

General		
Surplus: GAAP	SAP Surplus + Provision for Reinsurance + DAC + Non-Admitted Assets	
Goodwill: SAP	Min[Price of company – Surplus, (.1)(Surplus)]	
Goodwill: Purchase GAAP	Price of Company – <b>Net Assets</b>	
	Price of Company – [ <b>FV(Assets)</b> – <b>FV(Liabilities)</b> ]	
<b>FV(Liabilities)</b>	<b>Nominal future cash flows of liabilities</b>	$\sum \frac{\text{Loss and LAE Liability Payments}}{(1 + i)^{.5+t}} \quad \text{for } t = 0, 1, 2 \dots$
	<b>Risk Margin</b>	$(R - i) * \sum \frac{\text{Average}[(\text{Carried Capital})_t, (\text{Carried Capital})_{t+1}]}{(1 + i)^{1+t}} \quad \text{for } t = 0, 1, 2 \dots$
	<ul style="list-style-type: none"> <li>• <b>Note:</b> You may be given the FV of a liability component that <b>isn't Loss and LAE</b>. Include it.</li> </ul>	
Notation	<ul style="list-style-type: none"> <li>• DAC → Deferred Acquisition Cost</li> <li>• FV → Fair Value</li> <li>• PGAAP → Purchase GAAP</li> <li>• R → Pre-tax cost of capital</li> <li>• i → Risk Free Rate + <b>Illiquidity Premium</b></li> </ul>	

**SAP 10K Exhibit – 10-Year Loss Development Table**  
**Testing for *Adverse Deviation***

**Notation**

- I → Incurred
- P → Paid
- Sequential numbers indicate a sum
  - **Example: I12 = I1 + I2**

**Schedule P - Part 2**

Year Losses were Incurred (AY)	Incurred Net Loss and DCC Reported at Year End (CY)			
	2009	2010	2011	2012
2009	I1	I1	I1	I1
2010		I2	I2	I2
2011			I3	I3
2012				I4

**Schedule P - Part 3**

Year Losses were Incurred (AY)	Incurred Net Loss and DCC Reported at Year End (CY)			
	2009	2010	2011	2012
2009	P1	P1	P1	P1
2010		P2	P2	P2
2011			P3	P3
2012				P4

**10-K**

	2009	2010	2011	2012
<b>Initial</b>	I1 – P1	I12 – P12	I123 – P123	I1234 – P1234
<b>Cumulative Paid as of</b>				
1-Year Later	P1 – P1	P12 – P12	P123 – P123	
2-Year Later	P1 – P1	P12 – P12		
3-Year Later	P1 – P1			
<b>Cumulative Incurred as of</b>				
1-Year Later	I1 – P1	I12 – P12	I123 – P123	
2-Year Later	I1 – P1	I12 – P12		
3-Year Later	I1 – P1			
<b>Adverse Deviation</b>	(Cumulative Incurred Diagonal) <sub>CY</sub> – (Initial) <sub>CY</sub>			N/A

- **Checking your work:** *Adverse Deviation* simplifies to a difference of incurred columns in Schedule P, Part 2