

Modernized Source of Earnings and LDTI Forecasting Analytics

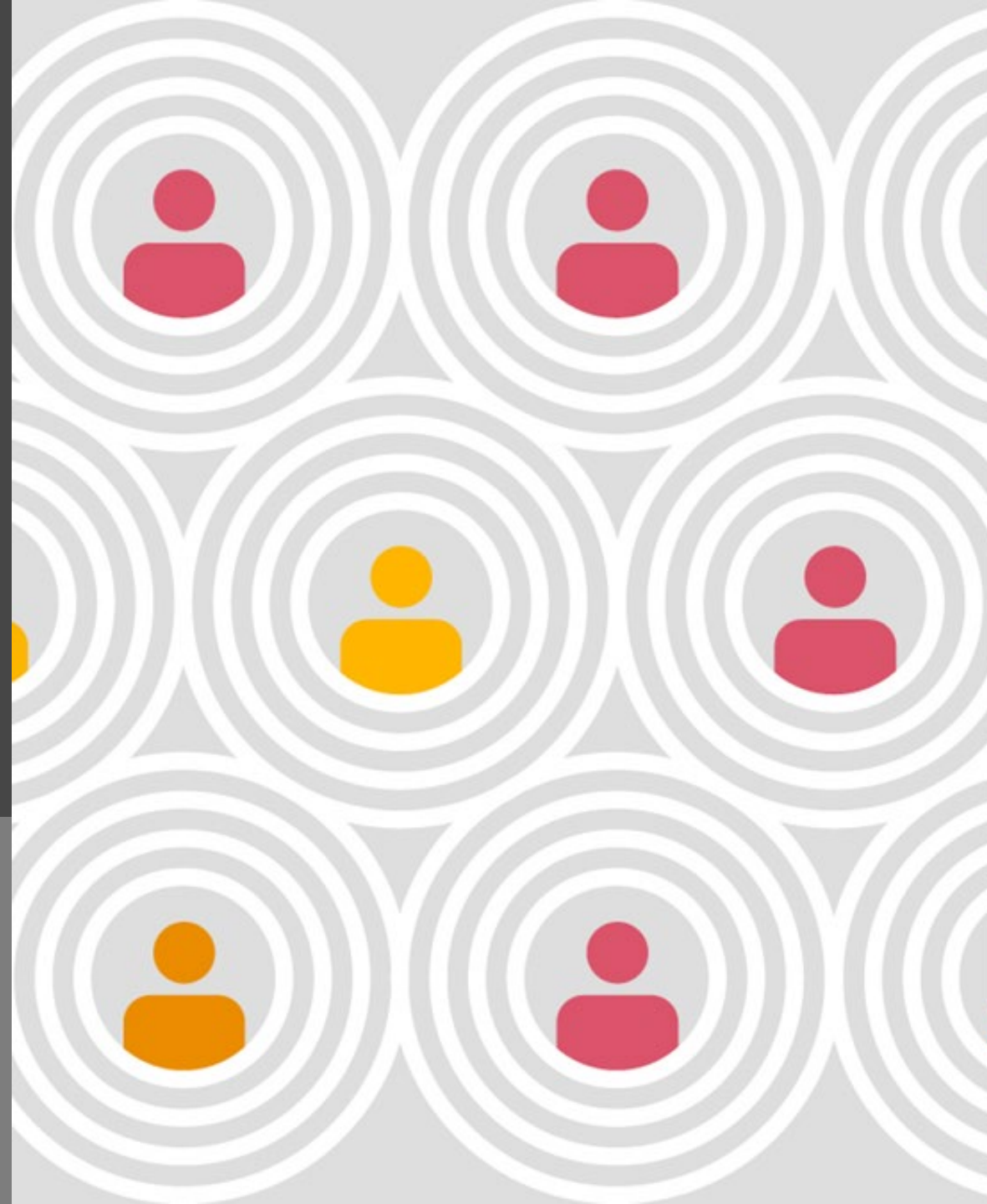
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Agenda

1. What we will cover today 10 min
2. Explaining LDTI results 20 min
- 3 Modernized source of earnings and strategic FP&A 20 min
- Live Demo
- 4 Q&A 10 min

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What we will cover today

What We Will Cover Today

Business Insights / Insurance Analysis

+

Market Leading Technology

Fundamental changes under LDTI and increased disclosure requirements will require companies to analyze their earnings at the different lens:

- Understand key drivers of earnings volatility
- Manage analysis with significantly increased granularity of the accounting model
- Overall GAAP income & balance sheet management

Core Enterprise Capabilities



Advanced source of earnings analysis



Capital management & ALM



Enhanced/real-time forecasting



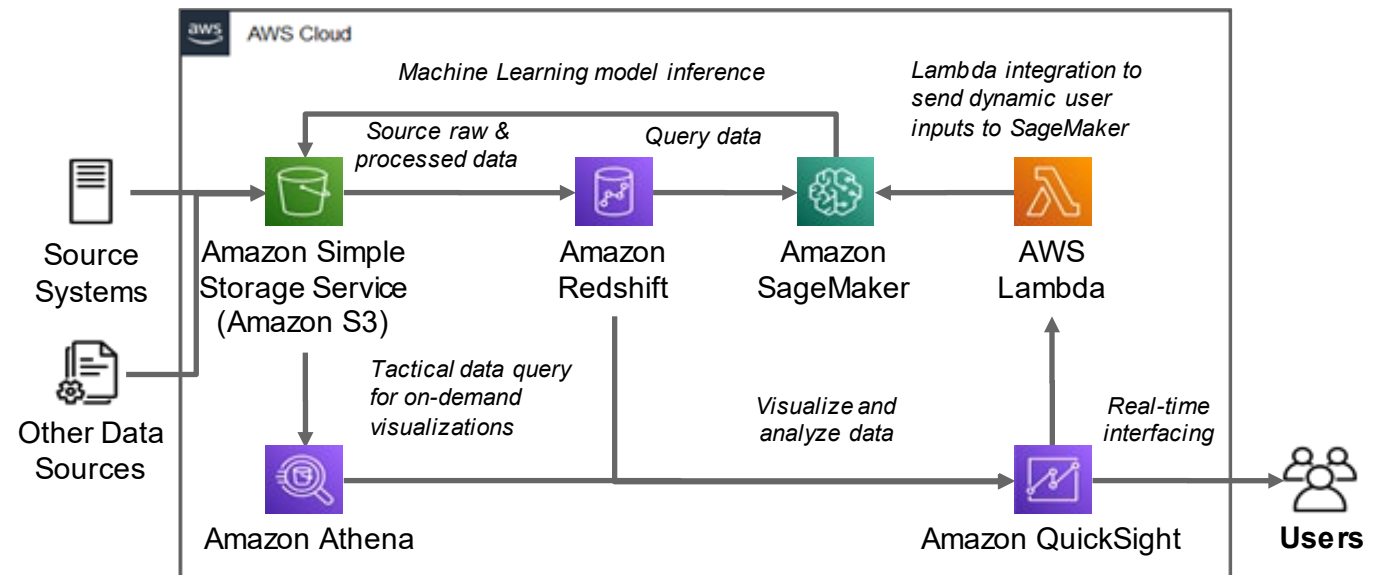
Investment management and external market analyses



Performance management



Risk & shareholder value management



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Explaining LDTI Results

The impact of LDTI on Earnings Analysis and Forecasting

LDTI is driving significant change in insurance performance management and reporting

Earnings analysis & management

- 1 Greater earnings volatility
- 2 Complexity of cohort dimensionality
- 3 Improved data, process and technology capabilities
- 4 Enhanced market disclosures

A more detailed and consistent Source of Earnings analysis connects components of liability disclosures with actual cash flows.

Financial planning and analysis

- 1 Liability model projections supporting in-force forecasts
- 2 FP&A re-positioned to drive strategy
- 3 Improved data, process and technology capabilities
- 4 Dynamic performance management

Leveraging actuarial models and the need to understand more complex projections drives more powerful re-forecasting and real time analysis capabilities.

Required LDTI Benefit Reserve Roll Forward Disclosures

		2020	2021	2022	2023	2024	2025	2026	2027
Present Value of Expected Net Premiums	Balance, beginning of year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Beginning balance at original discount rate								
	Effect of changes in cash flow assumptions								
	Effect of actual variances from expected experience								
	Adjusted beginning of year balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Issuances								
	Interest accrual								
	Net Premiums collected								
	Derecognition (lapses)								
	Ending balance at original discount rate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Effect of changes in discount rate assumptions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Balance, end of year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Present Value of Future Policy Benefits	Balance, beginning of year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Beginning balance at original discount rate								
	Effect of changes in cash flow assumptions								
	Effect of actual variances from expected experience								
	Adjusted beginning of year balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Issuances								
	Interest accrual								
	Benefit payments								
	Derecognition (lapses)								
	Ending balance at original discount rate	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Effect of changes in discount rate assumptions	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Balance, end of year	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net liability for future policy benefits	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Less: Reinsurance recoverable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net liability for future policy benefits, after reinsurance recoverable	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Balance, end of year, related to incurred claims	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Expected future gross premiums	See Note 1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Expected future benefit payments		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Weighted average interest accretion rate									
Weighted average discount rate	Required	0%	0%	0%	0%	0%	0%	0%	
Weighted average duration of liability (in years)									

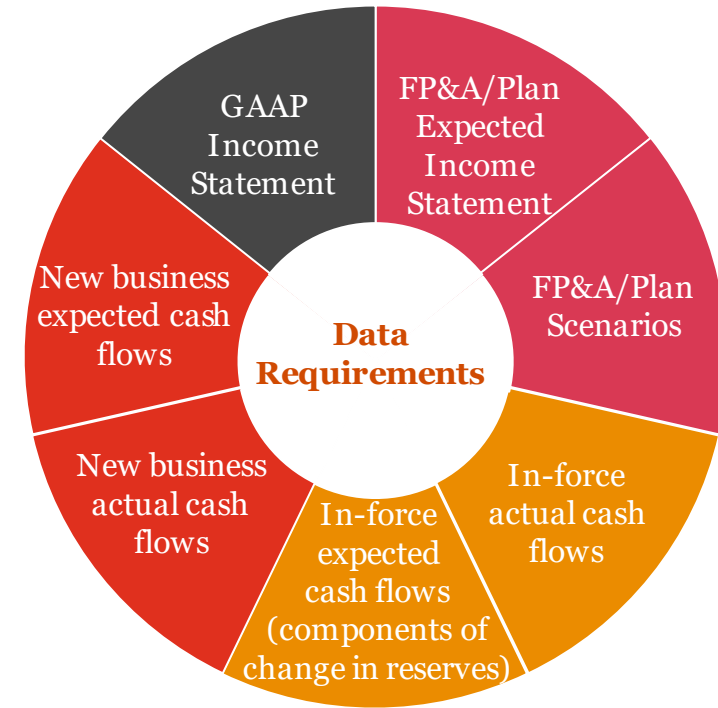
Advanced Source of Earnings – Components

High level components of the advanced source of earnings

$$\text{LDTI GAAP Net Income} = \text{Underwriting Margin} + \text{Expense Margin} + \text{Investment Margin}$$

Underwriting Margin		Expense Margin	Investment Margin
In-force variances	New Business	In-force variances	
Premiums AvE	NB Premiums	Maintenance expenses AvE	AvE Returns on assets backing policy liabilities
Fees and other revenues AvE	NB Claims	Overhead expense allocation AvE	Returns on assets backing economic capital
Claims and other policy benefits AvE	NB Fees and Other Revenues	New Business	Returns on surplus assets
Prospective change in reserve	Establishment of NB reserves	Acquisition expenses versus DAC capitalization	
Comparatives to Plan Scenarios	NB Plan Expected and Scenarios		

LDTI establishes a foundation upon which management information, reporting and analytics can be developed and maintained consistently across the enterprise.



Sources

Divisional
Valuation Data Store
Enterprise
General Ledger
FP&A

- Enterprise alignment areas
1. Alignment of KPIs
 2. Consistent reporting templates/reporting granularity
 3. Alignment of run structures/attribution order
 4. Enterprise data models/definition
 5. Workflow coordination/timing



Post-LDTI Source of Earnings Analysis

Underwriting Margin

Margin	Submargin	I/S Line Item	AvE	Q3 2021	Variiances	
Income (loss) before provision for income tax				\$1,950		
Underwriting margin	Premium	Premium on Inforce	Actuals	\$1 00,000	\$15,000	
			Expected	\$(85,000)		
		Premium on New Business	Actuals	\$3 0,000	\$0	
			Expected	\$(3 0,000)		
		Premium subtotal				\$15,000
		Fees and other revenue	Fees and other revenues on Inforce	Actuals	\$1,000	\$1,000
	Actuals			\$5 00	\$500	
	Fees and other revenue subtotal				\$1,500	
	Claims and policy benefits	Mortality P/L on Inforce	Actuals	\$(5 0,000)	\$(10,000)	
			Expected	\$4 0,000		
		Mortality P/L on New Business	Actuals	\$(6,000)	\$0	
			Expected	\$6,000		
		Other policy claims and benefits	Actuals	\$(3,000)	\$(3,000)	
			Expected	0		
	Claims and policy benefits total				\$(13,000)	
	Prospective change in reserve	Change in reserve on Inforce	Actuals	\$9,000	\$(1,000)	
Expected			\$(1 0,000)			
Establish New Business reserves		Actuals	\$(1,000)	\$0		
		Expected	\$(1,000)			
Prospective change in reserve subtotal				\$(1,000)		
Underwriting margin total				\$2,500		

Additional granularity into sub-components of claims and policy benefits such as mortality, surrenders etc

Post-LDTI Source of Earnings Analysis

Expense Margin

Margin	Submargin	I/S Line Item	AvE	Q3 2021	Variances
Income (loss) before provision for income tax				\$1,950	
Expense margin	Maintenance expense	Maintenance expense on Inforce	Actuals	\$(10,000)	\$(1,000)
			Expected	\$9,000	
		Maintenance expense subtotal			
	Overhead expense	Overhead expense on Inforce	Actuals	\$(1,000)	\$(100)
			Expected	\$900	
		Overhead expense subtotal			
	DAC margin	DAC amortization on Inforce	Actuals	\$(5,000)	\$500
			Expected	\$5,500	
		DAC experience adjustment on Inforce	Actuals	\$(800)	\$(300)
			Expected	\$500	
		Acquisition expense on New Business	Actuals	\$(600)	\$0
			Expected	\$600	
		DAC capitalization on New Business	Actuals	\$(3,000)	\$0
		Expected	\$3,000		
DAC margin subtotal				\$200	
Expense margin total				\$(900)	

Attribution analysis that shows the total acquisition expenses compared to NB DAC capitalization

Post-LDTI Source of Earnings Analysis

Investment Margin

Margin	Submargin	I/S Line Item	AvE	Q3 2021	Variances		
Income (loss) before provision for income tax				\$1,950			
Investment margin	Returns on assets backing policy liabilities	Funds withheld	Actuals	\$3,500	\$(500)		
			Expected	\$(4,000)			
		Interest margin on LFPB liabilities	Actuals	\$600	\$100		
			Expected	\$(500)			
		Interest margin on MRB liabilities	Actuals	\$600	\$(100)		
			Expected	\$(700)			
		Interest margin on Other liabilities (FAS97, FAS120 etc)	Actuals	\$500	\$0		
			Expected	\$(500)			
		Change in fair value due to market rate and volatility	Actuals	\$400	\$50		
			Expected	\$(350)			
		'Interest on policy loans	Actuals	\$300	\$(100)		
			Expected	\$(200)			
		Returns on assets backing policy liabilities subtotal					\$(550)
		Returns on assets backing economic capital	Economic capital	Actuals	\$(100)	\$(100)	
				Expected	\$0		
Returns on assets backing economic capital subtotal					\$(100)		
Returns on remaining surplus assets	Surplus assets	Actuals	\$1,000	\$1,000			
		Expected	\$0				
		Return on remaining surplus assets subtotal					\$1,000
Investment Margin Total					\$350		

Captures interest spread in investment margin

Illustrative Example of Level Term Contract

Illustrative P&L on level term contract

Yr	Premium	Inv Inc	Claims	Res Change	Expenses	Profit
1	100.0	5.0	(62.8)	(24.0)	(7.7)	10.5
2	89.9	5.7	(60.3)	(18.9)	(6.9)	9.5
3	80.9	6.2	(58.6)	(13.7)	(6.2)	8.5
4	72.7	6.5	(57.7)	(8.2)	(5.6)	7.7
5	65.4	6.5	(57.3)	(2.7)	(5.0)	6.9

Re-express P&L in terms of underwriting margin

Yr	Net Premium Ratio	Underwriting Margin	Premium	Underwriting Profit	Expenses	Profit
1	82.6%	17.4%	100.0	18.2	(7.7)	10.5
2	82.6%	17.4%	89.9	16.4	(6.9)	9.5
3	82.6%	17.4%	80.9	14.8	(6.2)	8.5
4	82.6%	17.4%	72.7	13.3	(5.6)	7.7
5	82.6%	17.4%	65.4	11.9	(5.0)	6.9

Experience Variance

Double claims in year 5 along with the experience variance explanation

Yr	Premium	Inv Inc	Claims	Res Change	Expenses	Profit
1	100.0	5.0	(62.8)	(24.0)	(7.7)	10.5
2	89.9	5.7	(60.3)	(18.9)	(6.9)	9.5
3	80.9	6.2	(58.6)	(13.7)	(6.2)	8.5
4	72.7	6.5	(57.7)	(8.2)	(5.6)	7.7
5	65.4	6.5	(114.6)	15.4	(5.0)	(32.3)

Profit Component	Expected	Actual	Explanation for Actual
Underwriting Margin (BOY)	17.4%	17.4%	(1- Net Premium Ratio)
Underwriting Margin (EOY)	17.4%	9.2%	
Premium for Period	65.4	65.4	
Expected Underwriting Margin	11.9	11.9	Underwriting Profit * Premium
Δ Underwriting Margin	0.0%	(8.2%)	Underwriting Margin EOY - BOY
Accumulated Premiums	n/a	479.4	Premiums accumulated with interest from contract inception
Experience Result	0	(39.2)	Δ Underwriting Margin * Accumulated Premiums
Expenses	(5.0)	(5.0)	
Profit	6.9	(32.3)	Expected Underwriting Margin + Experience + Expenses

Forecasting LDTI Earnings and link to Enterprise Value Under LDTI

LDTI Earnings

LDTI earnings analysis for one period

LDTI Value

Multi-year LDTI value metric over the full book of business measuring profitability of the business. LDTI value unwinds each period into LDTI earnings.

Value (BOY)

(1-NPR) * PV Gross Premium (BOY)

Underwriting Margin	Expected	$(1-NPR) * \text{Expected Gross Premium}$	$-(1-NPR) * \text{Expected Gross Premium}$
Underwriting Margin	Variance	$\Delta NPR * \text{Premiums received}$	$\Delta NPR * \text{PV(Future Premiums)}$
Expense Margin	Expected	zero	zero
Expense Margin	Variance	Actual Expenses	zero
Investment Margin	Expected	zero	Discount rate * Value (BOY)
Investment Margin	Actual	$(\text{Earned rate} - \text{discount rate}) * \text{reserve} + \text{earned rate} * \text{assets in excess of reserves}$	zero
New Business	Variance	$(1-NPR) * \text{Premium received on new business during reporting period}$	$(1-NPR) * \text{PV of premium expected in future periods from new business}$
Total		LDTI Earnings	(1-NPR) * PV Gross Premium (EOY)

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Modernized Source of Earnings & Strategic FP&A

Advanced Source of Earnings Analysis Overview

Earnings Analysis Overview

As part of the LDTI Source of Earnings analysis we used real LDTI ledger, actuarial model and business plan data to help explain the results.

Insurance margins analysis

Components of GAAP Net Income attributed to **underwriting, expense and investment margins** (split between in-force and new business).

Drives consistent margins definitions and analysis across the enterprise.

New Business on new cohorts

New business earnings on new cohorts – earnings on new policies decomposed into new business cash flows including acquisition expenses compared to new business DAC capitalization. Any reserve strain (in cases where the NPR is greater than 1) is shown separately.

In-force variances

In-force earnings decomposed into actual vs expected liability granular cash flows.

Key actual cash flows identified - premiums, claims, expenses and investment returns - and matched with the expected cash flows decomposed from the change in liability.

Current period vs prior periods vs plan vs plan scenarios

Understand actual margins and internal performance metrics versus plan margins and underlying cash flows for:

- Current period versus plan versus various scenarios
- Current period versus prior quarter and prior year

New Business on existing cohorts

New business earnings/strain – decomposed into new business cash flows including acquisition expenses, new business DAC capitalization and marginal new business reserves on an existing cohort.

Enterprise view with capability to analyze drivers within and across BUs with different lenses

Consistency in source of earnings powered by live data and consolidated reporting technology enabling drill down into BUs, management views, cohorts, E-Keys and comparing across these dimensions by line item, margin type, user-defined search etc.

Enhanced Core FP&A Capabilities

Business planning | performance management | sensitivity and scenario analysis | strategy effectiveness assessment

Income statement forecasts

Income Statement line items: All I/S line items forecasted leveraging actuarial models where applicable to ensure consistency with LDTI best estimate cash flow projections.

SOE forecasts

Forecasted SOE: Forecasted components of GAAP Net Income attributed to **underwriting, expense and investment margins** (split between in-force and new business). Drives consistent margins management across the enterprise.

Dynamic re-forecasting/rolling forecasts

Capability to update for actuals to date and re-forecast earnings based on multiple methodologies and at all levels of required granularity to compare the effect of varying business strategies/interventions.

Tactical/enterprise earnings scenarios analyses

Development and application of user defined earnings scenarios using:

- a) Earnings sensitivities, proxies or proxy models and linear interpolation
- b) Input sensitivity factors to enable computation of ad hoc earnings results

Tactical/enterprise capital impact analyses

Development and application of user defined capital scenarios using:

- a) Capital sensitivities, proxies or proxy models and linear interpolation
- b) Input sensitivity factors to enable computation of ad hoc capital results

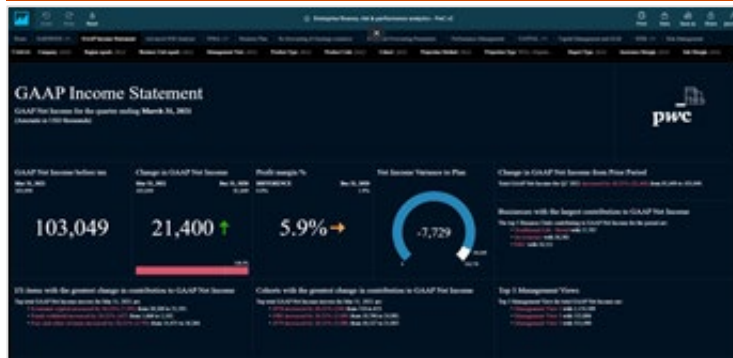
Strategic performance management

Assessment of execution effectiveness by computing strategy effectiveness metrics at an aggregated/enterprise level and computing required internal performance metrics. Production of metrics used to evaluate value versus market price, growth and performance relative peers to assess the effective alignment of internal and external metrics.

Demo of an Advanced SOE & LDTI Forecasting capability

Source of Earnings demo

GAAP Income Statement (post LDTI)



Advanced Source of Earnings Dashboard & Analyses



Report templates and additional visualizations



FP&A and performance management demo

Business Plan and Scenarios



3 Year Plan Strategic Forecasting



Performance management



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Q&A

Thank you

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