

Executive Compensation Disclosure (ECD) Taxonomy Guide

Updated December 19, 2022

1 GOAL

This document provides the technical specification for registrants required under 17 CFR Part 229 (Regulation S-K) Item 402(v) and Item 402(w) using Interactive Data. Foreign private issuers, multi-jurisdictional disclosure system issuers, and registered investment companies are not subject to Regulation S-K; instead, the relevant and equivalent provisions to Item 402(w) are Item 6.F of Form 20-F, paragraph (19) of General Instruction B to Form 40-F, and Item 18 of Form N-CSR¹. For brevity in this document only, the phrase “Item 402(w) and its equivalents” means the relevant provisions of the form type being submitted. This document explains to a technical audience how to create conforming Interactive Data documents. This specification does not provide interpretative guidance for any rule. Readers should be familiar with Interactive Data as described in the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) Filer Manual [EFM], including Inline XBRL [iXBRL] and XBRL Dimensions [DIM].

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¹ In addition, Items 8 and 22(b)(20) of Schedule 14A direct filers to provide the disclosure required by Item 402 of Regulation S-K and Item 18 of Form N-CSR, respectively.

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2 TAXONOMY STRUCTURE

The taxonomy has two entry points most likely to be used in different situations.

- For submission types where executive compensation disclosures are required, but that have limited iXBRL tagging requirements, such as Schedule 14A, then entry point `ecd-sub` imports the necessary linkbases and schemas so as to require minimal customization. The linkbases embedded in the core schema and three entry points are largely sufficient for the EDGAR Renderer (EFM sections 6.24 and 6.25) to produce a rendering that conforms to EFM section 6.12.3².
- For filers that wish to provide extensive filer-specific customization of rendering within the syntax of presentation linkbases permitted by the EDGAR Filer Manual the core ECD schema is appropriate.

The entry point hierarchy is illustrated in the table below. Each arrow \searrow points from the importing schema to the imported one.

² EFM 6.12.3 is “Every element in an instance must be presented.”

Figure 1. ECD taxonomy schema contents and import relationships

File base name	File type
ecd-entire	Top level entry point
↳ ecd-sub	Entry point presentation linkbase for submissions with limited tagging requirements
↳ ecd	ECD core schema, reference, definition and label linkbases, with no presentation links
↳ us-gaap	US-GAAP schema (also imports SRT and Country schemas)

Following the file naming of other standard taxonomies, a file from (for example) a “4th quarter 2023” taxonomy with a file base name of ecd-sub would be located at <https://xbrl.sec.gov/ecd/2023q4/ecd-sub-2023q4.xsd>.

Following the target namespace conventions of other EDGAR standard taxonomies, the current namespace³ of the core ECD schema is <http://xbrl.sec.gov/ecd/2022q4>, prefixed ecd.

As with other EDGAR standard taxonomies, the schema is updated annually along with other taxonomies, and may also have interim quarterly updates.

Unlike older EDGAR standard taxonomies, there is no doc schema or linkbase providing additional text about each concept. Instead, the reference linkbase embedded in the core schema provides the location of the specific part of SEC rules or forms that describe the associated disclosure requirement.

2.1 Imported Namespaces

2.1.1 US-GAAP Net Income (Loss) Element

Pay vs Performance (PvP) disclosures require a specific element – `us-gaap:NetIncomeLoss` – and it therefore appears in the ECD core schema’s embedded definition and label linkbases.

Therefore, any submission using any version of ECD will import a corresponding version of US-GAAP, SRT and COUNTRY.

Conversely, a submission that uses a given version of US-GAAP will be constrained as to versions of ECD that it may use.

This is no different from the EDGAR constraint that (for example) US-GAAP 2021 may only be used with DEI 2021 or DEI 2021q4.

2.2 Linkbase Roles

As in other EDGAR standard taxonomies, one set of linkbase roles serves to define presentation links, and a larger set serves to define definition links. All ECD role URIs begin with <http://xbrl.sec.gov/ecd/role/> and end with a camel-case token such as `ExecutiveCategories` as its Role ID. The definition text of each role follows the pattern established in EFM 6.7.12, the digits indicating the level of detail to be tagged. The token “Disclosure” indicates a role with presentation and dimensional relationships, while “Document” indicates a role intended to have only dimensional relationships. The suffix “Only” indicates dimensional roles where filers are expected to add custom members.

Figure 2. ECD taxonomy linkbase roles used in presentation links, embedded in the ecd-sub entry point.

Role ID	Definition Text
PvpDisclosure	995410 - Disclosure - Pay vs Performance Disclosure
ErrCompDisclosure	995440 - Disclosure - Recovery of Erroneously Awarded Compensation

Figure 3. ECD taxonomy linkbase roles used in the dimensional links, embedded in the main schema.

Role ID	Definition Text
PvpDisclosure	995410 - Disclosure - Pay vs Performance Disclosure
PvpDisclosureWithAdditionalMeasures	995411 - Document - Pay vs Performance Disclosure, with Additional Measures
PvpTable	995412 - Document - Pay vs Performance Table
PvpAdjustmentsToCompensation	995413 - Document - Adjustments to Compensation
TabularListsByExecutiveCategory	995414 - Document - Tabular Lists by Executive Category

³ A namespace URI (uniform resource identifier) is not a URL (uniform resource locator); it does not identify a web address.

Role ID	Definition Text
TabularListMeasures	995415 - Document - Tabular List Measures
PvpMeasures	995424 - Document - Measures
PvpExecutiveCategoriesOnly	995425 - Document - Executive Categories
PvpAdjustmentsOnly	995426 - Document – Pay vs Performance Adjustments
IndividualsOnly	995427 - Document - Individuals
ErrCompDisclosure	995440 - Disclosure - Recovery of Erroneously Awarded Compensation
ForgoneRecoveries	995441 - Document - Forgone Recoveries, by Individual
OutstandingRecoveries	995442 - Document - Outstanding Recoveries
Defaults	995450 - Document - Defaults

The remaining roles are partitioned into different levels of detail and relationship to one or more forms, as described in sections below.

The presentation linkbase puts all of a form’s concepts into a single XBRL presentation group, with text and numbers inside of a table text block shown as children of that table text block.

The taxonomy linkbases do not, on their own, distinguish between required disclosures and optional ones; refer to the form’s instructions for this information. For example, all pay vs. performance disclosures will contain at least one Pay vs Performance Table Text Block, but more are permitted under Item 402(v)(6)(i).

2.3 Common Dimensions

ECD defines a small number of typed and explicit dimensions. Concepts may be dimensionally qualified by any or all of these dimensions and their members. This flexibility permits the iXBRL document to preserve human readability, while each individual tagged fact can be tagged with all relevant contextual details.

For example, if the concept `ecd:PeoTotalCompAmt` appears in two places with different values for two different individuals, the filer defines members of the common dimension `IndividualAxis` and provides the detail necessary to distinguish them.

2.3.1 Measure Axis

Item 402(v) permits filers to define some number of distinct performance measures, one of which is distinguished as the “company selected measure” or CSM. For certain concepts, each fact must be dimensionally qualified by the `ecd:MeasureAxis` that takes on values that are integers represented by values of the element `ecd:MeasureAxis.domain`. The integers themselves have no semantic significance, although they are used in rendering to sequence lines of rendered output.

2.3.2 Executive Category Axis

Item 402(v)(6) requires filers, to the extent specified in the rule, to provide a “Tabular List” of the most important performance measures used by the filer to link executive compensation to company performance. Item 402(v)(6)(i) permits filers to partition the “Tabular List” of performance measures as (a) single list, (b) as two lists (one for the PEO and the other for Non-PEO NEOs), or (c) as a separate list for each individual NEO. Two explicit domain members of the `ecd:ExecutiveCategoryAxis` domain are fixed so that the default member is used in case (a), otherwise the two domain members are used in cases (b) and (c).

2.3.3 Individual Axis

Item 402(v) requires filers to detail certain compensation adjustments on an individual basis and permits filers to distinguish separate “Tabular Lists” by individuals as described in the previous paragraph; Item 402(w) and its equivalents require several disclosures on an individualized basis for each NEO and for current and former non-NEOs as a group. Filers must add custom explicit members to `ecd:IndividualAxis` in the base set defined by the `IndividualsOnly` role and are encouraged to provide mnemonic names for these members since they represent the individual company NEOs. A special member `ecd:NonNeosMember` represents forgone recoveries disclosed on an aggregate basis; see 6.1.2 below.

2.3.4 Adjustment to Compensation Axis

Item 402(v) requires some number or variety of adjustments to the Compensation as reported in the Summary Compensation Table, as compared to the Compensation Actually Paid. Filers are free to add custom members to the `ecd:AdjToCompAxis` in the base set defined by the `PvpAdjustmentsOnly` role and are encouraged to provide mnemonic names for the type of adjustment reported.

2.3.5 Restatement Determination Date Axis

Each fact in a disclosure under Item 402(w) and its equivalents will have at least one dimension, consisting of the Restatement Determination Date Axis with the determination date of the restatement.

3 SCHEMA ELEMENTS (CONCEPTS)

The taxonomy concepts follow element naming and standard label conventions that convey both meaning and data type. The definition linkbase organizes the concepts into dimensional tables, and the presentation linkbase organizes the concepts into a hierarchy (one for each form) and ordering to produce an adequate EDGAR rendering. There are several “Table Text Blocks”, but these are used only to encapsulate elements repeated along one or more dimensions.

3.1 Abbreviations

The following abbreviations are used in element names, and spelled out in the standard label.

Figure 4. Abbreviations in the ECD taxonomy.

Abbreviation	Text
Adj	Adjustment
Amt	Amount
Comp	Compensation
Fn	Footnote
Ind	Individual
Neo	Named Executive Officer (NEO)
NonNeo	Executive Officer that is not or has not previously been an NEO
NonPeoNeo	Non-PEO Named Executive Officer
Peo	Principal Executive Officer (PEO)
Perf	Performance
Pvp	Pay versus Performance
Rtn	Return

“Named executive officer” is a term defined in Item 402(a)(3) and (m)(2) of Regulation S-K that only applies to a subset of executive officers. See 17 CFR 229.402(a)(3), (m)(2). Note that “NEO” and “PEO” are not disjoint sets; rather the “PEO” is *one of* the “Named Executive Officers”.

3.2 Standard labels

All concepts have a standard label that is intended to align to the element name, with the data type sometimes shown in square brackets.

All ECD concepts are associated to their standard label via a link with priority “10” so that the label cannot be overridden⁴.

3.3 Numeric Concepts

The suffix “Amt” denotes facts of a numeric data type, in almost every case representing a monetary amount; there are two exceptions in which the amount might have any numeric unit:

Numeric Concept	Label
CoSelectedMeasureAmt	Company Selected Measure Amount
OtherPerfMeasureAmt	Other Performance Measure Amount

3.4 Text Block Concepts

Text block concepts contain formatted XHTML text that is normally entirely or mostly narrative. Inline XBRL tags can be nested, or “wrap” other numeric or non-numeric Inline XBRL tags.

Suffix	Sample Element	Sample Label
TextBlock	NamedExecutiveOfficersFnTextBlock	Named Executive Officers Footnote [Text Block]

⁴ EFM 6.9.9 reads: “The value of the priority attribute must be strictly less than 10. Standard taxonomy linkbases may prevent specific relationships from being prohibited.”

For example, the content outlined in double orange lines is a text block, the content shaded gray is ecd:PeoName:

For fiscal years 2018 through 2022, Fred W. Bock is included as the PEO, and Audie K. Gale, Florence A. Hood, Robin M. Murphy, and Nathan L. Bowie are included as other NEOs.

Because the content of a text block may be extracted and viewed in a browser within some other software application, the XHTML should have style attributes with sufficient CSS properties to display as intended. The fragment above, for example, is tagged with font family and size:

```
<ix:nonnumeric contextref="FY22" escape="true" name="ecd:NamedExecutiveOfficersFnTextBlock">
  <p style="font-family: Times New Roman; font-size: 10pt">
    For fiscal years 2018 through 2022, <ix:nonnumeric contextref="FY22_Bock"
      name="ecd:PeoName">Fred W. Bock</ix:nonnumeric> is included as the PEO, and Audie K.
      Gale, Florence A. Hood, Robin M. Murphy, and Nathan L. Bowie are included as other NEOs.
  </p></ix:nonNumeric>
```

The scope of text block content may encompass one or more images. The text block content can be quoted XHTML as detailed in EFM section 5.2.5 and 6.5.16. Include escaped img tags with src attribute reference to a local .gif or .jpg file, consistent with current Interactive Data practices.

3.5 Table Text Block Concepts

A table text block differs from an ordinary text block only in its intended use to enclose a set of repeating or very similar elements.

Suffix	Sample Element	Sample Label
TableTextBlock	PvpTableTextBlock	Pay vs. Performance [Table Text Block]

For example, the following is a table text block (orange double outline) with tagged facts inside (gray shading):

Year	Summary Comp. Table Total for PEO	Comp. Actually Paid to PEO	Average Summary Comp. Table Total		Value of Initial Fixed \$100 Investment Based On:			Company Selected Measure:
			for non-PEO Named Executive Officers	Actually Paid to non-PEO Named Executive Officers	Total Shareholder Return	Peer Group Total Shareholder Return	Net Income	
2022	\$ 8,702	\$ 8,102	\$ 2,872	\$ 1,372	\$ 44.50	\$ 159.59	\$ 43,375	5
2021	8,625	8,625	1,987	1,987	77.07	135.39	79,469	5
2020	9,398	9,398	2,239	2,239	145.79	117.45	76,526	72
2019	11,283	11,283	2,297	2,297	208.28	104.79	84,175	53
2018	18,121	18,121	4,466	4,466	186.30	101.00	140,267	92

3.6 Miscellaneous Concepts

A small number of other data types appear in the taxonomy.

Suffix	Sample Element	Sample Label	Type
Date	RestatementDeterminationDate	Restatement Determination Date	Date
Name	MeasureName	Measure Name	String

3.7 Authoritative References

The reference linkbase embedded in the ECD core schema uses a hierarchical order equivalent to those in other EDGAR standard taxonomies: Publisher, Name, Number, Section, Subsection, Paragraph, Subparagraph, Sentence, and Clause. For example, the concept “Aggregate Erroneous Compensation Amount” has four references:

Figure 5. Reference part hierarchy used in the ECD taxonomy with examples.

Reference Part	Regulation S-K 229.402(w)(1)(i)(B)	Form 20-F 6.F(1)(i)(B)	Form 40-F 19(b)(1)(ii)	Form N-CSR 18(a)(1)(ii)
Publisher	SEC	SEC	SEC	SEC
Name	Regulation S-K	Form 20-F	Form 40-F	Form N-CSR
Number	229			
Section	402	6	19	18
Subsection	w	F	b	A
Paragraph	1	1	1	1
Subparagraph	i	i	ii	ii
Sentence	B	B		

This example would be written out in this document as “402(w)(1)(i)(B)” for brevity.

4 INSTANCE DOCUMENT CONTENT

An Inline XBRL document⁵ conforming to this specification will consist largely of eXtensible Hyper Text Markup Language (XHTML) elements and attributes, with a number of Inline XBRL (iXBRL) elements and attributes to mark the required information.

As of this writing, Inline XBRL tagging requirements for proxy or information statements are relatively new by comparison with tagging of financial statements. What would have previously been a DEF 14A, DEF 14C or other HTML file attachment must be converted to Inline XBRL, meaning that a typical first step will be to convert the old HTML into XHTML.

5 PAY VS PERFORMANCE DISCLOSURE

Item 402(v) identifies several distinct parts to the disclosure: the Pay vs Performance (“main”) table, its footnotes (of which there may be several), the descriptions of relationships between the compensation and performance measures presented in the table, and the “Tabular List” of performance measures, which is related in specific ways to the footnotes and main table.

5.1 Definition (Dimension) Links

The structure of the Pvp disclosure is largely reflected in the dimensional links, which are not customizable (that is, they are embedded in the ecd schema, their arc priority is always 10, and they are dimensionally “closed”).

5.1.1 Concepts normally appearing in the Required Context.

In the figure below a hypercube with no axes (Pay vs Performance Disclosure [Table]) reflects that these concepts are not expected to ever be in contexts with dimensions, and moreover, are normally going to appear in the Required Context as defined in EFM 6.5.19.

Figure 6. Dimensional links supporting Pvp disclosure

Definition Links and Concept Labels		
PvpDisclosure Role	Relationship	Reference
Pay vs Performance Disclosure [Line Items]		
Pay vs Performance Disclosure [Table]	all (closed table)	
Pay vs Performance [Table Text Block]	domain-member	402(v)(1)
Peer Group Issuers, Footnote [Text Block]	domain-member	402(v)(2)(iv)
Changed Peer Group, Footnote [Text Block]	domain-member	402(v)(2)(iv)
Company Selected Measure Name	domain-member	402(v)(2)(vi)
Named Executive Officers, Footnote [Text Block]	domain-member	402(v)(3)
Adjustment To PEO Compensation, Footnote [Text Block]	domain-member	402(v)(3)

⁵ EFM section 5.2.5 specifies that technically, it is an Inline XBRL Document Set that may be provided in a submission, but the distinction is not important for the purposes of this Taxonomy Guide.

Definition Links and Concept Labels		
Adjustment to Non-PEO NEO Compensation Footnote [Text Block]	domain-member	402(v)(3)
Equity Valuation Assumption Difference, Footnote [Text Block]	domain-member	402(v)(4)
Compensation Actually Paid vs. Total Shareholder Return [Text Block]	domain-member	402(v)(5)(i)
Compensation Actually Paid vs. Net Income [Text Block]	domain-member	402(v)(5)(ii)
Compensation Actually Paid vs. Company Selected Measure [Text Block]	domain-member	402(v)(5)(iii)
Total Shareholder Return vs. Peer Group [Text Block]	domain-member	402(v)(5)(iv)
Compensation Actually Paid vs. Other Measures [Text Block]	domain-member	402(v)(5)(iv)
Additional 402(v) Disclosure [Text Block]	domain-member	402(v)

Some of these Text Blocks may be complex layouts containing multiple graphics and lengthy narratives. They are not covered further here; for specifics as to their content consult the corresponding rule reference.

The final text block, Additional 402(v) Disclosure, should be used for any additional material supporting Item 402(v) disclosures and any voluntary PvP disclosures.

It is generally unnecessary for this disclosure to define custom text blocks. However, several of the text blocks, when they appear, do require additional custom elements and linkbases, as covered in section 5.1.7 below.

5.1.2 Comparison text blocks potentially appearing with additional dimensions.

Item 402(v)(2)(vi) permits additional measures in addition to the Company Selected measure, in which case the relationship between each measure and compensation actually paid must be described narratively and/or graphically. The figure below shows the hypercube to accommodate a variety of possible such disclosures, as for example if different measures applied to different subsets of all NEOs.

Figure 7. Dimensional links for descriptions of additional measures.

Definition Links and Concept Labels	Relationship	Notes
PvpDisclosureWithAdditionalMeasures		
Pay vs Performance Additional Measure [Line Items]		
Pay vs Performance Additional Measure [Table]	all (closed table)	
Executive Category [Axis]	hypercube-dimension	No custom members
Individual [Axis]	hypercube-dimension	
Measure [Axis]	hypercube-dimension	Typed dimension of integers
Compensation Actually Paid vs. Other Measure [Text Block]	domain-member	

5.1.3 Concepts normally appearing without dimensions, one per fiscal year.

In the figure below a different hypercube with no axes (reflects that these concepts are not expected to ever be in contexts with dimensions, but because they are the quantitative disclosures required for a five year (or, for smaller reporting companies, three year) period, are normally appearing in the main table as columns. In some cases – where different individuals hold the PEO position in different periods – the Individual Axis (which has a default) is allowed:

Figure 8. Dimensional links supporting PvP main Table with multiple years

Definition Links and Concept Labels	Relationship	Notes
PvpTable		
Pay vs Performance Table [Line Items]		
Pay vs Performance Disclosure [Table]	all (closed table)	
Individual [Axis]	hypercube-dimension	Typically defaulted
PEO Total Compensation Amount	domain-member	
PEO Actually Paid Compensation Amount	domain-member	
Non-PEO NEO Average Total Compensation Amount	domain-member	
Non-PEO NEO Average Compensation Actually Paid Amount	domain-member	
Total Shareholder Return Amount	domain-member	
Peer Group Total Shareholder Return Amount	domain-member	

Definition Links and Concept Labels	Relationship	Notes
Net Income (Loss)	domain-member	element in us-gAAP namespace
Company Selected Measure Amount	domain-member	

The example shown earlier illustrates how the elements correspond to the eight columns. The fiscal year column is not tagged.

Year	Summary Comp. Table Total for PEO	Comp. Actually Paid to PEO	Average Summary Comp. Table Total for non-PEO Named Executive Officers		Average Comp. Actually Paid to non- PEO Named Executive Officers	Value of Initial Fixed \$100 Investment Based On:		Net Income	[Company Selected Measure:]
			Total	Peer Group		Total Shareholder Return	Total Shareholder Return		

Item 402(v) details how the table should be shown if there are multiple PEO's during the five years of disclosure. In that case the Individual Axis is used as a dimension that distinguishes between different individuals holding the position, as suggested by the columns below headed by [Member1] and [Member2]:

Year	[Member1] Summary Comp. Table Total for PEO	[Member2] Summary Comp. Table Total for PEO	[Member1] Comp. Actually Paid to PEO	[Member2] Comp. Actually Paid to PEO	Average Summary Comp. Table Total for non- PEO Named Executive Officers	Average Comp. Actually Paid to non-PEO Named Executive Officers	Value of Initial Fixed \$100 Investment Based On:		Net Income	[Company Selected Measure:]
	Total	Total	Shareholder Return	Peer Group Shareholder Return						

5.1.4 Adjustments to Compensation – up to three axes

Item 402(v) requires tagging of the quantitative derivation of the difference between the “Total Compensation Amount” and the “Compensation Actually Paid” for both the PEO and the individuals comprising the Non-PEO NEOs, both of whom might change during the course of the five years of disclosure.

Figure 9. Dimensional links supporting pay vs performance adjustments

Definition Links and Concept Labels	Relationship	Notes
Role PvpAdjustmentsToCompensation		
Adjustment [Line Items]		
Pay vs. Performance Adjustments [Table]	all (closed table)	
Executive Category [Axis]	hypercube-dimension	No custom members
Individual [Axis]	hypercube-dimension	
Adjustment to Compensation [Axis]	hypercube-dimension	May be defaulted if only one kind of adjustment is involved.
Adjustment to Compensation Amount	domain-member	

Like the Individual Axis, all the members of the Adjustments to Compensation Axis are custom. Each fact representing the amount of the adjustment also needs to reflect the executive category (PEO vs Non-PEO NEO) to which it applies. Below is some simple text that is represented in a table of hypothetical facts and contexts reflecting a set of adjustments made during the most recent reporting period. The sign of the numeric value should reflect whether the amount actually paid was due to additions (positive) or deductions (negative).

Adjusted per \$3.1m addition and \$2.5m deduction because of various and sundry reasons.

Includes the effect of deductions of \$1m for Messrs. Gale and Murphy, respectively, and \$860,000 for Ms. Hood for miscellaneous reasons and additions of \$250,000 for Ms. Hood and \$300,000 for Mr. Murphy also for various reasons.

Concept	Period	Executive Category Axis	Custom member of Individual Axis	Custom member of Adjustment to Compensation Axis	Value in millions
ecd:AdjToCompAmt	FY22	PeoMember	BockMember	AdjType1Member	3.1
ecd:AdjToCompAmt	FY22	PeoMember	BockMember	AdjType2Member	-2.5
ecd:AdjToCompAmt	FY22	NonPeoNeoMember	GaleMember	AdjType1Member	-1.0
ecd:AdjToCompAmt	FY22	NonPeoNeoMember	MurphyMember	AdjType1Member	-1.0
ecd:AdjToCompAmt	FY22	NonPeoNeoMember	MurphyMember	AdjType2Member	0.30
ecd:AdjToCompAmt	FY22	NonPeoNeoMember	HoodMember	AdjType1Member	-0.86
ecd:AdjToCompAmt	FY22	NonPeoNeoMember	HoodMember	AdjType2Member	0.25

5.1.5 The Company Selected Measure (CSM) and other Performance Measures

Item 402(v) requires the filer, to the extent specified in the rule, to define some number of performance measures considered important in determining executive compensation. One of these measures is distinguished as the CSM appearing in the rightmost column of the main table. The filer *may* include other measures in the table, along with their historical values, and in some cases must include a definition if the measure is considered “non-GAAP”. In any case all of the measures, including the CSM, appear as distinct items in the Tabular List. In the following definition link role, the filer assigns a name, and if it appears in the main table, provides an amount (which need not be a monetary amount) and in a footnote to the main table, its definition.

Figure 10. Dimensional links supporting performance measure details

Definition Links and Concept Labels	Relationship
Role MeasuresOnly	
Measures [Line Items]	
Measures [Table]	all (closed table)
Measure [Axis]	hypercube-dimension
Measure Name	domain-member
Non-GAAP Measure Description [Text Block]	domain-member
Other Performance Measure Amount	domain-member

An example in which two supplemental measures are defined and included in the main table is shown below. Note that the supplemental measures are clearly marked as such in the text of the footnotes.

Figure 11. Main table with supplemental non-gaap performance measures.

Year	Summary Comp. Table Total for PEO	Comp. Actually Paid to PEO	Average Summary Comp. Table Total for non-PEO Named Executive Officers	Average Comp. Actually Paid to non-PEO Named Executive Officers	Total Shareholder Return	Value of Initial Fixed \$100 Investment Based On: Peer Group Total Shareholder Return	Net Income	[Company Selected Measure]	[1 st Additional Measure]	[2 nd Additional Measure]
------	-----------------------------------	----------------------------	--	---	--------------------------	---	------------	----------------------------	--------------------------------------	--------------------------------------

Pay Versus Performance										
(in thousands, except as indicated)										
Year	Summary Comp. Table Total for PEO	Comp. Actually Paid to PEO	Average Summary Comp. Table Total for non-PEO Named Executive Officers	Average Comp. Actually Paid to non-PEO Named Executive Officers	Total Shareholder Return	Value of Initial Fixed \$100 Investment Based On: Peer Group Total Shareholder Return	Net Income	[Company Selected Measure]	Additional Financial Performance Measures: [1 st Additional Measure]	[2 nd Additional Measure]
								Relative Total Shareholder Return (rTSR) Percentile	Adjusted Revenue (\$m)	Adjusted EPS
2022	8,702	\$ 8,102 (1)	\$ 2,872 (2)	\$ 1,372 (3)	44.50	\$ 159.59	\$ 43,375	12(4)	\$ 1,492(5)	0.02(6)
2021	8,625	8,625	1,987	1,987	77.07	135.39	79,469	5	1,365	0.04
2020	9,398	9,398	2,239	2,239	145.79	117.45	76,526	72	1,226	0.15

* * *

(4) Relative total shareholder return (rTSR) is defined as the percentile of the company’s three-year cumulative TSR within the peer group.

(5) Adjusted revenue, which is intended to reflect organic growth, is calculated as revenue determined in accordance with accounting principles generally accepted in the United States ("GAAP") and adjusted to remove the impacts of currency. It may also be adjusted for certain items that affect the comparability of results, including acquisitions or dispositions completed during the fiscal period, other specific large, unusual or nonrecurring items and changes in accounting principles pursuant to GAAP. This is a supplemental measure.

(6) Adjusted EPS is calculated as earnings per share determined in accordance with GAAP and adjusted for certain items that affect the comparability of results, including acquisitions or dispositions completed during the fiscal period, other specific large, unusual or nonrecurring items and changes in accounting principles pursuant to GAAP. This is a supplemental measure.

This results in the following facts for the CSM (relative total shareholder return) and two additional measures (adjusted revenue and adjusted EPS). Note that a separate element, `ecd:CoSelectedMeasureAmt`, is used for the values of the CSM. As a percentile, it is treated as a percent (ranges between 0 and 1, not 0 and 100).

Figure 12. Performance measure facts.

Element	Period	Measure Axis	Value – Unit
<code>ecd:MeasureName</code>	FY22	1	Relative Total Shareholder Return
<code>ecd:NonGaapMeasureDescriptionTextBlock</code>	FY22	1	Relative total shareholder return (rTSR) is defined as the percentile of the company’s three-year cumulative TSR within the peer group.
<code>ecd:CoSelectedMeasureAmt</code>	FY22	1	.12 – pure
<code>ecd:CoSelectedMeasureAmt</code>	FY21	1	.05 – pure
<code>ecd:CoSelectedMeasureAmt</code>	FY20	1	.72 – pure
<code>ecd:MeasureName</code>	FY22	2	Adjusted Revenue

Element	Period	Measure Axis	Value – Unit
ecd:NonGaapMeasureDescriptionTextBlock	FY22	2	Adjusted revenue, which is intended to reflect organic growth, is calculated as revenue determined in accordance with accounting principles generally accepted in the United States ("GAAP") and...
ecd:OtherPerfMeasureAmt	FY22	2	\$1,492,000,000
ecd:OtherPerfMeasureAmt	FY21	2	\$1,365,000,000
ecd:OtherPerfMeasureAmt	FY20	2	\$1,226,000,000
ecd:MeasureName	FY22	3	Adjusted EPS
ecd:NonGaapMeasureDescriptionTextBlock	FY22	3	Adjusted EPS is calculated as earnings per share determined in accordance with GAAP and adjusted for certain items that affect the comparability of results, including acquisitions or dispositions ...
ecd:OtherPerfMeasureAmt	FY22	3	.02 - USD/share
ecd:OtherPerfMeasureAmt	FY21	3	.04 – USD/share
ecd:OtherPerfMeasureAmt	FY20	3	.1515 – USD/share

5.1.6 Tabular lists and the PEO Name

The Tabular List as defined by 402(v)(6) is a simple list of measure names, as for example in this list where the measure names are tagged:

Relative Total Shareholder Return (rTSR)
Adjusted Revenue
Adjusted EPS

The three `ecd:MeasureName` facts appearing in Figure 12 above could be tagged in this table, although filers should take care to use identical text if the measure names will be shown in multiple locations. There is no necessary correspondence between the number in the table and the number used in the `MeasureAxis.domain` value.

As noted above in discussing the “Executive Category” axis, the individual items in the tabular list are measures, and they are characterized as to whether they appear in one of three formats for the tabular list. The “PEO Name” could have appeared in any dimensional link containing `IndividualAxis` without `MeasureAxis`.

Figure 13. Dimensional links for one or more Tabular Lists

Definition Links and Concept Labels	Relationship	Notes
TabularListsByExecutiveCategory		
Pay vs Performance Tabular Lists [Line Items]		
Pay vs Performance Tabular Lists [Table]	all (closed table)	
Executive Category [Axis]	hypercube-dimension	No custom members
Individual [Axis]	hypercube-dimension	
Tabular List [Table Text Block]	domain-member	
PEO Name	domain-member	

Each measure, whether a Company Selected Measure or a supplemental measure, will have a Measure Name. Measures presented in the main table will also require an explanation (graphical, narrative or both) of its relationship to compensation; however, this requirement will not apply to measures that are disclosed in the Tabular List but are not presented in the main table.

Figure 14. Dimensional links for a single Tabular List

Definition Links and Concept Labels	Relationship	Notes
TabularListMeasures		
Tabular List Measures [Line Items]		
Pay vs Performance Tabular Lists [Table]	all (closed table)	
Executive Category [Axis]	hypercube-dimension	No custom members
Individual [Axis]	hypercube-dimension	
Measure [Axis]	hypercube-dimension	Typed dimension of integers
Measure Name	domain-member	

5.1.7 Custom taxonomy elements and linkbases.

The disclosure requirements in Items 402(v)(3) and 402(v)(4) which appear as the following three text blocks require quantitative detail to justify adjustments to compensation and changes in equity valuation.

Adjustment To PEO Compensation, Footnote [Text Block]
Adjustment to Non-PEO NEO Compensation Footnote [Text Block]
Equity Valuation Assumption Difference, Footnote [Text Block]

Specific parameters are not included in the ECD taxonomy because of the potential variety of possible derivations. Therefore, filers are free to create custom tags, definition, presentation, calculation and label links to provide the required quantitative details, in much the same way that “Level 4” detail tagging as described in Regulation S-T 232.405 requires custom tagging in many financial statement footnotes. Quantitative amounts appearing only within image files referenced by text block can be tagged as if they had been displayed in a table.

5.2 Presentation Links

Presentation links for the ECD taxonomy’s Pay vs Performance disclosures all appear within a single role, `PvpDisclosure`, embedded in the `ecd-sub` schema and it provides a basic rendering, on the assumption that the content will either be viewed in a browser in its original layout, or as data captured and used by other means. The `ecd-sub` schema is optional, as is the `dei-sub` schema that it imports (as shown in Figure 1). Filers choosing not to use these optional schemas will need to provide their own presentation links for ECD elements so as to ensure that all facts are presented and otherwise conforming to EDGAR Filer Manual directions and validations.

6 ERRONEOUSLY AWARDED COMPENSATION RECOVERY DISCLOSURE

Item 402(w) and its equivalents identify a relatively small number of structured data items required when a company has prepared a required accounting restatement that triggers recovery analysis of erroneously awarded compensation (*i.e.*, a clawback), or when a company has an outstanding balance of erroneously awarded compensation to be recovered.⁶

6.1 Definition (Dimension) Links

The structure of Item 402(w) and its equivalent disclosure requirements is largely reflected in the dimensional links, which are not customizable (that is, they are embedded in the `ecd` schema and their arc priority is always 10). A unique feature of the disclosure is reflected in the text of the rule, which characterizes each occurrence of erroneously awarded compensation recovery as being associated with a specific restatement identified by the date of its determination. Therefore every fact in this disclosure will have at least one dimension, consisting of the Restatement Determination Date Axis and the determination date of the restatement.

⁶ The erroneously awarded compensation recovery (*i.e.*, clawback) rulemaking also adds new tagged checkboxes to the cover pages of Form 10-K, Form 20-F, and Form 40-F (but not to Form N-CSR, Schedule 14A, or Schedule 14C). The tags for these checkboxes are contained in the `dei` taxonomy, not the `ecd` taxonomy.

6.1.1 Concepts appearing in the Required Context augmented with the restatement determination date.

In the figure below a hypercube with one axis (Erroneously Awarded Compensation Recovery [Table]) reflects that these concepts are not expected to ever be in contexts with any dimensions other than the Restatement Determination Date Axis, and moreover, are normally going to appear in the Required Context as defined in EFM 6.5.19.

Figure 15. Erroneously awarded compensation concepts with the restatement determination date dimension.

Definition Links and Concept Labels	
ErrCompDisclosure Role	Relationship
Recovery of Erroneously Awarded Compensation Disclosure [Line Items]	
Erroneously Awarded Compensation Recovery [Table]	all (closed table)
Restatement Determination Date [Axis]	hypercube-dimension
Restatement Determination Date	domain-member
Aggregate Erroneous Compensation Amount	domain-member
Erroneous Compensation Analysis [Text Block]	domain-member
Stock Price or TSR Estimation Method [Text Block] ⁷	domain-member
Outstanding Aggregate Erroneous Compensation Amount	domain-member
Aggregate Erroneous Compensation Not Yet Determined [Text Block]	domain-member
Restatement Does Not Require Recovery [Text Block]	domain-member

The simplest possible use of the ECD taxonomy would involve just two facts: the Restatement Determination Date, and the text indicating that the amount has not yet been determined, as for example:

On November 1, 2032, the Audit Committee of the Board, in consultation with the Company’s management, determined that the Company’s consolidated financial statements for the affected periods included in the 2031 Annual Report on Form 10-K were required to be restated. The Company is conducting an analysis under its Recovery of Erroneously Awarded Compensation Policy to determine whether any amount of compensation received by executive officers in fiscal years 2031, 2030, or 2029 is to be recovered. In light of the short period of time between the restatement determination date and the date of this filing, the company has not yet determined the amount of erroneously awarded executive compensation that must be recovered.

This only requires two facts, one of which exists only because Inline XBRL does not provide a way to “tag” an axis member:

Element	Period	Member of Restatement Determination Date Axis	Value
RestatementDeterminationDate	FY32	2032-11-01	2032-11-01
AggErrCompNotYetDeterminedTextBlock	FY32	2032-11-01	The Company is conducting an analysis under its Recovery of Erroneously Awarded Compensation Policy to determine whether any amount of compensation received by executive officers in fiscal years 2031, 2030, or 2029 is to be recovered. In light of the short period of time between the restatement determination date and the date of this filing, the company has not yet determined the amount of erroneously awarded executive compensation that must be recovered.

⁷ With respect to the tagging of quantitative details included within narrative descriptions, such as including stock price or TSR estimates within the calculation of the stock price or TSR estimation methodology, please see the explanation related to custom tagging in Section 5.1.7, which is applicable here as well.

6.1.2 Forgone Recoveries

Sometimes a company will effectively abandon (*i.e.*, forgo) an attempt to recover compensation due to impracticability. In this case, each amount must be disclosed with a text block describing one of three valid reasons for the impracticability, for each current and former named executive officer, and for all other current and former executive officers as a group.

Figure 16. Dimensional links for forgone recoveries, by restatement determination date and individual.

Definition Links and Concept Labels	
ForgoneRecoveries Role	Relationship
Forgone Recoveries [Line Items]	
Forgone Recoveries, by Individual [Table]	all (closed table)
Restatement Determination Date [Axis]	hypercube-dimension
Individual [Axis]	hypercube-dimension
Forgone Recovery, Individual Name	domain-member
Forgone Recovery due to Expense of Enforcement, Amount	domain-member
Forgone Recovery due to Violation of Home Country Law, Amount	domain-member
Forgone Recovery due to Disqualification of Tax Benefits, Amount	domain-member
Forgone Recovery, Explanation of Impracticability [Text Block]	domain-member

The Individual Axis is used here as described for compensation recovery disclosures, with the exception that `ecd:NonNeosMember` must be used for the aggregate amount for all non-NEO current and former executive officers as a group.

6.1.3 Outstanding Recoveries

As long as the effort to collect continues, if the amounts owed by current and former named executive officers have been outstanding for at least 180 days, these amounts must also be disclosed, by individual.

Figure 17. Dimensional links for outstanding recoveries, by restatement determination date and individual.

Definition Links and Concept Labels	
OutstandingRecoveriesRole	Relationship
Outstanding Recoveries [Line Items]	
Outstanding Recoveries, by Individual [Table]	all (closed table)
Restatement Determination Date [Axis]	hypercube-dimension
Individual [Axis]	hypercube-dimension
Outstanding Recovery, Individual Name	domain-member
Outstanding Recovery Compensation Amount	domain-member

In the absence of text blocks encompassing the entire disclosure, it is likely that most tagging will appear as facts within narratives, for example:

On June 1, 2032, the Audit Committee of the Board, in consultation with the Company’s management, concluded that the previously issued consolidated financial statements for fiscal years 2031, 2030, and 2029 on Form 10-K filed with the Securities and Exchange Commission on April 15, 2032, April 15, 2031, and April 15, 2030, respectively, contained an error related to the accounting of [expense X]. The Audit Committee also determined that the Company’s consolidated financial statements for the affected periods included in the 2032 Annual Report, 2031 Annual Report, and 2030 Annual Report on their respective Forms 10-K should not be relied upon and were required to be restated by increasing [expense X]. As a result of this change, [metric Y] was decreased.

The Board determined that based on this decrease to [metric Y], previously awarded executive compensation totaling \$16 million was required to be recovered in total under the company’s clawback policy described above. To arrive at this amount, the Company used the following calculation: [narrative explanation of methodology including nested quantitative values \$(Z1) and (Z2) to be included here]. As of December 31, 2032, all \$14 million owed by John Smith (Chief Executive Officer) has been recovered.

As of December 31, 2032, of the erroneously awarded executive compensation attributable to this restatement, \$2 million to be reimbursed by Joe Public (Chief Financial Officer) to the Company has remained outstanding for over 180 days. As a result of the above, the aggregate outstanding amount of erroneously awarded compensation attributable to this restatement was \$2 million as of December 31, 2032.

This example results in the following facts.

Element	Period	Member of Restatement Determination Date Axis	Member of Individual Axis	Value
RestatementDeterminationDate	2032-06-01	2032-06-01		2032-06-01
AggtErrCompAmt	2032-12-31	2032-06-01		16,000,000 USD
OutstandingRecoveryCompAmt	2032-12-31	2032-06-01	PublicMember	2,000,000 USD
OutstandingRecoveryIndName	2032-01-01 to 2032-12-31	2032-06-01	PublicMember	Joe Public
OutstandingAggtErrCompAmt	2032-12-31	2032-06-01		2,000,000 USD
ErrCompAnalysisTextBlock	2032-01-01 to 2032-12-31	2032-06-01		To arrive at this amount, the Company used the following calculation: [narrative explanation of methodology including nested quantitative values \$(Z1) and (Z2) to be included here]

6.2 Presentation Links

Presentation links for the ECD taxonomy’s Item 402(w) and equivalent disclosures all appear within a single role, `ErrCompDisclosure`, embedded in the `ecd-sub` schema and it provides a basic rendering, on the assumption that the content will either be viewed in a browser in its original layout, or as data captured and used by other means. The `ecd-sub` schema is optional, as is the `dei-sub` schema that it imports (as shown in Figure 1). Filers choosing not to use these optional schemas will need to provide their own presentation links for ECD elements so as to ensure that all facts are presented and otherwise conforming to EDGAR Filer Manual directions and validations.

7 REFERENCES

- [DIM] XBRL Dimensions 1.0
<https://specifications.xbrl.org/spec-group-index-group-dimensions.html>
- [EFM] EDGAR Filer Manual, Volume II, sections 5.2.5 and 6 on Interactive Data
<https://www.sec.gov/edgar/filer-information>
- [iXBRL] Inline XBRL 1.1.
<https://specifications.xbrl.org/work-product-index-inline-xbrl-inline-xbrl-1.1.html>