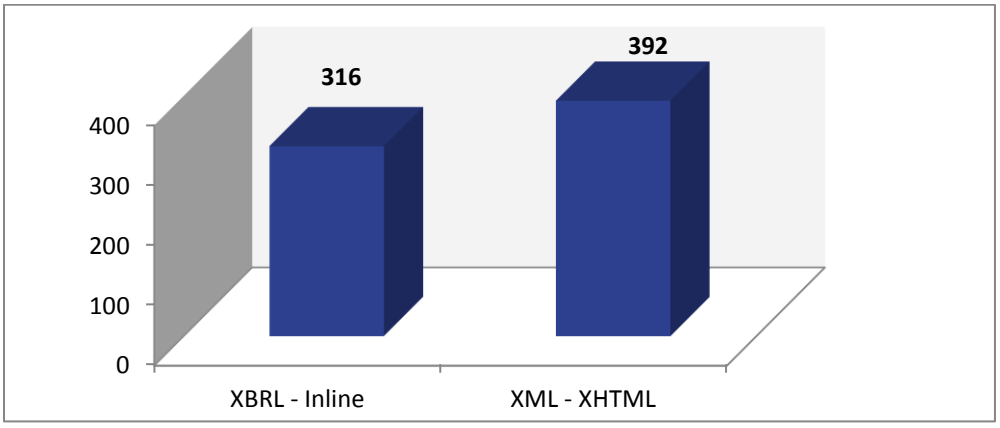
However given the low level of participation and the relatively small deviations in the expected risks related to each of the different options it is not possible to come to an unequivocal conclusion.

Qualitative appraisal expressed by MPs
Since these differences do not significantly discriminate among the different technologies, the results obtained from the responses to the questionnaires should take into account some general considerations expressed by MPs with respect to costs estimation. • Some respondents found it difficult to estimate costs without performing a previous assessment; • Some respondents considered their estimates rough and tentative, due to a lack of knowledge of the technology and taxonomy required to implement at this stage of the approach (bolt-on/built-in); • On the basis of their internal knowledge, some respondents considered it easier to estimate the costs related to XBRL implementation; • For some of the issuers that already use XBRL, this technological solution could represent the least expensive one. Of the issuers that do not use XBRL, one considered that the lack of internal knowledge would generate a high implementation cost in the first phase; • To make use of XBRL data directly, users will need to invest in desktop rendering tools. However, there are also a number of free XBRL financial analysis websites available which are based on published XBRL corporate data. iXBRL offers the additional benefit that, because XBRL data is already rendered in an XHTML wrapper, data can be shared with third parties who can view it without any special tooling. • Some concerns regarding the development of the taxonomies have been mentioned by different stakeholders that were not able to provide precise cost estimations.

4.2.3.3 Analysis of the NCAs questionnaire results

As shown by the comparative analysis, NCAs provided the lowest overall cost estimate of the different technological options among all stakeholder categories. The graph below shows the median of total costs expressed by NCAs.

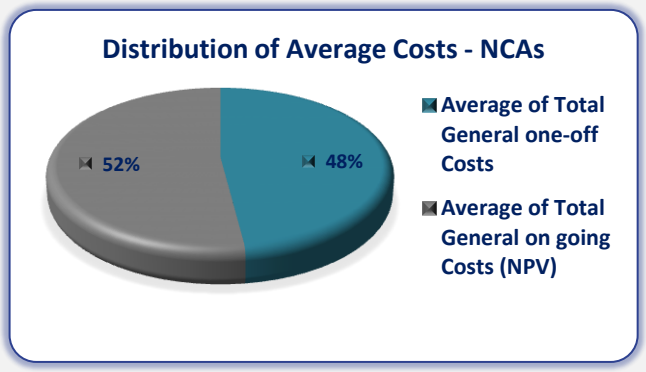
Figure 13 Median of Total Costs in € '000 expressed by NCAs



No significant difference in terms of costs was revealed among the technological options. As shown in the Figure 13, XML and XHTML are considered the most expensive solutions at € 392,000, while XBRL and iXBRL are the least expensive at € 316,000. It is worth noting that the respondents were asked to provide a single evaluation for XBRL and iXBRL, as well as for XML and XHTML.

The following graph illustrates the costs distribution resulting from the NCAs responses.

Figure 14 Distribution of Average Costs expressed by NCAs



The total expenses sustained by NCAs for the ESEF implementation would be almost equally represented by general one-off costs and general on-going costs.

Table 24 Average Costs expressed by NCAs (with distribution of reported estimates) - Data Quality Costs subcategories

General costs - NCAs			
100%			
One-off	48% (41%-49%)	On-going (NPV)	52% (50%-59%)
IT	(27%-31%)	IT (annual cost)	(3%-4%)
Staff	(3%-4%)	Staff (annual cost)	(5%-6%)
Process	(8%-9%)	Process (annual cost)	(2%-3%)
Consultancy	(2%-3%)	Outsourcing (annual cost)	(1%-2%)
Others	(0-1%)	Others (annual cost)	0-1%)

Within General one-off costs, IT accounts for the largest share (27% - 31%), followed by Process, while the other subcategories represent a significantly lower share of the total costs. Within the on-going costs, the NPV of Staff is the largest share.

Because of the structure of the questionnaire, no data are available on Data quality and Extension costs. Nevertheless, some respondents suggested that the adoption of XBRL or iXBRL for the ESEF might raise questions on the availability of the taxonomy and the development of extensions.

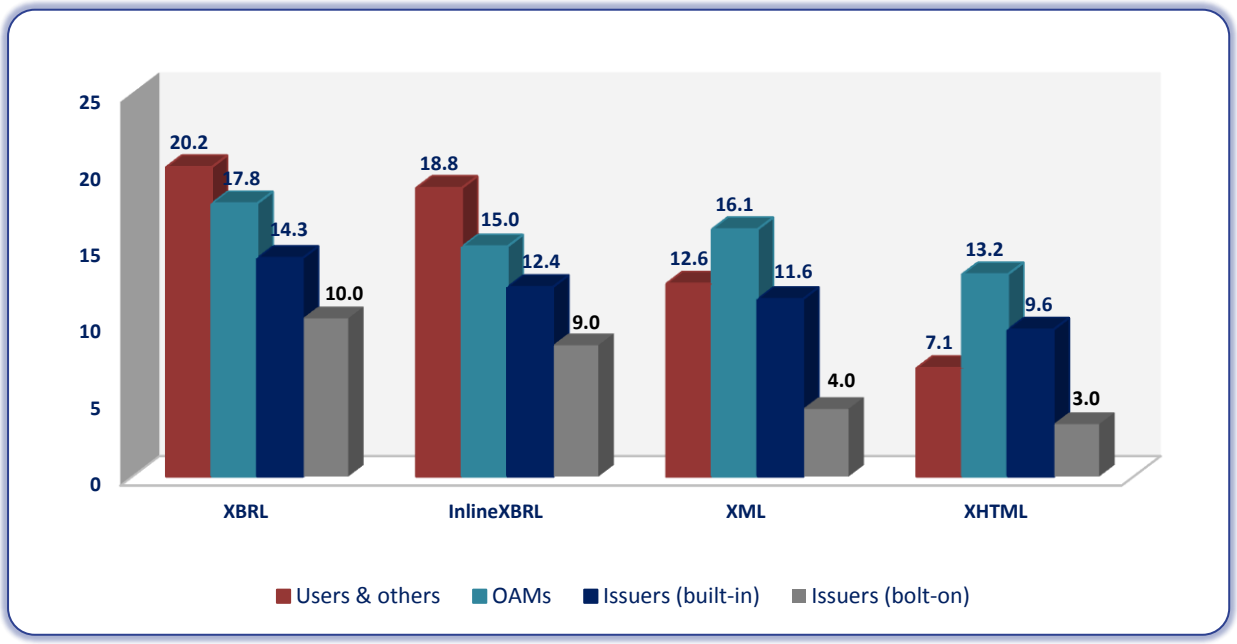
4.2.4 Comparative analysis - Benefits

This section provides a comparison of the benefits of the different technological options for each stakeholder category (NCAs, OAMs, market participants) as resulting from the analysis of the responses provided by the survey participants.

The analysis is based on the comparison of the average and median score of the total benefits for the implementation of the different technological options.

The scores are determined by converting the qualitative judgement expressed by the stakeholders into the corresponding figure to enable calculations and comparison (*please refer to Tables 05 to 08*).

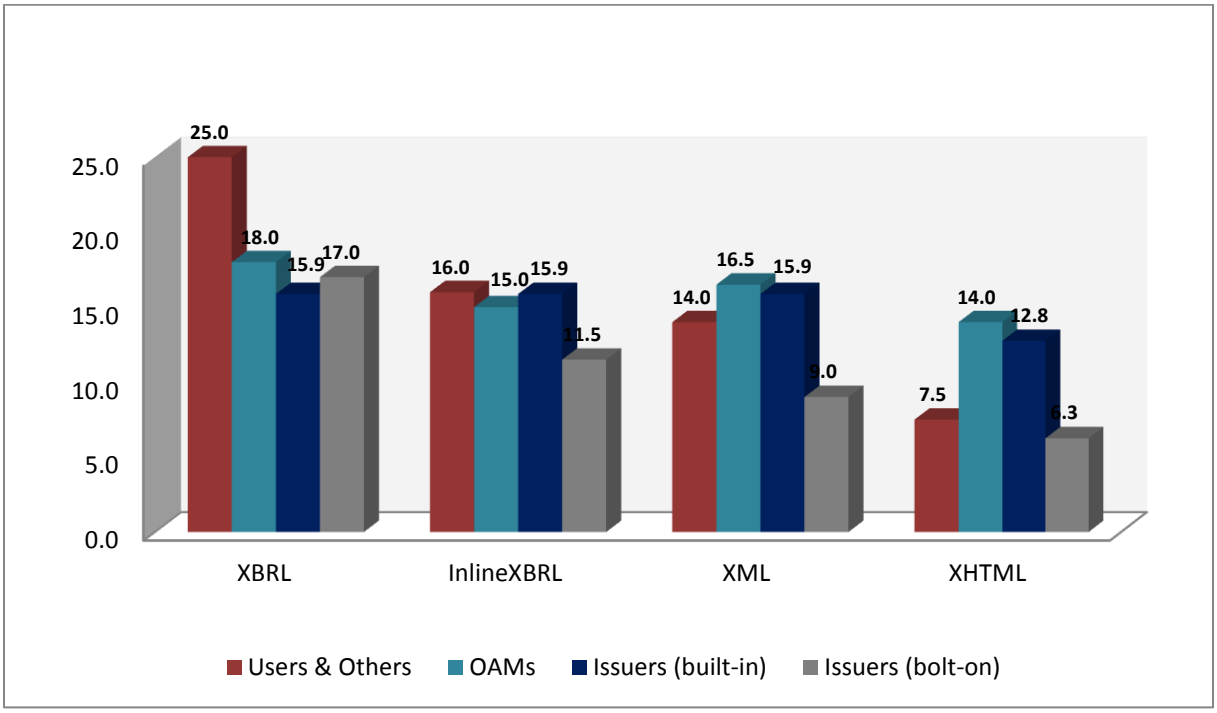
Figure 15 Average of Total Benefits (score) - Stakeholders/Technological options



Overall, the respondents of all three categories express a general preference for XBRL compared to the other options, while XHTML is considered the least valuable alternative.

Considering the evaluations provided by the three stakeholder categories, no significant differences can be observed between iXBRL and XBRL.

Figure 16 Median of Total Benefits (score) - Stakeholders/Technological options



The lack of significant differences among the different technologies is confirmed when comparing them using the median values. Nevertheless, the preference for XBRL as compared to iXBRL is stronger when considering median values, especially for the Users' category.

4.2.5 Analysis by Stakeholders category - Benefits

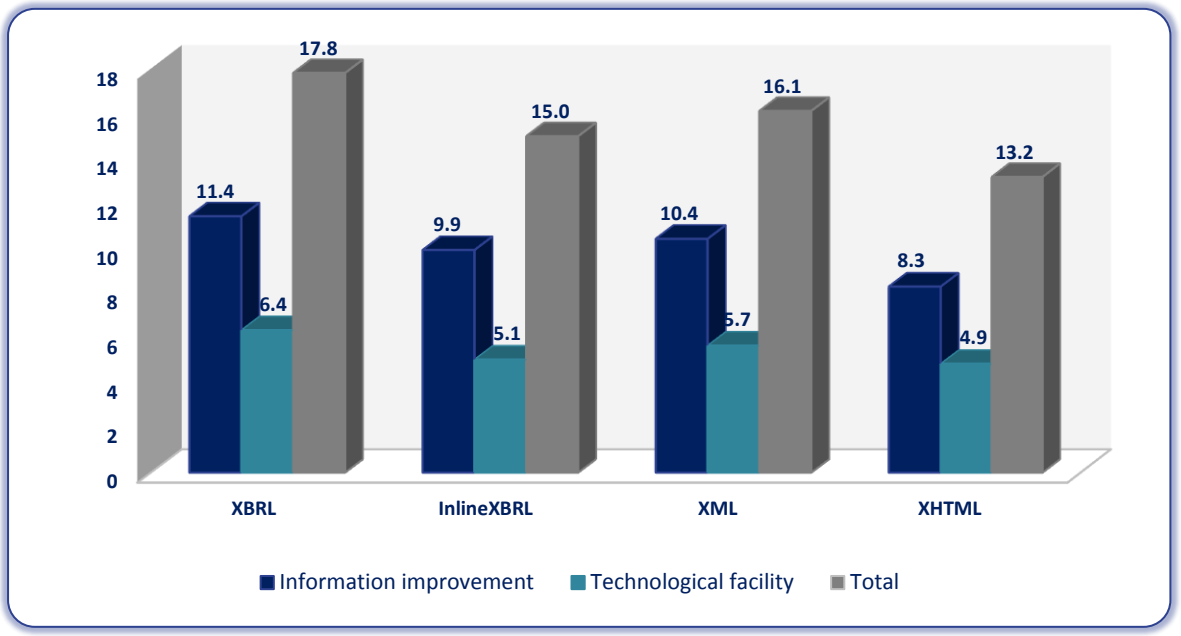
This section aims at illustrating the comparative evaluation of benefits of the different technological options for OAMs and MPs (issuers and users) as resulting from the analysis of the responses provided by the selected survey participants.

The analysis is based on the comparison of the average score of the **total benefits** for each technological option broken down into the main categories, namely information improvement, technological facility and data quality.

4.2.5.1 Analysis of the OAMs questionnaire results

This section illustrates the results of the benefits assessment conducted on the OAMs' responses. The average values of total benefits expressed by this selected category are reported in the following figure.

Figure 17 Average of Total Benefits (score) expressed by OAMs



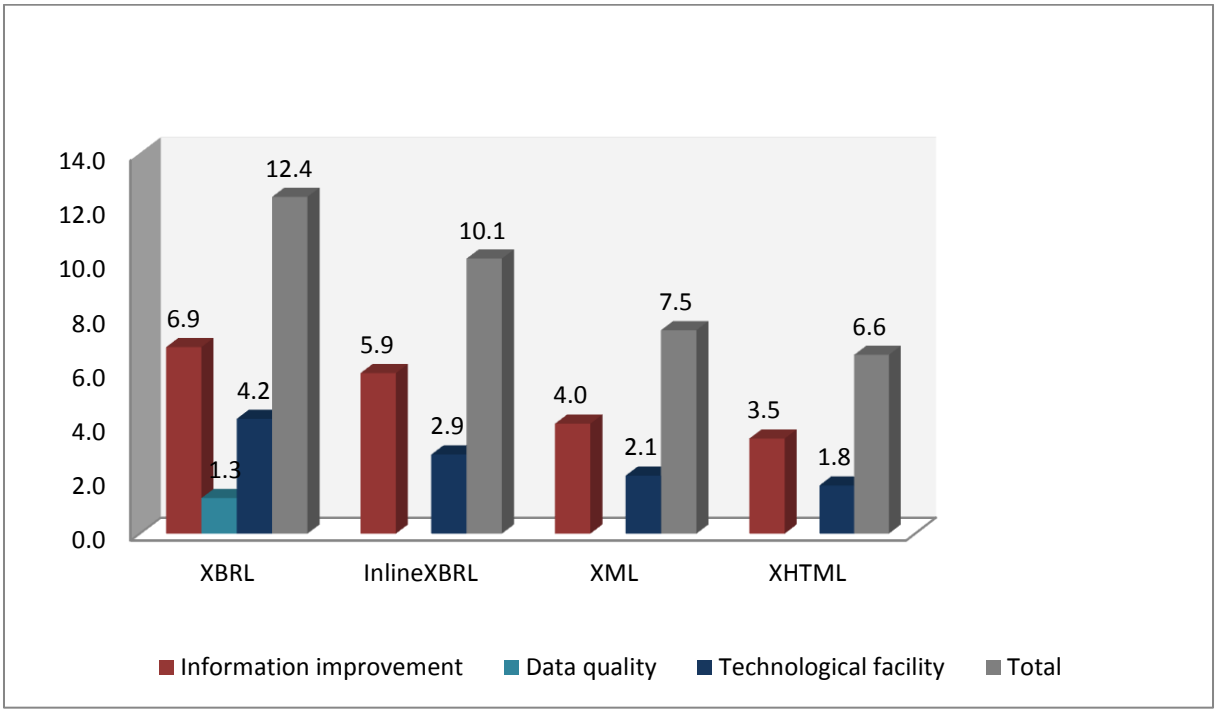
According to the estimated benefits, the OAMs seem to prefer XBRL for a total score of 17.8. This difference is due to a higher score obtained by XBRL compared to the other technologies with respect to both technological facility and information improvement.

It is important to note that the differences in estimated benefits among the considered technological options are relatively small; only the application of XHTML is expected to be significantly less beneficial than the other options. This conclusion can be drawn also considering each of the benefits subcategories, both technological facility and information improvement.

4.2.5.2 Analysis of the MPs questionnaire results

The results of the benefits assessment conducted among the different subcategories of MPs provide values reported below.

Figure 18 Average of Total Benefits (score) expressed by Issuers



The benefits evaluation expressed by issuers confirms the results obtained from the OAMs, with XBRL being the favourite option and XHTML appearing as the least attractive alternative.

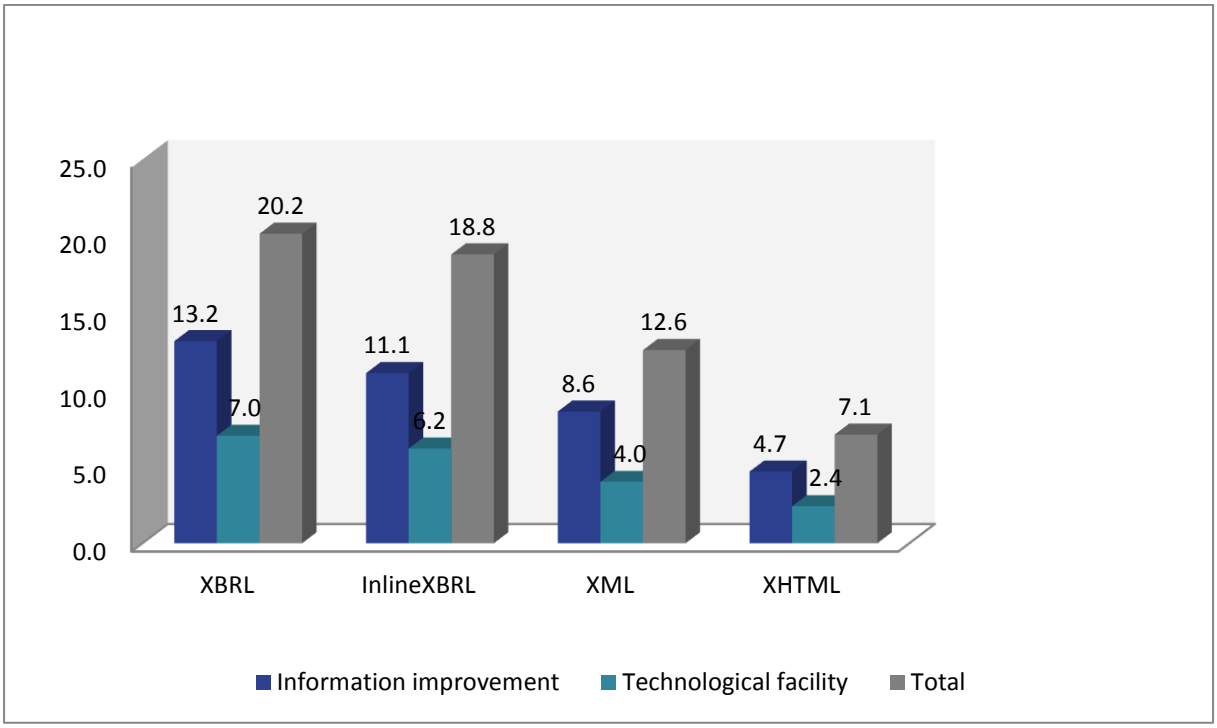
This difference is mainly due to the perceived advantage of XBRL for information improvement.

According to the issuers, the potential benefits of an automatic processing/extraction of structured financial data would be:

- Cost saving and simplification of extracting and comparing information.
- Faster validation for reported data, reduction of errors.
- Faster and more precise analysis
- Confidence on the data source for institutional investors.
- Enhanced analysis of information, based on improved availability.
- Promotion of cross-border investment may be achieved if the concepts used have a uniform meaning and the uncertainty that exists today for various concepts with the same meaning is avoided. This reduces lead times (administrative tasks) and allows more time for analysis.
- For institutional and retail investors: reduced cost for manual input of figures from paper and PDF. Better data quality arising from automated controls and checks.

- However, most respondents do not see added value for retail investors. To meet their specific needs, software should be available to view and analyse the electronic format in an easy way.

Figure 19 Average of Total Benefits (score) expressed by users & other stakeholders



For users, the benefits evaluation confirms the results obtained from the other categories with XBRL and iXBRL being the favourite options and XHTML appearing as the clearly least popular alternative. The difference is mainly due to a higher score obtained by XBRL compared to the other technologies with respect to information improvement.

Due to the small number of respondents, it was difficult to draw general conclusions on the benefits identified by every sub-category:

- Regulators - XBRL appears to be the preferred option with a total score almost twice the score expressed for the other technological options;
- Auditors - the scores of the different options are very close and no relevant difference can be inferred from the analysis;
- Business registers - iXBRL and XBRL are the preferred options, with related scores twice as high as XML and XHTML;

- Professional investors - XBRL is the most valuable option, but the scores of the different technological options seem to be very close and no substantial difference exists;
- Standard setter - iXBRL and XBRL are the preferred options with related scores twice as high as XML and XHTML. Furthermore, they consider that XHTML is expected to bring disadvantages rather than benefits.

Some respondents considered that XBRL is widely used on an international basis and would have the key advantage to provide similar reporting in Europe and in the United States.

iXBRL has the advantage to be more user-friendly for non-professional investors than XBRL. As it combines rendering and structured data, retail investors would find it easier to handle.

As the following table shows respondents and especially Issuers feared that all options would have an adverse impact on the timely delivery of the financial statements. It would be an additional step in the preparation and control of financial statements. XBRL and iXBRL are expected to be slightly less detrimental to the timely delivery of annual financial reports than XML or XHTML.

Figure 20 Facilitation of the timely delivery of annual financial reports with the different options

	YES	*PARTIALLY*	*NO*	*BLANK*	*TOTAL*
Option 1: XBRL	9	15	10	0	34
Option 2: iXBRL	9	12	13	0	34
Option 3: new European Standard based on XML	6	14	14	0	34
Option 4: new European Standard based on xHTML	6	12	16	0	34

Qualitative appraisal expressed by MPs

Other relevant information useful for the final benefits evaluation was received from MPs:

- Impact on taxonomy and financial reporting process - 15 respondents believe that, of all the proposed technological options, XBRL would involve the smallest changes in their taxonomy and financial reporting process. In this respect, five respondents chose

a new European standard based on XML and three chose iXBRL.

- One user stated that pure XML lacks the specific structures needed to create and extend taxonomies, and this will make it hard to incorporate national and entity-specific extensions into an XML filing regime, thus having a large impact on costs. To allow national authorities to extend an XML dataset, the XML model needs to be refined to provide extensibility and relationship structures akin to those in XBRL. The lack of specification-level constraints on extensions would tend to make this an expensive and unreliable approach. Ease of access to XML for software developers would be cancelled by the lack of tooling around the chosen report formats and lack of publicly available analysis. This would severely limit the benefits.

- The above reasoning was also made for pure xHTML. In addition, this solution would cover most of the ground already handled by iXBRL which provides the accessibility of XHTML and the semantic structure of XBRL.

- Issuers raised concerns about an increase of operational burden, higher costs and additional lead time for financial information release. In addition, some critical criteria (regarded as risks) to ensure that ESEF will bring benefits to issuers were highlighted: 1) Instability of IFRS; 2) Standardization of narrative information; 3) Inexistence of taxonomy for National GAAP for preparing statutory financial statements; 4) Lack of flexibility of a structured electronic solution, which could lead to excessive standardisation of data or a rule-based approach, which would render communication overly inflexible and not adapted to the specific characteristics of the company; 5) Responsibility issues related to the consequences of using unsuitable taxonomies or languages that would not reflect the substance of their disclosure; 6) If the final approach would result in a built-in one, the effects on the overall architecture of the IT's system.

- Issuers see no advantage on their access to financing, while users welcome overall transparency and well-timed availability of financial data.

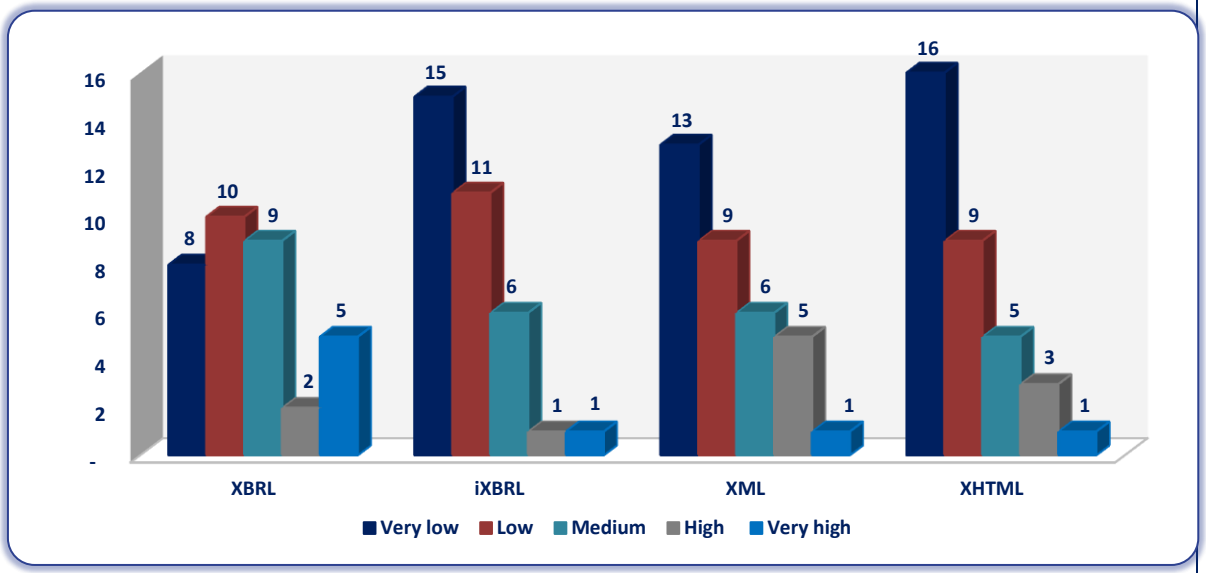
- Structured financial reporting is deemed as enabling the promotion of cross-border investment, although, in the view of issuers, providing consistency among national GAAPs and regulatory requirements is of the greatest importance.

- Some issuers set forth the advantage of implementing the same technology as in the U.S. and other countries (XBRL), with possibly one single XBRL IFRS file to be filed in the U.S. and in Europe.

- One user reported high added value for small and medium companies on their ability to access regulated markets, because of their present lack of visibility. For large companies there would be little value added on their ability to access regulated markets.

- Level of internal knowledge of the different technological options - XBRL seems to be the most well-known technology among those considered for the analysis, while the majority of the sample showed a low level of internal knowledge with respect to the possible development of a new European standard based on XHTML. The following graph shows the level of internal knowledge of the different technological options as resulting from the responses to the questionnaires.

Figure 21 General level of internal knowledge of the technological options



- Furthermore, some respondents stated that the adoption of a different standard than XBRL would create significant burdens for European issuers listed in the U.S. (where XBRL is mandatory).

4.2.5.3 Analysis of the NCAs questionnaire results

Although no quantitative data on benefits have been required from the NCAs, some qualitative assessments could be drawn from the comments provided:

- Overall, NCAs considered that the key benefit of structured reporting will be enhanced supervision through the ability to compare harmonised information, to automatically

assess their completeness, to analyse the filed data and undertake statistical assessments.

- While underlying the current wide use of XBRL, NCAs made a number of comments on the different options:
  - ✓ Numerous quality problems of XBRL have been observed by the US SEC.
  - ✓ The use of iXBRL has not always made it possible to achieve comparability and standardisation of reporting, as it offers every organisation a wide range of options tailored to its specific needs.
  - ✓ The development of a new European Standard based on customised XML or HTML would require considerable time and compromise the implementation of structured reporting. As HTML is subject to extensive technological changes, the comparability of reports would not be provided for with the same extent as with the other options.

V. Tentative conclusions

The final recommendations are based on the evidence derived from the CBA and the results gathered from the experiences of other countries.

The answers provided by stakeholders on the questionnaires led to the following conclusions:

1. **MPs** consider XBRL and to a slightly lesser extend iXBRL to be significantly more beneficial than XML and XHTML. Very small variations in expected costs could be observed among the different technologies. The issuers expect the costs of XBRL to be overall lower than of the other technologies. But caution has to be applied when forming conclusions based on these results as the response rate of MPs was very low. Also the lack of representatives of large markets amongst the respondents has to be taken into account; in particular only one MP (Users subcategory) for UK and Germany took part in the survey;

2. **OAMs** evaluate XML as the least expensive option and expect the largest benefits from an application of XBRL, however the differences in expected benefits for XBRL, iXBRL and XML are rather small;

3. **NCAs** assume there are no relevant differences between the 4 technological options, even though XML and XHTML are considered more expensive than the other options.

Considering that the responding MPs and OAMs expect XBRL to be the most beneficial technology and taking into account that most costs will be borne by issuers and the responding issuers expect XBRL also to be the cheapest technology, XBRL seems to be the most appropriate option. However, the lack of adequate representativeness of the figures collected from MPs did not provide a complete picture in terms of costs for the ESEF development and the large differences among the answers of respondents prevented ESMA from drawing strong conclusions. As such, further analysis will be necessary.

The results of the desk research demonstrate that XBRL is currently the most used technological option for electronic reporting transmission. This implies that there might be an issue of data comparability, not only within the EU but also at a global level. Several respondents considered that, because XBRL reporting is already in place in the US, developing a new European Standard based on customised XML or HTML would reduce comparability between US and EU issuers.

According to the TDA, "*A harmonised electronic format for reporting would be very beneficial for issuers, investors and competent authorities, since it would make reporting easier and*

facilitate accessibility, analysis and comparability of annual financial reports". Based on this consideration, the different technologies should be evaluated taking into account not only the costs related to their implementation, but also the extent to which they are aligned to the objectives of the TDA.

After the assessment of the economic feasibility of the ESEF implementation, the final evaluation of the format to be adopted should take into account the benefits associated with the different technological options. In this view, the opinions expressed seem to indicate that XBRL and iXBRL are the most beneficial options and are better aligned with the objectives of the TDA in terms of information improvement and technological facility.

Therefore, the adoption of XBRL or iXBRL is supposed to foster the achievement of the objectives of the TDA and result in an enhancement of the attractiveness of EU capital markets and an increase in investment flows. However it has to borne in mind that ESMA's CBA is limited to the choice of technologies.

Annex IV - Draft Regulatory technical standard

Draft

COMMISSION DELEGATED REGULATION (EU) No …/..

of […]

supplementing Directive 2004/109/EC of the European Parliament and of the Council with regard to certain regulatory technical standards on the European Single Electronic Format

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 290 thereof;

Having regard to Directive 2004/109/EC of the European Parliament and of the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC [37], and in particular Article 4 (7) thereof;

Whereas:

(1) In accordance with Directive 2004/109/EC, all annual financial reports should be prepared in a single electronic reporting format from 1 January 2020. Such harmonised electronic reporting format should make reporting easier for issuers and facilitate accessibility, analysis and comparability of annual financial reports for

[37] *OJ L 390, 31.12.2004, p. 38*

investors and competent authorities, thereby increasing the efficiency, transparency and integration of securities markets.

(2) Considering the need for an annual financial report having legal effectiveness and admissibility as evidence in legal proceedings , the lack of specific provisions in Directive 2004/109/EC and the absence of a mandate to impose audit requirements in relation to electronic files, the provision of the annual financial report in an equivalent to paper format is necessary for all annual financial reports.

(3) In developing these regulatory technical standards, ESMA specified the European Single Electronic Format (ESEF) with due reference to technological options and current global electronic financial reporting practices. ESMA performed an evaluation of the technological options considered for the assesment of the technical specificities of electronic reporting and undertook the tests required by Directive 2004/109/EC. ESMA concluded that [result of the tests to be provided after they are performed].

(4) Considering the objectives of Directive 2004/109/EC and the assessment of the respective costs and benefits of electronic reporting technologies, ESMA chose the Portable Document Format (PDF) as the technology for making public annual financial reports in a non-structured format. The Extensible Business Reporting Language (XBRL) / Inline Extensible Business Reporting Language (iXBRL) is the technology for making public audited financial statements in a structured format.

(5) Considering that full comparability can be achieved only when comparing financial information prepared using the same financial reporting framework, the greatest benefits for making public financial information in a structured format can be drawn for financial statements prepared on the basis of Regulation EC 1606/2002 of the European Parliament and of the Council of 19 July 2002 on the application of international accounting standards[38]. The benefits are more limited for making public financial information based on national GAAP in a structured electronic format, as comparability is limited to other issuers using the same national GAAP. This additionally reduces the cost for issuers and other parties concerned and provides higher benefits for end-users of the financial information.

(6) Moving from current practices to structured reporting requires the existence of a taxonomy, i.e. a given hierarchical structure used for classification of financial information, built in the form of networks representing relationships and allowing for input data to be transformed into structured data. Considering the timeframe granted by the Union legislator and the non-availability of taxonomies for all Generally

[38] *OJ L 243, 11.9.2002, p.1*

Accepted Accounting Principles (GAAPs) under which annual accounts can be prepared according to the national law of the Member States, annual accounts prepared in accordance with the Member States' national law should not be required to be reported under structured format but be made public in a non-structured format. Upon availability of, either taxonomies for all GAAPs under which annual accounts of issuers can be prepared, or a EU core taxonomy on the basis of the Accounting Directive, this Regulation should be amended to require making public also the annual accounts of an issuer in a structured electronic format.

(7) Provided a Member State either requires or allows to make public the annual accounts of the issuer in a structured electronic format and the taxonomy for the respective GAAP already exists, this regulation should permit to make public the annual accounts of the issuer, prepared in accordance with the Member States national law, in a structured format. As not for all GAAPs that are deemed to be equivalent to IFRS, taxonomies exist, issuers from third countries should not be required to make public their consolidate accounts or their annual accounts in a structured electronic format. However, they may decide to make them public in a structured electronic format.

(8) The International Financial Reporting Standards (IFRS) Taxonomy, issued by the International Accounting Standards Board (IASB), has been specifically developed by the IASB to present IFRS financial statements in a structured electronic format and is therefore the best option to transform IFRS financial data in such format. The use of the IFRS Taxonomy would be beneficial for comparability of the data presented in a structured electronic format, on a global level.

(9) This Regulation is based on draft regulatory technical standards submitted by the European Securities and Markets Authority (hereinafter ESMA) to the Commission.

(10) In accordance with Article 2 of Regulation (EU) No 1095/2010, in developing the draft regulatory technical standards on the formats to be applied to banks and financial intermediaries and to insurance companies, ESMA cooperated regularly and closely with the European Banking Authority established by Regulation (EU) No 1093/2010[39] of the European Parliament and of the Council, and the European Insurance and Occupational Pensions Authority established by Regulation (EU) No 1094/2010[40] of the European Parliament and of the Council, in order to take into account the specific

[39] *OJ L 331, 15.12.2010, p. 12.*
[40] *OJ L 331, 15.12.2010, p. 48.*

characteristics of those sectors, ensuring cross-sectoral consistency of work and reaching joint positions.

(11) In accordance with Article 10 of Regulation (EU) No 1095/2010, of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority European Securities and Markets Authority, ESMA has conducted open public consultations on such draft regulatory technical standards, analysed the potential related costs and benefits and requested the opinion of the ESMA Securities and Markets Stakeholder Group referred to in Article 37 of that Regulation.

HAS ADOPTED THIS REGULATION:

Article 1

Structure of the ESEF

1. Issuers shall make public their annual financial reports in a single electronic reporting format, which consists of a non-structured data format and a structured data format.

2. The structured data format shall represent machine readable data with a recognisable structure in the sense of embedded coding that is used to give the document various structural meanings according to a schema. The representation of a document in a structured electronic format shall allow manipulation, extraction or search for specific data.

3. The non-structured data format shall represent human readable data not having a recognisable structure as specified in Article 1(2) of this Regulation.

Article 2

ESEF requirements

1. Issuers shall make public their annual financial reports in the non-structured format by making use of the technology specified in Article 3(1) of this Regulation.

2. Where the issuer's annual financial report includes consolidated accounts prepared in accordance with Regulation (EC) No 1606/2002, the issuer shall make them public in the structured format specified in Article 3(2) of this Regulation.

3. Where the issuer's annual financial report includes annual accounts of the issuer prepared in accordance with the Member States' national law, the issuer shall be allowed to make them public in the structured format specified in Article 3(2) of this Regulation, provided the Member State in which the company is incorporated is allowing or requiring to make the annual accounts public in the structured format specified in Article 3(2) of this Regulation.

4. Where the issuer's annual financial report includes audited financial statements prepared in accordance with a third country GAAP requirement, the issuer shall make them public in the non-structured format by making use of the technology specified in Article 3(1) of this Regulation.

Article 3

Technological means

1. For the non-structured format of the ESEF, the issuer shall make use of the PDF technology.

2. For the structured format of the ESEF, the issuer shall make use of the [XBRL/IXBRL] technology.

3. The issuer shall use the technological version of PDF or [XBRL/IXBRL] which is compatible with those applied by the Officially Appointed Mechanism (OAM).

Article 4

Taxonomies

1. When making public their audited financial statements in accordance with Article 2(2) of this Regulation, issuers shall make use of the relevant provisions of the latest available IFRS Taxonomy as endorsed in the EU [legal tool to be specified in the final RTS].

2. When making public its annual accounts in accordance with Article 2(3) of this Regulation, the issuer shall use the taxonomy permitted or required in that Member State [legal tool to be specified in the final RTS].

Article 5

Entry into force and application

1. This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union.*

   This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, [date]

For the Commission

The President

[…]