

APPENDIX F 1 RESULTS OF THE RISK AVERSION QUESTIONNAIRE

BINS

Questions 1 to 8 are based on Prospects involving positive outcomes

questions 9 to 16 are based on Prospects involving negative outcomes

Test for difference
in population means

A = Risk Averse T= Risk Tolerant

Sample size <30

Question	Brad	Peter	Geoff	Craig	Roland	Rob	Tony	David	Stephan	Andre	Naresh	Total A	Total T	Differences			
												A= Risk Averse	T=Risk tolerant	Difference=d-A-T	d-d	(d-d) ²	
Prospects involving positive outcomes	1	A	A	T	A	A	A	T	T	T	A	A	7	4	3	2.25	5.06
	2	A	A	T	A	T	T	T	T	T	T	A	4	7	-3	-3.75	14.06
	3	A	A	A	A	A	A	A	T	A	A	A	10	1	9	8.25	68.06
	4	A	A	A	A	T	A	A	A	A	T	A	9	2	7	6.25	39.06
	5	T	T	A	A	A	A	T	T	A	A	A	7	4	3	2.25	5.06
	6	T	T	A	A	T	T	A	T	T	T	T	3	8	-5	-5.75	33.06
	7	T	T	T	T	T	T	T	A	A	T	A	3	8	-5	-5.75	33.06
	8	T	T	A	T	A	T	T	T	T	A	A	4	7	-3	-3.75	14.06
Individual Results	50/50	50/50	A	A	50/50	T	T	T	50/50	50/50	A	Total A 47	Total T 41	Total 6	Mean d= 0.75	0.00	211.50

Prospects involving negative outcomes	9	A	T	T	T	T	A	T	T	T	T	2	9	-7	-3.00	9.00	
	10	A	T	T	T	T	A	T	T	T	T	2	9	-7	-3.00	9.00	
	11	A	T	A	T	T	A	A	T	T	T	4	7	-3	-1.00	1.00	
	12	A	T	T	A	T	A	A	T	A	A	7	4	3	7.00	49.00	
	13	A	T	T	A	T	T	A	T	T	T	3	8	-5	-1.00	1.00	
	14	A	T	A	A	T	T	T	A	A	T	T	5	6	-1	3.00	9.00
	15	A	T	A	T	T	T	T	T	A	T	T	3	8	-5	-1.00	1.00
	16	A	T	T	T	T	T	T	A	T	T	T	2	9	-7	-3.00	9.00
Individual Results	A	T	T	50/50	T	T	A	50/50	T	T	T	Total A 28	Total T 60	Total -32	Mean d= -4	0.00	88.00

Testing for the positive outcomes

d= 0.75
 $s^2= 30.21$
 $t = \frac{(0.75 - \mu)}{(s/\sqrt{n})}$ with 7 degrees of freedom

H₀: When facing gains there is no preference for risk averse behaviour, A≤T
 H₁: When facing gains there is a preference for risk averse behaviour, A>T

H₀: μ≤0
 H₁: μ>0

This is a one tailed t test with 7 degrees of freedom

t (calc)= $\frac{0.75/\sqrt{(30.21/8)}}{1} = 0.39$
 $t_{.1} = 1.42$

Accept H₀: When facing gains there is no preference for risk averse behaviour

Testing for the negative outcomes

d= -4
 $s^2= 12.57$
 $t = \frac{(-4 - \mu)}{(s/\sqrt{n})}$ with 7 degrees of freedom

H₀: When facing losses there is no preference for risk tolerant behaviour, T≤A
 H₁: When facing losses there is a preference for risk tolerant behaviour, T>A

H₀: μ≤0
 H₁: μ>0

This is a one tailed t test with 7 degrees of freedom

t (calc)= $\frac{-4/\sqrt{(12.57/8)}}{1} = -3.19$
 $t_{.01} = -3.00$

Reject H₀: When facing losses there is a preference for risk tolerant behaviour at 1% level

APPENDIX F 2 RESULTS OF THE RISK AVERSION QUESTIONNAIRE

QD

Questions 9 to 16 are based on Prospects involving negative outcomes

A = Risk Averse T= Risk Tolerant

Test for difference

in population means

Sample size <30

	Question	Graeme	Robert	Justin	Nick	Gina	Gordon	Graham	Total A	Total T	Differences		
											A= Risk Averse	T=Risk tolerant	Difference d=A-T
Prospects involving positive outcomes	1	T	A	A	A	A	A	A	6	1	5	4.50	20.25
	2	T	A	T	T	T	A	A	5	2	3	2.50	6.25
	3	T	T	A	A	A	A	A	5	2	3	2.50	6.25
	4	T	A	A	A	T	A	A	5	2	3	2.50	6.25
	5	T	T	T	A	A	A	A	4	3	1	0.50	0.25
	6	T	T	A	A	A	A	A	4	3	1	0.50	0.25
	7	T	T	T	T	T	A	T	1	6	-5	-5.50	30.25
	8	T	T	T	T	T	T	T	0	7	-7	-7.50	56.25
Individual Results	T	T	50/50	A	50/50	A	A	Total A	30	Total T	26	Mean d=	0.5
									Total A	Total T	4	0.00	126.00

Prospects involving negative outcomes	9	T	T	T	T	T	A	T	1	6	-5	-1.50	2.25	
	10	T	T	T	T	T	A	T	1	6	-5	-1.50	2.25	
	11	T	T	A	A	T	A	T	3	4	-1	2.50	6.25	
	12	T	T	T	T	T	A	A	2	5	-3	0.50	0.25	
	13	T	A	T	T	A	T	T	2	5	-3	0.50	0.25	
	14	T	T	T	A	T	T	T	1	6	-5	-1.50	2.25	
	15	T	T	T	T	T	A	A	2	5	-3	0.50	0.25	
	16	T	T	T	T	T	A	A	2	5	-3	0.50	0.25	
Individual Results	T	T	T	T	T	T	A	T	Total A	14	Total T	42	Mean d=	-3.5
									Total A	Total T	-28	0.00	14.00	

Testing for the positive outcomes		Testing for the negative outcomes	
d=	0.5	d=	-3.5
s ² =	18	s ² =	2
t =	(0.5 - μ)/(s/√n)	t =	(-3.5 - μ)/(S/√n)
	with 7 degrees of freedom, n=8		7 degrees of freedom, n=8
H ₀ :	When facing gains there is no preference for risk averse behaviour, A ≤ T	H ₀ :	When facing losses there is no preference for risk tolerant behaviour, T ≤ A
H ₁ :	When facing gains there is a preference for risk averse behaviour, A > T	H ₁ :	When facing losses there is a preference for risk tolerant behaviour, T > A
H ₀ :	μ ≤ 0	H ₀ :	μ ≤ 0
H ₁ :	μ > 0	H ₁ :	μ > 0
	This is a one tailed t test with 7 degrees of freedom		This is a one tailed t test with 7 degrees of freedom
t (calc)=	0.5/√(18/8) = 0.33	t (calc)=	-3.5/√(2/8) = -7
t _{.025}	2.37	t _{.001}	-4.785
	Accept H ₀ : There is no preference for risk seeking behaviour when facing gains at the 5% level		Accept H ₁ : When facing losses there is preference for risk tolerant behaviour

APPENDIX F 3 RESULTS OF THE RISK AVERSION QUESTIONNAIRE

VGOLD

Questions 1 to 8 are based on Prospects involving positive outcomes

Questions 9 to 16 are based on Prospects involving negative outcomes

A = Risk Averse T= Risk Tolerant

Test for difference

in population means

Sample size <30

	Question	Willo	Mike M	Gilbert	Total		Differences				
					A= Risk Averse	T=Risk tolerant	Diff=d=A-T	d-d	(d-d) ²		
Prospects involving positive outcomes	1	A	T	A	2	1	1	-0.50	0.25		
	2	A	T	A	2	1	1	-0.50	0.25		
	3	A	A	A	3	0	3	1.50	2.25		
	4	A	T	A	2	1	1	-0.50	0.25		
	5	A	A	A	3	0	3	1.50	2.25		
	6	A	A	A	3	0	3	1.50	2.25		
	7	A	T	T	1	2	-1	-2.50	6.25		
	8	A	A	T	2	1	1	-0.50	0.25		
Total A					18	Total T	6	Total	12	0.00	14.00
Individual Results	A	50/50	A				Mean d=	1.5			

Prospects involving negative outcomes	9	T	T	A	1	2	-1	-1.25	1.56		
	10	A	A	A	3	0	3	2.75	7.56		
	11	T	T	A	1	2	-1	-1.25	1.56		
	12	A	A	A	3	0	3	2.75	7.56		
	13	T	T	T	0	3	-3	-3.25	10.56		
	14	T	A	A	2	1	1	0.75	0.56		
	15	T	A	T	1	2	-1	-1.25	1.56		
	16	T	A	A	2	1	1	0.75	0.56		
Total A					13	Total T	11	Total	2	0.00	31.50
Individual Results	T	A	A				Mean d=	0.25			

Testing for the positive outcomes (gains)

$$\begin{aligned} \bar{d} &= 1.5 \\ s^2 &= 2 \\ t &= \frac{(1.5 - \mu)}{(s/\sqrt{n})} \quad \text{with 7 degrees of freedom, } n=8 \end{aligned}$$

H₀: When facing gains there is no preference for risk averse behaviour, A ≤ T

H₁: When facing gains there is a preference for risk averse behaviour, A > T

H₀: μ ≤ 0

H₁: μ > 0

This is a one tailed t test with 7 degrees of freedom

$$t(\text{calc}) = \frac{1.5/\sqrt{(2/8)}}{1} = 3.000$$

$$t_{.01} = 2.998$$

Reject H₀: When facing gains there is a preference for risk averse behaviour at the 1% level

When facing gains there is preference for risk averse behaviour at the 1% level

Testing for the negative outcomes (losses)

$$\begin{aligned} \bar{d} &= 0.25 \\ s^2 &= 4.50 \\ t &= \frac{(0.25 - \mu)}{(S/\sqrt{n})} \quad \text{7 degrees of freedom, } n=8 \end{aligned}$$

H₀: When facing losses there is no preference for risk tolerant behaviour, T ≤ A

H₁: When facing losses there is a preference for risk tolerant behaviour, T > A

H₀: μ ≤ 0

H₁: μ > 0

This is a one tailed t test with 7 degrees of freedom

$$t(\text{calc}) = \frac{0.25/\sqrt{(4.50/8)}}{1} = 0.33$$

$$t_{.05} = 1.9$$

Accept H₀: When facing losses there is no preference for risk averse behaviour

When facing losses there is no preference for risk averse behaviour