

# EDM Webinar

## Control Risks Lurk at Every Step: Revealing Data and Process Risk in Regulatory Reporting

A conversation with:



**Harry Chopra**  
Senior Advisor  
AxiomSL  
*Moderator*



**Thangaraja Nadaraja**  
Partner  
PwC Singapore



**Abraham Teo**  
Head of Product & Pre-sales  
AxiomSL



**Eli Feuer**  
Engagement Lead  
AxiomSL

# Introduction and Q&A by Mike Meriton

## Co-Founder & COO, EDM Council

- Joined EDM Council full-time 2015 to lead Industry Engagement
- EDM Council Co-Founder & First Chairman (2005-2007)
- EDM Council Finance Board Chair (2007-2015)
- Former CEO GoldenSource (2002-2015)
- Former Executive for D&B Software and Oracle
- FinTech Innovation Lab – Executive Mentor (2011-Present)



# Moderating by Harry Chopra

## Senior Advisor, AxiomSL

- 30+ years of experience in global sales and financial services
- Oversees AxiomSL's global business development efforts, implementing go-to-market strategies and building worldwide client-driven growth
- Held prior leadership roles at Citigroup, S&P and Credit Benchmark

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PLATFORM FOR CHANGE



# Today's panel

Moderator



**Harry Chopra**  
Senior Advisor  
AxiomSL

**AXIOMSL®**



**Thangaraja Nadaraja**  
Partner  
PwC Singapore

**pwc**



**Abraham Teo**  
Head of Product & Pre-sales  
AxiomSL

**AXIOMSL®**



**Eli Feuer**  
Engagement Lead  
AxiomSL

**AXIOMSL®**



### Ingestion

- Data Quality Issue
- Missing Data
- Unexpected CDE Values
- Adjustment Error
- Adjustment Tracking Error
- PII Data Breach

### Enrichment

- Untraceable Requirement
- Data Redundancy

### Pre-Processing

- Lack of Visibility into Business Rules

### Validation

- Reportable Data Validation Issue
- Data Discrepancies Across Periods
- Data/Logic Issues
- Discrepancies Reconciling to GL
- Unexpected Data Change

### Attestation

- Cumbersome Attestation Process
- Inconsistency of Reportable Data Across Reports

### Submission

- Unauthorized Code Change
- Unauthorized Data Change
- Lack of Filing History
- Lack of Adjustment Transparency

### Lineage and Analytics

- Lack of BCBS 239 Compliance
- Unmanageable Report Views

- Audit Defense Challenges
- Lack of Code Tracking

### Process Transparency

- Unauthorized Access
- Undocumented Code Change

- Ineffective User Communication
- Data Opacity



## Ingestion

1. Data Quality Issue
2. Missing Data
3. Unexpected CDE Values
4. Adjustment Error
5. Adjustment Tracking Error
6. PII Data Breach

## Field Masking Capabilities

**Mapping**

3 Field Masking Entities

Demo\_Field\_Masking

Key	Field Name	Description	Title	Data Type	Size	Allow Nulls	Field Masking Entity
	customer_id	Customer ID	Customer ID	VARCHAR	80	<input type="checkbox"/>	
	gov_id	Government ID	Government ID	VARCHAR	100	<input checked="" type="checkbox"/>	Demo_Field_Masking

CLNT\_customer\_data 104

	Status	Customer ID	Government ID	Government ID Type
Total				
1		04112	798923606	SSN
2		04113	638689791	SSN
3		04211	657991432	SSN
4		04212	141926875	SSN
5		04214	356827813	SSN
6		04215	209018869	SSN

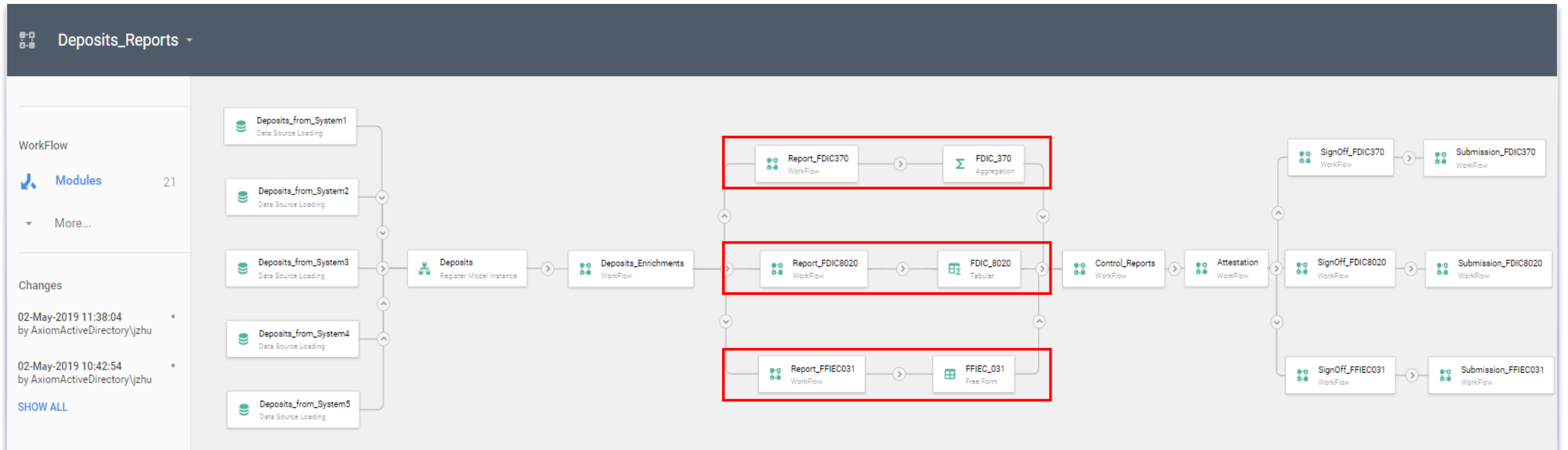
CLNT\_customer\_data 104

	Status	Customer ID	Government ID	Government ID Type
Total				
1		04112	xxxxxxxxx	SSN
2		04113	xxxxxxxxx	SSN
3		04211	xxxxxxxxx	SSN
4		04212	xxxxxxxxx	SSN
5		04214	xxxxxxxxx	SSN
6		04215	xxxxxxxxx	SSN



## Enrichment

1. Untraceable Requirement
2. Data Redundancy







# Pre-Processing

1. Lack of Visibility into Business Rules

## Visual Business Rules and Shorthands

SHORTHAND

TII\_DebtSecuritiesHeld

Type of instrument. Debt securities held

cloud

star

three dots

Shorthand

Conditions

2

Models

1

Changes

19-Jan-2021 17:31:04

by Global\raziz

SHOW ALL

2 Condition Mappings

Drag/Drop Models between Condition Mappings

Condition Mapping	Models
Default Condition	
con	dm_Pos_Oal_Cons dm_Pos_Oal_Cons

con

Conditions

AND

+

AND

Expression

\$root.lkupProdType='DebtSecuritiesHeld'



## Validation

1. Reportable Data Validation Issue
2. Data Discrepancies Across Periods
3. Data/Logic Issues
4. Discrepancies Reconciling to GL
5. Unexpected Data Change

## Rerun Variance Report Output

Current and Previous  
runtimes compared

Current and Previous  
amounts compared

As Of Date	Current Time Stamp	Previous Time Stamp	Current Version	Current Filing Version	Previous Version	Previous Filing Version	Entity	MDRM	Current Amount	Previous Amount	Difference
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK0081	450,000.00	0.00	450,000.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK0395	395,000.00	395,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK0397	397,000.00	397,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK1773	32,261,000.00	32,261,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2130	24,736,157,000.00	24,736,157,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2143	74,048,000.00	74,048,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2145	2,145,000.00	2,145,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2150	2,150,000.00	2,150,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2160	866,626,000.00	866,626,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK2170	45,813,507,000.00	44,212,507,000.00	1,601,000,000.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK3123	194,039,000.00	194,039,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK3545	3,545,000.00	3,545,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK3656	(24,737,033,000.00)	(24,737,033,000.00)	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCK5369	12,974,696,000.00	12,974,696,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCKB528	27,068,754,000.00	27,068,754,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCKB529	26,874,715,000.00	26,874,715,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCKB989	1,525,540,000.00	1,525,540,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHCKJJ34	310,315,000.00	310,315,000.00	0.00
30-Jun-2019	4/23/2020 16:57:45	4/23/2020 16:50:30	0	1	0		1 9C	BHDMB987	3,147,100,000.00	1,546,550,000.00	1,600,550,000.00





# Attestation

1. Cumbersome Attestation Process
2. Inconsistency of Reportable Data Across Reports



## CFO Attestation Dashboard By Reporting Period



CFO Attestation Main

[Home](#)
74


[Logout](#)

Instance Selector:
Report Name:
Sign Off Status:


2018-06-3...
ALL
ALL



Attestation that actual and projected data reported on the FR Y-14 Forms were prepared in good faith using reasonable efforts to conform with the applicable Federal Reserve form instructions


Done, 2020-03-26

CLEAR SIGN OFF




Attestation that actual reported data are "materially correct to the best of [the CFO's] knowledge"

SIGN OFF




Attestation that actual data being reported are subject to internal controls over reporting that "are effective and include those practices necessary to provide reasonable assurance as to the accuracy of [such] data".

SIGN OFF



Attestation that internal controls "are audited at least annually by internal audit or compliance staff, and are assessed regularly by management of the bank holding company"

SIGN OFF



Agreement to report promptly material weaknesses in internal controls for the FR Y-14 Forms and material errors or omissions in submitted data

SIGN OFF

Export

Report	Filing Date	Reconciliation Checks Pass %	Sign Off %	Sign Off Status	Sign Off Comment	PDF document
FR Y-14A	2018-08-14	155.85%	0.00%	IN-PROGRESS	Started (Denys Chumachenko)	<a href="#">Download</a>
FR Y-14M	2018-08-14	89.29%	0.00%	COMPLETE	Done (Denys Chumachenko)	<a href="#">Download</a>
FR Y-14Q	2018-08-14	21.68%	0.00%	NONE		<a href="#">Download</a>



## Submission

1. Unauthorized Code Change
2. Unauthorized Data Change
3. Lack of Filing History
4. Lack of Adjustment Transparency

## Adjustments Examples: APRA

SRF\_530\_0\_D > 31 Mar 2020 00:00:00 consolidation XXSEDB Option RSE XXSEDB Client version 0

SRF\_530\_0\_D Format Profile Thousands with no decimal pla...

Header SRF\_530\_0

	A	B	C	D	E	F	G	H	I
	Asset class type	Asset domicile type	Asset listing type	Fixed income type	Fixed income term	Fixed income currency type	Mortgage type	International economy type	Value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
15	2. Directly held investments								
16									
17	Cash	Australia	Recognised Exchange	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
18	Equities	Australia	Recognised Exchange	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NotApplicable	3,339,875
19	Cash	Australia	Not Applicable	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
20	Cash	Australia	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NotApplicable	118,298
21	Cash	Not Australia	Recognised Exchange	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
22	Cash	Not Australia	Not Applicable	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000

SRF\_530\_0\_D > 31 Mar 2020 00:00:00 consolidation XXSEDB Option RSE XXSEDB Client version 0

SRF\_530\_0\_D Format Profile Thousands with no decimal pla...

Header SRF\_530\_0

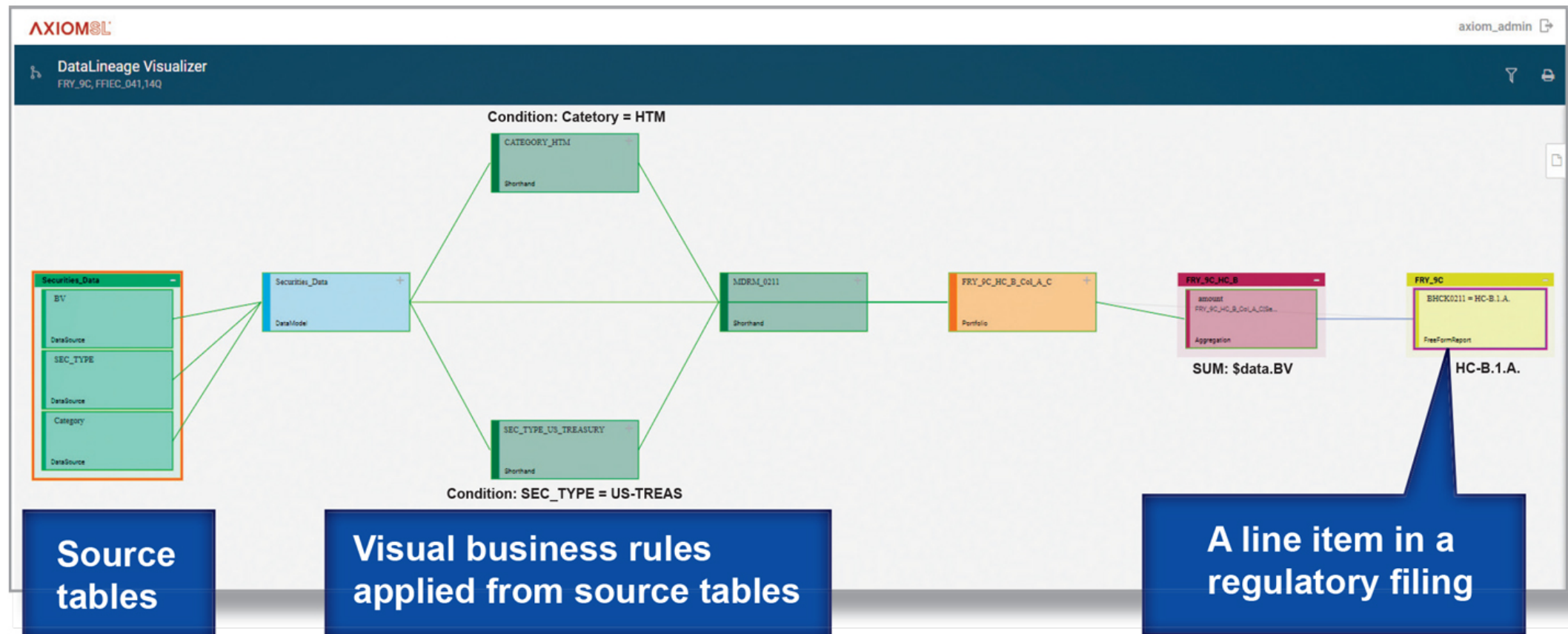
	A	B	C	D	E	F	G	H	I
	Asset class type	Asset domicile type	Asset listing type	Fixed income type	Fixed income term	Fixed income currency type	Mortgage type	International economy type	Value
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
14	2. Directly held investments								
15									
16									
17	Cash	Australia	Recognised Exchange	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
18	Equities	Australia	Recognised Exchange	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NotApplicable	3,339,875
19	Cash	Australia	Not Applicable	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
20	Cash	Australia	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	NotApplicable	568,298
21	Cash	Not Australia	Recognised Exchange	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000
22	Cash	Not Australia	Not Applicable	Government	Not Applicable	Not Applicable	Residential	EmergingMarkets	1,000



## Lineage and Analytics

1. Lack of BCBS 239 Compliance
2. Unmanageable Report Views
3. Audit Defense Challenges
4. Lack of Code Tracking

## LineageView – A ControllerView Native Application



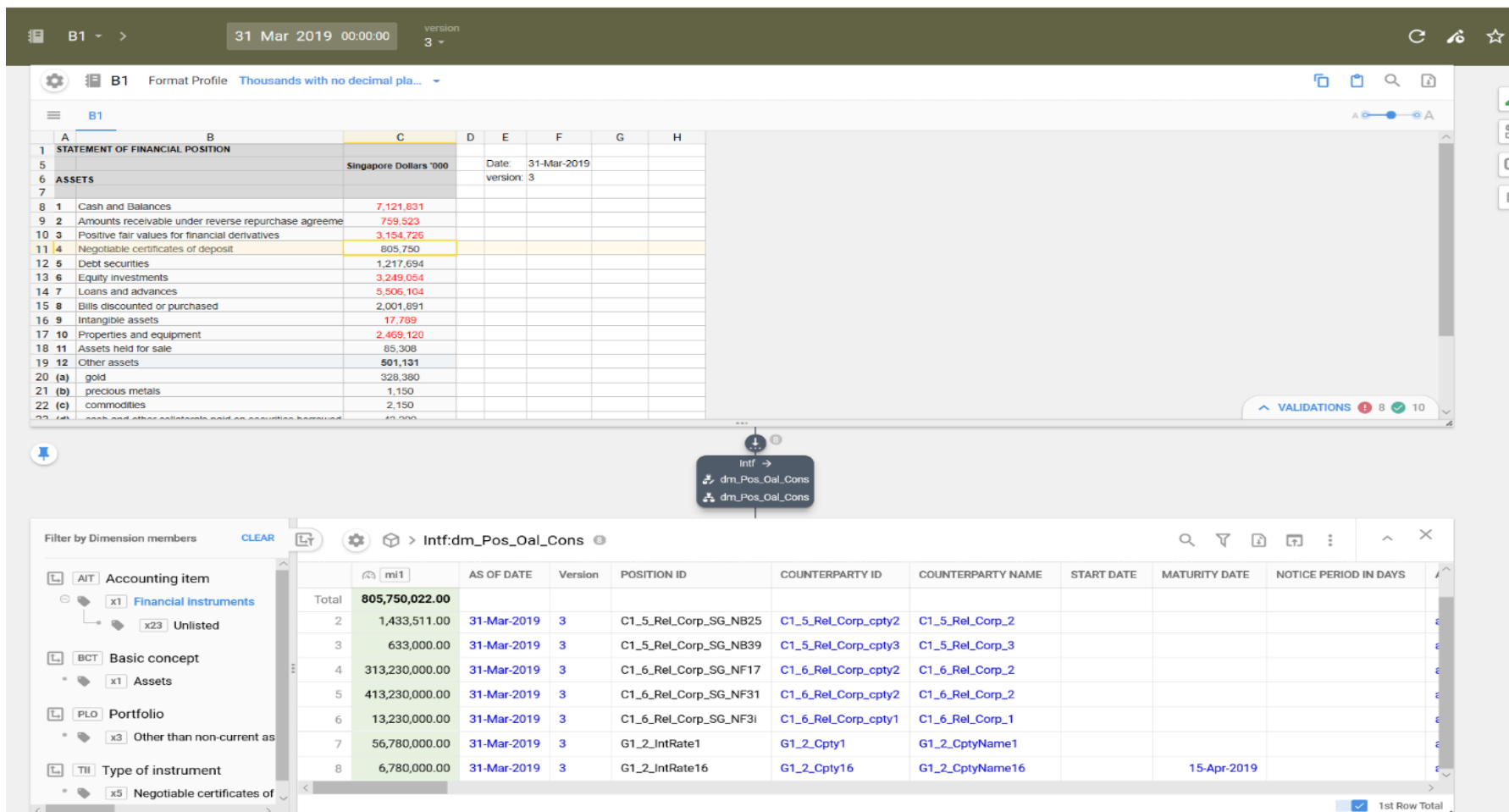




## Process Transparency

1. Unauthorized Access
2. Undocumented Code Change
3. Ineffective User Communication
4. Data Opacity

## Powerful Drilldown Capabilities



The screenshot displays the AxiomSL software interface, showing a financial statement (Statement of Financial Position) and its drilldown capabilities.

**Top Panel:** Shows the date **31 Mar 2019 00:00:00** and version **3**. The format profile is set to **Thousands with no decimal pla...**.

**Financial Statement (Table 1):**

Row	Accounting Item	Value	Date	Version
1	STATEMENT OF FINANCIAL POSITION		31-Mar-2019	3
5	ASSETS			
8	Cash and Balances	7,121,831		
9	Amounts receivable under reverse repurchase agreeme	759,523		
10	Positive fair values for financial derivatives	3,154,726		
11	Negotiable certificates of deposit	805,750		
12	Debt securities	1,217,694		
13	Equity investments	3,249,054		
14	Loans and advances	5,506,104		
15	Bills discounted or purchased	2,001,891		
16	Intangible assets	17,789		
17	Properties and equipment	2,469,120		
18	Assets held for sale	85,308		
19	Other assets	501,131		
20	(a) gold	328,380		
21	(b) precious metals	1,150		
22	(c) commodities	2,150		
23	(d) cash and other saleable sold on securities borrowed	49,000		

**Drilldown Panel (Table 2):**

Filter by Dimension members: **Intf:dm\_Pos\_Oal\_Cons**

Row	Accounting item	Value	AS OF DATE	Version	POSITION ID	COUNTERPARTY ID	COUNTERPARTY NAME	START DATE	MATURITY DATE	NOTICE PERIOD IN DAYS
Total	805,750,022.00									
2	1,433,511.00	31-Mar-2019	3	C1_5_Rel_Corp_SG_NB25	C1_5_Rel_Corp_cpty2	C1_5_Rel_Corp_2				
3	633,000.00	31-Mar-2019	3	C1_5_Rel_Corp_SG_NB39	C1_5_Rel_Corp_cpty3	C1_5_Rel_Corp_3				
4	313,230,000.00	31-Mar-2019	3	C1_6_Rel_Corp_SG_NF17	C1_6_Rel_Corp_cpty2	C1_6_Rel_Corp_2				
5	413,230,000.00	31-Mar-2019	3	C1_6_Rel_Corp_SG_NF31	C1_6_Rel_Corp_cpty2	C1_6_Rel_Corp_2				
6	13,230,000.00	31-Mar-2019	3	C1_6_Rel_Corp_SG_NF31	C1_6_Rel_Corp_cpty1	C1_6_Rel_Corp_1				
7	56,780,000.00	31-Mar-2019	3	G1_2_IntRate1	G1_2_Cpty1	G1_2_CptyName1				
8	6,780,000.00	31-Mar-2019	3	G1_2_IntRate16	G1_2_Cpty16	G1_2_CptyName16		15-Apr-2019		

**Dimensions:**

- AIT Accounting item
  - Financial Instruments
    - Unlisted
- BCT Basic concept
  - Assets
- PLO Portfolio
  - Other than non-current as
- TII Type of instrument
  - Negotiable certificates of

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# Questions?

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# FOR MORE INFORMATION:

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**AXIOMSL<sup>®</sup>**  
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The logo for EDM Council, featuring a stylized blue and orange arc above the text "EDM Council" in blue and orange.