

# LIFE INSURANCE AND RETIREMENT PRODUCT DEVELOPMENT

**ASSIGNMENT SEMESTER 2 2019** 







Assignment Semester 2 2019

#### Rubric for the LI&R Product Development Assignment Semester 2 2019

A key skill is telling the story in a professional well-written manner. The first rubric applies across all the parts of the report and is weighted by 10%.

Weight: 10%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Clarity of	All sentences are	All sentences are	A few sentences	Many sentences
report	complete and	complete and	are incomplete	are incomplete
	grammatically	grammatically	and/or	and/or
	correct. All	correct. All	grammatically	grammatically
	paragraphs deal	paragraphs deal	incorrect. Words are	incorrect. The
	with a single	with a single theme.	not chosen for their	author does not
	theme.	Most new or	precise meanings.	acknowledge that
	All new or unusual	unusual terms are	New or unusual	key words have
	terms are well-	well-defined. Key	terms are not well-	precise meanings.
	defined. Key	concepts are	defined. Key	Information
	concepts are	explained.	concepts are not	(names, facts, etc.)
	accurately and	Examples are clear.	explained	is inaccurate.
	completely		sufficiently well.	
	explained. Where	The documentation	Examples are not	The documentation
	appropriate, clear	has been spell-	clear. Information	has many spelling
	examples are used	checked, has some	(names, facts, etc.)	errors and often the
	to illuminate	errors, and the	is mostly accurate.	language is not
	concepts and	language is		appropriate for the
	issues.	appropriate to the	The documentation	intended
		audience.	has several spelling	audience.
	The report has		errors and at times	
	been spell-		the language is not	
	checked, has no		appropriate for the	
	errors, and the		intended audience.	
	language is			
	appropriate to the			
	audience.			





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#### Question 1 - Risks and benefits

	Significantly	Pass level	Some	Significantly
Weight: 10%	above pass		improvement	below pass
	level		required	level
Customer	Clear explanation	Demonstrated an	A material	Unclear
benefits	of the products	understanding of	misunderstanding of	explanation and
	and their suitability	the products but	one product.	clear that the
	to defined	some parts on the		candidate does
	customers and in	benefits are		not understand the
	what	unclear or too		products.
	circumstances they	brief.		
	are suitable.			
Customer risks	Clear articulation	A good description	The reader can infer	The student does
	of how the benefits	of the risks but	what the risks are	not really
	for each product	sometimes there is	but revisions are	understand the
	may not achieve	a lack of clarity on	required to the text	concept of
	the objectives of a	linking benefits and	to make it clearer to	customer risks
	customer.	risks.	the intended	relative to the
			audience.	benefits on offer.
Risks to the	The reader is	The student	Similar to the above	The report
	provided with	demonstrates an	- it's clear the ideas	demonstrates a
organisation	clarity on the risks	understanding of	are present but	weak
	for each of the	J	·	
		the risks but	need revision to	understanding of
	three products	appears to miss	bring out the key	the risks.
	from the correct	one or two key	points.	
	perspective.	risks.		

#### Question 2 - Developing input assumptions

Weight: 10%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Calculations	A well-	A well-	The model is not	Poor design of
	documented	documented	well-documented	spreadsheet with
	model in the	model in the	but looks ok.	no documentation.
	spreadsheet.	spreadsheet.		





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	Clear separation of	Clear separation of	OR, there is not a	Unclear or
	data, assumptions,	data, assumptions,	clear separation of	obviously incorrect
	calculations and	calculations and	data, assumptions,	calculations.
	results.	results.	calculations and	Calculations.
	resuits.	resuits.	results.	
	All assumptions are	All assumptions are	results.	No explanation of
	·	inputs rather than	Assumptions or	
	inputs rather than	'	Assumptions are	any assumptions.
	hard coded.	hard coded.	hard coded rather	
			than inputs.	
	The modelled	Student has used	Any additional	
	results are	most of the	assumptions are in	
	consistent with the	information in the	the report although	
	stated	question	they may be	
	assumptions.	appropriately.	partially explained	
			or inconsistent.	
	Student has used	Any additional		
	all information	assumptions are in	Student has	
	provided in the	the report	misunderstood or	
	question	although they may	not used key	
	appropriately.	be partially	information	
		explained or	provided.	
	Additional	inconsistent.		
	assumptions are			
	clearly explained in			
	the report and are			
	relatively sensible.			
	-			
Results	Results are	Results are	Results are not	Results not
	presented clearly	presented clearly	unclear in some	presented clearly.
	and are	most of the time	places.	
	reasonable in light	and are		No evidence of
	of given	reasonable in light	Results may not be	sense checks.
	information and	of given	reasonable due to	
	declared	information and	errors in model.	
	assumptions.	declared		
		assumptions.	No evidence of	
	Complete	2 .22 2	sense checks.	
	evidence of sense	Some evidence of	11.00 0000.	
	check of results.	sense checks.		
	CHECK OF TESUITS.	SCHSC CHGCRS.		





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#### Question 3 - Deterministic model for Products 1 and 2

bove pass		:	l
		improvement	below pass
evel		required	level
ee Question 2's	See Question 2's	See Question 2's	See Question 2's
Calculations" and	"Calculations" and	"Calculations" and	"Calculations" and
Results".	"Results".	"Results".	"Results".
lear	Clear and correct	Predominantly	No reasonable
nderstanding of	use of the product	correct use of the	attempt has been
e calculations	comparison results	product	made to
nd implications	and some links to	comparisons	demonstrate an
or risks and	risks and benefits.	although the links to	understanding of
enefits for the		risks and benefits	the calculations
ustomer.	Reasonable	are incomplete.	and the
	understanding of		application to a
lear discussion of	the weaknesses.	Does not	customer.
eaknesses of		understand the	
alculations from a		weaknesses.	
ustomer's			
erspective.			
	ear derstanding of e calculations risks and nefits for the stomer.  ear discussion of eaknesses of lculations from a stomer's	See Question 2's alculations" and "Calculations" and "Results".  Clear and correct use of the product comparison results and some links to risks and inefits for the stomer.  Reasonable understanding of the weaknesses of lculations from a stomer's	e Question 2's see Question 2's "Calculations" and "Results".  The contract of the product of th

#### **Question 4: Pooled annuity product**

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Weight 20%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Calculations	See Question 2's	See Question 2's	See Question 2's	See Question 2's
and Results	"Calculations" and	"Calculations" and	"Calculations" and	"Calculations" and
and noodito	"Results".	"Results".	"Results".	"Results".
Method	Correct	Correct	Correct application	Incorrect
	application of	application of	of some of mortality	application of
	mortality credits,	mortality credits,	credits, investment	mortality credits,
	investment returns	investment returns	returns and	investment returns
	and mortality	and mortality	mortality tables.	and mortality
	tables.	tables.		tables.





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Clear explanation	An explanation of	Unclear or	No explanation of
of method and	method and	incomplete	method or
assumptions used	assumptions used	explanation of	assumptions used
to determine how	to determine how	method and	to determine how
many alive each	many alive each	assumptions used	many alive each
year.	year.	to determine how	year.
		many alive each	
		year.	

#### **Question 5: Sensitivity testing**

Weight 15%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Calculations	See Question 2's	See Question 2's	See Question 2's	See Question 2's
and results	"Calculations" and	"Calculations" and	"Calculations" and	"Calculations" and
	"Results".	"Results".	"Results".	"Results".
Discussion	Sensitivity tests are	The sensitivity tests	Sensitivity tests do	Student does not
	well explained and	selected are	not demonstrate a	understand basic
	demonstrate a	reasonable.	breadth of possible	concepts.
	range of different		mortality events.	
	mortality events.	Discussion of results		No other risk factors
		demonstrates an	Discussion does not	mentioned.
	Discussion	understanding of	demonstrate an	
	demonstrates a	results produced.	understanding of	
	clear		results or key	
	understanding of	Student	concepts.	
	concepts and	demonstrates an		
	issues, in particular	understanding of	Student does not	
	the impact of early	the impact of the	demonstrate an	
	or late deaths on	timing of deaths on	understanding of	
	mortality credits.	the size of mortality	mortality credits.	
		credits.		
	The implications of		Some other risk	
	volatility of	The implications of	factors mentioned	
	mortality are	volatility of	with no discussion.	
	discussed.	mortality are		
		identified.		





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Relevant risk	Some risk factors	
factors mentioned	mentioned with	
with explanation of	some explanation	
whether necessary	of whether it is	
to test other	necessary to test	
factors.	other factors.	

#### **Question 6: Cohort size**

Weight 10%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Calculations	See Question 2's	See Question 2's	See Question 2's	See Question 2's
and results	"Calculations" and	"Calculations" and	"Calculations" and	"Calculations" and
	"Results".	"Results".	"Results".	"Results".
Discussion	Clear	Understanding of	The report may be	Either no discussion
	understanding of	how the size of the	read that the size is	at all or student
	how the size of the	scheme affects the	important but	does not
	scheme affects the	payments to the	reasons why are not	understand basic
	payments to the	annuitants.	quite clear.	concepts.
	annuitants.			
		Identifies pros and	Does not identify	No mention of
	Clear	cons of definition.	pros or cons of	pros/cons or
	understanding of		definition or	incorrect
	pros and cons of	Provides some	misunderstands	understanding.
	definition.	justification for an	some issues.	
		alternative		No alternative
	Provides a well	definition.	Alternative	presented.
	justified alternative		definition is not	
	definition that		reasonable.	
	addresses the			
	issues.			





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#### **Question 7: Product design**

Weight 5%	Significantly	Pass level	Some	Significantly
	above pass		improvement	below pass
	level		required	level
Discussion	Student	Suggested	Comments are	Student clearly
	demonstrates a	improvements to	vague or general	does not
	clear	product design	rather than	understand basic
	understanding of	appear	specific to the	concepts.
	concepts and	reasonable	product, provider	
	issues.	based on	and situation.	
		information		
	Suggested	provided in the		
	changes to	question and		
	product design	results produced		
	are well justified	in the analysis.		
	and show a direct			
	link to solving			
	problems.			

**END OF MARKING GUIDE** 

