



Actuarial and IT Support related to Policy Administration

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Lorin Hoepfner, FSA, MAAA
Steve Hunter, Senior Implementation Specialist

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Key Roles/Responsibilities

Areas where Actuarial and IT Support are provided related to Policy Administration

1. Policyholder Tax Compliance
2. Product Development
3. Due Diligence
4. System Conversions
5. Ongoing Administrative Oversight

1. Policyholder Tax Compliance

Life Insurance Product Actuaries Need to be familiar with the following:

- TEFRA – IRC Section 101(f)
 - Flex Premium Life Ins. issued prior to 1985 needs to pass one of two tests to qualify as Life Insurance
- DEFRA – IRC Section 7702
 - All Types of Life Ins. issued in 1985 or later need to pass one of two tests to qualify as Life Insurance
- TAMRA – IRC Section 7702A
 - Life Policies entered into on or after 6/21/88 need to pass the 7-Pay Test to avoid becoming Modified Endowment Contracts (MECs)

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1. Policyholder Tax Compliance

Guideline Premium Test:

To pass this test, at all times,

Premiums Paid* \leq Guideline Premium Limit, where,

- 7702(f)(1)(A) defines Premiums Paid (often equal to sum of Premiums less sum of withdrawals)
- The Guideline Premium Limit is the Greater of the Guideline Single Premium (“GSP”) and the Guideline Level Premium (“GLP”) Accumulation
- GLP is the level annual premium required to fund future benefits under the required calc assumptions (GSP is the single premium required to fund...)

*Excess Premiums can be returned to the policyholder with interest up to 60 days after the end of a contract year

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1. Policyholder Tax Compliance: Sample calcs for hypothetical \$100K Face Amt Option A UL



Policy Year	Annual Premiums	Cumulative Premiums Paid	GSP	GLP Accum	Guideline Limit	A.V.
1	1,907	1,907	54,653	4,684	54,653	859
2	1,907	3,814	54,653	9,368	54,653	1,669
3	1,907	5,721	54,653	14,052	54,653	2,420
4	1,907	7,628	54,653	18,736	54,653	3,104
5	1,907	9,535	54,653	23,420	54,653	3,707
6	1,907	11,442	54,653	28,104	54,653	4,218
7	1,907	13,349	54,653	32,788	54,653	4,609
8	1,907	15,256	54,653	37,472	54,653	4,858
9	1,907	17,163	54,653	42,156	54,653	4,935
10	1,907	19,070	54,653	46,840	54,653	4,806
11	1,907	20,977	54,653	51,524	54,653	4,444
12	1,907	22,884	54,653	56,208	56,208	3,815
13	1,907	24,791	54,653	60,892	60,892	2,893
14	1,907	26,698	54,653	65,576	65,576	1,641
15	1,907	28,605	54,653	70,260	70,260	15
16	5,000	33,605	54,653	74,944	74,944	1,241
17	5,000	38,605	54,653	79,628	79,628	2,175
18	5,000	43,605	54,653	84,312	84,312	2,753
19	5,000	48,605	54,653	88,996	88,996	2,898
20	5,000	53,605	54,653	93,680	93,680	2,527

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1. Policyholder Tax Compliance: Sample calcs for hypothetical \$100K Face Amt Option A UL



Assuming a Decrease in coverage at the end of year 20 from \$250K to \$10K,

$$\text{New GLP} = \text{Old GLP} - \text{GLP}(X,+20,\$250K) + \text{GLP}(X,+20,\$10K) = 4,684 - 13,578 + 543 = -8,351$$

Policy Year	Annual Premiums Paid	Cumulative Premiums Paid	GSP	GLP Accum	Guideline Limit	A.V.
21	-	53,605	-58,713	85,329	85,329	2,449
22	-	53,605	-58,713	76,978	76,978	2,346
23	-	53,605	-58,713	68,627	68,627	2,215
24	-	53,605	-58,713	60,276	60,276	2,050
25	(1,680)	51,925	-58,713	51,925	51,925	26
26	352	52,277	-58,713	43,574	43,574	0
27	415	52,692	-58,713	35,223	35,223	0
28	456	53,147	-58,713	26,872	26,872	0
29	504	53,651	-58,713	18,521	18,521	0
30	557	54,208	-58,713	10,170	10,170	0
31	615	54,822	-58,713	1,819	1,819	0
32	675	55,497	-58,713	(6,532)	(6,532)	0
33	738	56,235	-58,713	(14,883)	(14,883)	0
34	803	57,038	-58,713	(23,234)	(23,234)	0
35	871	57,909	-58,713	(31,585)	(31,585)	0

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1. Policyholder Tax Compliance

Cash Value Accumulation Test (CVAT):

To pass this test, at all times,

$CSV \leq \text{Net Single Premium}$,

where,

- 7702(f)(2)(A) defines CSV as the CV determined without regard to surrender charges, debt, or reasonable termination dividends
- Net Single Premium is the Single Premium required to fund paid up future benefits under the required calc assumptions

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1. Policyholder Tax Compliance

7-Pay Premium Test:

To pass this test, at all times during the 1st 7 contract years,

$\text{Amount Paid}^* \leq \text{Accumulated 7-Pay Premiums}$, where,

- 7702A(e)(1)(A) defines Amount Paid (often equal to sum of premiums less sum of withdrawals)
- $\text{Accumulated 7-Pay Premium} = 7\text{-Pay Premium} \times \text{Years from 7-Pay Start Date}$
- 7-Pay Premium is the level premium payable for 7 years that would fund paid-up future benefits under the required calc assumptions

*Excess Premiums can be returned to the policyholder with interest up to 60 days after the end of a contract year

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2. Product Development

Need to consider the time and cost required to code various Special Product Features


- Knowledge of base system capabilities
- Knowledge of existing system modifications
- Tax compliance considerations
- Illustration software


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3. Due Diligence – Product Review

- Review policy forms, product specifications, marketing materials, actuarial memos
- Any special features that impact the value of the business?
- Mapping of plan codes to policy forms
- Review any known outstanding issues
- Identify and review admin systems

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	<h3>3. Due Diligence – Data Review</h3>
	<ul style="list-style-type: none">■ Prepare informational reports■ Reconcile counts, face amounts and account values■ Data Anomalies■ Compliance with policy form requirements■ Tax compliance checks (examples to follow)
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	<h3>3. Due Diligence – Data Review</h3>
	<ul style="list-style-type: none">■ Tax Compliance Checks - Example 1: Confirm for each Life policy that total Premiums Paid do not exceed the Guideline Limit in order to check for point in time Guideline Premium Test compliance*:<ul style="list-style-type: none">–Some policies may have Premiums Paid that exceed the Guideline Limit, but might be remedied if they are within the allowable 60 day refund of excess premium window
Slide 12	<p>*Since this test is only as of a given point in time, it may not identify all violators, such as those policies that had Premiums Paid that exceeded the Guideline Limit in the past</p>

3. Due Diligence – Data Review

- Tax Compliance Checks - Example 2:

Confirm that for the majority of the Guideline Tested Life policies, the GLP Accumulation is an integer multiple of the GLP, where that integer is equal to the number of years that the policy has been in force

- If this is not the case, need to understand why not

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4. System Conversions

It is important for Actuarial and IT to work together for successful system conversions

- Originating Systems
- Tables / Rates
- Products and Riders
- Data Needs
- Build Plans / Run Cycles
- Tools

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4. System Conversions – Originating Systems

There are many systems you'll need to consider

- Accounting System
- Base Administration System(s)
- Claims System
- Commission/Agent System
- Image System and/or Policy Files
- Illustration/Reproposal Systems
- Reinsurance System
- Reserve System
- Work Tracking System

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4. System Conversions – Tables / Rates

Know the structure of the tables and Rates on the old system

- Interest Rates
- Surrender Charges
- COIs (Current and Guaranteed)
- Indexes/NAVs/Unit Values
- Tabular Values

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4. System Conversions – Products and Riders

Complete Understanding of the products that will be converted is crucial

- Expanding upon work that was done in Due Diligence
- Account for all PlanCodes on old system
- Identify any features that will need specialized approach


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4. System Conversions – Data Needs

Identify and define data needs and frequency of data delivery

- Create Data Dictionary/Data Mapping Document, for conversion files. Here are four you may want to consider
 - Policy and Rider Basic
 - Client Info
 - Transactions
 - Balances
- Specialized conversion files may be needed


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	<p>Swiss Re</p>  <p>4. System Conversions – Build Plans / Run Cycles</p>
<p>Slide 19</p>	<p>Once you've done research and obtained data you can begin setting up plans, loading policies, and running cycles</p>

	<p>Swiss Re</p>  <p>4. System Conversions – Tools</p>
<p>Slide 20</p>	<p>It's important to document the entire process, and build tools to support an efficient and accurate conversion</p> <ul style="list-style-type: none"><li>■ Project Plan<li>■ Status Reports<li>■ Project Risk Reports<li>■ Issue Log, and document all resolutions decisions<li>■ Milestone Reports<li>■ Compare Reports (Non-Financial)<li>■ Balancing Reports (Financial)<li>■ Scorecards

	<p>Swiss Re</p> <p>III</p> <h2>5. Ongoing Policy Administration Oversight - Overview</h2>
<p>Slide 21</p>	<ul style="list-style-type: none">■ Policyholder Annual Statements■ Inforce Illustrations■ Non-Guaranteed Elements■ Checks and Balances■ Policyholder Services Support

	<p>Swiss Re</p> <p>III</p> <h2>5. Ongoing Policy Administration Oversight – Policyholder Annual Statements</h2>
<p>Slide 22</p>	<ul style="list-style-type: none">■ Life Insurance Illustrations Model Regulation<ul style="list-style-type: none">– Section 10 deals with Annual Reports■ If provided, are projections accurate?<ul style="list-style-type: none">– Are projection assumptions clear?

5. Ongoing Policy Administration Oversight – Inforce Illustrations		Swiss Re 
	<ul style="list-style-type: none">■ Are your illustrations compliant with the Life Insurance Illustrations Model Regulation?■ Do projections match those provided on the Policyholder Annual Statements, if any?■ Does software handle 7702/7702A limitations adequately?<ul style="list-style-type: none">– policies with decreases in coverage typically impacted the most, but some policies without decreases may also be limited	
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5. Ongoing Policy Administration Oversight – Non-Guaranteed Elements		Swiss Re 
	<ul style="list-style-type: none">■ Declared Interest Rates & Indexed Interest Rates■ Variable Loan Rates■ Current COI rates■ Bonuses■ Policy Charges	
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5. Ongoing Policy Administration Oversight – Checks and Balances



- Data Warehouse - Compile from various data sources
- Cross Reference reports and extracts for inconsistent data
- $BOP(t) = EOP(t-1)$
- Rollforward of Values
- Account for all contracts
- Used to regression test
- Non-Financial data review

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5. Ongoing Policy Administration Oversight – Policyholder Services Support



- Various types of issues may arise
 - Annual Statements, Illustrations, Sales Practice related, Correspondence
- Keep a good relationship with the ones working with the system, and taking calls
- May need to recreate policy values back to issue

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Questions and Comments



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