Accounting Equation GOLDEN (Seattle Method):

Verification Tool:

https://pacioli.auditchain.finance/tools/PowerUserTool.swinb

Base XBRL Taxonomy: http://www.xbrlsite.com/seattlemethod/golden/ae/ae_ModelStructure.html

Report rendering:

Reporting Entity [Axis]	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442
Unit [Axis]	USD
	Period [Axis]
Implied [Line Items]	2020-12-31
Balance Sheet [Arithmetic]	
Assets	5,000
Liabilities	1,000
Equity	4,000

Report model:

Label	Report Element Class	Period	Balance	Preferred Label Role	Name
Implied [Table]	[Table]	As Of		Standard Label	fro:ImpliedTable
Implied [Line Items]	[LineItems]	As Of		Standard Label	fro:ImpliedLineItems
Balance Sheet [Arithmetic]	[Abstract]			Standard Label	ae:BalanceSheetArithmetic
Assets	[Concept] Monetary	As Of	Debit	Standard Label	ae:Assets
Liabilities	[Concept] Monetary	As Of	Credit	Standard Label	ae:Liabilities
Equity	[Concept] Monetary	As Of	Credit	Standard Label	ae:Equity

Report facts:

#	Reporting Entity	Period	Concept	Fact Value	Unit	Rounding
1	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	2020-12-31	Assets	5000	USD	0
2	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	2020-12-31	Liabilities	1000	USD	0
3	GH259400TOMPUOLS65II http://standards.iso.org/iso/17442	2020-12-31	Equity	4000	USD	0

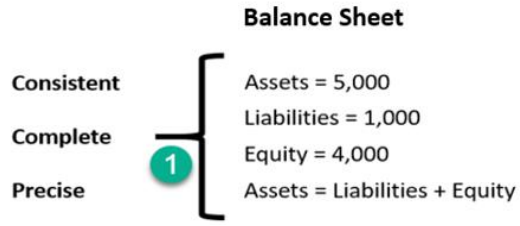
Report rules:

id	satisfied	message
REPORT_Arithmetic_BS01 (evaluation 1)	satisfied	$Assets=3500 = ($Liabilities=0 + $Equity=3500)

Human readable: http://www.xbrlsite.com/site1/seattlemethod/golden/reports/ae/state1/evidence-package/contents/index.html#Rendering-BalanceSheet-Implied.html

The following examples of different “states” of the accounting equation show the types of things that can go wrong when creating an XBRL-based digital financial report, how Pacioli can detect those things that can go wrong, and Pacioli’s flexibility in processing reports.

State 1: Properly Functioning System



% Accounting Equation, State 1 – Properly Functioning System, OK %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state1/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

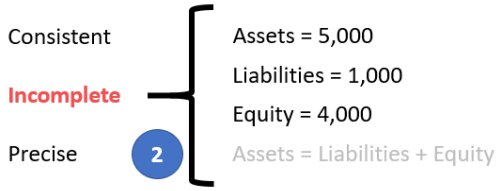
https://auditchain.infura-ipfs.io/ipfs/QmPUJWRLDvRu35kv3kuicNnwSw2EBFvGYPhaQyR4hrxpZb
(November 25, 2022)

Pacioli verification summary:

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

NOTE: #2 is gray because there are no XBRL calculations; one XBRL Formula is used to represent the rule and is verified in #3.

State 2: Incomplete Coverage by Rules



% Accounting Equation, State 2 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state2/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

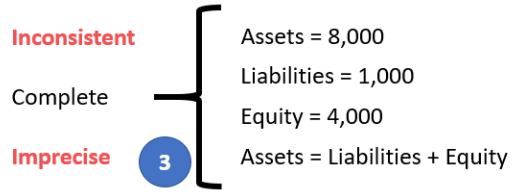
https://auditchain.infura-ipfs.io/ipfs/QmSqKLq6vb23f5hdpNm9oiGz2Wmx8ed9kidYnbPUcCFDmJ
(Updated November 25, 2022)

Error is generated because a balance sheet is defined as being an Arithmetic pattern; but because the rule was removed, the balance sheet is seen as a “Set” rather than as an “Arithmetic” pattern. But, while the report rule is not provided, the FAC rule does prove that the report is correct mathematically.

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	require [disclosures:BalanceSheet]	Require disclosure: • disclosures:BalanceSheet

State 3: Inconsistent and Imprecise



% Accounting Equation, State 3 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state3/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

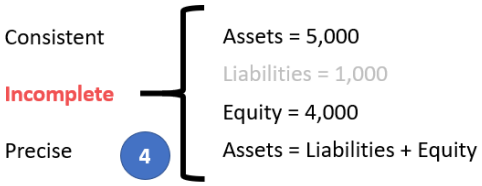
https://auditchain.infura-ipfs.io/ipfs/QmebJ1CLa4fBoyBbhFqibKVR9YpyhYFia5gdHMT68L3jik (Updated November 25, 2022)

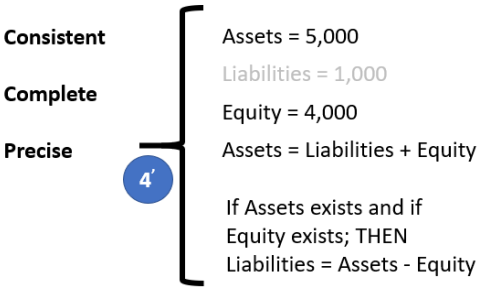
Note that the value for assets was changed from 5,000 to 8,000 to cause a mathematical error.

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	BS1	Assets=Liabilities+Equity
3	inconsistency	FAC_CONSISTENCY_Assets	Assets=Liabilities+Equity

State 4: Unreported Facts





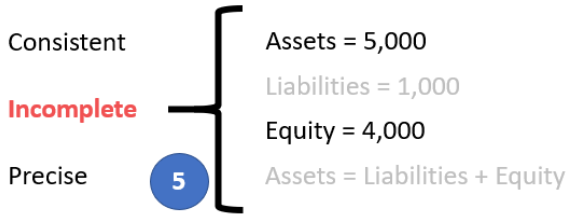
% Accounting Equation, State 4 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state4/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

https://auditchain.infura-ipfs.io/ipfs/QmUwY5dErAY4W4khz3EAwcRk8XuGDweQcaL1RguHe2dozG
(Updated November 25, 2022)

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	require [disclosures:BalanceSheet]	Require disclosure: • disclosures:BalanceSheet

State 5: Incomplete



% Accounting Equation, State 5 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state5/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

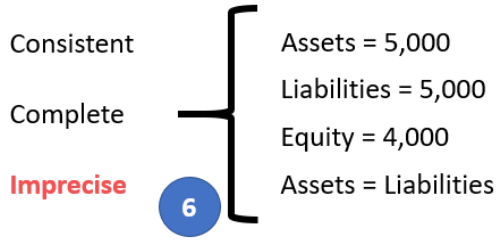
https://auditchain.infura-ipfs.io/ipfs/QmdPx9fiGD7Qei5YQo1GwqE7L2kMoEPVDigDHv5nVpY7wR
(Updated November 25, 2022)

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	require [disclosures:BalanceSheet]	Require disclosure: • disclosures:BalanceSheet

Pacioli reports a disclosure checklist error because the balance sheet is not discovered because (a) liabilities is required by the disclosure mechanics rules and (b) a balance sheet has an “Arithmetic” rule associated with it but because the rule was not provided, the pattern is incorrect.

State 6: Imprecise



% Accounting Equation, State 6 %
checkReport3("https://suite.auditchain.finance/storage/395dfa84-e4e4-11ec-8fea-0242ac120002/XHqZcKlM0/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

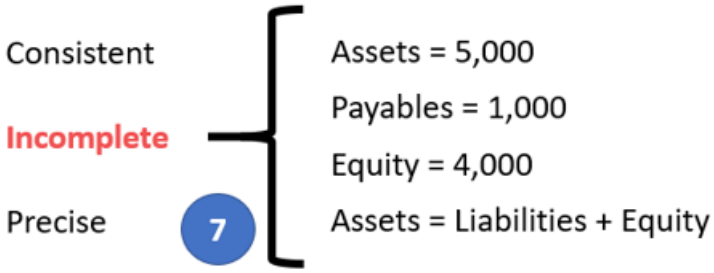
https://auditchain.infura-ipfs.io/ipfs/QmXCmksgopABBqXzUH5oeBL9rrNyJj7WYss23nLLbpxRsD
(Updated November 25, 2022)

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	FAC_CONSISTENCY_Assets	Assets=Liabilities+Equity

While the report verified by itself is valid because two errors (improper value for liabilities and improper rule) interact to offset each other; FAC validation consistency cross checks correctly point out the error. Note that if the FAC validation was not used, the report would appear to be valid and properly functioning.

State 7: Extension Concept (WITHOUT anchoring)



% Accounting Equation, State 7 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state7/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

https://auditchain.infura-ipfs.io/ipfs/QmNZYenPXKEAMJu9oBo1bHP5D61PrFMpTnCxGXHJVvWbyA
(Updated November 25, 2022)

The report is found to be incomplete because liabilities is expected within the disclosure balance sheet but there is no information which states that payables is a specialization of the more general term liabilities.

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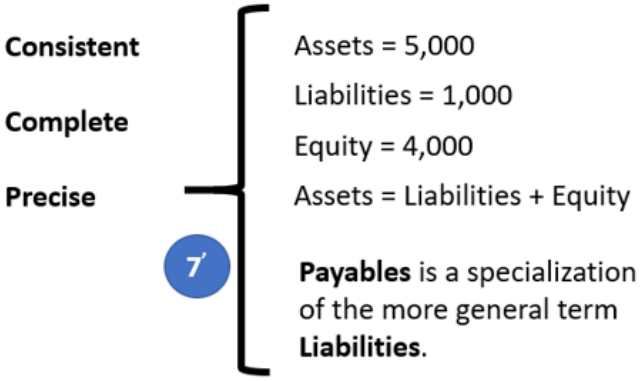
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	inconsistency	require [disclosures:BalanceSheet]	Require disclosure: • disclosures:BalanceSheet

State 7': Extension Concept (WITH ANCHORING)

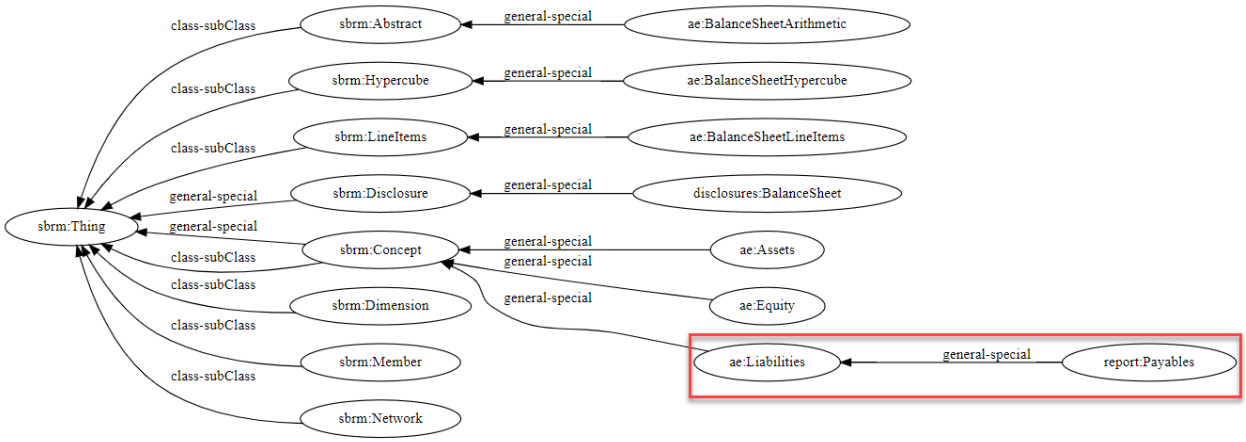


% Accounting Equation, State 7' %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state7/instance.xml",
['http://xbrlsite.com/site1/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml',
'http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state7/dm-BalanceSheet-with-payables-rules-def.xml', 'http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state7/fac-mapping-definition.xml', 'http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state7/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

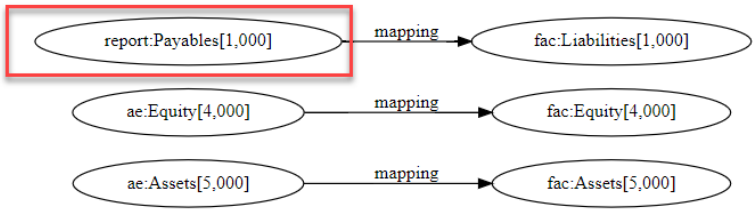
https://auditchain.infura-ipfs.io/ipfs/QmdNjhFvoik5KFcA9PBEYdWCRZht6MtaWGVDqg3go5qYf1
(Updated November 25, 2022)

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

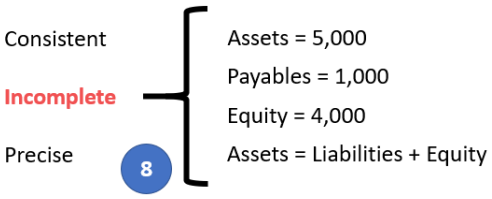
https://auditchain.infura-ipfs.io/ipfs/QmdNjhFvoik5KFcA9PBEYdWCRZht6MtaWGVDqg3go5qYf1/typeSubTypeGraph.html

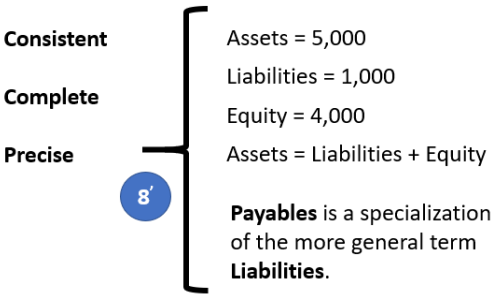


https://auditchain.infura-ipfs.io/ipfs/QmdNjhFvoik5KFcA9PBEYdWCRZht6MtaWGVDqg3go5qYf1/derivationsGraph.html



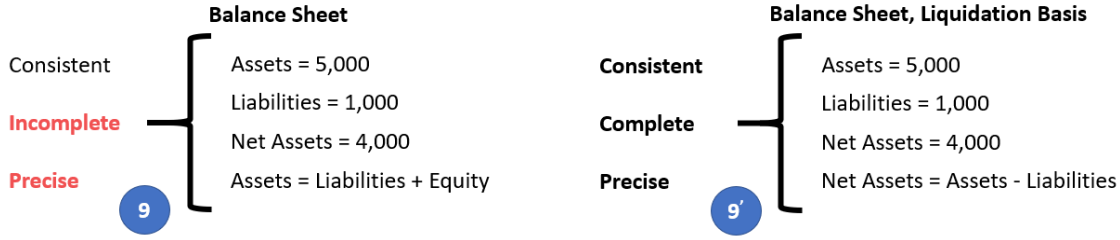
State 8: Base Taxonomy Wider/Narrower Concept Use





This example is exactly the same as State 7 and State 7' except that rather than an extension concept is not described to be a generalization of the specialized term Liabilities; it is a base taxonomy concept that does not provide that information. There is NO DIFFERENCE between whether a concept is an extension created by a reporting entity or a concept that is part of the base taxonomy; if the information about the association is not provided, a computer-based process cannot understand the association (i.e. because the information is not provided in machine readable form.)

State 9: Anchoring Extension Structures

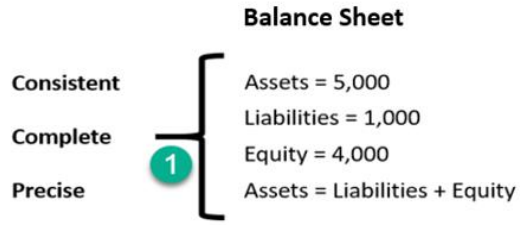


% Accounting Equation, State 9 %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state9/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml',
'http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state9/typeSubtype-rules-def.xml',
'http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state9/dm-BalanceSheet-with-netassets-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

https://auditchain.infura-ipfs.io/ipfs/QmSGYyeuKd7zD1sw4eqLRztQWQ1fESwqUH7eaWzrjX9VAQ
(Updated November 25, 2022)

#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

State 10: Improper Report Model Structure



While all the INFORMATION is present as per State 1 which is a properly functioning system; in this case the REPORT MODEL is pathological. The example was represented as this:

Rendering | Model Structure | Fact Table | Business Rules Structure | Business Rules Validation Results | Elements

Label	Report Element Class	Period	Balance	Preferred Label Role	Name
Implied [Table]	[Table]	As Of		Standard Label	fro:ImpliedTable
Implied [Line Items]	[LineItems]	As Of		Standard Label	fro:ImpliedLineItems
Balance Sheet [Arithmetic]	[Abstract]			Standard Label	ae:BalanceSheetArithmetic
Assets	[Concept] Monetary	As Of	Debit	Standard Label	ae:Assets
Liabilities	[Concept] Monetary	As Of	Credit	Standard Label	ae:Liabilities
Equity	[Concept] Monetary	As Of	Credit	Standard Label	ae:Equity

Logically, it should have been represented as this which makes more sense: (this is a SET of three facts that are mathematically interrelated, Assets = Liabilities + Equity; This is NOT A ROLL UP!!! This is the pattern called Arithmetic)

Label	Report Element Class	Period	Balance	Preferred Label Role	Name
Implied [Table]	[Table]	As Of		Standard Label	fro:ImpliedTable
Implied [Line Items]	[LineItems]	As Of		Standard Label	fro:ImpliedLineItems
Balance Sheet [Arithmetic]	[Abstract]			Standard Label	ae:BalanceSheetArithmetic
Assets	[Concept] Monetary	As Of	Debit	Standard Label	ae:Assets
Liabilities	[Concept] Monetary	As Of	Credit	Standard Label	ae:Liabilities
Equity	[Concept] Monetary	As Of	Credit	Standard Label	ae:Equity

% Accounting Equation, State 10 Model structure inconsistencies %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state10/instance.xml",
['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd',
'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml',
'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'],
[newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

https://auditchain.infura-ipfs.io/ipfs/QmaW39j3rC3ELt2XSRqmmC3x8UFsGXg34r42kKfMZAfbnf/

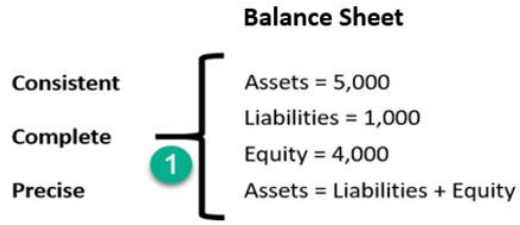
#	Verification Category	Result
1	XBRL Technical Syntax Verification	
2	Report Mathematical Computations Verification (XBRL Calculations)	
3	Report Mathematical Computations Verification (XBRL Formulas)	
4	Report Model Structure Verification	
5	Fundamental Accounting Concept Consistency Crosschecks Verification	
6	Type-subtype (wider-narrower) Associations Verification	
7	Disclosure Mechanics Verification	
8	Report Disclosure Checklist Verification	
9	Other	

2	error	Model structure violation	In presentation network BalanceSheet the report element ae:Assets has an impermissible child report element ae:Liabilities. Details: discouraged(http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state10/report-pre.xml,Concept,Concept))
3	error	Model structure violation	In presentation network BalanceSheet the report element ae:Liabilities has an impermissible child report element ae:Equity. Details: discouraged(http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state10/report-pre.xml,Concept,Concept))

https://auditchain.infura-ipfs.io/ipfs/QmaW39j3rC3ELt2XSRqmmC3x8UFsGXg34r42kKfMZAfbnf/modelStructure.html

Child	Parent						
	Network	Hypercube (a.k.a. Table)	Dimension (a.k.a. Axis)	Member	Line Items (a.k.a. Primary Items)	Abstract	Concept
Network	0	0	0	0	0	0	0
Hypercube (a.k.a. Table)	1	0	0	0	0	0	0
Dimension (a.k.a. Axis)	0	0	0	0	0	0	0
Member	0	0	0	0	0	0	0
Line Items (a.k.a. Primary Items)	0	1	0	0	0	0	0
Abstract	1	0	0	0	1	1	0
Concept	0	0	0	0	0	4	2

State 11: Improper XBRL Technical Syntax



While all the INFORMATION is present as per State 1 which is a properly functioning system; in this case the XBRL technical syntax has an error. In this example, a roleRef, which is required to be present peer the XBRL technical specification, has been manually removed from the XBRL presentation relations:

<link:roleRef roleURI="http://www.xbrlsite.com/report/role/BalanceSheet" xlink:href="report.xsd#BalanceSheet" xlink:type="simple" />

% Accounting Equation, State 11 XBRL technical syntax error %
checkReport3("http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state11/instance.xml", ['http://xbrlsite.com/sbrm/sbrm-structure-rules-strict-def.xml', 'http://xbrlsite.com/seattlemethod/golden/ae/fac.xsd', 'http://xbrlsite.com/seattlemethod/golden/ae/dm-BalanceSheet-rules2-def.xml', 'http://xbrlsite.com/seattlemethod/golden/ae/dr-rules-def.xml', 'http://xbrlsite.com/seattlemethod/golden/ae/typeSubtype-rules-def.xml'], [newRulesFormat, auditchainTestUI, saveToIPFS, extendedJSON, cacheValidity(0)], Result, IPFSlink).

https://auditchain.infura-ipfs.io/ipfs/QmYgdoGJyZgBZaLv59wKqnj9kKAs76FxxBNYnFi9cJKPcw (Updated November 25, 2022)

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#	Type	Stage	Message
1	info	xbrlValidation(done)	XBRL syntax was verified
2	error	xbrlValidation(xbrl.3.5.2.4:missingRoleRef)	[xbrl.3.5.2.4:missingRoleRef] Role http://www.xbrlsite.com/report/role/BalanceSheet is missing a roleRef - http://www.xbrlsite.com/seattlemethod/golden/reports/ae/state11/report-pre.xml 6

There are hundreds, even thousands, of different XBRL technical syntax errors that could be made. The XBRL International conformance suite helps software process XBRL correctly.

SUMMARY:

- **State 1**: A report can be provably properly functioning per a set of rules. The State 1 report is an example of a properly functioning financial report. **All the logical statements are provided for per a set of machine-readable rules, the statements are consistent with one another, and the information is precise per the area of knowledge (in this case the accounting equation)**. The Pacioli logic engine verifies all this.
- **State 2**: If you REMOVE a logical statement, such as if you REMOVE the rule "Assets = Liabilities + Equity"; and three facts are reported; a machine-based process can have NO IDEA whether those three facts are CORRECT or INCORRECT using automated processes because the RULE IS MISSING. NO MACHINE-READABLE RULE, MACHINE CANNOT VERIFY.
- **State 3**: If you intentionally put information in the report to simulate an error; Pacioli DETECTS that error and a human can SEE that from the verification results. But for inconsistencies to be detected, the machine-readable rules must exist. Leave out rules and you cripple the logic engine.
- **State 4**: If a line item is not reported, this causes increased complexity in processing reports. For example, if you leave out the line item "Liabilities" BUT you don't provide a machine-readable derivation rule, there is NO WAY a computer can UNDERSTAND THE information.
- **State 4'**: But as State 4' shows, if you DO provide the derivation rules, the system will still be able to automate effectively because the missing information can be derived. It just calls for additional work (i.e. creating the derivation rule BECAUSE not reporting certain line items is allowed). Don't what to cause additional work? Don't want to cause additional RISK of misunderstanding? Then DON'T ALLOW unreported high-level line items. This is a choice.
- **State 5**: If a line item is NOT reported AND the consistency rule is not provided; THEN there is no way a machine-based process can effectively use the report. Remember, computers are INCREDIBLY DUMB. They need to be led by the hand; that is what machine-readable rules do.
- **State 6**: It is possible to represent a report, get 100% of the verification checks to be GREEN; but the report is STILL WRONG. If (a) a FACT is wrong and (b) if a RULE is wrong; the two can work together to make a report seem CORRECT; but be incorrect. However, this situation can be detected by using high-level crosschecks of the continuity of a report.
- **State 7**: If a report uses an extension concept to report a fact, the MACHINE will not understand how to process the extension information, so humans MUST step in to sort things out. As such, a process cannot be automated.
- **State 7'**: "Anchoring" helps OVERCOME State 7; the machine-readable anchoring information enables a process (a) to be automated and (b) the use of extensions to make the system more flexible which maximizes system "information richness".
- **State 8**: The EXACT SAME PROBLEM that anchoring solves with extension concepts exists with BASE TAXONOMY CONCEPTS!!! Again, computers are dumb, dumb, dumb. If anchoring is not also used in the base taxonomy, then you have EXACTLY the same problem you have with extensions.
- **State 9**: The EXACT SAME PROBLEM that anchoring solves exists with DISCLOSURES (i.e. SETS of concepts). Whether a disclosure (structure) is in a report model or base taxonomy model; if an automated process cannot sort out what that structure/disclosure is; then it WILL NOT KNOW WHAT TO DO WITH IT. Anchoring applies to structures/disclosures as it does to concepts, report or base models.

- **State 10**: The report models need to be represented logically. What does “indentation” of a concept mean? Whatever you think it might means, it means something else to someone else. Every Tom, Dick, and Harry has their own personal interpretation. Don’t use “indentation” (parent-child associations) to carry ambiguous meaning. Remember, computers are REALLY dumb. Be more explicit and use XBRL definition relations which machines can read.
- **State 11**: Fundamentally, the “payload” of information must be provided by a standard technical syntax. It an improper XBRL technical syntax is used, software may not work correctly. XBRL technical syntax tends to be pretty good because XBRL International publishes a conformance suite which can be used to test software to see if the software is detecting mistakes correctly in XBRL technical syntax.

Pacioli Options:

Option	Description
noXBRLvalidation	Turns of XBRL technical syntax verification. By default, XBRL technical syntax verification is performed.
noCalculations	Turns off XBRL calculations verification. By default, XBRL calculations verification is performed.
isLinkbase	Indicates that the file being verified is a linkbase as opposted to an XBRL instance.
autoloadReportingStyle	Will automatically load reporting styles for an XBRL instance coming from the SEC website per a CSV mapping file between CIK and reporting style.
renderFAConly	Only render Fundamental Accounting Concepts (FAC) verification results, do NOT render information from actual report.
doNotRenderFAC	If FAC rules are provided, suppresses rendering of the FAC verification results.
newRulesFormat	Uses the XBRL formula format that uses precondition for derivation rules. By default, the old XBRL formula format is used for derivation rules.
removePrecondFallbacks	Forces the fallbacks on preconditions to be ignored if they exist.
removeValueAssertionFallbacks	Forces the fallbacks on value assertions to be ignored if they exist.
valueAssertionsCanDerive	Indicates that value assertions can be used as derivation rules (this is used only with the old FAC XBRL formula derivation rule format.
lastPeriodOnly	Forces FAC verification to focus on the last balance sheet date and last income statement and cash flow statement period.
definitionGraphs	Forces XBRL definition relations graphs to be rendered. By default, XBRL definition graphs are not rendered.
saveToIPFS	Indicates that the verification results should be uploaded and saved to IPFS. Requires the use of the “extendedJSON” parameter also.
extendedJSON	Indicates that the logical model of the report should be serialized and provided in JSON for the report being verified. By default a smaller set of information is provided.
doNOTaddFACzeros	Used for debugging only. Used to suppress derivation of facts for certain contexts.
showPROLOGrules	Used for debugging only. Shows PROLOG debugging information.
cacheValidity(*seconds*)	Indicates whether the file cache should be overridden during verification of a report. Value of 3600 indicates that cache should not be updated. Value of 0 seconds indicates that all files should be updated in the cache.
supressWarnings	Suppresses warning messages; does not write in messages summary.