Investor Profile

2021-09-03

Prepared for

Bill Smith

Tina Williams

Prepared by

Sales UK Demo

ENG,

MORNINGSTAR®

Table of contents

Introduction to suitability

Creating an investment strategy is a process that takes into consideration all of the following components in order to ensure that any recommendations made are suitable for you:

When we recognize each of these components, it allows us to identify a **"Suitability Score"** to ensure that the investment strategy we recommend is suitable for you. Let's look at each of these suitability components in order to understand how each impact our recommendations.

Risk capacity: Risk capacity is the level of financial risk a person can afford to take without seriously jeopardising the achievement of important financial goals. Risk capacity is generally assessed by stress-testing your financial plan to identify any unexpected negative outcomes that may derail the plan.

Risk tolerance: Risk tolerance is a psychological trait, it is how emotionally comfortable a person is with taking financial risk. For example, how much a person is willing for their portfolio to diminish for a chance to make bigger returns. Generally, the higher the risk tolerance the higher the level of risk a person prefers to take.

Risk required: Risk required is the expected risk associated with the return required to achieve a person's goals from the financial resources available. Risk and return go hand in hand, the potential for higher returns typically require higher risk.

Time horizon: An investment time horizon is the length of time over which an investment is made or held before it is liquidated. Generally, longer-term investments can afford to be more aggressive, as short-term losses have the potential to be offset by long-term gains.

Knowledge and experience: Generally, the more knowledge and experience a person has with financial markets the more resilient one is to fluctuating markets.

Composure: Composure is a measure of a person's emotional state when markets go up and down in value. When things are going well it's easy to be comfortable with investment risk, but when things are going badly, we may find we are not as resilient as we might have thought. Generally, a more conservative approach is recommended for those who are less composed during market downturns.
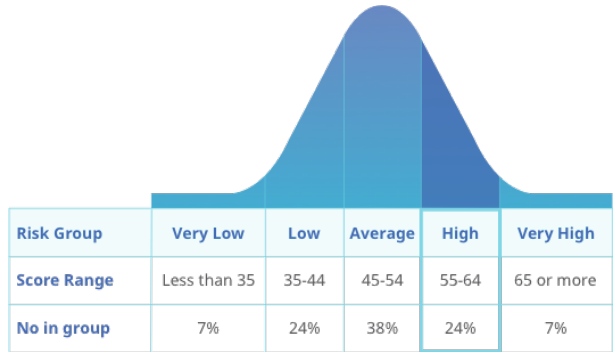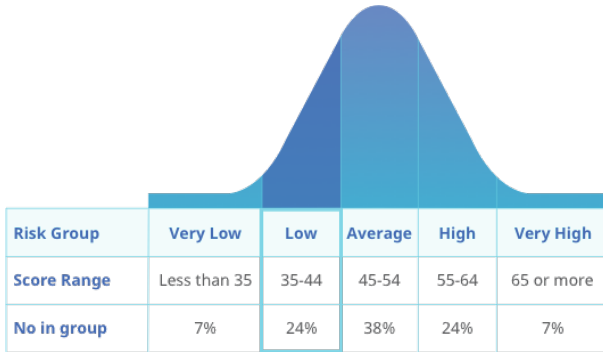
Risk tolerance

Bill Smith	Tina Williams
Score: 44 | Agreed score: 44 | Date: 2021-06-29	**Score: 64 | Agreed score: 64 | Date: 2021-06-29**

Your risk tolerance score

Your risk tolerance score enables you to compare yourself to a representative sample of the adult population. Your score is 44. This is a lower-than-average score, lower than 71% of all scores.

When scores are graphed they form a bell-curve as shown below. To make the scores more meaningful, the 0 to 100 scale has been divided into five risk groups. Your score places you in the **Low** risk group.

Your risk tolerance score enables you to compare yourself to a representative sample of the adult population. Your score is 64. This is a very high score, higher than 91% of all scores.

When scores are graphed they form a bell-curve as shown below. To make the scores more meaningful, the 0 to 100 scale has been divided into five risk groups. Your score places you in the **High** risk group.

Risk Group	Very Low	Low	Average	High	Very High
Score Range	Less than 35	35-44	45-54	55-64	65 or more
No in group	7%	24%	38%	24%	7%

Risk Group	Very Low	Low	Average	High	Very High
Score Range	Less than 35	35-44	45-54	55-64	65 or more
No in group	7%	24%	38%	24%	7%

Your risk group

Overview

The description of the **Low** risk group which follows provides a summary of the typical attitudes, values, preferences and experiences of those in your risk group. It summarizes how those in your risk group usually answer the risk tolerance questionnaire.

Investors in the **Low** risk group are prepared to take a small to medium degree of risk with their financial decisions, more likely small. When faced with a major financial decision they are usually more concerned about the possible losses than the possible gains. For some, it is somewhat more important that the value of their investments does not fall than that it retains its purchasing power but for others retaining purchasing power is the more important of the two. For most, a fall of 10% in the total value of their investments would make them feel uncomfortable but for others it would take a fall of 20%. Given the portfolio choices below, they prefer Portfolio 2 or 3, more likely Portfolio 3.

Overview

The description of the **High** risk group which follows provides a summary of the typical attitudes, values, preferences and experiences of those in your risk group. It summarizes how those in your risk group usually answer the risk tolerance questionnaire.

Investors in the **High** risk group are only prepared to take a medium degree of risk with their financial decisions. When faced with a major financial decision most are usually more concerned about the possible gains while some are usually more concerned about the possible losses. It is somewhat to much more important that the value of their investments retains its purchasing power than that it does not fall. For some, a fall of 20% in the total value of their investments would make them feel uncomfortable but for others it would take a fall of 33%. Given the portfolio choices below, they prefer Portfolio 4 or 5, more likely Portfolio 4.

Mix of Investments in Portfolio

Portfolio	High Risk / Return	Medium Risk / Return	Low Risk / Return
1	0%	0%	100%
2	0%	30%	70%
3	10%	40%	50%
4	30%	40%	30%
5	50%	40%	10%
6	70%	30%	0%
7	100%	0%	0%

Mix of Investments in Portfolio

Portfolio	High Risk / Return	Medium Risk / Return	Low Risk / Return
1	0%	0%	100%
2	0%	30%	70%
3	10%	40%	50%
4	30%	40%	30%
5	50%	40%	10%
6	70%	30%	0%
7	100%	0%	0%

Differences

It is not uncommon for some of the answers given in the risk tolerance questionnaire to differ from those typically given by people with similar risk tolerance. Sometimes the difference indicates more risk tolerance and sometimes less. The table below shows your differences.

Risk group				
Very Low	**Low**	**Average**	**High**	**Very High**
Q1 Self-rating				
	✓			
Q2 Adaptability				
		◑		
Q3 Meaning of risk				
	✓			
Q4 Losses v. gains				
		◑		
Q5 Current risk-taking				
	✓			
Q6 Reinvest				
	✓			
Q7 Downside comfort				
◑				
Q8 Preferred portfolio				
	✓			
Q9 Face v. real value				
	✓			
Q10 10-year returns				
	✓			

Risk group				
Very Low	**Low**	**Average**	**High**	**Very High**
Q1 Self-rating				
			✓	
Q2 Adaptability				
			✓	
Q3 Meaning of risk				
			✓	
Q4 Losses v. gains				
			✓	
Q5 Current risk-taking				
			✓	
Q6 Reinvest				
			✓	
Q7 Downside comfort				
			✓	
Q8 Preferred portfolio				
			✓	
Q9 Face v. real value				
			✓	
Q10 10-year returns				
			✓	

Adjusted risk score

Having regard to where you differed from those with similar risk tolerance as shown above, it is recommended that your risk score has been adjusted from 44 to 42.

Notes

Notes

Details on actual **Risk tolerance** responses can be found in the Appendix of this report.

Know your client (KYC)

	Bill Smith	Tina Williams
Age	26	27
Education	Trade or diploma qualification.	University degree or higher qualification.
Annual income	£30,000 - £39,999.	£20,000 - £29,999.
Income stability	Somewhat stable.	Somewhat stable.
Net worth	Under £100,000.	Under £100,000.
Investment capital	Under £100,000.	Under £100,000.
Financial vocation (last 5 years)	No.	No.

Suitability components

	Bill Smith	Tina Williams
Risk tolerance agreed score	44	64
Financial knowledge	I have no or very little knowledge about investing.	I have no or very little knowledge about investing.
Experience	Managed funds. Bank Deposits.	Managed funds. Shares.
Composure	I have never experienced a financial downturn.	I was nervous and sold shares.

Investment policy - by portfolio

Portfolio description	Time horizon	Current range	Suitability score	Investment policy	Amount
Bill's Investments	5 years	65 - 79	44 SUITABILITY	Moderately Cautious	£14,574
No constraints identified for this portfolio.					
Joint Retirement Savings	20 years	0 - 25	61 SUITABILITY	Moderately Adventurous	£77,538
No constraints identified for this portfolio.					
Tina's Investments	2 years	80 - 100	37 SUITABILITY	Moderately Cautious	£18,396
No constraints identified for this portfolio.					
Weighted			55 SUITABILITY		**£110,509**

Your core values

	Bill	Tina
Core value 1	Security	Family
Those who share this value	17%	68%
Core value 2	Spirituality	Faith
Those who share this value	5%	25%
Core value 3	Environment	Enjoyment
Those who share this value	2%	6%
Core value 4	Teamwork	Respect
Those who share this value	2%	5%
Core value 5	Privacy	Truthfulness
Those who share this value	1%	2%

Implementation by portfolio

Portfolio	Suitability score	Preferred solution	Solution range	Amount
Bill's Investments	**44** SUITABILITY	Balanced (1) (Solutions (GB))	41 - 52	£14,574
No considerations identified for this implementation.				
Joint Retirement Savings	**61** SUITABILITY	Growth (2) (Solutions (GB))	65 - 79	£77,538
No considerations identified for this implementation.				
Tina's Investments	**37** SUITABILITY	Conservative (2) (Solutions (GB))	34 - 46	£18,396
No considerations identified for this implementation.				
Weighted	**55** SUITABILITY			**£110,509**

Consolidated portfolio allocation
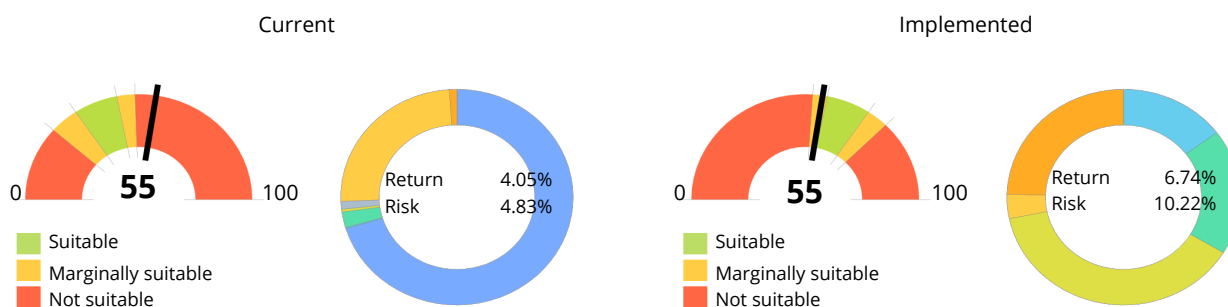
Current

Return 4.05%
Risk 4.83%

- Suitable
- Marginally suitable
- Not suitable

Implemented

Return 6.74%
Risk 10.22%

- Suitable
- Marginally suitable
- Not suitable

Asset classes			Current	Implemented				Out of range
Class	Return	%	Amount	Min %	%	Amount	Max %	Amount
Cash	2.5%	70.3%	£77,684	15.9%	0.0%	£0	25.9%	(£49,035)
UK fixed income	4.1%	0.1%	£146	3.8%	14.8%	£16,336	14.8%	£4,020
Global fixed income ex UK	4.3%	2.4%	£2,623	10.2%	18.8%	£20,793	21.2%	£8,639
Property	8.8%	0.0%	£0	0.0%	0.0%	£0	5.0%	
UK Equity	8.1%	0.4%	£437	11.1%	38.2%	£42,215	27.4%	£11,818
DEU ex UK equity	7.6%	1.2%	£1,312	3.5%	0.0%	£0	12.8%	£2,565
Developed ex EU equity	8.0%	24.6%	£27,141	15.6%	3.6%	£4,026	32.0%	
Emerging markets equity	7.9%	1.1%	£1,166	0.0%	24.6%	£27,138	8.8%	
Alternatives	6.7%	0.0%	£0	0.0%	0.0%	£0	5.0%	

Implementation by portfolio

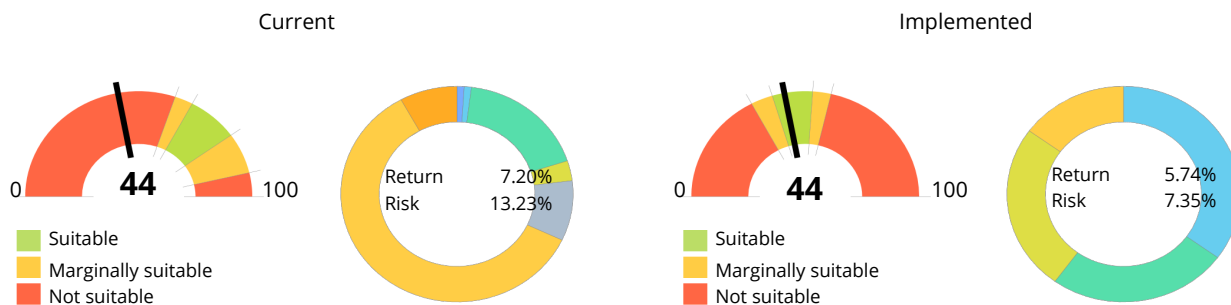|						
Weighted	100.0%	£110,509		100.0%	£110,509	

Appendix

Portfolio analysis
- Bill's Investments
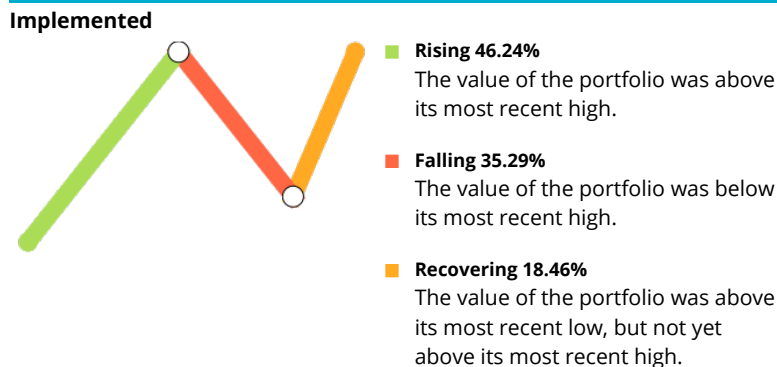- Joint Retirement Savings
- Tina's Investments

Risk tolerance details
- Risk responses
- How to use the risk tolerance analysis
- Footnotes

Portfolio analysis - Bill's Investments

Portfolio allocation - Moderately Cautious

Current

- Suitable
- Marginally suitable
- Not suitable

Return 7.20%
Risk 13.23%

Implemented

- Suitable
- Marginally suitable
- Not suitable

Return 5.74%
Risk 7.35%

Asset classes			Current	Implemented				Out of range
Class	Return	%	Amount	Min %	%	Amount	Max %	Amount
Cash	2.5%	1.0%	£146	90.0%	0.0%	£0	100.0%	£12,971
UK fixed income	4.1%	1.0%	£146	0.0%	35.0%	£5,101	5.0%	
Global fixed income ex UK	4.3%	18.0%	£2,623	0.0%	25.0%	£3,644	5.0%	(£1,895)
Property	8.8%	0.0%	£0	0.0%	0.0%	£0	5.0%	
UK Equity	8.1%	3.0%	£437	0.0%	25.0%	£3,644	5.0%	
DEU ex UK equity	7.6%	9.0%	£1,312	0.0%	0.0%	£0	5.0%	(£583)
Developed ex EU equity	8.0%	60.0%	£8,745	0.0%	15.0%	£2,186	5.0%	(£8,016)
Emerging markets equity	7.9%	8.0%	£1,166	0.0%	0.0%	£0	5.0%	(£437)
Alternatives	6.7%	0.0%	£0	0.0%	0.0%	£0	5.0%	
Total		**100.0%**	**£14,574**		**100.0%**	**£14,574**		

Ups and downs

Implemented

Rising 46.24%
The value of the portfolio was above its most recent high.

Falling 35.29%
The value of the portfolio was below its most recent high.

Recovering 18.46%
The value of the portfolio was above its most recent low, but not yet above its most recent high.

Just as markets go up and down, so do the values of portfolios invested in these markets. We have tracked the performance of a portfolio similar to the one recommended to you going back monthly to 1970 to give you an idea of the relative amount of time your portfolio might have been moving in each direction.
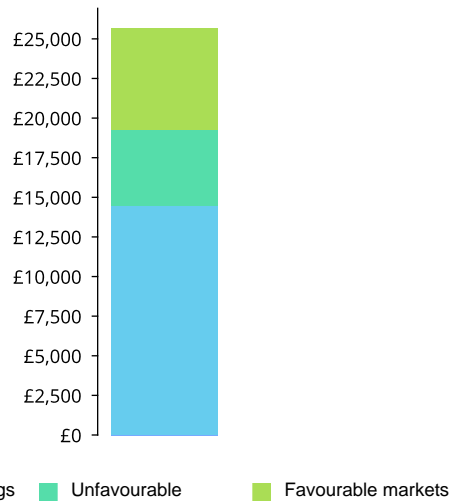
Implemented

Top 10 falls for a similar portfolio

Depth of fall	Started falling	Months in fall	Months to recover	Recovery
-45.34%	Dec - 72	24	4	Apr - 75
-27.28%	Dec - 89	9	5	Feb - 91
-23.24%	Jul - 87	4	9	Aug - 88
-21.4%	Dec - 07	14	5	Jul - 09
-18.62%	Jan - 01	20	12	Sep - 03
-16.0%	Jan - 20	2	7	Oct - 20
-15.57%	Jan - 94	5	9	Mar - 95
-15.43%	Apr - 79	7	6	May - 80
-14.42%	Sep - 77	5	4	Jun - 78
-12.01%	Mar - 70	2	3	Aug - 70

It is normal for financial markets to go through periods where portfolio values fall, sometimes significantly. It's also normal for both markets and portfolios to recover from these falls. These fluctuations in value are something you must be prepared for and understand how to react to. To help you in this regard, it's useful to examine the periods where biggest falls were experienced by a portfolio similar to the one we have recommended to you, and how long it took in each case for the value of the portfolio to recover from the falls.
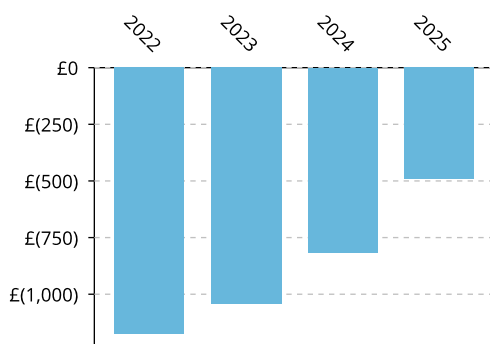
Risk capacity

Implemented

- Capital and savings
- Unfavourable
- Favourable markets

Your risk capacity is a measure of your financial ability to deal with the worst case outcomes from your investments. This analysis looks at the projected values of your investments given favourable and unfavourable markets.
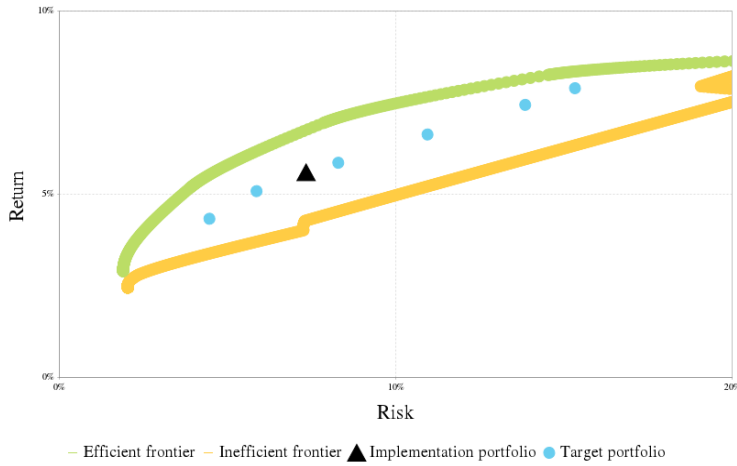
VAR (Value at Risk)
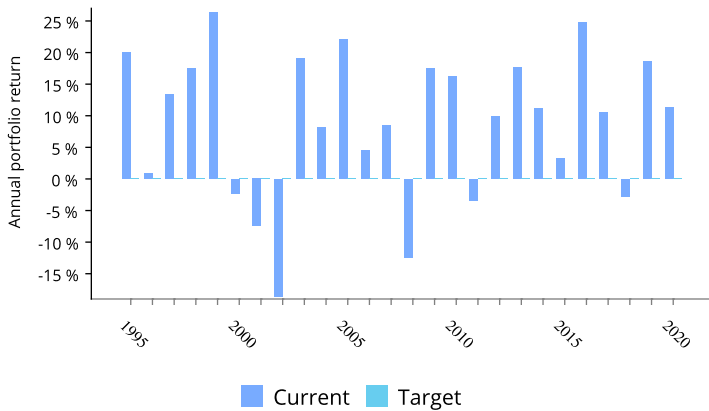
Implemented

For investors, risk is about the odds of losing money, and VAR is based on that common-sense fact. By assuming investors care about the odds of a really big loss, VAR answers the question, "What is my worst-case scenario?" or "How much could I lose in a really bad month?" In this analysis we identify the worst case result as well as the time required to recover from that loss.
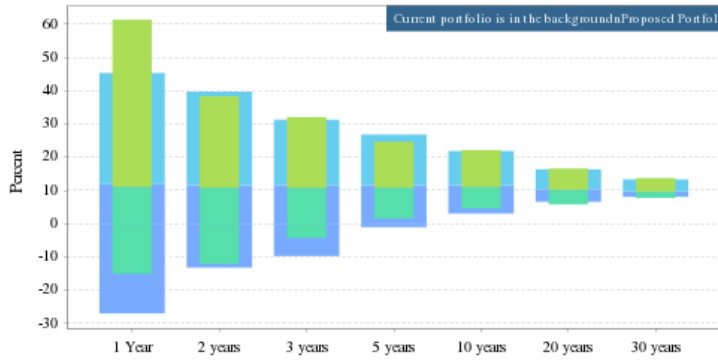
Efficient frontier

In his Nobel Prize winning work, Harry Markowitz employed advanced mathematics to solve the puzzle of how to achieve maximum return with the least amount of risk. He was able to calculate "mathematically correct" portfolios that were most effective in balancing the trade-off between the risk and reward of various asset classes. He called those portfolios "efficient". While it's considered ideal for your proposed portfolio to be positioned directly on the efficient frontier, it's also a reality that there are constraints that can limit your ability to achieve this ideal.

— Efficient frontier — Inefficient frontier ▲ Implementation portfolio ● Target portfolio

25 years of history

When we identify the long-term projected return for your current portfolio, this creates an expectation for the future. However, it's also helpful to see how both the current and target portfolio have performed historically based on the benchmarks used for each asset class. This analysis of history illustrates the actual annual returns achieved by each portfolio in the past. It highlights the fact that while we expect a certain return over the long term, actual returns from year to year will fluctuate.

While we know that history does not repeat itself exactly, the rates of return for the various asset classes and their associated "risk" are influenced by economic cycles that do have a reasonably consistent long-term pattern. Consider the "Portfolio risk vs. time" graph, which provides a good picture of the highest, lowest and average historical returns over both short-term and long-term time horizons for your current and target portfolio. This clearly illustrates that shorter time horizons demonstrate high historical volatility of returns whereas volatility over longer time horizons is reduced. Portfolios with an emphasis on aggressive long-term growth will tend to experience a higher degree of volatility in the short-term than portfolios with a moderate or conservative emphasis on growth. This is the trade-off that must be accepted in order to achieve higher rates of return.

	1 year	2 years	3 years	5 years	10 years	20 years	30 years
Current portfolio							
Actual historical highest (%)	45.32	39.7	31.28	26.84	21.87	16.37	13.34
Actual historical average (%)	11.88	11.53	11.46	11.51	11.58	10.32	9.7
Expected return (%)	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Actual historical lowest (%)	-26.97	-13.19	-9.71	-1.07	3.05	6.58	8.07
Proposed portfolio							
Actual historical highest (%)	61.36	38.35	32.08	24.67	22.17	16.61	13.75
Actual historical average (%)	11.04	10.84	10.82	10.8	11.02	10.19	9.64
Expected return (%)	5.74	5.74	5.74	5.74	5.74	5.74	5.74
Actual historical lowest (%)	-15.06	-12.11	-4.25	1.55	4.6	5.81	7.74

Portfolio analysis - Joint Retirement Savings

Portfolio allocation - Moderately Adventurous

Current

Suitable	
Marginally suitable	
Not suitable	

Return 2.52%
Risk 1.97%

Implemented

Suitable	
Marginally suitable	
Not suitable	

Return 7.25%
Risk 12.33%
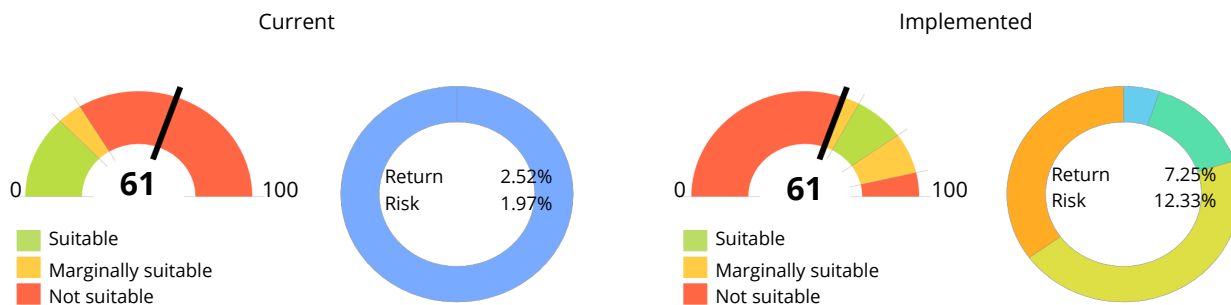
Asset classes			Current	Implemented				Out of range
Class	Return	%	Amount	Min %	%	Amount	Max %	Amount
Cash	2.5%	100.0%	£77,538	4.0%	0.0%	£0	14.0%	(£66,683)
UK fixed income	4.1%	0.0%	£0	3.0%	5.0%	£3,877	13.0%	£2,326
Global fixed income ex UK	4.3%	0.0%	£0	8.0%	15.0%	£11,631	18.0%	£6,203
Property	8.8%	0.0%	£0	0.0%	0.0%	£0	5.0%	
UK Equity	8.1%	0.0%	£0	14.5%	45.0%	£34,892	34.5%	£11,243
DEU ex UK equity	7.6%	0.0%	£0	5.0%	0.0%	£0	15.0%	£3,877
Developed ex EU equity	8.0%	0.0%	£0	20.5%	0.0%	£0	40.5%	£15,895
Emerging markets equity	7.9%	0.0%	£0	0.0%	35.0%	£27,138	10.0%	
Alternatives	6.7%	0.0%	£0	0.0%	0.0%	£0	5.0%	
Total		**100.0%**	**£77,538**		**100.0%**	**£77,538**		

Ups and downs
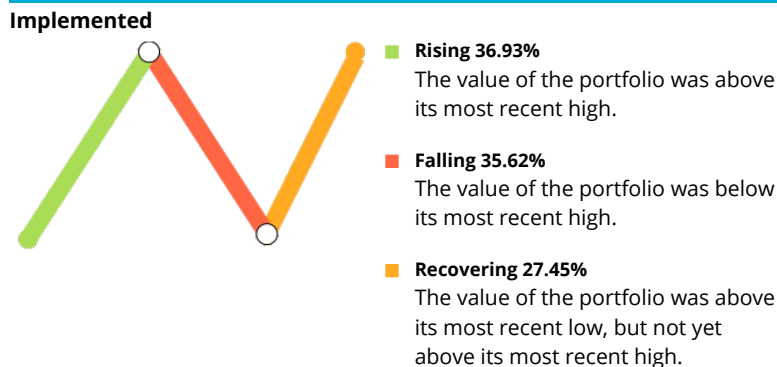
Implemented

Rising 36.93%
The value of the portfolio was above its most recent high.

Falling 35.62%
The value of the portfolio was below its most recent high.

Recovering 27.45%
The value of the portfolio was above its most recent low, but not yet above its most recent high.

Just as markets go up and down, so do the values of portfolios invested in these markets. We have tracked the performance of a portfolio similar to the one recommended to you going back monthly to 1970 to give you an idea of the relative amount of time your portfolio might have been moving in each direction.
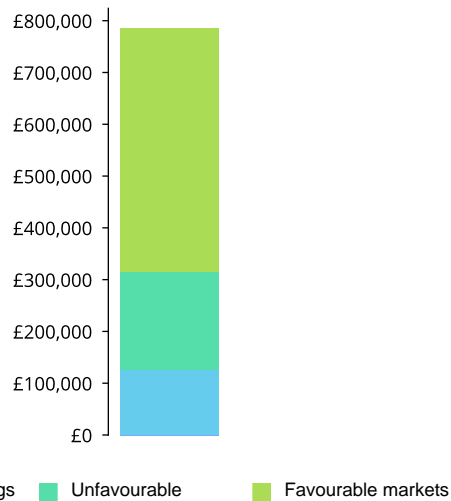
Implemented

Top 10 falls for a similar portfolio

Depth of fall	Started falling	Months in fall	Months to recover	Recovery
-61.02%	Nov - 72	24	12	Nov - 75
-33.1%	Oct - 07	16	12	Feb - 10
-30.98%	Sep - 87	2	15	Feb - 89
-29.34%	Jan - 01	24	20	Sep - 04
-22.08%	Dec - 19	3	9	Dec - 20
-20.34%	Apr - 76	6	2	Dec - 76
-19.79%	Dec - 89	9	5	Feb - 91
-15.83%	Jan - 70	4	9	Feb - 71
-14.93%	Apr - 79	8	5	May - 80
-14.49%	Jan - 94	5	10	Apr - 95

It is normal for financial markets to go through periods where portfolio values fall, sometimes significantly. It's also normal for both markets and portfolios to recover from these falls. These fluctuations in value are something you must be prepared for and understand how to react to. To help you in this regard, it's useful to examine the periods where biggest falls were experienced by a portfolio similar to the one we have recommended to you, and how long it took in each case for the value of the portfolio to recover from the falls.
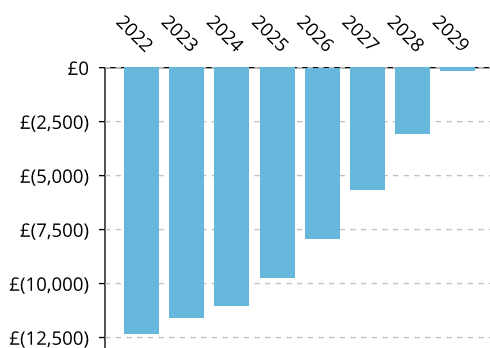
Risk capacity

Implemented

Your risk capacity is a measure of your financial ability to deal with the worst case outcomes from your investments. This analysis looks at the projected values of your investments given favourable and unfavourable markets.
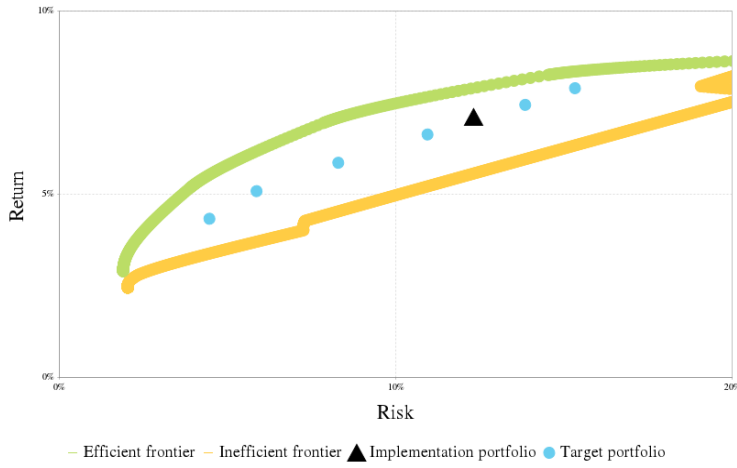
VAR (Value at Risk)

Implemented

For investors, risk is about the odds of losing money, and VAR is based on that common-sense fact. By assuming investors care about the odds of a really big loss, VAR answers the question, "What is my worst-case scenario?" or "How much could I lose in a really bad month?" In this analysis we identify the worst case result as well as the time required to recover from that loss.
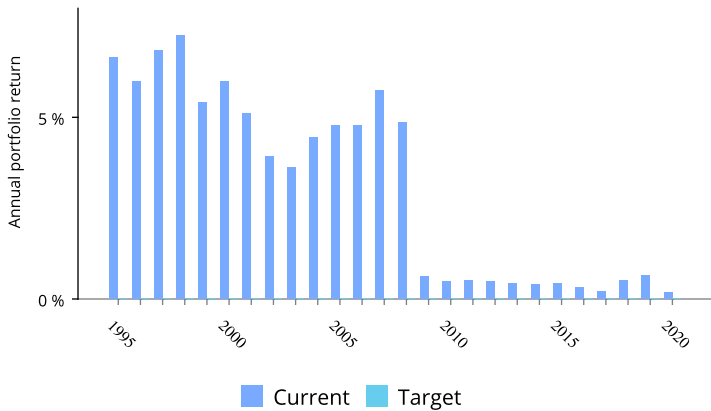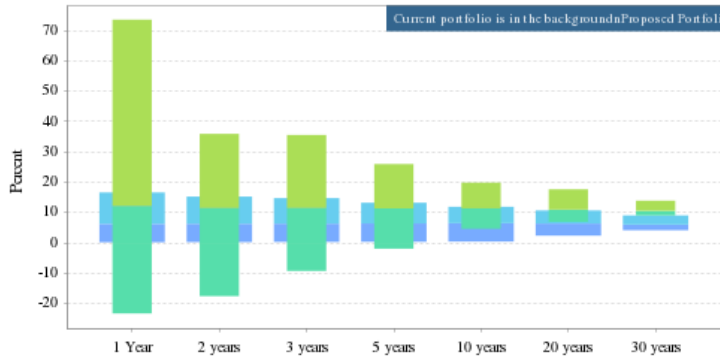
Efficient frontier

In his Nobel Prize winning work, Harry Markowitz employed advanced mathematics to solve the puzzle of how to achieve maximum return with the least amount of risk. He was able to calculate "mathematically correct" portfolios that were most effective in balancing the trade-off between the risk and reward of various asset classes. He called those portfolios "efficient". While it's considered ideal for your proposed portfolio to be positioned directly on the efficient frontier, it's also a reality that there are constraints that can limit your ability to achieve this ideal.

— Efficient frontier — Inefficient frontier ▲ Implementation portfolio ● Target portfolio

25 years of history

When we identify the long-term projected return for your current portfolio, this creates an expectation for the future. However, it's also helpful to see how both the current and target portfolio have performed historically based on the benchmarks used for each asset class. This analysis of history illustrates the actual annual returns achieved by each portfolio in the past. It highlights the fact that while we expect a certain return over the long term, actual returns from year to year will fluctuate.

While we know that history does not repeat itself exactly, the rates of return for the various asset classes and their associated "risk" are influenced by economic cycles that do have a reasonably consistent long-term pattern. Consider the "Portfolio risk vs. time" graph, which provides a good picture of the highest, lowest and average historical returns over both short-term and long-term time horizons for your current and target portfolio. This clearly illustrates that shorter time horizons demonstrate high historical volatility of returns whereas volatility over longer time horizons is reduced. Portfolios with an emphasis on aggressive long-term growth will tend to experience a higher degree of volatility in the short-term than portfolios with a moderate or conservative emphasis on growth. This is the trade-off that must be accepted in order to achieve higher rates of return.

	1 year	2 years	3 years	5 years	10 years	20 years	30 years
Current portfolio							
Actual historical highest (%)	16.63	15.27	14.76	13.24	11.9	10.7	9.06
Actual historical average (%)	6.28	6.31	6.35	6.41	6.49	6.39	6.02
Expected return (%)	2.52	2.52	2.52	2.52	2.52	2.52	2.52
Actual historical lowest (%)	0.2	0.26	0.31	0.35	0.43	2.39	4.17
Proposed portfolio							
Actual historical highest (%)	73.59	35.94	35.59	25.99	19.88	17.67	13.91
Actual historical average (%)	12.16	11.5	11.51	11.38	11.39	10.96	10.58
Expected return (%)	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Actual historical lowest (%)	-23.25	-17.54	-9.23	-1.91	4.64	6.9	9.05

Portfolio analysis - Tina's Investments

Portfolio allocation - Moderately Cautious

Current

Return 8.00%
Risk 17.27%

Suitable
Marginally suitable
Not suitable

Implemented

Return 5.36%
Risk 6.42%

Suitable
Marginally suitable
Not suitable
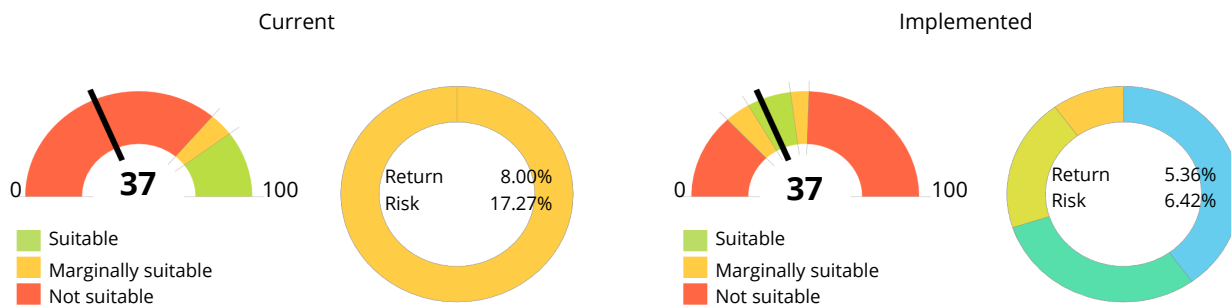
Asset classes			Current		Implemented				Out of range
Class	Return	%	Amount	Min %	%	Amount	Max %		Amount
Cash	2.5%	0.0%	£0	7.5%	0.0%	£0	17.5%		£1,380
UK fixed income	4.1%	0.0%	£0	10.0%	40.0%	£7,358	30.0%		£1,840
Global fixed income ex UK	4.3%	0.0%	£0	27.5%	30.0%	£5,519	47.5%		£5,059
Property	8.8%	0.0%	£0	0.0%	0.0%	£0	5.0%		
UK Equity	8.1%	0.0%	£0	5.5%	20.0%	£3,679	15.5%		£1,012
DEU ex UK equity	7.6%	0.0%	£0	0.0%	0.0%	£0	10.0%		
Developed ex EU equity	8.0%	100.0%	£18,396	7.5%	10.0%	£1,840	17.5%		(£15,177)
Emerging markets equity	7.9%	0.0%	£0	0.0%	0.0%	£0	7.0%		
Alternatives	6.7%	0.0%	£0	0.0%	0.0%	£0	5.0%		
Total		**100.0%**	**£18,396**		**100.0%**	**£18,396**			

Ups and downs
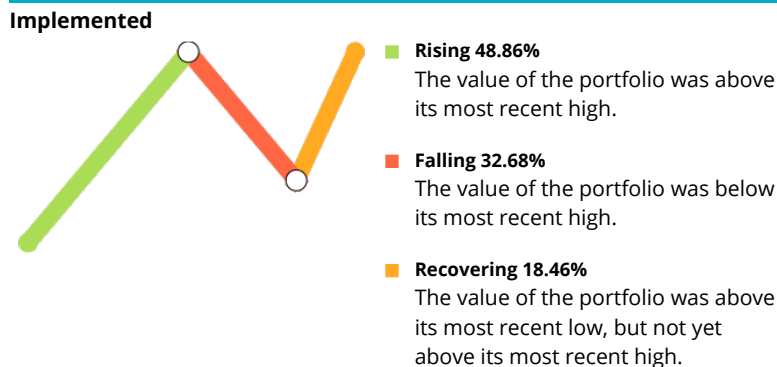
Implemented

Rising 48.86%
The value of the portfolio was above its most recent high.

Falling 32.68%
The value of the portfolio was below its most recent high.

Recovering 18.46%
The value of the portfolio was above its most recent low, but not yet above its most recent high.

Just as markets go up and down, so do the values of portfolios invested in these markets. We have tracked the performance of a portfolio similar to the one recommended to you going back monthly to 1970 to give you an idea of the relative amount of time your portfolio might have been moving in each direction.
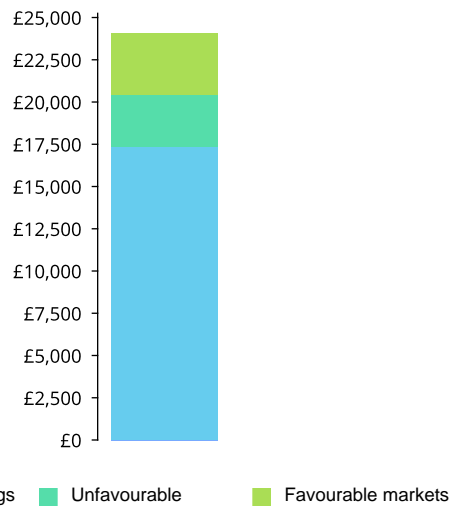
Implemented

Top 10 falls for a similar portfolio

Depth of fall	Started falling	Months in fall	Months to recover	Recovery
-35.71%	Dec - 72	24	3	Mar - 75
-23.53%	Dec - 89	9	4	Jan - 91
-17.73%	Jul - 87	4	6	May - 88
-15.3%	Dec - 07	10	8	Jun - 09
-15.04%	Apr - 79	7	6	May - 80
-14.9%	Jan - 94	5	9	Mar - 95
-12.92%	Sep - 77	5	5	Jul - 78
-12.22%	Jan - 20	2	7	Oct - 20
-8.96%	Apr - 84	1	2	Jul - 84
-8.73%	Mar - 70	2	3	Aug - 70

It is normal for financial markets to go through periods where portfolio values fall, sometimes significantly. It's also normal for both markets and portfolios to recover from these falls. These fluctuations in value are something you must be prepared for and understand how to react to. To help you in this regard, it's useful to examine the periods where biggest falls were experienced by a portfolio similar to the one we have recommended to you, and how long it took in each case for the value of the portfolio to recover from the falls.
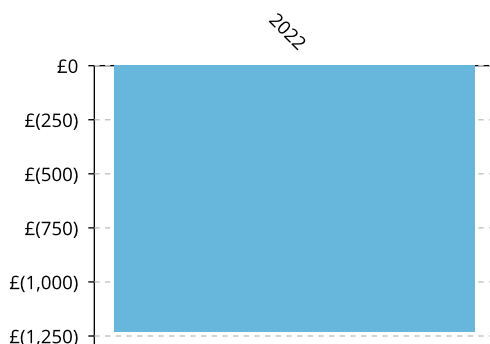
Risk capacity

Implemented

- Capital and savings
- Unfavourable
- Favourable markets

Your risk capacity is a measure of your financial ability to deal with the worst case outcomes from your investments. This analysis looks at the projected values of your investments given favourable and unfavourable markets.
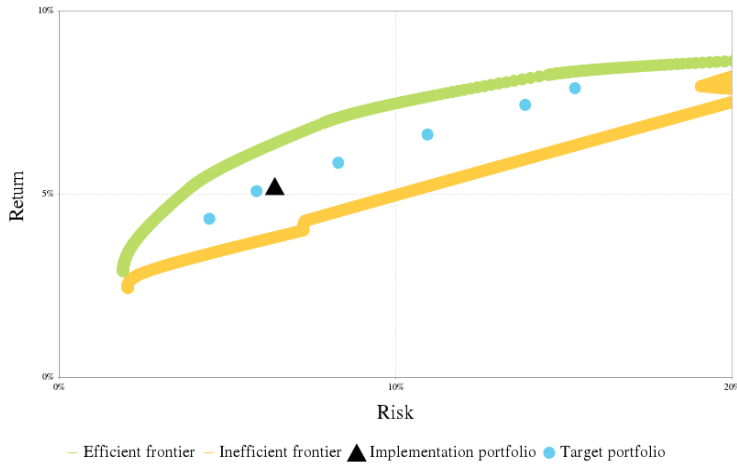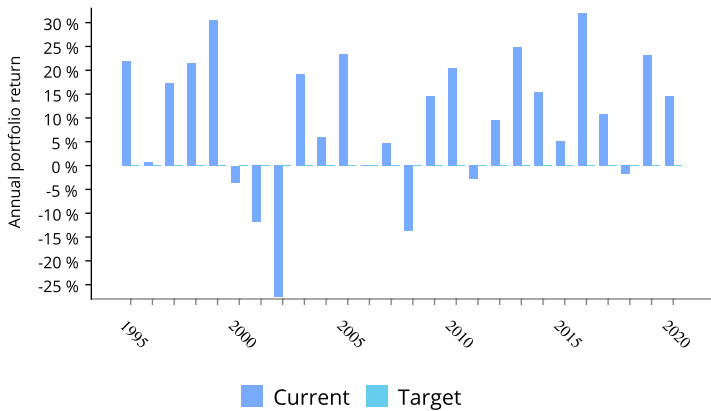
VAR (Value at Risk)

Implemented

For investors, risk is about the odds of losing money, and VAR is based on that common-sense fact. By assuming investors care about the odds of a really big loss, VAR answers the question, "What is my worst-case scenario?" or "How much could I lose in a really bad month?" In this analysis we identify the worst case result as well as the time required to recover from that loss.
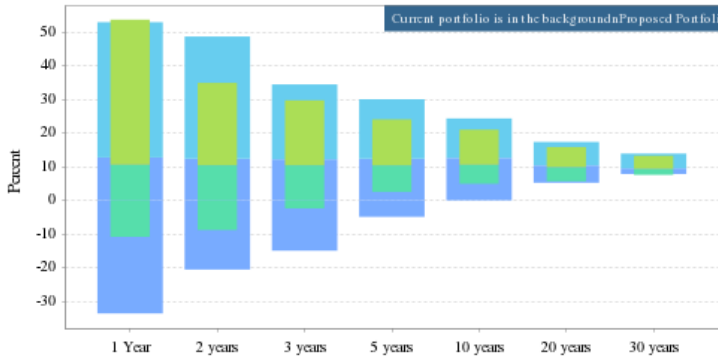
Efficient frontier

In his Nobel Prize winning work, Harry Markowitz employed advanced mathematics to solve the puzzle of how to achieve maximum return with the least amount of risk. He was able to calculate "mathematically correct" portfolios that were most effective in balancing the trade-off between the risk and reward of various asset classes. He called those portfolios "efficient". While it's considered ideal for your proposed portfolio to be positioned directly on the efficient frontier, it's also a reality that there are constraints that can limit your ability to achieve this ideal.

— Efficient frontier — Inefficient frontier ▲ Implementation portfolio ● Target portfolio

25 years of history

When we identify the long-term projected return for your current portfolio, this creates an expectation for the future. However, it's also helpful to see how both the current and target portfolio have performed historically based on the benchmarks used for each asset class. This analysis of history illustrates the actual annual returns achieved by each portfolio in the past. It highlights the fact that while we expect a certain return over the long term, actual returns from year to year will fluctuate.

While we know that history does not repeat itself exactly, the rates of return for the various asset classes and their associated "risk" are influenced by economic cycles that do have a reasonably consistent long-term pattern. Consider the "Portfolio risk vs. time" graph, which provides a good picture of the highest, lowest and average historical returns over both short-term and long-term time horizons for your current and target portfolio. This clearly illustrates that shorter time horizons demonstrate high historical volatility of returns whereas volatility over longer time horizons is reduced. Portfolios with an emphasis on aggressive long-term growth will tend to experience a higher degree of volatility in the short-term than portfolios with a moderate or conservative emphasis on growth. This is the trade-off that must be accepted in order to achieve higher rates of return.

	1 year	2 years	3 years	5 years	10 years	20 years	30 years
Current portfolio							
Actual historical highest (%)	52.92	48.66	34.44	30.04	24.33	17.34	13.9
Actual historical average (%)	12.73	12.35	12.18	12.34	12.58	10.37	9.51
Expected return (%)	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Actual historical lowest (%)	-33.61	-20.58	-14.97	-4.91	-0.05	5.21	7.81
Proposed portfolio							
Actual historical highest (%)	53.67	34.88	29.7	24.04	21.01	15.83	13.25
Actual historical average (%)	10.58	10.41	10.41	10.39	10.57	9.86	9.36
Expected return (%)	5.36	5.36	5.36	5.36	5.36	5.36	5.36
Actual historical lowest (%)	-10.86	-8.83	-2.4	2.51	4.92	5.65	7.57

Risk tolerance - responses

Bill Smith	Tina Williams

1) Compared to others, how do you rate your willingness to take financial risks?

Bill Smith	Tina Williams
1) Extremely low risk taker.	**1)** Extremely low risk taker.
2) Very low risk taker.	**2)** Very low risk taker.
3) Low risk taker.	**3)** Low risk taker.
4) Average risk taker. ✓	**4)** Average risk taker.
5) High risk taker.	**5) High risk taker. ✓**
6) Very high risk taker.	**6)** Very high risk taker.
7) Extremely high risk taker.	**7)** Extremely high risk taker.

2) How easily do you adapt when things go wrong financially?

Bill Smith	Tina Williams
1) Very uneasily.	**1)** Very uneasily.
2) Somewhat uneasily.	**2)** Somewhat uneasily.
3) Somewhat easily. ✓	**3) Somewhat easily. ✓**
4) Very easily.	**4)** Very easily.

3) When you think of the word "risk" in a financial context, which of the following words comes to mind first?

Bill Smith	Tina Williams
1) Danger.	**1)** Danger.
2) Uncertainty. ✓	**2)** Uncertainty.
3) Opportunity.	**3) Opportunity. ✓**
4) Thrill.	**4)** Thrill.

4) When faced with a major financial decision, are you more concerned about the possible losses or the possible gains?

Bill Smith	Tina Williams
1) Always the possible losses.	**1)** Always the possible losses.
2) Usually the possible losses.	**2)** Usually the possible losses.
3) Usually the possible gains. ✓	**3) Usually the possible gains. ✓**
4) Always the possible gains.	**4)** Always the possible gains.

5) What degree of risk are you currently prepared to take with your financial decisions?

Bill Smith	Tina Williams
1) Very small.	**1)** Very small.
2) Small. ✓	**2)** Small.
3) Medium.	**3) Medium. ✓**
4) Large.	**4)** Large.
5) Very large.	**5)** Very large.

6) Suppose that 5 years ago you bought shares in a highly regarded company. That same year the company experienced a severe decline in sales due to poor management. The price of the shares dropped drastically and you sold at a substantial loss. The company has been restructured under new management and most experts now expect it to produce better than average returns. Given your bad past experience with this company, would you buy shares now?

Bill Smith	Tina Williams
1) Definitely not.	**1)** Definitely not.
2) Probably not.	**2)** Probably not.
3) Not sure. ✓	**3)** Not sure.
4) Probably.	**4) Probably. ✓**
5) Definitely.	**5)** Definitely.

7) Investments can go up or down in value and experts often say you should be prepared to weather a downturn. By how much could the total value of <u>all your investments</u> go down before you would begin to feel uncomfortable?

Bill Smith	Tina Williams
1) Any fall would make me feel uncomfortable. ✓	**1)** Any fall would make me feel uncomfortable.
2) 10%.	**2)** 10%.
3) 20%.	**3)** 20%.
4) 33%.	**4) 33%. ✓**
5) 50%.	**5)** 50%.
6) More than 50%.	**6)** More than 50%.

8) Most investment portfolios have a mix of investments - some of the investments may have high expected returns but with high risk, some may have medium expected returns and medium risk, and some may be low-risk/low-return. (For example, shares and property would be high-risk/high-return whereas cash and bank deposits would be low-risk/low-return.) Which mix of investments do you find most appealing? Would you prefer all low-risk/low-return, all high-risk/high-return, or somewhere in between?

1) Portfolio 1.		**1)** Portfolio 1.	
2) Portfolio 2.		**2)** Portfolio 2.	
3) **Portfolio 3.** ✔		**3)** Portfolio 3.	
4) Portfolio 4.		**4)** Portfolio 4.	
5) Portfolio 5.		**5)** **Portfolio 5.** ✔	
6) Portfolio 6.		**6)** Portfolio 6.	
7) Portfolio 7.		**7)** Portfolio 7.	

Mix of Investments in Portfolio

Portfolio	High Risk / Return	Medium Risk / Return	Low Risk / Return
1	0%	0%	100%
2	0%	30%	70%
3	10%	40%	50%
4	30%	40%	30%
5	50%	40%	10%
6	70%	30%	0%
7	100%	0%	0%

9) With some types of investment, such as cash and bank deposits, the value of the investment is fixed. However, inflation will cause the purchasing power of this value to decrease.

With other types of investment, such as shares and property, the value is not fixed. It will vary. In the short term it may even fall below the purchase price. However, over the long term, the value of the shares and property should certainly increase by more than the rate of inflation.

With this in mind, which is more important to you - that the value of your investments does not fall or that it retains its purchasing power?

1) Much more important that the value does not fall.	**1)** Much more important that the value does not fall.
2) **Somewhat more important that the value does not fall.** ✔	**2)** Somewhat more important that the value does not fall.
3) Somewhat more important that the value retains its purchasing power.	**3)** Somewhat more important that the value retains its purchasing power.
4) Much more important that the value retains its purchasing power.	**4)** **Much more important that the value retains its purchasing power.** ✔

10) Think of the average rate of return you would expect to earn on an investment portfolio over the next ten years. How does this compare with what you think you would earn if you invested the money in bank deposits?

1) About the same rate as from bank deposits.	**1)** About the same rate as from bank deposits.
2) About one and a half times the rate from bank deposits.	**2)** About one and a half times the rate from bank deposits.
3) **About twice the rate from bank deposits.** ✔	**3)** About twice the rate from bank deposits.
4) About two and a half times the rate from bank deposits.	**4)** **About two and a half times the rate from bank deposits.** ✔
5) About three times the rate from bank deposits.	**5)** About three times the rate from bank deposits.
6) More than three times the rate from bank deposits.	**6)** More than three times the rate from bank deposits.

How to use the risk tolerance analysis

If you are one of a couple, your partner should also do a separate risk tolerance questionnaire. Few couples have the same risk tolerance, so a 'joint' questionnaire simply won't work.

Comparing the individual results will highlight the differences between the couple and ensure these are addressed in financial decisions. Similarly, where you are acting on behalf of someone else, e.g. under a power of attorney or as trustee, your own risk tolerance remains relevant but must be considered in the context of your responsibilities.

Understanding Financial Risk Tolerance

People usually cannot immediately describe their attitudes to risk, because it is not something that they generally think about. This profile helps to draw out those experiences, feelings and attitudes and guide you in your financial decision making.

Risk tolerance is a personal trait - partly down to genetics and partly down to life experiences. It is a 'stable' part of our personality, which means that over time we tend to stay who we are.

Typically, risk tolerance does decrease slowly with age and may be changed by major life events, good or bad. This means that your risk tolerance should be retested every two or three years and also after any major life event.

Your risk tolerance profile is built using 'psychometrics', which is a combination of psychology and statistics. The science of creating psychometric questionnaires is very complex, which is why it took many years of academic work to create and road-test this questionnaire. But the results are simple - you will get a clear and accurate 'picture' of exactly who you are and where you 'fit' on that scale of very conservative to high risk taker.

Using Your Risk Tolerance Profile with a Financial Professional

Your risk tolerance profile compares your answers to those given by a very large sample of the adult population.

If you use a financial professional, the report, particularly if your answers differ from other people in your risk group, should be discussed with your financial professional. Notes of this discussion, including modifications of, or expansions on, particular aspects of your report, should be signed-off by both you and your financial professional, to ensure you both have the same understanding of your risk tolerance.

Your financial professional will use your results to:

- Explain the risks that come with your financial decisions.
- Explore with you trade-offs that you might need to make between risk and return in order to help you achieve your financial goals.
- Help choose investments that are suitable for you.

While we fully support the profile itself, we cannot endorse or support any specific decision you may make because we are not privy to all the other information that effective financial decision making requires. Think of your risk tolerance profile as the financial services equivalent of your blood pressure reading. While an accurate blood pressure reading does not, by itself, determine a diagnosis or treatment, it does provide critically important information. For more information about Risk, Risk Tolerance and the FinaMetrica system see the Footnotes.

Footnotes

1. **Risk, Risk Tolerance and Psychological Testing**
Risk means different things to different people - danger, uncertainty, opportunity, thrill. In reality, though, there is risk in any situation where there is more than one possible outcome and the outcomes have differing values for you.

We are all aware that, when it comes to taking risks, we each have our own comfort zone. We also know our friends, family members and colleagues often have different comfort zones from our own.

Studies have identified five different categories of risk: financial, physical, social, health and ethical. Most people behave consistently within a category but not necessarily between categories, e.g. a sky-diver Is more likely to be a mountain climber but may or may not be a comfortable public speaker or financial risk-taker.

People react differently to risk. Some are habitually inclined to reject it, others to accept it. Risk tolerance is best defined as the extent to which a person chooses to risk experiencing a less favourable outcome in the pursuit of a more favourable outcome. It should be thought of as a continuum, with people ranging from risk-avoiders to risk-seekers. Your risk tolerance is not a particular point on that continuum but rather a range of risk levels with which you would be comfortable.

The whole issue of financial risk is a difficult one. On the one hand, low risk tolerance prevents many people from doing as well as they could financially. On the other, some of life's most unpleasant financial surprises arise because people were exposed to a level of risk beyond their comfort zone, i.e. beyond their risk tolerance. So, while we tend to focus on the dangers of taking too much risk, it is possible to have too little risk, which results in missed opportunities.

Unlike, say, height or weight, there is no unit of measurement for risk tolerance. A person's risk tolerance can only be measured relative to others on an artificial scale (in much the same way as IQ is measured.) Someone may know what risks they are, or are not, prepared to take. But they are unlikely to know how this compares to others.

Studies confirm that people generally do not accurately estimate their own risk tolerance (and, not surprisingly, given the difficulties in any communication about an intangible, that their financial professionals' estimates are less accurate than their own.) While the pattern of estimates is scattered, there is a slight overall tendency to under-estimate. A possible explanation for this is that the majority of the population is, in absolute terms, more risk-avoiding than it is risk-seeking. Faced with a choice between a certain profit and an uncertain but probably larger profit, a sizeable majority chooses the certain (but probably smaller) profit. Someone who in absolute terms is slightly risk-averse may not realise that this is typical of the population as a whole.

An additional difficulty is that, even the meaning of "risk" can depend on the situation. When individuals talk about "risk" as they experience it in their personal financial affairs they are not talking about the same thing as investment researchers discussing the "risk" of an investment.

So, consumers (and their financial professionals) face a double challenge, firstly, in making an accurate and meaningful assessment of their tolerance of risk as they perceive it, and secondly, in expressing this assessment in such a way that the risk involved with their current arrangements, and in the decision alternatives now on offer to them, can be evaluated against their risk tolerance. All fields of human endeavour use measurement in some form, and each field has its own measuring tools measuring units and measuring disciplines.

Risk tolerance is a psychological trait, as are other aspects of personality. A trait can be defined as any distinguishable, relatively enduring way in which one person varies from another.

Since the early 1900s, psychologists and statisticians have been developing techniques to measure and assess psychological traits. While this development has not been free of controversy, there is now a widely accepted discipline, psychometrics, a blend of psychology and statistics, for psychological testing and assessment. The technical quality of any test can now be measured against internationally agreed psychometric standards. A 'good' test is one that is valid and reliable, i.e. it measures what it purports to measure and it does so consistently.

FinaMetrica's Risk Profiling system has been developed using the disciplines that apply to psychometric testing and the test itself exceeds international psychometric standards.

2. **FinaMetrica's Risk Tolerance Scoring Scale**
As with many other human attributes, risk tolerance is normally distributed. When graphed they follow its familiar bell curve.

Because the mathematics of a Normal distribution are well defined, the interpretation of individual scores is greatly simplified. For example, it is possible to state with confidence the proportion of scores that will fall above or below a particular score, and also the proportion that will fall within a particular range of scores.

In order to aid understanding and interpretation, the 'raw' scores from the questionnaire have been 'standardised' to the FinaMetrica risk tolerance scale which has a Mean of 50 and a Standard Deviation of 10.

To further aid understanding and interpretation, the 0 - 100 scale has been divided into five segments - Very Low, Low, Average, High and Very High. The middle segment is the mean ± half a standard deviation, i.e. from 45 to 54. The segments either side are then a standard deviation higher or lower, with the end segments covering the balance of the high and low 'tails' of the distribution.

3. **FinaMetrica's Risk Group Descriptions & Differences**
A person's risk group description, fine-tuned by any reported differences, provides the basis for comparing the risk involved with their current arrangements, and in any financial decisions being considered, against their risk tolerance.

The group descriptions allow you (and your financial professionals) to build a picture of what is typical for your group. The risk groups can be thought of as the equivalent of the standard clothing sizes where Average is Medium, High is Large, Low is Small, and so on.

The risk group descriptions have been developed by analysing how members of that group typically answer the questionnaire.

Of course, few people in a group will fit the group description precisely. Where a person gives a different answer, that answer is reported. Usually, someone will give about five different answers and so have five reported differences. The reported differences can be thought of as the equivalent of the tailoring adjustments needed to have one of the standard clothing sizes fit you precisely.

4. **The Development of the FinaMetrica System**
The FinaMetrica system had its beginnings with The Survey of Financial Risk Tolerance (SOFRT) authored by Dr. Michael J. Roszkowski, Associate Professor of Psychology at The American College, Bryn Mawr, PA. Dr. Roszkowski is an acknowledged expert in the relationships between psychological and financial variables, and continues to consult to FinaMetrica. The SOFRT was PC-based and used a 57-question questionnaire which took 30 minutes to complete.

FinaMetrica's first development phase was a pre-licensing evaluation of the SOFRT system, completed late 1997, which involved, Australianising the language of the SOFRT, inventing the seven-segment Risk Tolerance Scale and the risk group/differences reporting system, conducting useability and 'norming' trials, and establishing the Australian database.

The evaluation was successful in confirming Australian validity and reliability. But financial professionals and clients reported that the SOFRT system was too cumbersome and time-consuming to warrant the effort involved.

However, FinaMetrica could see how to overcome the shortcomings of the SOFRT. The second development phase, completed October 1998, became the creation of a new test and testing system which involved, developing questions with more perceived relevance and/or more usefulness in reporting and reduce the number of questions while maintaining psychometric integrity, the invention of a new, more precise scoring algorithm which allowed reliability/accuracy to be improved and the number of questions to be reduced from 57 to 25, the conducting of three further trials, and the establishment of the system on our website.

Psychological testing expertise was provided by Chandler & Macleod Consultants during the first phase and by Drs. Austin Adams and Jim Bright of the Applied Psychology Unit at the University of New South Wales during the second phase.

FinaMetrica has ongoing research relationships with academic institutions in Australia and elsewhere. The qualities of our test are monitored continuously. In 2011/12 our database of ~500,000 completed tests was analysed in detail and the test was fine-tuned. In 2016/17 our test was fine-tuned again as our database grows. The test continues to exceed psychometric standards for tests of this type. During the most recent analysis, psychometric expertise was provided by Dr Myrsini Katsikatsou, Research Fellow at the London School of Economics, Department of Statistics.

The 10 question version of our test was developed from the 25 question version using standard psychometric techniques.

Signatures

Bill Smith	Tina Williams

Signature _____

Date _____

Signature _____

Date _____

Advisor: Sales UK Demo Morningstar Research Inc

Signature _____

Date _____