

21 October 2024

Vanessa Countryman
Secretary
Securities and Exchange Commission.
100 F Street N.E.
Washington, D.C. 20549

Directorate Office

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Via Email

Dear Secretary Countryman

**Financial Data Transparency Act - XBRL International Comment Letter
Release No. 33-11295; 34-100647; IA-6644; IC-35290; File No. S7-2024-05**

The FDTA provides a common-sense roadmap. Ensure reports and forms are digital for both collection and dissemination. Ensure they are comparable and consistent. Use non-proprietary data standards. Use common, open identifiers for identity, products, instruments and transactions. The devil is in the detail.

We urge the SEC and the rest of the Agencies to embrace the spirit and the approach of the FDTA and embed its requirements into their operations. Thanks to new technologies (AI in particular) and new threats (cyber related in particular) we expect that the importance of structured open data will greatly increase going forward. The US has the potential to lead the way in this field. We expect that this approach will become "table stakes" internationally in due course.

In this letter we would like to address a number of points related to the joint rulemaking proposed under the FDTA by the Agencies. Our comments are specific to the SEC although the majority have application to all of the Agencies. We cover: the importance of digital reporting; the role and importance of data definitions, the manner in which they are created and managed using XBRL, and their role in ensuring comparability and consistency; the role of AI in reporting together with the increasing importance of traceability and provenance; and the relevance of the LEI and the vLEI going forward.

As you know, XBRL International is the global not-for-profit standards development organization responsible for XBRL. Our standards are open and freely licensed and are used across the world¹ to facilitate digital business reporting in a wide range of reporting domains. We have a specific public interest purpose: to improve the

¹ See the XBRL International [Project Directory](#) for a list of current regulatory mandates that we are aware of.

accountability and transparency of business performance globally, by providing an open data exchange standard for business reporting.

XBRL International uses formal, consensus-based standards-making processes, including public comment periods in the preparation of our voluntary specifications² that together make up the XBRL standard. Our 500+ organisational members comprise representatives from across the information supply chain, including a significant number of regulators from right around the world. We are supported by 19 independent chapters that focus on digital reporting in their own countries and regions, including XBRL US. We recognise and support the comment letter on the FDA multi-agency draft prepared by our colleagues there, as well as their answers to the questions posed by Commissioner Peirce.

Digital Reporting

We live in a digital age. Nobody should seriously suggest that regulatory reports, filings, disclosures or forms should be on paper, or in PDF (merely paper under glass) anymore. Anyone that does needs to spend more time with the examiners, regulators and policy makers that are still forced to waste immense amounts of time transforming information into a computer-readable format, as well as a wide range of market participants that are willing to expend significant sums on ensuring that they have access to digital representations of the information that they seek to analyse instead of themselves rekeying, reprocessing and micro-managing information that arrives in an unstructured format.

The idea that securities markets only operate effectively because of the actions taken by regulators to limit information asymmetry and enhance transparency – specifically mandatory disclosure requirements – is well understood and well accepted, including in a recent speech by Chair Gensler, quoting with approval the 1984 paper of Professor John C. Coffee³. The logic that mandatory disclosure helps to level the playing field is hard to argue with.

Today, given the size and complexity of securities markets, paper (or paper under glass) disclosure creates information that in practical terms can only be properly compared and analysed by those with access to proprietary information provider screens and tools. Retail investors, customers, suppliers and supply chain users, academics and yes, even regulators, don't typically have these kinds of subscriptions to hand.

In a digital age we believe that Professor Coffee's logic should be carried one step further. In the modern era, to ensure "complete and truthful disclosure" as required by the Securities Act written in the first half of last century, issuers that seek money from the public in this century should be obliged to provide disclosures that are not just timely and mandatory, but also *digital*.

² See <https://specifications.xbrl.org/>

³ "I'm with Roosevelt and Jack: Benefits of Mandatory Disclosure" [Prepared Remarks of Chair Gary Gensler](#) before Columbia Law School Conference in Honor of John C. Coffee, Jr. March 22 2024.

For reasons that we set out below, we think that the process of preparing, reviewing and securing the information that regulators require in a structured form is going to continue to get easier and faster. This should be true whether the information is for public consumption by markets or for the private consumption of just the regulators.

The use of non-proprietary open standards to govern the delivery of data means that the process will continue to be supported by highly competitive software and service providers, which will continue to put downward pressure on costs.

A word about costs

Around the world we have heard complaints about perceived costs that might be imposed on issuers prior to the imposition of a digital reporting mandate many times over. There are now in excess of 200 of them around the world¹ covering millions of companies of all sizes and all complexities. The sky has not fallen.

Every environment is slightly different but in every case that we are aware of, the reality has never matched the fear. In several mandates the costs have been literally near-zero. See for example, XBRL US's data about the use of templates for small and very simple filing organisations in their letter to Commissioner Peirce today.

There are many other similar examples around the world. Some mandates have been designed in such a manner as to more or less oblige the incorporation of Inline XBRL export capabilities into existing accounts preparation packages used by small companies and their accountants. This has meant that these costs have been near-zero.

For larger and more sophisticated companies, the costs incurred have generally been an order of magnitude smaller than the "fear uncertainty and doubt" fostered by those concerned about change prior to the digital mandate. We think you can add a healthy discount to the cost fears expressed in some of the comment letters that we have seen thus far.

But how does it work?

We use an analogy to explain the way that the XBRL standard works. It perhaps helps to clarify some of the terms used in the FDITA and encourages the consistent use of standards to ensure that computer-readable data definitions are central to data collection and management inside Federal Financial Agencies.



Figure 1: How Digital Reporting with XBRL Works

We explain the way that the XBRL standards work by reference to the graphic in Figure 1, at left.

First, to ensure that different tools and software can prepare, display, exchange, publish, analyse and consume data in an interoperable manner, there is an agreed consistent “Alphabet and

Grammar”. Anyone that uses the Alphabet and Grammar can communicate with anyone else that uses the same letters and the same rules for sentence construction. Because XBRL is a digital standard, anyone can use a set of digital rules to test whether a particular piece of software is using the “Alphabet and Grammar” correctly and in line with the written rules. The single Alphabet and Grammar – of course, these are the XBRL specifications² – have been developed by XBRL International.

Second, an alphabet and grammar can’t be used without a Dictionary of terms that define the words that can be used in a particular context. So regulators (including the SEC and FFIEC) and standards setters (like FASB and the IASB) create their own dictionaries of terms. Each disclosure term in a rule or standard has a specific definition in the dictionary. For example, the US GAAP definition of Profit (Loss) is “*us-gaap:ProfitLoss*”.

Again, because XBRL is a digital standard, use of relevant defined words can be checked using a set of digital rules. “Is this word in the dictionary?”.

We call these dictionaries “taxonomies”, but you can think of them as a digital model or digital twin of the reporting, disclosure, compliance or performance standards that are being used to govern specific reporting arrangements. The dictionaries go well beyond just definitions. For example, they:

- connect related reporting terms,
- provide links to authoritative references,
- constrain terms (a date needs to be a date, not a piece of text); and
- permit the creation of report labels in multiple human languages.

Third and most importantly, however, preparers and other relevant reporting organisations need to prepare their digital reports and documents.

They do so using the words in the Dictionary⁴ (taxonomy) and the “Alphabet and Grammar” defined in the XBRL specifications.

⁴ There is a slight twist to corporate reporting in that it isn’t entirely constrained by what’s in reporting standards like US GAAP. Companies can create their own definitions for unique aspects of their disclosures. To do that in XBRL they

Once reporting entities have produced digital reports using the words in the Dictionary, using the letters in the Alphabet and the rules of Grammar, a very wide range of users can consume and understand these reports using a large number of interoperable tools, including off-the-shelf analytics packages⁵. Data providers and other information professionals make extensive use of structured XBRL reports provided to the SEC and other regulators right around the world.

What about flexible approaches and other formats that don't use a "Dictionary"?

Of course, the XBRL standard is not the only approach to providing machine-readable definitions and data. Other key standards, such as ISO 20022, which is used for the exchange of transactional data broadly within the payments context, also provide "dictionaries" that have been developed by an authoritative body. These "semantic" standards (like XBRL and ISO20022) are called this because there are a wealth of machine-readable definitions available, that can and should be used by tools in both the construction and consumption of this data.

This contrasts with a "format", which provides a way for data to be exchanged (such as plain JSON, CSV or XML) but doesn't provide a specific set of machine-readable definitions.

We are cautious about the references to formats and even "schemas" in the draft rule that don't contain specific, machine-readable definitions. Whereas an Agency can create its own proprietary set of reporting requirements using a format such as CSV, it will be necessary for companies and users to develop their own software that has been hand-coded and carefully mapped to capture the meaning that is intended to be conveyed using these "flexible" formats for the preparation or consumption of this data.

XBRL is a standard, not a technology

Over the last several years, XBRL International has worked to ensure that the XBRL standard is future proof. We have done this by creating an abstract report standard (the "Open Information Model⁶") that contains all of the meaning required in any kind of digital business report. We have also created a range of formats⁷.

The meaning required in any kind of digital report won't change over time. You will still need to be able to identify a monetary amount, and a date and a text field. You will still want a reference (or link) to the authoritative literature – be that to an SEC

create their words for the dictionary (called an "extension" taxonomy) and then use those definitions in their reports. It's a bit like having a dictionary in a loose-leaf binder that can be added to by companies.

⁵ Here is an [example set of regulatory analytics](#), pulled from EU corporate filings prepared in Inline XBRL, converted into xBRL-JSON and then imported into Tableau, a common analytics tool.

⁶ Designed for computer scientists, you can find the Open Information Model – the newest part of the "Alphabet and Grammar" [here](#).

⁷ For now, that means xBRL-XML, xBRL-CSV and xBRL-JSON as well as the Inline XBRL format (the human and machine readable web pages used by the SEC for data collection from issuers today).

rule or to US GAAP or to a piece of legislation. You will want to be able to distinguish different segments reported by a company through time. The *semantics* will stay the same. Those formal, careful and universal descriptions of the different parts of a digital report are what's contained in our Open Information Model. They have longevity and are, in a practical sense, what the XBRL standard is.

What might change is the technological format that you prefer to use. As technology moves on and new formats emerge, the XBRL specifications will be expanded to permit the use of new formats, together with those that people are comfortable using today. Today you can move data between the different xBRL formats (xBRL-XML, xBRL-JSON and xBRL-CSV) in a lossless manner.

None of this is important to anyone other than the computer scientists and IT professionals that are working with the XBRL specifications (the "Alphabet and Grammar") to ensure that a report prepared with one piece of software can be consumed by another piece of software. We are aware of nearly 200 such software applications around the world, a considerable number of which we have certified as "XBRL Certified Software⁸", a mark of technical interoperability.

What does all of this mean in terms of the FDIA?

At the core of the legislation is the idea that information should be comparable and re-usable. Having the "flexibility" to use a simple format without semantics – without an alphabet and grammar, and therefore without a machine-readable dictionary – means that to compare or reuse data in that format obliges you to manually map it from one system to another. Furthermore, it requires a company or a financial institution to develop a custom process, procedure, piece of software and set of controls to deal with that specific custom format.

We think that what the Agencies need to do is to have well defined machine-readable dictionaries of terms that can be reused, that can be easily compared and that be leveraged within a single Agency as well as across the Federal Financial Agencies. That means that a definition like "US GAAP Profit (Loss)" can be drawn directly from FASB's official dictionary (the US GAAP taxonomy) and used across different systems and in different contexts, without being redefined and redesigned. That is just as true for a data definition for a street address, or for a type of financial instrument. Many of these cross-Agency definitions can and should be developed and maintained within a cross-Agency collaboration set up for that purpose. Many others will be focussed just on the specifics of that Agency's role and won't require a collaborative approach to their management (except within the Agency). The definitions (and wherever possible) the data should still be exposed to the other Agencies to assist their analysis going forward.

Where Agencies are taking a "flexible" shortcut for a simple data set or a trivial form, they really need to be consciously deciding that the information in that data set simply won't be shared or reused.

⁸ See the current list of XBRL Certified Software [here](#).

Having an “Alphabet and Grammar”, a “Dictionary” of terms, and a machine (and optionally also human) readable “Report” is what sits at the heart of modern open semantic data standards. Consistent identifiers (including the LEI, see below) are a particular example of semantic data standards, and act as a vital bridge between data collections, allowing analysts to connect data from one area to another.

In an era in which structured data underpins everything that regulators are doing, it is critical that the information to hand is indeed structured from the outset.

What does AI mean for regulatory data?

Around the world many people are asking what the advent of next generation AI, including LLMs, will mean for a wide range of business processes. Some are asking if AI will be able to replace the work of companies in developing their digital reports. Will we need semantic data standards like XBRL?

In our testing, analysis, discussion with AI professionals in industry (including in the information provider industry) and academia, we are of the view that AI will indeed deepen our relationships with data, accelerate and enhance the way in which reports are prepared and analysed and that very large data sets are reviewed. We have a hypothesis on three parts. At this point in the development of these advanced “thinking” technologies we all need to speak in terms of hypotheses.

Fundamentally, we don’t expect that AI can or should replace management’s judgement or accountability in the process of regulatory and market reporting.

As things stand, well-trained LLM-driven specialised models appear to be capable of determining the appropriate “tag” or word in an XBRL dictionary between 80% and 90% of the contents of a report, depending on the industry and the complexity of the reporting entity⁹.

That could mean that either:

(a) Companies could use these tools to improve the speed and quality with which they are able to prepare and review their digital disclosures, meaning that management remains responsible for each disclosure but in practice will just need to focus on the 10%-20% of their reports that the AI-enhanced tools are unable to assist with. Management will remain accountable for the resulting digital report and there will be a single version of the digital truth for that disclosure. This is an “AI as co-pilot” model.

OR

(b) Management will prepare a human readable version of their disclosure but will no longer create a digital version. Multiple information providers (presumably many more than exist today as the barriers to entry will reduce somewhat) will use advanced AI to structure these reports in their own manner, reviewing the last 10%-20% of the report in their own way.

⁹ This estimate is drawn from discussions with multiple vendors that are currently working to bring LLM based enhancements to their XBRL tools. We expect these tools to become commercially available early in 2025.

Management will not be accountable for the resulting digital reports and there will be many slightly different versions of the digital truth for each disclosure. This is an “AI as pilot” model.

In our judgement, the much more likely and more desirable outcome from a policy perspective is that option A will come about. Management *must* remain accountable for the information which is being used directly (by way of digital consumption) or indirectly (by way of digital consumption via an information provider) by investors. The fact that the raw data being consumed is in digital form merely means that management needs to be directly responsible for their structured disclosures in a 21st century format.

Which gives rise to our three-part hypothesis.

First, we think that the advent of AI technologies will accelerate and improve the quality, consistency and comparability of digital disclosures. It will be easier and faster to prepare and test digital disclosures. Logically these tools should mean that (although over time and not certainly) it will be cheaper for companies to prepare their digital disclosures in the structured format (like Inline XBRL) that regulators require. We believe that management must remain accountable for their disclosures, and that there should be a single version of the digital truth. Importantly, it should always be possible to trace back from an analytical model to each original source data point, something that Inline XBRL facilitates¹⁰. *AI should accelerate and enhance the process of digital reporting.*

Second, we think that the combination of AI technologies and structured data will make it possible to carry out extensive analytical research across huge numbers of disclosures (and related data sources) in ways that have never been possible before. In effect, every single disclosure is going to be looked at by multiple AI agents for a wide range of purposes, including the preparation of in-depth, but routine investment research. In effect there will be no such thing as a security that isn't “covered”. For reasons to do with the liquidity and depth of specific markets and individual securities, this is most likely to give rise to new kinds of financial products, such as packaged portfolios represented by way of new kinds of fundamental indexes.

We have done a range of initial (and by no means expert) research into the accuracy and clarity of analysis over both narrative and numeric disclosures using commercially available “basic” LLMs. Once these tools have been loaded with a combination of structured data and structured metadata (the XBRL dictionaries, including company-specific extensions) the results are extremely impressive, leaving analysis of unstructured versions of the same disclosures far behind. The analytic capabilities of these tools, for investors and regulators alike, is likely to create a material step up in knowledge and insight. *AI should materially enhance and broaden regulatory and investor analytics.*

¹⁰ For example, an analytical model that is drawn from a digital filing that uses Unilever's net profit, should always be able to [link back to the original source](#). For clarity, we use this example instead of an SEC filing simply because at present the EDGAR Inline XBRL viewer doesn't support linking back to specific facts in a report. We expect this will change before long.

Third, we think that the logical corollary of points one and two above is that it can be fairly assumed that the result of simpler, more accurate preparation of structured data, combined with the material improvement in analysis that can be achieved for regulators and end-users alike should mean that there will be greater demand for structured data going forward. *AI is likely to drive a fly wheel of demand for structured data.*

Use of the LEI and vLEI

Finally, we wanted to make some comments about the role of the LEI and the vLEI, including in response to your question on p36 of the draft, asking whether the Agencies should consider data standards that enable automatic verification of the identities of those submitting information? We note with approval the comment letter from GLEIF and make the following specific points in support of the comprehensive use of the LEI.

Costs. There continues to be criticism of the cost of acquiring and renewing the LEI. We think these criticisms are misplaced. This is a competitive process and the greater demand for LEIs there is, the lower these costs will be, as the barriers to entry to become an LOU are relatively low. Today, the “street price” for individual LEIs is in the order of \$40-\$45. More expensive options are available, but shopping around works. In a relatively short period we have seen this price achieved from original fees in the order of \$200. Importantly, the LEI system imposes no costs and no restrictions on the use of the LEI by users of any kind. The fees paid for LEI issuance and renewal cover the costs associated with obtaining significant independent assurance about the identity of an individual legal entity. If a financial actor of almost any kind – from the largest financial institution to a tiny municipality – can’t afford \$45 per year to provide confidence in their identity, we question whether they should have access to financial markets at all.

Digital Identity. The risks and costs to financial markets and individual financial participants brought about through increasingly sophisticated cybercrime, including via highly organised money laundering, cyber theft, identity theft, account takeover, payment fraud and a wide range of man-in-the-middle attacks are rising to astronomic levels. On current indications the types, frequency and sophistication of these attacks will rapidly increase thanks in no small part to the ingenuity of criminal use of AIs.

Regulators, too, are subject to carefully orchestrated and concerning cyberattacks. The risks associated with fraudulent market filings could impact not just the fortunes of individual issuers but go directly to overall market confidence. Trust is ephemeral.

It is therefore vital that regulators the world over, including in the United States, focus on and urgently prioritize digital identity and security. The new Verifiable LEI, or vLEI is governed by GLEIF and, through the ROC, the Financial Stability Board. It has recently been incorporated into ISO 17442.

The vLEI is a digital identity mechanism that creates previously unavailable levels of corporate digital trust. It can be used to assert with an extremely high degree of confidence that *a person has a specific role in a specific legal entity at a specific*

point in time. It permits the use of that digital identifier in a range of ways. If used across the financial system it should prove a vital weapon in the ongoing fight against cybercrime for financial institutions, their counterparties, and individual customers. It could also significantly enhance trust and security for regulators.

We think the SEC should pay particular attention to the role that the vLEI could have in defending trust in filings from issuers by incorporating its use into the operations of EDGAR.

The addition of a vLEI signature would provide a significant additional layer of confirmation that *this* filing really does originate from *this* entity and that *this* officer (who really does hold that role) used a digital signature to confirm it. Having, for example, a 10K digitally signed by the CEO and CFO would raise trust in the contents of the disclosure. Requiring that the embedded audit report be additionally digitally signed by the auditor or audit firm that created it would both enhance trust, enhance accountability, and add yet another layer of digital security to the filing process, further restricting the avenues for cyber-attack.

Note that, to facilitate this mechanism, a new XBRL specification – Digital Signatures for XBRL Reports – has been developed and is now being tested. Although its use is not limited to the vLEI, we consider the vLEI an intelligent and very credible approach to materially improving disclosure in our digital age.

Given the immediate danger that a wide range of cyber threats pose to the financial system, it is beholden on regulators to urgently ensure that they avail themselves of the new tools that are available to them. The vLEI appears, to us, to be the right technical mechanism, governed in the right way, and available at the right time.

These additional layers of trust enhancement are not the kind of thing that can wait on successful attacks on the integrity of US financial markets. This stable door must be slammed well and truly before the horse has bolted.

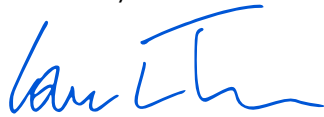
Renewals

Given the extraordinary range of jurisdictions and structures that come into play within financial markets, it is vital that the information available to regulators about each individual regulated issuer and (where necessary) its counterparties is up to date. The GLEIF API and freely reusable database of LEI records provide a valuable global resource for our global capital markets in this regard, but regulators need to plan to ensure that it is always up to date. This means ensuring that LEI renewals are a consistent obligation on corporates. The SEC could also encourage GLEIF to build closer digital partnerships with business registrars in this regard, but obliging the use of LEIs, obliging renewal of LEIs and monitoring and encouraging compliance will not just benefit the operations of the SEC. It will also benefit global financial markets. This is one of those (many) areas in our digital era where close enough is not good enough.

* * *

Thank you for your time and the opportunity to comment. We would be happy to answer any questions that you might have.

Sincerely



John Turner
CEO