Accounting perspective to LDTI

June, 2021

Today’s Presenters

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Agenda for today

Briefly discussion on current state of LDTI implementation and key challenges	**10 minutes**
End to End View of LDTI (Focus in on the Accounting Treatments)	**10 minutes**
Discuss how Moody's is helping clients implement LDTI	**30 minutes**
Q&A	**10 minutes**

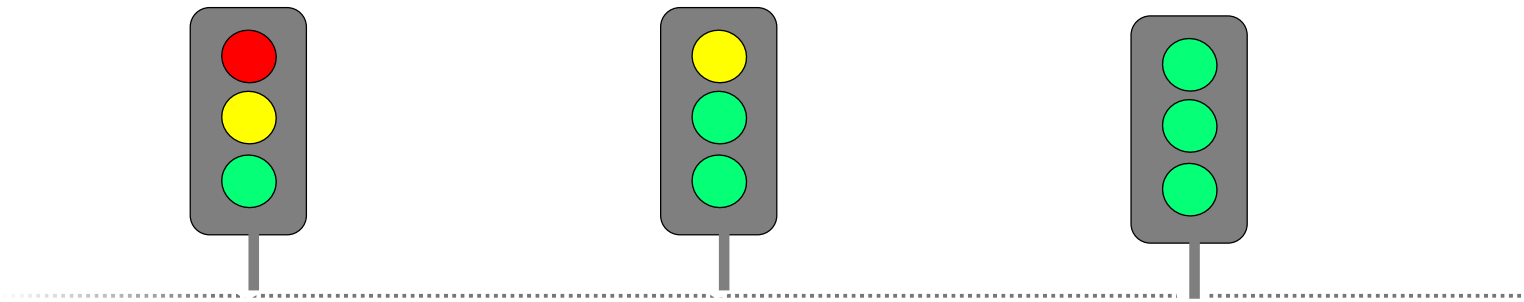
Implementation Timelines

Early adoption

- Favorable view from investors – potentially from acquisitions
- Complexity and cost of dragging out the program
- Early adopters only need to provide 1 year of transition and comparatives - as opposed to 2 years of transition for 2023 filers
- GAAP is an internal metric for management

Project Activites

- Configuration, Unit Testing , Results Verification, methodology testing
- Methodology and Regression Testing for Portfolios by testing multiple Use Cases , each with multiple layered Business Events
- Activities include creating the end-to-end data flows, automation, data quality checks and integration with GL



2021	2022	2023
Implementation	**Parallel Run**	**Go Live!**
- All models implemented - Dry-run and fine tuning - Finalize transition approaches - Automation - Training end-users	- Comparative reporting runs - Transition Choices and - Previous year results ready for initial reporting	- Product Annual and Interim financial statements - Q1 reports with LDTI numbers

Current State and Implementation Challenges

Data Management

- Reserves now at cohort level. DAC can be seriatim.
- Sub-Cohort calculations may be needed
- Analysis of results is much more difficult
- Historical premiums and claims become part of valuation formula (via updating NPR's).
- Assumption changes | Interest rate changes
- New sources and patterns for variability in results

Actuarial Models

- Update Actuarial Models
- More valuation runs required.
- Differences between runs calculated.
- Assumption Management
- Historical Runs and True-ups

Producing the required disclosures and reporting

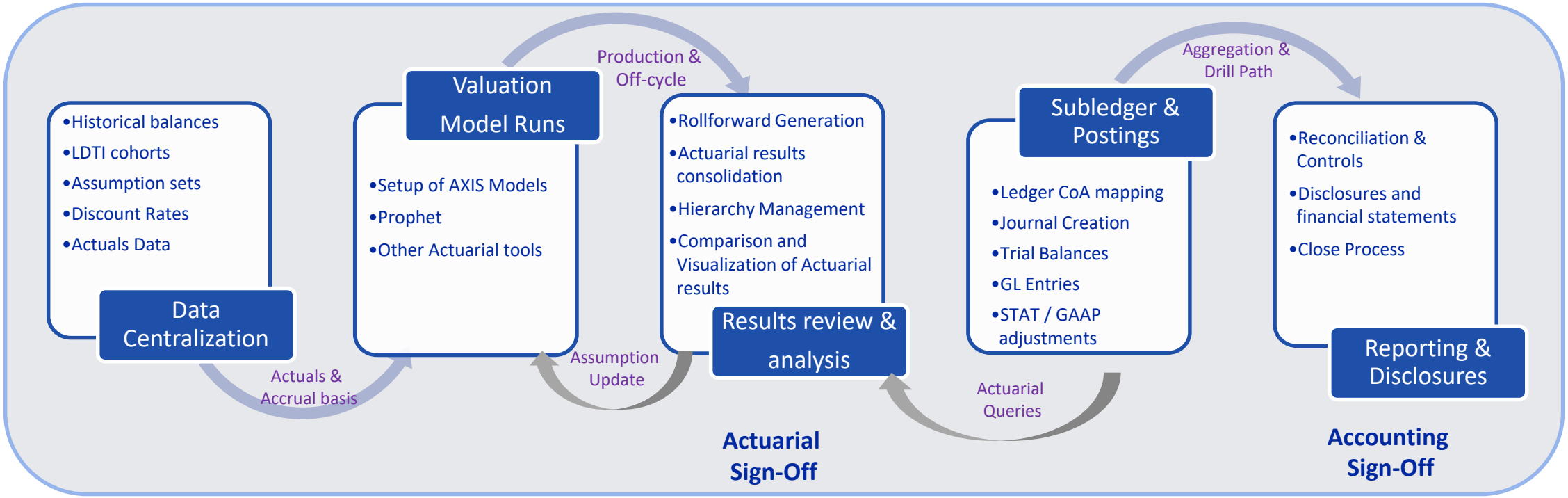
- Considerably more information will be provided to investors. Granular movement analysis type reporting required for key balance sheet items.
- Expansion of ledger systems.
- Management reporting, planning and forecasting

Implementing appropriate Controls & Governance

- Validation of results was done at a much higher–more detailed and granularity
- New, audited processes for assumption reviews and potential updates. (at least annually)
- Internal controls
- More numbers to validate,

Our Vision of the LDTI Process

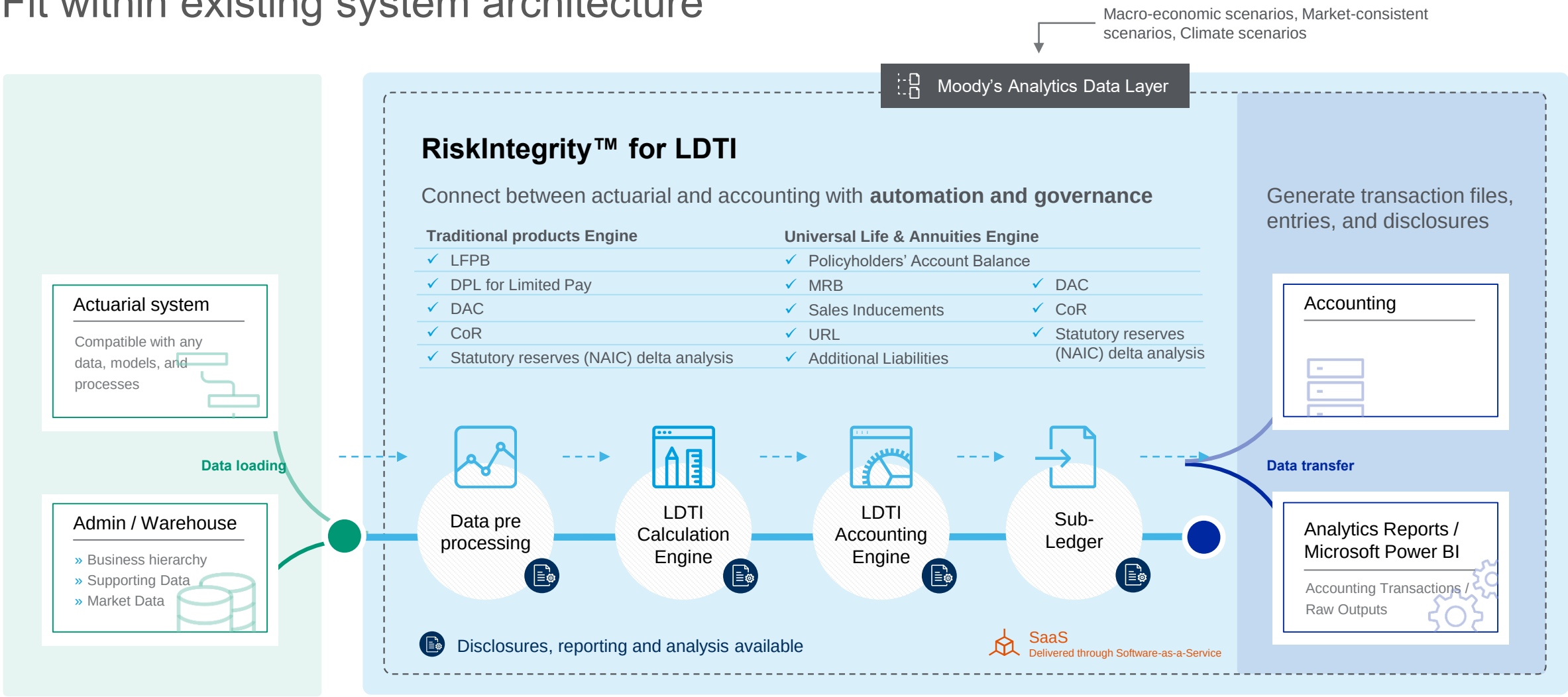
A collaborative platform to connect both Actuarial and Accounting functions



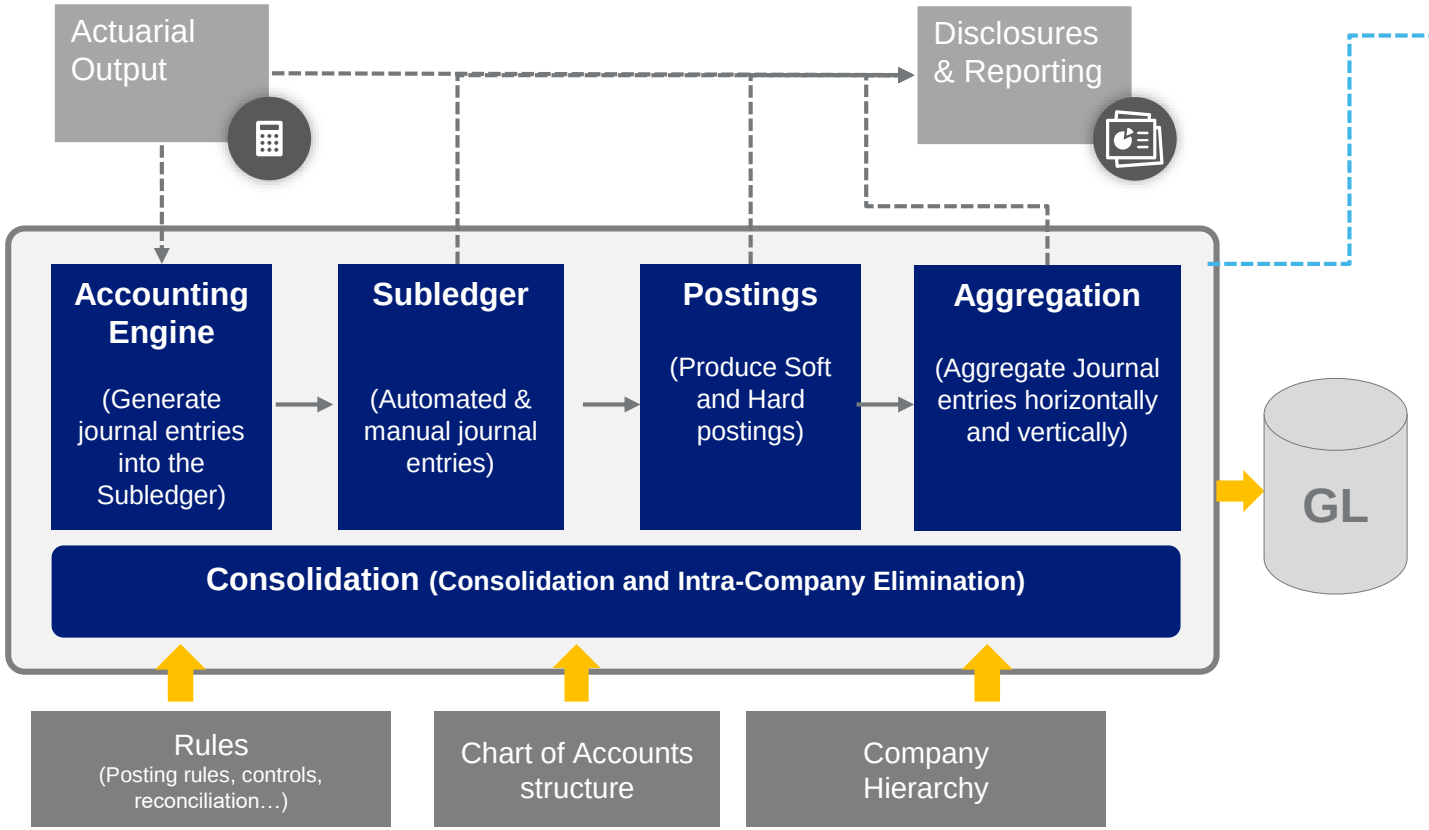
Use					
	Actuaries	Actuaries	Actuaries	Actuaries	
	Accountants		Accountants	Accountants	Accountants

End-to-end process for LDTI

Fit within existing system architecture



Accounting Treatment and Functionality



Scope covered in RiskIntegrity

- Populating ASU Disclosures, Financial Statements based on Journal Entries
- Aggregating subledger cohort entries to client specific GL entries
- Interim Reporting – Generate Period-to-Date and Year-To-Date entries (e.g.: sum of the Q1, Q2, and Q3)
- FX - Currency gains and losses recorded in current period net income
- Reinsurance Treatment
- Soft/Hard Postings
- Accounting control & audit
- Internal Management Reporting

Reports and Disclosures

Category	Description	Presentation and Disclosures
Disclosures	Year-to-date disaggregated rollforwards covering all long duration contracts: 1) Traditional insurance contracts and limited-payment contracts, 2) Universal life-type contracts, 3) Annuitization, death, or other insurance benefits, 4) Investment-type contracts, 5) Market risk benefits, 6) Variable annuity and variable life insurance separate account structures and 7) Participating life insurance contracts	• Liability for future policy benefits, • Policyholder account balances, • Market risk benefits, • Separate account liabilities, and • Deferred acquisition costs (and balances amortized on a basis consistent with DAC). • Financial statement presentation– Liability side Balance Sheet and Income Statement
Actuarial Analysis	Reports to give the practitioners that the LDTI liabilities to be reported, and their components, are correct and so key during the production process.	• Analysis by LDTI Cohort • Analysis of Change
Accounting	Trial Balances to show that the accounting deliveries to downstream systems are accurate and complete and reconcile to upstream calculations.	• Chart of Accounts • Trial Balances • Controls
Reconciliation	Reports to demonstrate that the RiskIntegrity for LDTI production process is robust. For example, Internal reconciliation reports: e.g. LDTI liabilities from the “actuarial” calculations compared to the same from the accounting output, audit and data lineage reports, etc.	• Reconciliation Reports
Business Insight	Reports to help practitioners understand the business. For example, Portfolio Comparison Reports, Trend Analysis (Model Input), P&L and Earnings Volatility	• Portfolio Analysis • Trend Analysis • P&L Analysis and Drill-Down

Master Account

How RiskIntegrity™ for LDTI separates posting logic from CoA structure

Master Account:
- Uniquely defines the content of an account
- Set of attributes = contains the real underlying accounting reality
- Comprehensible to anybody (not familiar with your CoA)
- No need to learn a numbering system
- Hierarchy is irrelevant

Master Account				
Section	**Direct/RCH**	**Component**	**Sub-Component**	**Movement**
Res	ICI	LFPB	PV/Prem	Open

Custom Chart of Accounts:
- Is a numbering system + friendly account name
- Is less intelligible to someone not familiar with your organisation
- Imposes a hierarchy

Moody's Analytics Sample CoA	
2750300020	GI Investment Element ABC

Your HQ's CoA	
12005000	Non-life Gross Liabilities XYZ

Your Subsidiary's CoA	
52927381	Unidentified Flying Insurance Object

Technical Link

Visual Link

Posting Rules, Reconciliation Rules & other accounting logic:

Rule No	valuation_method	reinsurance_hel	tbc	calc_step_code	variable_name	movement_sign	Debit account ID	Debit account name	Credit account ID	Credit Account name
1		FALSE		PBL_BEGINNING_CURRENT_DR	PVP	POSITIVE	1	Res_ICI_LFPB_PV/Prem_Open_WL	34	RE_ICI_LFPB_Transition_Prem_WL
2		FALSE		PBL_BEGINNING_CURRENT_DR	PVP	NEGATIVE	34	RE_ICI_LFPB_Transition_Prem_WL	1	Res_ICI_LFPB_PV/Prem_Open_WL
3		FALSE		PBL_BEGINNING_ORIGINAL_DR	DELTA_PVP	POSITIVE	2	Res_ICI_LFPB_PV/Prem_OpenRes_WL	54	NFE/OCI_ICI_LFPB_PV/Prem_DR_Change_FA_WL
4		FALSE		PBL_BEGINNING_ORIGINAL_DR	DELTA_PVP	NEGATIVE	54	NFE/OCI_ICI_LFPB_PV/Prem_DR_Change_FA_WL	2	Res_ICI_LFPB_PV/Prem_OpenRes_WL
5		FALSE		PBL_CHANGE_IN_CF_ASSUMPTIONS	DELTA_PVP	POSITIVE	3	Res_ICI_LFPB_PV/Prem_EstChange_NFA_WL	42	Ins Exp_ICI_REM_PV/Prem_EstChange_NFA_WL

- **Technically**, mapped on Master Account *only*
  ⇒ **Strict separation of posting logic and CoA structure**
- ⇒ **Independent of entity and CoA version**
- **Visually**, you map on your custom CoA
  ⇒ Intuitive, in your "language"

Chart of accounts design for LDTI

Minimal dimensions recommended

Section	Financial statement section (asset, liability, revenue, expense and which type)
Direct/RCH	Direct business or reinsurance held
Component	Component of asset or liability: LFPB, MRB, DAC…
Sub-Component	Further breakdown of component into e.g. PV(premiums), PV(benefits)…
Movement	Movement of the rollforward: issuances, experience adjustment, interest accrual…
Sub-Movement 1	Further breakdown of movement (e.g. financial versus non-financial assumption changes…)
Product Type	Needed because product type drives classification and measurement approach
Custom attributes	Any other segmentation which is relevant for your internal analysis
Custom variable sub-hierarchies	E.g. breakdown of DAC into “Commissions”, “Overhead”, “Other”…

MA's Sample LDTI CoA

Master Account								Release				Account numbering										
Section	Direct/RCH	Valuation method	Component	Sub-Component	Movement	Sub-Movement 1	Product Type	Enabled	Deprecated in release	Account ID	Release	Section	Direct/RCH	Valuation method	Component	Sub-Component	Movement	Sub-Movement 1	Product Type	Account number	Account name	Comment
	Level 1																					
Res	ICI		LFPB	PV/Prem	Open		WL	TRUE		1	0.0	1	1	0	01	1	01	00	09	110011010009	Res_ICI_LFPB_PV/Prem_Open_WL	Balance, beginning of period
Res	ICI		LFPB	PV/Prem	OpenRes		WL	TRUE		2	0.0	1	1	0	01	1	02	00	09	110011020009	Res_ICI_LFPB_PV/Prem_OpenRes_WL	Beginning balance at original disc
Res	ICI		LFPB	PV/Prem	EstChange	NFA	WL	TRUE		3	0.0	1	1	0	01	1	03	01	09	110011030109	Res_ICI_LFPB_PV/Prem_EstChange_NFA_WL	Effect of changes in cash flow ass
Res	ICI		LFPB	PV/Prem	Issuance		WL	TRUE		4	0.0	1	1	0	01	1	04	00	09	110011040009	Res_ICI_LFPB_PV/Prem_Issuance_WL	Effect of new business
Res	ICI		LFPB	PV/Prem	ExpAdj		WL	TRUE		5	0.0	1	1	0	01	1	05	00	09	110011050009	Res_ICI_LFPB_PV/Prem_ExpAdj_WL	Effect of actual variances from ex
Res	ICI		LFPB	PV/Prem	Received/Paid		WL	TRUE		6	0.0	1	1	0	01	1	12	00	09	110011120009	Res_ICI_LFPB_PV/Prem_Received/Paid_WL	Amount of premium collected
Res	ICI		LFPB	PV/Prem	IntAcc		WL	TRUE		7	0.0	1	1	0	01	1	06	00	09	110011060009	Res_ICI_LFPB_PV/Prem_IntAcc_WL	Interest accrual
Res	ICI		LFPB	PV/Prem	CloseInception		WL	TRUE		8	0.0	1	1	0	01	1	08	00	09	110011080009	Res_ICI_LFPB_PV/Prem_CloseInception_WL	Ending balance at original discou
Res	ICI		LFPB	PV/Prem	DR_Change	FA	WL	TRUE		9	0.0	1	1	0	01	1	09	02	09	110011090209	Res_ICI_LFPB_PV/Prem_DR_Change_FA_WL	Effect of changes in discount rate
Res	ICI		LFPB	PV/Prem	Close		WL	TRUE		10	0.0	1	1	0	01	1	10	00	09	110011100009	Res_ICI_LFPB_PV/Prem_Close_WL	Ending balance at closing rate
Res	ICI		LFPB	PV/Ben	Open		WL	TRUE		11	0.0	1	1	0	01	2	01	00	09	110012010009	Res_ICI_LFPB_PV/Ben_Open_WL	Balance, beginning of period
Res	ICI		LFPB	PV/Ben	OpenRes		WL	TRUE		12	0.0	1	1	0	01	2	02	00	09	110012020009	Res_ICI_LFPB_PV/Ben_OpenRes_WL	Beginning balance at original disc
Res	ICI		LFPB	PV/Ben	EstChange	NFA	WL	TRUE		13	0.0	1	1	0	01	2	03	01	09	110012030109	Res_ICI_LFPB_PV/Ben_EstChange_NFA_WL	Effect of changes in cash flow ass
Res	ICI		LFPB	PV/Ben	ExpAdj		WL	TRUE		14	0.0	1	1	0	01	2	05	00	09	110012050009	Res_ICI_LFPB_PV/Ben_ExpAdj_WL	Effect of actual variances from ex
Res	ICI		LFPB	PV/Ben	Issuance		WL	TRUE		15	0.0	1	1	0	01	2	04	00	09	110012040009	Res_ICI_LFPB_PV/Ben_Issuance_WL	Effect of new business
Res	ICI		LFPB	PV/Ben	IntAcc		WL	TRUE		16	0.0	1	1	0	01	2	06	00	09	110012060009	Res_ICI_LFPB_PV/Ben_IntAcc_WL	Interest accrual
Res	ICI		LFPB	PV/Ben	Received/Paid		WL	TRUE		17	0.0	1	1	0	01	2	12	00	09	110012120009	Res_ICI_LFPB_PV/Ben_Received/Paid_WL	Incurred claims
Res	ICI		LFPB	PV/Ben	CloseInception		WL	TRUE		18	0.0	1	1	0	01	2	08	00	09	110012080009	Res_ICI_LFPB_PV/Ben_CloseInception_WL	Ending balance at original discou
Res	ICI		LFPB	PV/Ben	DR_Change	FA	WL	TRUE		19	0.0	1	1	0	01	2	09	02	09	110012090209	Res_ICI_LFPB_PV/Ben_DR_Change_FA_WL	Effect of changes in discount rate
Res	ICI		LFPB	PV/Ben	Close		WL	TRUE		20	0.0	1	1	0	01	2	10	00	09	110012100009	Res_ICI_LFPB_PV/Ben_Close_WL	Ending balance at closing rate
Res	ICI		OTH	ClmRes	Open		WL	FALSE		21	TBC	1	1	0	05	6	01	00	09	110056010009	Res_ICI_OTH_ClmRes_Open_WL	Balance, beginning of period
Res	ICI		OTH	ClmRes	Incurred		WL	FALSE		22	TBC	1	1	0	05	6	13	00	09	110056130009	Res_ICI_OTH_ClmRes_Incurred_WL	Claims incurred during the perio
Res	ICI		OTH	ClmRes	Adj		WL	FALSE		23	TBC	1	1	0	05	6	16	00	09	110056160009	Res_ICI_OTH_ClmRes_Adj_WL	Adjustment of outstanding claim
Res	ICI		OTH	ClmRes	Received/Paid		WL	FALSE		24	TBC	1	1	0	05	6	12	00	09	110056120009	Res_ICI_OTH_ClmRes_Received/Paid_WL	Claims paid during the period
Res	ICI		OTH	ClmRes	Close		WL	FALSE		25	TBC	1	1	0	05	6	10	00	09	110056100009	Res_ICI_OTH_ClmRes_Close_WL	Ending balance

Posting rules for LDTI

Definition of accounting logic

Challenges

- Posting rules have to be designed specifically by ASU Rollforwards and Financial Implications
- The accounting logic works differently under various scenarios and treatments

Examples of a posting rule:

Rule No	valuation_method	Reinsurance_held	tbc	calc_step_code	variable_name	movement_sign	Debit account ID	Debit account name	Credit account ID	Credit Account name
1		FALSE		PBL_BEGINNING_CURRENT_DR	PVP	POSITIVE	1	Res_ICI_LFPB_PV/Prem_Open_WL	34	RE_ICI_LFPB_Transition_Prem_WL
2		FALSE		PBL_BEGINNING_CURRENT_DR	PVP	NEGATIVE	34	RE_ICI_LFPB_Transition_Prem_WL	1	Res_ICI_LFPB_PV/Prem_Open_WL
3		FALSE		PBL_BEGINNING_ORIGINAL_DR	DELTA_PVP	POSITIVE	2	Res_ICI_LFPB_PV/Prem_OpenRes_WL	54	NFE/OCI_ICI_LFPB_PV/Prem_DR_Change_FA_WL
4		FALSE		PBL_BEGINNING_ORIGINAL_DR	DELTA_PVP	NEGATIVE	54	NFE/OCI_ICI_LFPB_PV/Prem_DR_Change_FA_WL	2	Res_ICI_LFPB_PV/Prem_OpenRes_WL
5		FALSE		PBL_CHANGE_IN_CF_ASSUMPTIONS	DELTA_PVP	POSITIVE	3	Res_ICI_LFPB_PV/Prem_EstChange_NFA_WL	42	Ins Exp_ICI_REM_PV/Prem_EstChange_NFA_WL

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RiskIntegrity™ for LDTI

A modular end-to-end solution

The RiskIntegrity™™ for LDTI solution helps insurance companies make the transition from current insurance accounting frameworks to the LDTI standard. It helps insurance entities of any size - from large international groups with life and non-life businesses to small monoliners - efficiently meet the new reporting challenges.

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MOODY'S ANALYTICS

RiskIntegrity™ for LDTI
Roadmap for future improvements

Target 1: Regulatory compliance

- Enhanced reinsurance non-proportional
- Sub-Cohort calculations
- Advanced Consolidation
- MRB enhancements for LDTI

Target 2: Local Reporting

- Enhanced NAIC/SSAP statutory accounting
- OSFI SoE

Target 3: Business Decision Support

- Planning & Forecasting
- Scenario/Sensitivity Analysis
- Business Intelligence
- KPI
- Benchmarking
- EV, PAR,…

MOODY'S ANALYTICS

Better Faster Decisions

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