

Validating SEC Filings with Pesseract

By Charles Hoffman, CPA

This document walks you through the process of validating an XBRL-based public company financial filing to the SEC to see if it is valid. It will also walk you through the same validation process for a local copy of an XBRL-based financial report that has not yet been submitted. The goal of the document is to familiarize you with the steps involved in the process.

IMPORTANT NOTE: Metadata is not provided for all reporting styles with the free version of the software. This is a working proof of concept that does a pretty good job on most filings, but it cannot guarantee perfect results for every filing.

STEP 1: Get XBRL-based financial report you want to validate from SEC EDGAR system

The first step in validating an XBRL-based financial report that has already been submitted to the SEC EDGAR system is to get that filing from the SEC. There are two ways you can do that. Using the interfaces provided by the SEC. Alternatively you can use interfaces provided by XBRL Cloud which I personally find easier. First, go to this URL below:

<https://edgardashboard.xbrlcloud.com/edgar-dashboard/>

The screenshot shows the EDGAR Dashboard interface. At the top, there is a search bar and navigation tabs for "10-K and 10-Q (Excluding Trusts and Funds)", "Risk/Return", and "All Other XBRL Filings". The main table lists various companies with columns for CIK, SIC, Form, Date Filed, Creation Software, % Extended, Interactive Reviewer, Evidence Package Sample, and Evidence Package Excel Sample. To the right of these columns are numerous validation columns, each with a "List" button and a status indicator (OK, 1, 2, 3, or Processing). A yellow callout bubble points to the search bar.

#	Company	CIK	SIC	Form	Date Filed	Creation Software	% Extended	Interactive Reviewer	Evidence Package Sample	Evidence Package Excel Sample	XBRL Technical Syntax Rules	Automatable EFM Rules	Model Structure Rules (US GAAP Taxonomy Architecture)	US GAAP Domain Level Rules	Fundamental Accounting Concepts and Relations Rules	XBRL-US Data Quality	Notes Consistency	Reporting Entity Specific Rules	Reporting Entity Specific Rules Manual	Reporting Entity Specific Roll Up Rules	US GAAP Reportability Rules	Other Rules		
1	HOLOGIC INC	0000859737	3844	10-K	Today	Workiva	26%																Processing	
2	Xiant Medical Holdings, Inc.	0001453593	2836	10-Q	Today	DataTracks	22%																	Processing
3	AXA EQUITABLE LIFE INSURANCE CO	0000727920	6411	10-Q/A	Today	Workiva	31%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
4	Palo Alto Networks Inc	0001327567	3577	10-Q	Today	Workiva	9%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
5	Galenfeha, Inc.	0001574676	8711	10-Q	Today	Compliance Xpressware	62%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	1	OK	OK	OK	OK
6	Duos Technologies Group, Inc.	0001396536	7372	10-Q/A	Today	Novaworks Software	26%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
7	HighLight Networks, Inc.	0001445175	5090	10-Q	Today	Novaworks Software	8%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	1	OK	OK	OK	OK
8	EliteSoft Global Inc.	0001612254	6770	10-Q	Today	Novaworks Software	4%	Viewer	Info	Download	OK	OK	OK	OK	2	OK	1	OK	1	OK	OK	OK	OK	OK
9	PREMIER BIOMEDICAL INC	0001515740	2836	10-Q	Today	GoXBRL	27%	Viewer	Info	Download	OK	OK	OK	OK	1	6	OK	OK	OK	2	OK	OK	OK	OK
10	WASHINGTON FEDERAL INC	0000936528	6021	10-K	Today	Workiva	26%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	1	OK	OK	OK	OK
11	Hawk Street Acquisition Corp	0001681302	6770	10-Q	Today	Thunderdome	6%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
12	HOME DEPOT INC	0000354950	5211	10-Q	Today	Workiva	5%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
13	SweeGen, Inc.	0001590883	2860	10-Q/A	Today	Advanced Computer Innovations	13%	Viewer	Info	Download	OK	OK	OK	OK	1	17	OK	OK	OK	OK	OK	OK	OK	OK
14	Cavitation Technologies, Inc.	0001376793	700	10-Q/A	Today	Novaworks Software	8%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	2	OK	1	OK	OK	OK
15	HEMCARE HEALTH SERVICES INC.	0001420368	7200	10-Q	Today	GoXBRL	20%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	2	OK	OK	1	OK	OK	OK	OK
16	VIEW SYSTEMS INC	0001075857	7380	10-Q	Today	Novaworks Software	7%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	10	OK	OK	OK	OK	OK	OK	OK
17	IONIX TECHNOLOGY, INC.	0001528308	3841	10-Q	2017-11-20	Novaworks Software	13%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	2	OK	OK	OK	OK	OK	OK	OK
18	NORTHWEST BIOTHERAPEUTICS INC	0001072379	2834	10-Q	2017-11-20	DataTracks	32%	Viewer	Info	Download	OK	OK	1	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
19	Blink Charging Co.	0001429764	3612	10-Q	2017-11-20	Novaworks Software	34%	Viewer	Info	Download	OK	OK	1	OK	OK	3	OK	OK	1	1	OK	OK	OK	OK
20	FINDEX COM INC	0001089061	3470	10-Q	2017-11-20	Ez-XBRL	27%	Viewer	Info	Download	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Once you get to the main page, enter the name of the company you are looking for in the “Search” text box. For our example we will use “HOME DEPOT”. So, enter that in the search text box and select the company from the list provided:



For our purposes we want to use the 10-K. We will want to click on the intersection of the form we want which is “10-K” and the “Date Filed” which has a link to the SEC page for the filing. So, click that, “2017-03-23”:

#	Company	CIK	SIC	Form	Date Filed	Creation Software	% Extended
1	HOME DEPOT INC	0000354950	5211	10-Q	Today	Workiva	5%
2	HOME DEPOT INC	0000354950	5211	10-Q	2017-08-22	Workiva	4%
3	HOME DEPOT INC	0000354950	5211	10-Q	2017-05-23	Workiva	1%
4	HOME DEPOT INC	0000354950	521	10-K	2017-03-23	Workiva	16%
5	HOME DEPOT INC	0000354950	5211	10-Q	2016-11-22	Workiva	11%

You will see the SEC page for the filing. On that page, look for the “XBRL INSTANCE DOCUMENT”. Either right-click over the link to select it or open the link in your browser and then copy the link.

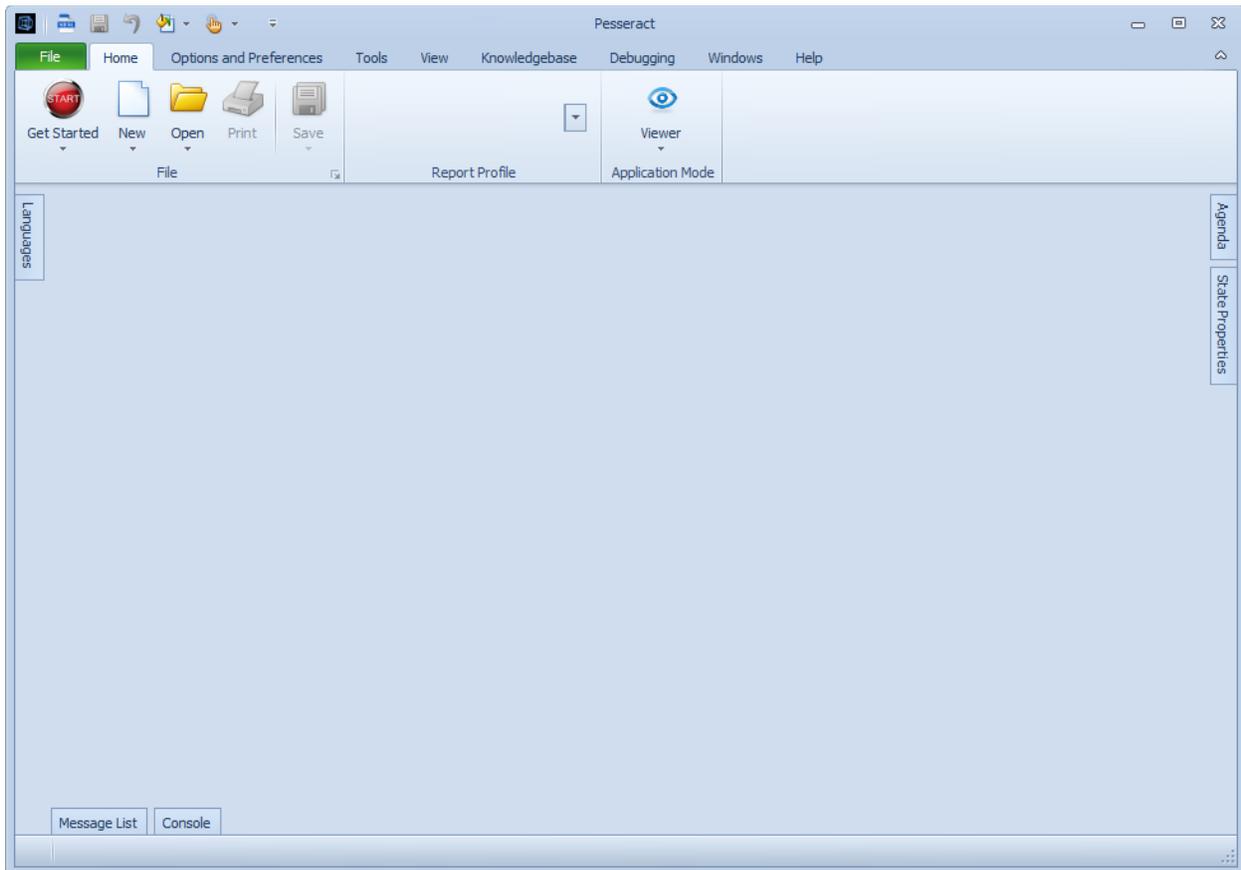
Seq	Description	Document	Type	Size
11	XBRL INSTANCE DOCUMENT	hd-20170129.xml	EX-101.INS	1744031
12	XBRL TAXONOMY EXTENSION SCHEMA DOCUMENT	hd-20170129.xsd	EX-101.SCH	58047
13	XBRL TAXONOMY EXTENSION CALCULATION LINKBASE DOCUMENT	hd-20170129_cal.xml	EX-101.CAL	110041
14	XBRL TAXONOMY EXTENSION DEFINITION LINKBASE DOCUMENT	hd-20170129_def.xml	EX-101.DEF	306911

Ultimately, you want a URL that looks like this to paste into the Pesseract application:

<https://www.sec.gov/Archives/edgar/data/354950/000035495017000005/hd-20170129.xml>

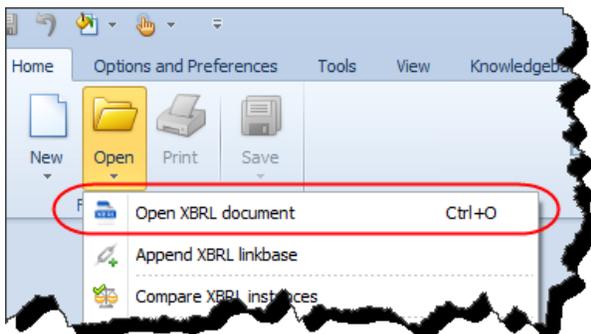
STEP 2: Start Pesseract.

Open the Pesseract application and the main form is displayed and the “Home” tab of the menu ribbon is displayed.

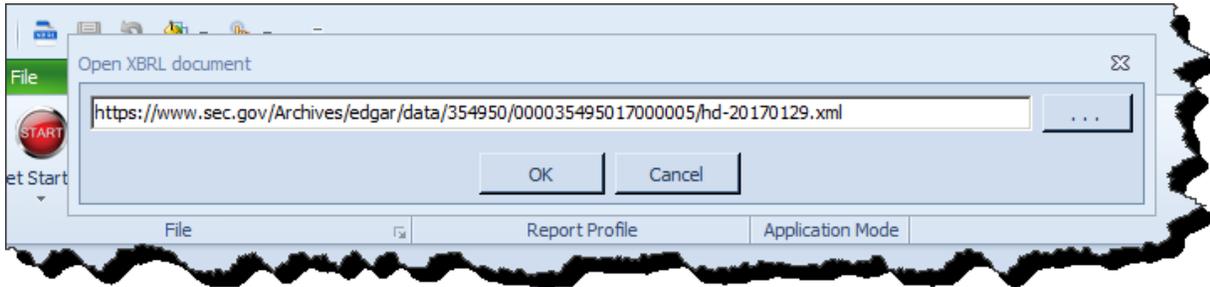


STEP 3: Open the URL for the company you selected.

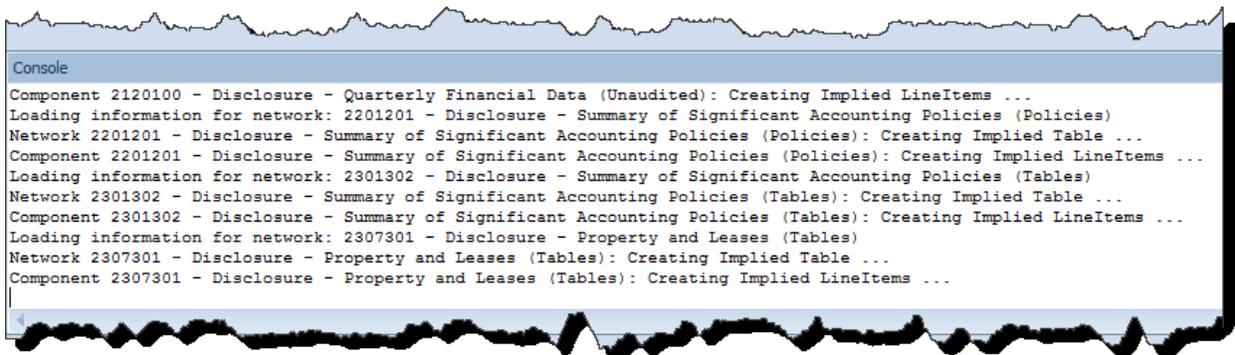
Press the “Open” icon on the “Home” menu ribbon. Select the “Open XBRL document” menu item.



This will open a new form and you will then paste the URL of the XBRL instance from the SEC page for the filing of the XBRL-based report into the text box.



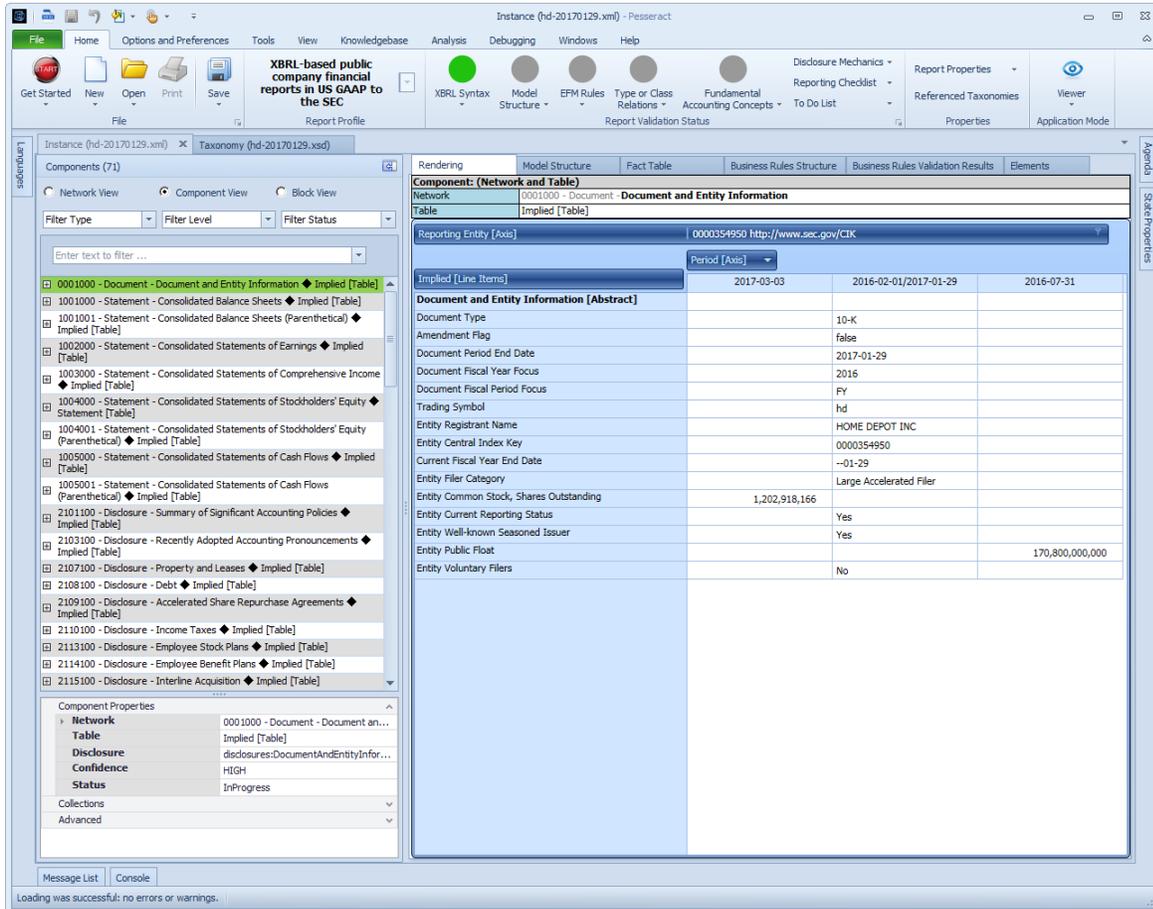
You can see the files being loaded in the “Console” window on the bottom of the main window:



Messages will flow through the Console form until the report loading process has completed.

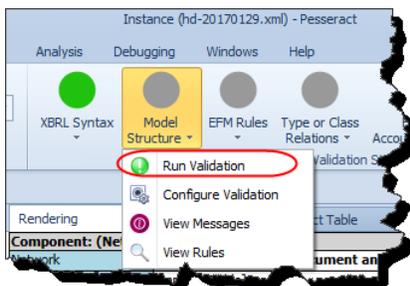
STEP 3: View information from the report.

After the loading process has been completed you will see the fragments of the report in a list on the LEFT side of the screen.



STEP 4: Validate the model structure of the report.

We will perform the validation steps one-by-one. Click the “Model Structure” icon from the Validation Status group within the “Home” tab. Then select “Run Validation” from the list that is provided to you:



A new document will be opened up and you will see the results of the Model Structure validation as shown below for HOME DEPOT:

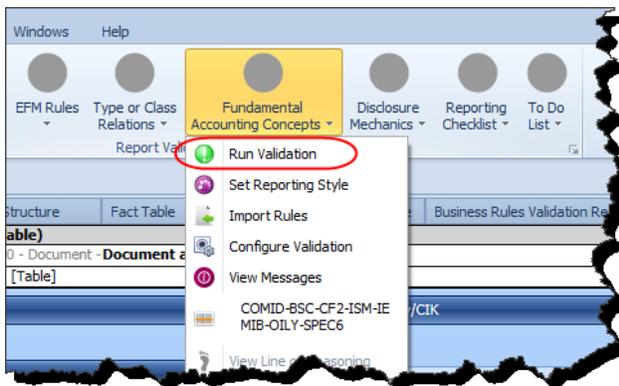
Child	Parent						
	Network	Table	Axis	Member	LineItems	Abstract	Concept
Network	0	0	0	0	0	0	0
Table	0	0	0	0	0	24	0
Axis	0	49	0	0	0	0	0
Member	0	0	49	143	0	0	0
LineItems	0	24	0	0	0	0	0
Abstract	69	0	0	0	8	29	0
Concept	0	0	0	0	128	311	0

What you want to make sure is that there are numbers ONLY in the GREEN colored cells. Anything other than a “0” in a RED, ORANGE, or YELLOW colored cell is an error or a warning that something has been represented incorrectly within the report.

Close the model structure validation results by clicking the “X” in the upper right corner of the “Model Structure Validation Results” document.

STEP 5: *Validate the fundamental accounting concept relations of the report.*

Click the “Fundamental Accounting Concepts” icon from the Validation Status group within the “Home” tab. Then select “Run Validation” from the list that is provided to you:



Three new documents will be opened up and you will see the results of the FAC Validation Result as shown below for HOME DEPOT:

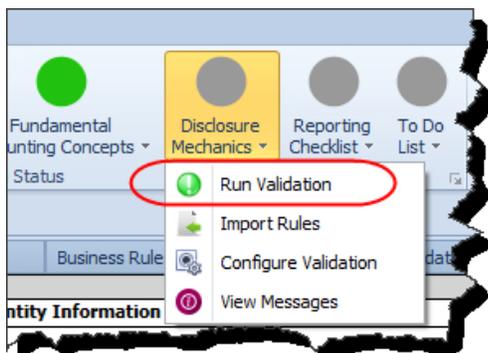
Instance (hd-20170129.xml)	Taxonomy (hd-20170129.xsd)	FAC Instance (hd-20170129.xml)	FAC Taxonomy	FAC Validation Result	
Entity	Period	ID	Test	Result	Amount Of Inconsistency
0000354950	2016-FY	FAC_CONSISTENCY_1	fac:Equity = (fac:EquityAttributableToParent + fac:EquityAttributableToNoncontrollingInterest)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_10	fac:NetCashFlowFromInvestingActivities = (fac:NetCashFlowFromInvestingActivitiesContinuing + fac:NetCashFlowFromInvestingActivitiesDiscontinued)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_11	fac:NetCashFlowFromFinancingActivities = (fac:NetCashFlowFromFinancingActivitiesContinuing + fac:NetCashFlowFromFinancingActivitiesDiscontinued)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_12	fac:GrossProfit = (fac:Revenues - fac:CostOfRevenue)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_13	fac:OperatingIncomeLoss = (fac:GrossProfit - fac:OperatingExpenses)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_15	fac:IncomeLossFromContinuingOperationsBeforeTax = (fac:OperatingIncomeLoss + fac:NonoperatingIncomePlusInterestAndDebtExpensePlusIncomeFromEquityMethodInvestments)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_16	fac:IncomeLossFromContinuingOperationsAfterTax = (fac:IncomeLossFromContinuingOperationsBeforeTax - fac:IncomeTaxExpenseBenefit)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_17	fac:NetIncomeLoss = (fac:IncomeLossFromContinuingOperationsAfterTax + fac:IncomeLossFromDiscontinuedOperationsNetOfTax + fac:ExtraordinaryItemsOfIncomeExpenseNetOfTax)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_18	fac:NetIncomeLoss = (fac:NetIncomeLossAttributableToParent + fac:NetIncomeLossAttributableToNoncontrollingInterest)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_19	fac:NetIncomeLossAvailableToCommonStockholdersBasic = (fac:NetIncomeLossAttributableToParent - fac:PreferredStockDividendsAndOtherAdjustments)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_2	fac:Assets = fac:LiabilitiesAndEquity	True	0
0000354950	2016-FY	FAC_CONSISTENCY_20	fac:ComprehensiveIncomeLoss = (fac:ComprehensiveIncomeLossAttributableToParent + fac:ComprehensiveIncomeLossAttributableToNoncontrollingInterest)	True	0
0000354950	2016-FY	FAC_CONSISTENCY_21	fac:ComprehensiveIncomeLoss = (fac:NetIncomeLoss + fac:OtherComprehensiveIncomeLoss)	True	0

We are not going to go through all the results as we only want to cover the validation process for now. Watch the video or go through the PDF that explains how to find errors and understand the error so that the errors can be fixed. HOME DEPOT has no errors in this report.

Close the three new documents that were opened for the fundamental accounting concept validation.

STEP 6: Validate the disclosure mechanics of the report.

Click the “Disclosure Mechanics” icon from the Validation Status group within the “Home” tab. Then select “Run Validation” from the list that is provided to you:



Two new documents will be opened up and you will see the results of the Disclosure Mechanics Validation Result as shown below for HOME DEPOT:

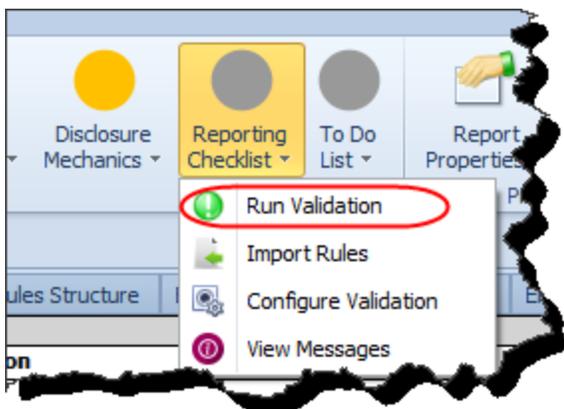
Instance (hd-20170129.xml) Taxonomy (hd-20170129.xsd) Disclosure Mechanics Taxonomy Disclosure Mechanics Validation Result									
Show more information									
Primary Information									
#	Disclosure	Category	Level	Pattern	Disclosure Found	Disclosure Con...	Applicable	Representation Concept [TEXT BLOCK]	Representation Concept DETAIL
1	Accounts Payable and Accr...	Disclosure	Level3TextBlock,Level4Detail	RollUp	False	N/A	False	NOT-FOUND	NOT-FOUND
2	Accounts, Notes, Loans an...	Disclosure	Level3TextBlock,Level4Detail	RollUp	False	N/A	False	NOT-FOUND	NOT-FOUND
3	Accrued Liabilities [Roll Up]	Disclosure	Level3TextBlock,Level4Detail	RollUp	False	N/A	False	NOT-FOUND	NOT-FOUND
4	Accumulated Other Compr...	Disclosure	Level3TextBlock,Level4Detail	RollForward	False	CONSISTENT	True	NOT-FOUND	NOT-FOUND
5	Allowance for Credit Losse...	Disclosure	Level3TextBlock,Level4Detail	RollForward	False	N/A	False	NOT-FOUND	NOT-FOUND
6	Asset Retirement Obligato...	Disclosure	Level3TextBlock,Level4Detail	RollForward	False	N/A	False	NOT-FOUND	NOT-FOUND
7	Assets [Roll Up]	Statement	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Assets
8	Balance Sheet	Statement	Level4Detail	Component	True	CONSISTENT	True	-	-
9	Base of Reporting Note [N...	Disclosure	Level3TextBlock	TextBlock	True	CONSISTENT	True	Organization, Consolidation and Presentation of Financial Statem...	NOT-EXPECTED
10	Cash Flow Statement [Rol ...	Statement	Level4Detail	RollUp	True	CONSISTENT	True	NOT-EXPECTED	Cash and Cash Equivalents, Period Increase (Decrease)
11	Deferred Tax Assets and Li...	Disclosure	Level3TextBlock,Level4Detail	RollUp	True	CONSISTENT	True	Schedule of Deferred Tax Assets and Liabilities [Table Text Block]	Deferred Tax Assets, Net of Valuation Allowance
12	Defined Benefit Plan, Alloc...	Disclosure	Level3TextBlock,Level4Detail	Hierarchy	False	N/A	False	NOT-FOUND	NOT-FOUND
13	Defined Benefit Plan, Assu...	Disclosure	Level3TextBlock,Level4Detail	Hierarchy	False	N/A	False	NOT-FOUND	NOT-FOUND
14	Defined Benefit Plan, Chan...	Disclosure	Level3TextBlock,Level4Detail	RollForward	False	N/A	False	NOT-FOUND	NOT-FOUND
15	Defined Benefit Plan, Chan...	Disclosure	Level3TextBlock,Level4Detail	RollForward	False	N/A	False	NOT-FOUND	NOT-FOUND

Again, we are not going to go through all the results as we only want to cover the validation process for now. Watch the video or go through the PDF that explains how to find errors and understand the error so that the errors can be fixed. HOME DEPOT has several disclosure mechanics validation inconsistencies.

This time we will LEAVE THE VALIDATION RESULTS documents that were created OPEN. We will need those for the Reporting Checklist Validation which is next.

STEP 7: Validate the reporting checklist for the report.

Click on the “Instance” document tab to make sure you have that document selected. Click the “Reporting Checklist” icon from the Validation Status group within the “Home” tab. Then select “Run Validation” from the list that is provided to you:



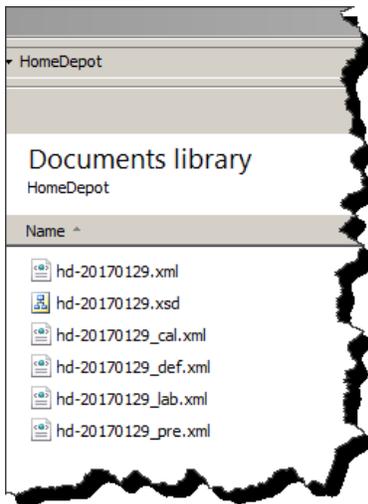
Two new documents will be opened up and you will see the results of the Reporting Checklist Validation Result as shown below for HOME DEPOT:

Instance (hd-20170129.xml)	Taxonomy (hd-20170129.xsd)	Disclosure Mechanics Taxonomy	Disclosure Mechanics Validation Result	Reporting Checklist Taxonomy	Reporting Checklist Validation Result	Expectation Met	Link to Disclosure Mechanics
#	Disclosure	Checklist Category	Reason Disclosure Must Exist	Discovers	Expectation Met		
0	Reporting Checklist						
1	Document Information [Hierarchy]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Document Information [Hierarchy]
2	Document and Entity Information [Hierarchy]	Alternative representation	Not necessary, satisfied by Document Information [Hierarchy] disclosure	True	N/A	True	Document and Entity Information [Hierarchy]
3	Entity Information, by Legal Entity [Hierarchy]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Entity Information, by Legal Entity [Hierarchy]
4	Document and Entity Information [Hierarchy]	Alternative representation	Not necessary, satisfied by Entity Information, by Legal Entity [Hierarchy] disc...	True	N/A	True	Document and Entity Information [Hierarchy]
5	Balance Sheet	Required disclosure	Disclosure always required, satisfied by Assets [Roll Up] and Liabilities and Equi...	True	CONSISTENT	True	Balance Sheet
6	Assets [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	True	Assets [Roll Up]
7	Liabilities and Equity [Roll Up]	Part of disclosure	Satisfies Balance Sheet disclosure	True	CONSISTENT	True	Liabilities and Equity [Roll Up]
8	Income Statement, by Legal Entity [Roll Up]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Income Statement, by Legal Entity [Roll Up]
9	Statement of Income and Comprehensive Income [Roll Up]	Alternative representation	Not necessary, satisfied by Income Statement, by Legal Entity [Roll Up] discos...	True	N/A	True	Statement of Income and Comprehensive Income [Roll Up]
10	Statement of Comprehensive Income [Roll Up]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Statement of Comprehensive Income [Roll Up]
11	Statement of Income and Comprehensive Income [Roll Up]	Alternative representation	Not necessary, satisfied by Statement of Comprehensive Income [Roll Up] discos...	True	N/A	True	Statement of Income and Comprehensive Income [Roll Up]
12	Cash Flow Statement [Roll Forward]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Cash Flow Statement [Roll Forward]
13	Statement of Changes in Equity [Roll Forward]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Statement of Changes in Equity [Roll Forward]
14	Nature of Operations Note [Note Level]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Nature of Operations Note [Note Level]
15	Basis of Reporting Note [Note Level]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Basis of Reporting Note [Note Level]
16	Significant Accounting Policies Note [Note Level]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Significant Accounting Policies Note [Note Level]
17	Revenue Recognition Policy [Policy Text Block]	Required disclosure	Disclosure always required	True	CONSISTENT	True	Revenue Recognition Policy [Policy Text Block]
18	Inventory, Net (Current) [Roll Up]	Line item exists, then disclosure requi...	Required because line item us-gaap:InventoryNet was reported	False	INCONSISTENT	False	Inventory, Net (Current) [Roll Up]
19	Property, Plant and Equipment, Net, by Type [Roll Up] (A...	Line item exists, then disclosure requi...	Required because line item us-gaap:PropertyPlantAndEquipmentNet was repor...	True	CONSISTENT	True	Property, Plant and Equipment, Net, by Type [Roll Up] (A...
20	Property, Plant and Equipment, Net, by Type [Roll Up] (A...	Alternative representation	Not necessary, satisfied by Property, Plant and Equipment, Net, by Type [Roll U...	True	N/A	True	Property, Plant and Equipment, Net, by Type [Roll Up] (A...
21	Property, Plant and Equipment Useful Lives, by Type [Hier...	Line item exists, then disclosure requi...	Required because line item us-gaap:PropertyPlantAndEquipmentNet was repor...	True	CONSISTENT	True	Property, Plant and Equipment Useful Lives, by Type [Hier...

STEP 8: Open a local report and validate the document.

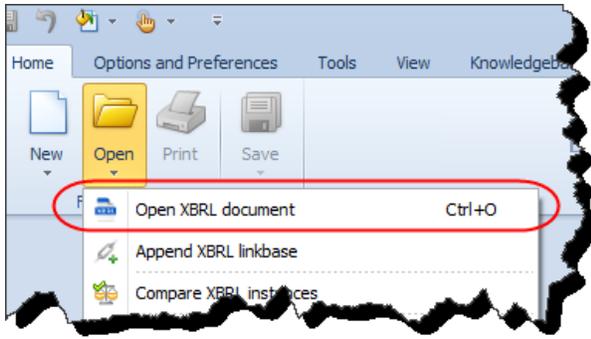
You can validate a local report such as an XBRL-based financial report that has not yet been filed to the SEC. You have to download all of the relevant files or have created the files. During the validation process NO INFORMATION FROM ANY FILE IS TRANSFERRED OFF OF YOUR COMPUTER. Pre-filed financial information is not ever at risk from the validation process.

The following is the typical set of files you need for an XBRL-based financial report of the style that would eventually be submitted to the SEC.



To open the local files, simply load the XBRL instance and just like the web-based files the local taxonomy and the proper US GAAP XBRL taxonomy components will be loaded.

So just as before, press the “Open” icon on the “Home” menu ribbon. Select the “Open XBRL document” menu item.



Then, press the button with the three dots to navigate to and select the local XBRL instance that you want to open:



Everything else is exactly the same once the local file is opened by the application.

PROBLEMS? Please email Charles.Hoffman@me.com if you need help resolving software installation issues.