

Who and what is FinaMetrica



Clients for Life

Independently owned
business launched in 1998

Builds long & short
psychometric risk tolerance
tests, supporting materials &
methodologies

Suitability heart of Robo
advisors in five countries

Comprehensive experience in
all things planning,
investment & retirement

23 countries, almost 1 million
tests, 5,500
advisers, languages

Data used in 20 peer
reviewed academic papers,
over a dozen Master's theses
& 3 PhDs.

Paul Resnik has 40 year plus
successful history in
innovation in all parts of the
financial services value chain
paul.resnik@finametrica.com

Robo-advisers Automate the Financial Advice Process:

Robo-advisers collect data about a client's identity, their financial situation, the goals and – importantly their risk tolerance;

Use an algorithm containing risk tolerance, financial data and goals to produce an investment recommendation that is suitable for the client; and

Implement the recommendation by managing the purchase and ongoing operations of the investments.

Robo-advisers don't do anything new that humans are not doing already. But robo-advisers do:

- The work in the blink of an

eye, to a consistent standard and at low cost and their processes are easily scalable and delivered online.

- Offer self-service; using algorithms to match portfolios to clients, based on assessed risk tolerance and factors such as age; and confined to relatively simple portfolio construction matters, including allocating money's to asset classes, rebalancing, tax optimisation and account aggregation.
- Processes that involve the use of technology in support of a human interaction – for example, an adviser using an automated data-

gathering questionnaire with clients – are not robo in nature. These hybrid human/technology systems are better described as cyborg (half human, half machine)

- Robo-advisers will certainly play an important part in the cyborg world, but the bigger story is what they can achieve on their own.
- Depending on your definition, it can easily be argued that robo-advisers have been with us for around a decade.

What's driving Robo growth?

- Post 2008 regulation 'encourages' advisers to work with wealthier clients leaving middle market unadvised
- Affluent demographic bubble needs affordable advice
- Enabling technology encourages development
- Little natural wealth management growth, so partnerships between asset managers and banks on the agenda
- Large institutions looking to reduce advice risks



Strengths and Weaknesses in Oz Pension System

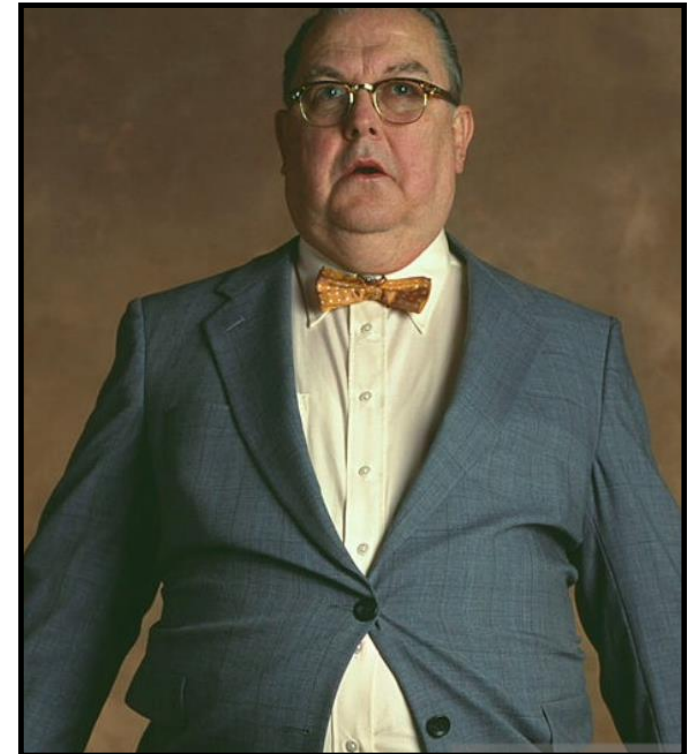
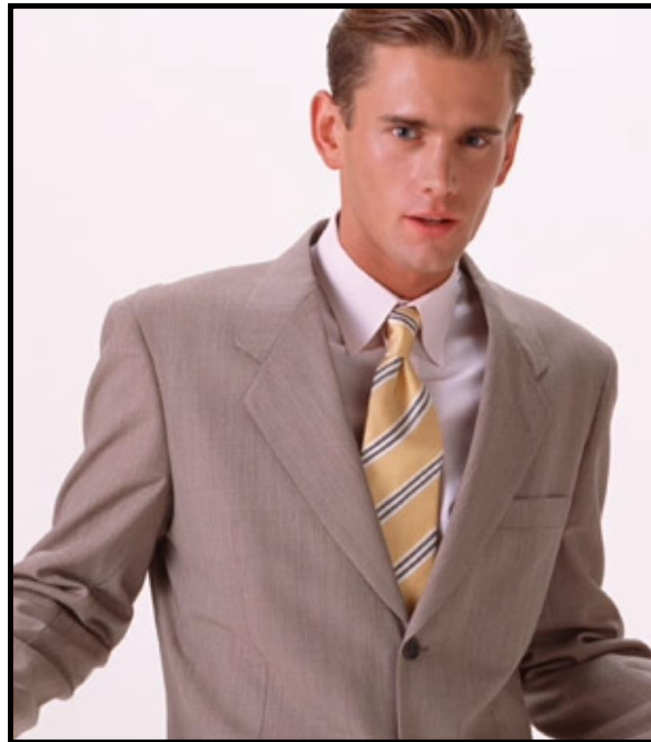
Best Accumulation

- 9.5% of salary
- Paid by employer
- 70% equity exposure
- Listed & unlisted securities
- Mutual fund
- Exemplary performance
- No member engagement

Worst De-accumulation

- Minimal annuity take up
- Little professional management
- Virtually all direct investments
- Virtually all Oz exposed
- Overweight natural income
- Overly reliant on franking and property
- Average 70% equity exposure

Your portfolio should fit like a well cut suit

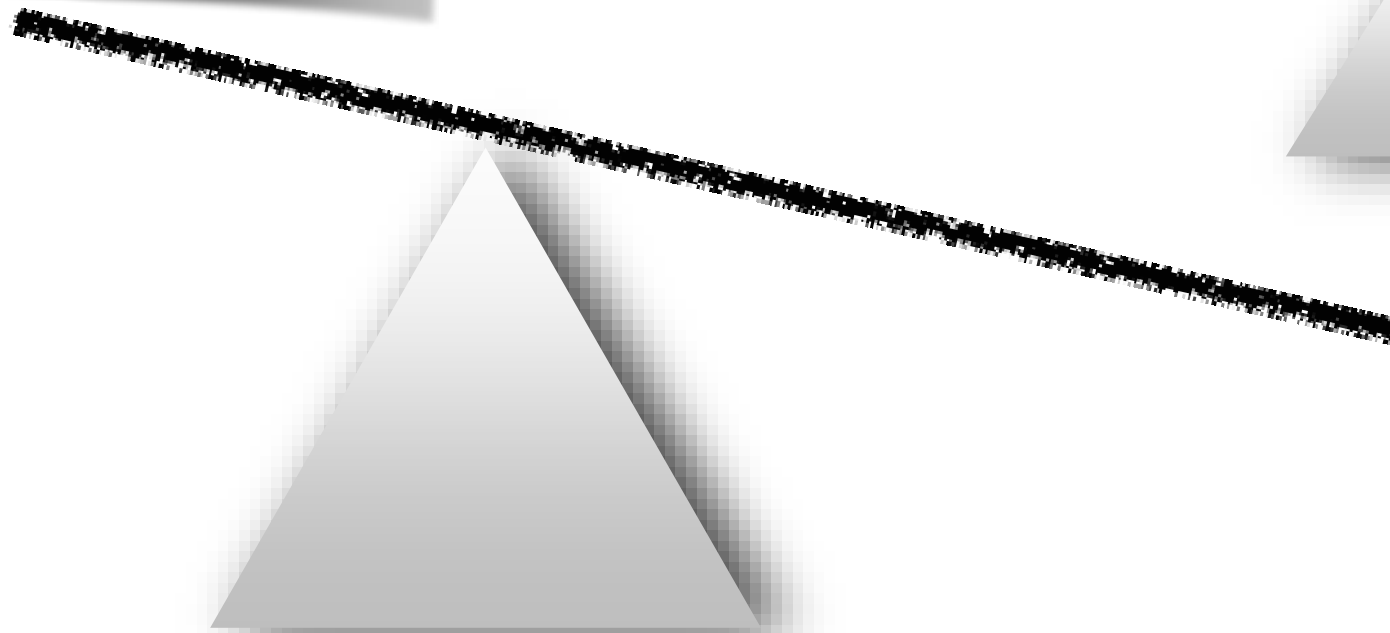


Low Risk

Average Risk

High Risk

Does Your Financial Life Seem Like a Never Ending Balancing Act?



Does Your Financial Life Seem Like a Never Ending Balancing Act?



Risk Tolerance

- the risk you would emotionally prefer to take, all else being equal



Risk Required

- the risk you need to take to achieve your goals



Risk Capacity

- the risk that you can take that allows you to live passably comfortably when everything goes pear shape.

Risk tolerance report for Jean

Under the heading, **Your Risk Tolerance Score**, the Risk Tolerance report

- Provides the client's score and a higher/lower % comment, Jean's score is 54, higher than 64% of all scores,
- Identifies the client's Risk Group, Jean's score is in Risk Group 4, and
- Reports on the accuracy of the client's self-impression. Jean over-estimated her score.

Under the heading, **Your Risk Group**, the Risk Tolerance report provides:

- A description of the client's risk group, Risk Group 4 for Jean,
- A count of the number of answers the client gave which differ from the those typically given by members of their risk group, for Jean, two,
- Specific details of any different answers below the relevant part of the Risk Group description. See the continuation of the report on the next page for details of Jean's two differences.

The Risk Group description, as modified by the reported differences, is a verbatim statement by the client about themselves in relation to risk. Jean Sample is saying,

I think of "risk" as "uncertainty". I have a reasonable amount of confidence in my ability to make good financial decisions. I usually feel somewhat optimistic about my major financial decisions after I make them...

Personal Financial Risk Tolerance Report

Prepared Jean Sample AUS 2.0 from the questionnaire completed on 1 September 2012

Your Risk Tolerance Score

Your Risk Tolerance Score enables you to compare yourself to a representative sample of the adult population. **Your score is 54.** This is a slightly-higher-than-average score, **higher than 64% 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 seven Risk Groups. Your score places you in **Risk Group 4.**



In answer to the last question, **you estimated your score would be 60.** Most people underestimate their score by a few points. However, yours was an over-estimate. When compared to others you are somewhat less risk tolerant than you thought you were.

Your Risk Group

The description of Risk Group 4 which follows provides a summary of the typical attitudes, values, preferences and experiences of those in your group. It summarizes how those in your Risk Group typically answer the risk tolerance questionnaire. **Two** of your answers differed from this description. They are shown in italics below the relevant part and in the Summary section that follows. These differences fine-tune the description to you personally.

Making Financial Decisions

They think of "risk" as "uncertainty" and are prepared to take a medium degree of risk with their financial decisions (Q3 & 10). They have a reasonable amount of confidence in their ability to make good financial decisions and usually feel somewhat optimistic about their major decisions after they make them (Q12 & 7).

When faced with a major financial decision some are usually more concerned about the possible losses while others are usually more concerned about the possible gains (Q6). They would be slightly more likely to choose more job security with a small pay increase than less job security with a big pay increase (Q5).

Financial Disappointments

When things go wrong financially they are as likely to adapt somewhat uneasily as somewhat easily (Q2).

Financial Past

They have taken a small to medium degree of risk with their past financial decisions, more likely medium, and most have never borrowed money to make an investment (Q9 & 11). They have never invested a large sum of money in a risky investment mainly for the "thrill" of seeing whether it went up or down in value (Q4).

Under the heading, **Summary**, the Risk Tolerance report provides a chart showing the differences identified under **Your Risk Group.**

The balance of the Risk Tolerance report (not shown opposite)

- explains to the client how the report should be used,
- makes provision for client/advisor comment and sign-off, and
- provides footnoted information about risk, risk tolerance and the FinaMetrica system (for your 'engineer' clients.)

Investments

... continued

It is somewhat more important that the value of their investments retains its purchasing power than that it does not fall (Q18). For most, a fall of 20% in the total value of their investments would make them feel uncomfortable but for others it would take a 33% fall (Q14). In recent years, for most there have been no changes in the risk of their personal investments but for those that have changed, the changes have been mostly towards lower risk (Q19). Over ten years they expect an investment portfolio to earn, on average, about two to two and a half times the rate from term deposits, more likely two times (Q21).

Given the portfolio choices below, they prefer Portfolios 3 or 4, more likely Portfolio 4 (Q16).

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

With these portfolio choices, you would choose Portfolio 5.

Borrowing

If they were borrowing a large sum of money at a time when it was not clear which way interest rates were going to move and when the fixed interest rate was 1% more than the variable rate, most would choose to have 50% of the loan at fixed interest but some would choose 75% or 100% (Q23).

You would choose to have only 25% at fixed interest.

Government Benefits and Tax Advantages

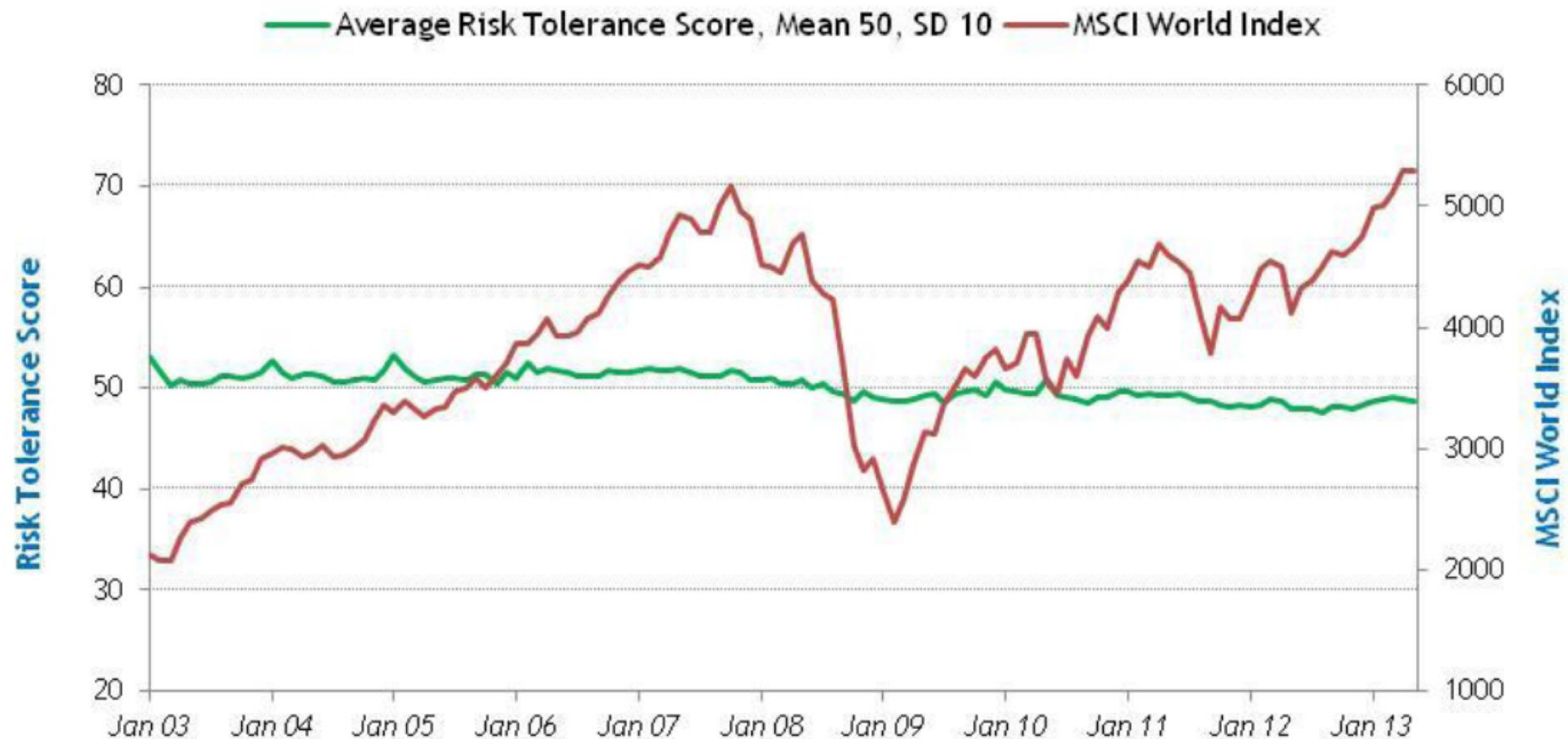
So long as there was only a small chance they could finish up worse off than if they had done nothing, they would take a risk in arranging their affairs to qualify for a government benefit or obtain a tax advantage (Q22).

Summary

		Risk Group						
		1	2	3	4	5	6	7
		0-24	25-34	35-44	54	55-64	65-74	75-100
Making Financial Decisions								
Meaning of "Risk" Q3					✓			
Current Risk-Taking Q10					✓			
Confidence in Decisions Q12					✓			
Feel After Decisions Q7					✓			
Losses v Gains Q6					✓			
Job Security v Pay Increase Q5					✓			
Financial Disappointments								
Adaptability Q2					✓			
Financial Past								
Risk Taking? Q9					✓			
Borrow to Invest Q11					✓			
Thrill Investing Q4					✓			
Investment								
Face vs Real Value Q18					✓			
Downside Comfort Q14					✓			
Risk Changes? Q19					✓			
10-year Returns Q21					✓			
Preferred Portfolio Q16						✓		
Borrowing								
Fixed v Variable Interest Q23							✓	
Government Benefits and Tax Advantages								
Take a Risk? Q22					✓			

Continued over ...

Monthly average risk tolerance score v MSCI World Index shows stability



Individual advisers:

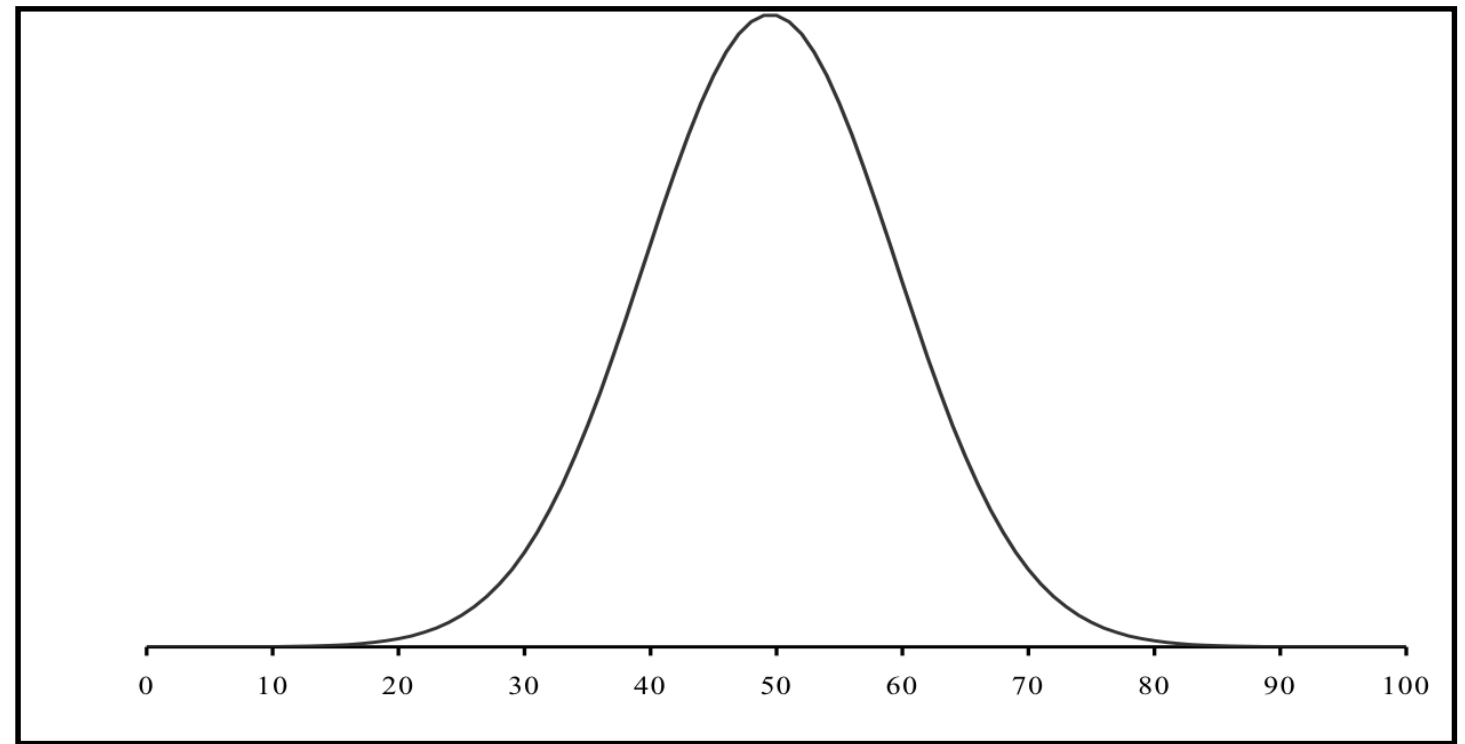
- are likely to have different ways to assess risk tolerance compared to the scientific methodology adopted by FinaMetrica.

- inappropriately presume that investor's changed risk perceptions are really changed risk tolerance
- may also mistakenly see

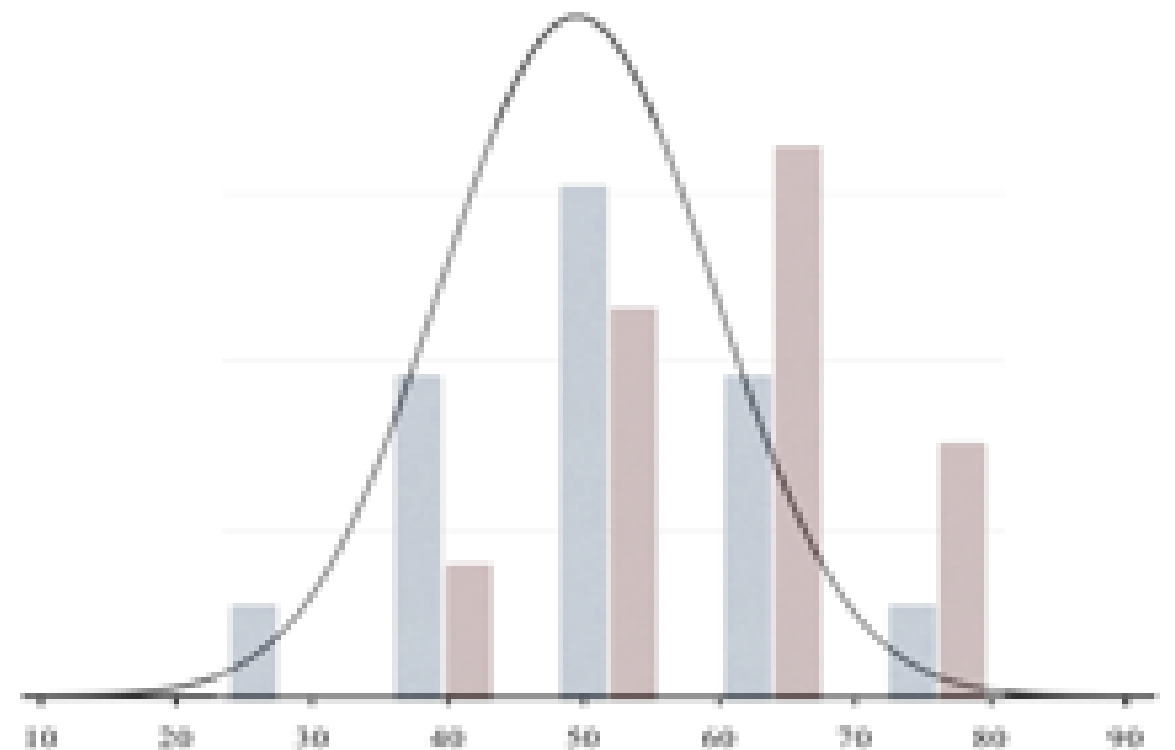
changed investment behaviour as a sign of changed risk tolerance

Risk Group Distribution of Attendees at AIA Conference

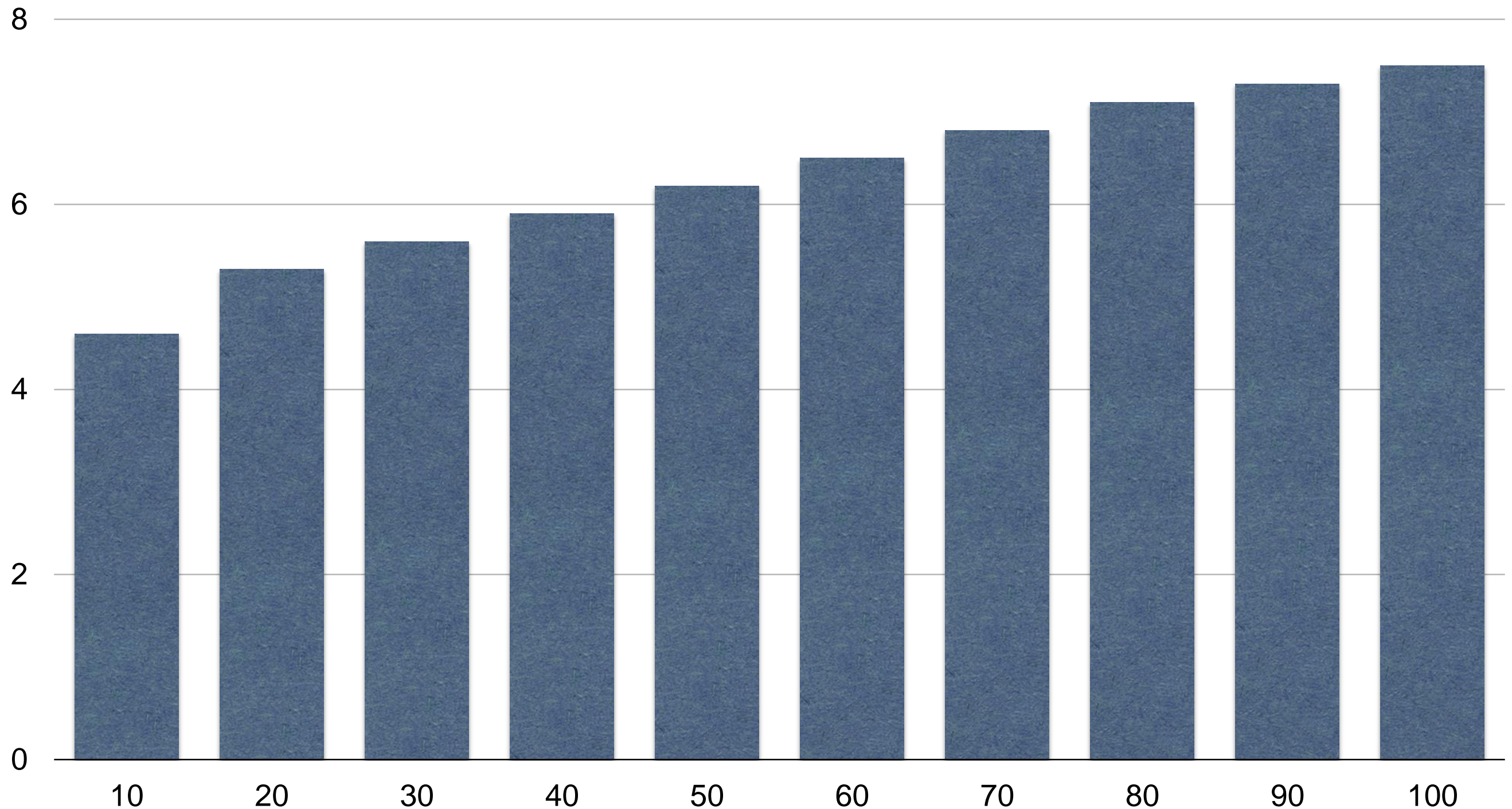
- More risk tolerant than typical investors?
- If so beware overconfidence of the risk tolerant



Risk Group	Very Low	Low	Average	High	Very High
Score Range	<35	35 – 44	45 – 54	55 – 64	65+
No in Group	7%	24%	38%	24%	7%



Average after inflation return for each 10% additional exposure to shares last 44 years



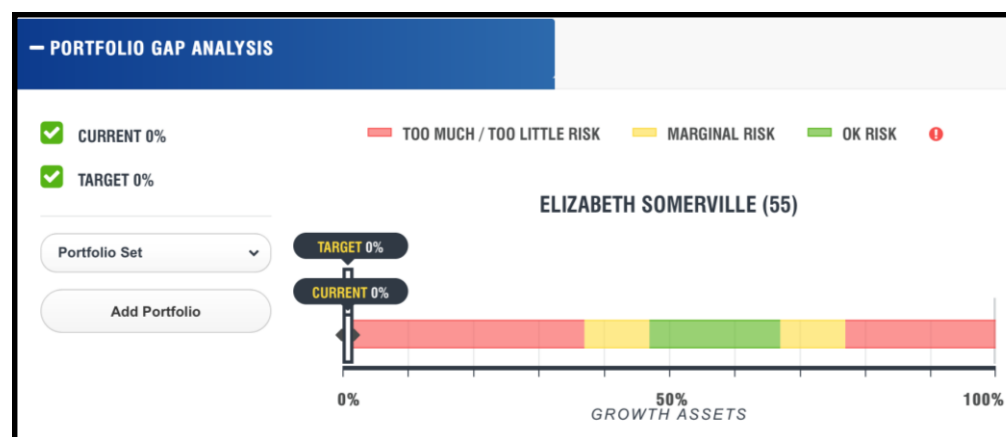
Biggest Drops and Recoveries

Depth of Fall	Started Falling	Months in Fall	Months to Recover	Recovery
-31.3%	Jan-73	20	14	Nov-75
-31.2%	Oct-07	16	45	Nov-12
-24.9%	Sep-87	2	20	Jul-89
-13.0%	May-81	10	6	Sep-82
-10.5%	Jan-94	12	4	May-95
-10.0%	Dec-01	14	7	Sep-03
-8.5%	Feb-80	1	2	May-80
-7.5%	Jul-90	2	4	Jan-91
-6.6%	Apr-84	1	2	Jul-84
-6.1%	Jan-90	3	2	Jun-90

Indices Used in Calculations

The indices chosen were:

Cash	From Apr 87: Bloomberg AusBond Bank TR From Jan 72 to Mar 87: Cash index based on Reserve Bank data for Notes and Bills.
Fixed Interest	From Oct 89: Bloomberg AusBond Composite TR From Feb 77 to Sep 89: Commonwealth Bank All Series All Maturities Accumulation Index. From Jan 72 to Jan 77: Ten Year Australian Government Bond Total Return Index (Source: Global Financial Data.)
Australian Shares	From Jan 80: S&P/ASX All Ordinaries Accumulation Index. From Jan 72 to Dec 79: Australian ASX All Ordinaries Accumulation Index (Source: Global Financial Data)
International Shares	MSCI World ex Australia Gross Index.
Property	From Jan 79: S&P/ASX A-REIT Accumulation Index From Jan 72 to Dec 79: LPT Accumulation Index (Source IRESS.)
Term Deposits	From Dec 81: 1 Year Term Deposit (Source: Reserve Bank.) From Jan 72 to Nov 81: Term Deposit Index based on Reserve Bank Data for Cash and 2 Year Commercial Debentures (Source: FinaMetrica.)
Inflation	Consumer Price Index, All Groups (Source: Reserve Bank.)

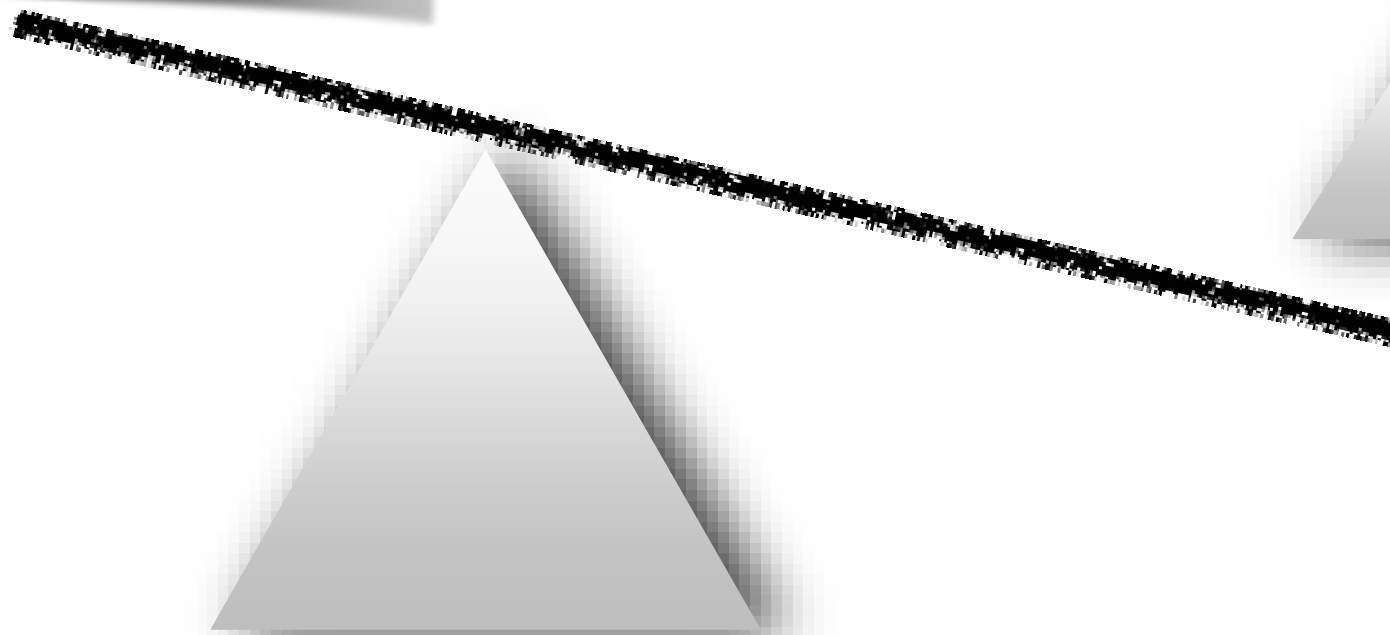




International Managers Moving to Robo

	Investment Styles	Relationship Tools	International Brand
Fidelity	Going Passive	eMoney	2/5
Vanguard	Going Active	Personal Advisor Service	2/5
BlackRock	Active & Passive	FutureAdviser	1/5
Invesco	Active	JemStep	0/5
UBS	Multi-manager	SigFig	2/5
Schwab	Schwab & Others Mainly Passive	Intelligent Portfolios	0/5
Morningstar	Multi-manager Active & Passive	Tool Kits	1/5

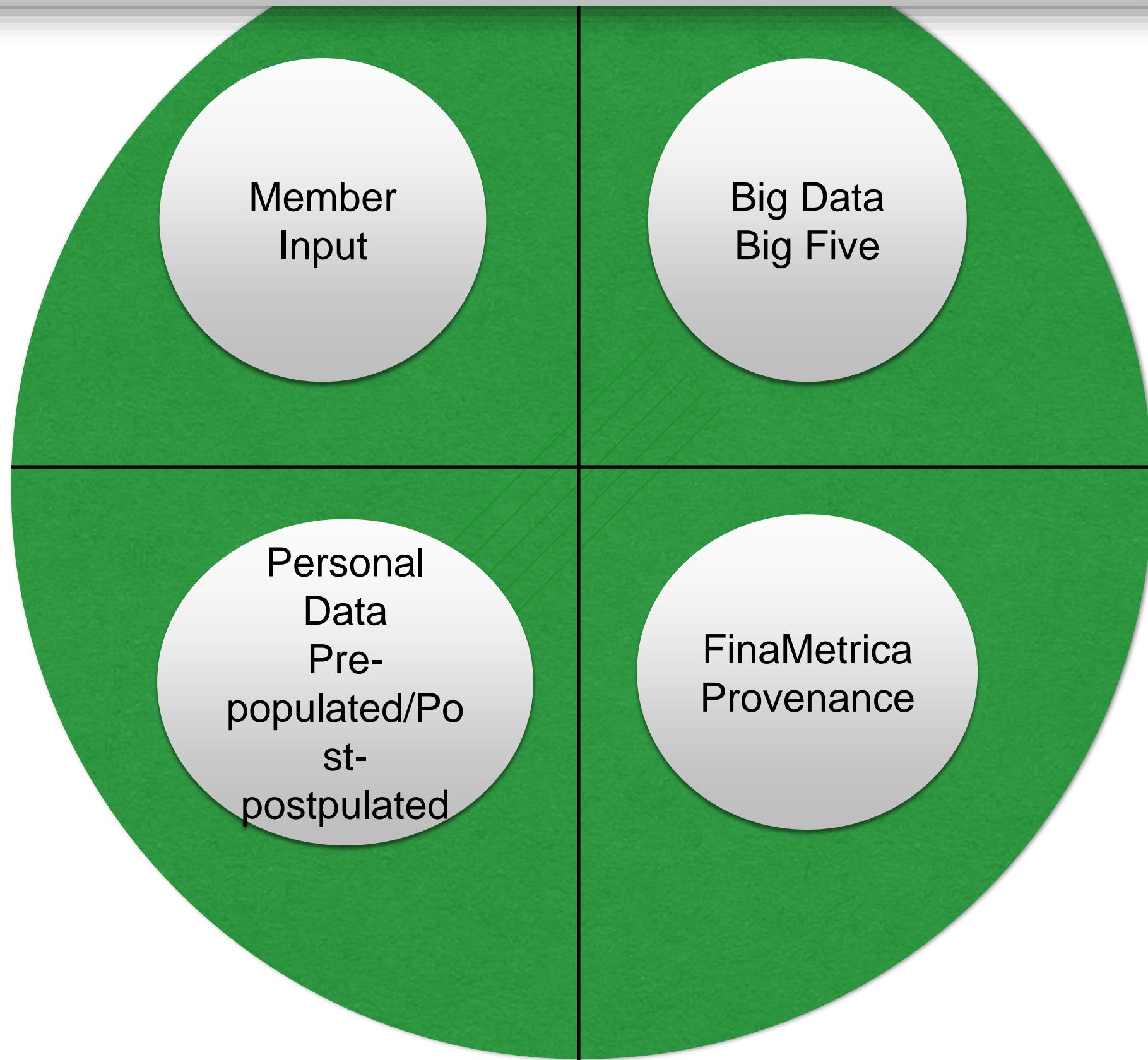
A good Robo should lead you to a portfolio that best meets
your competing needs!



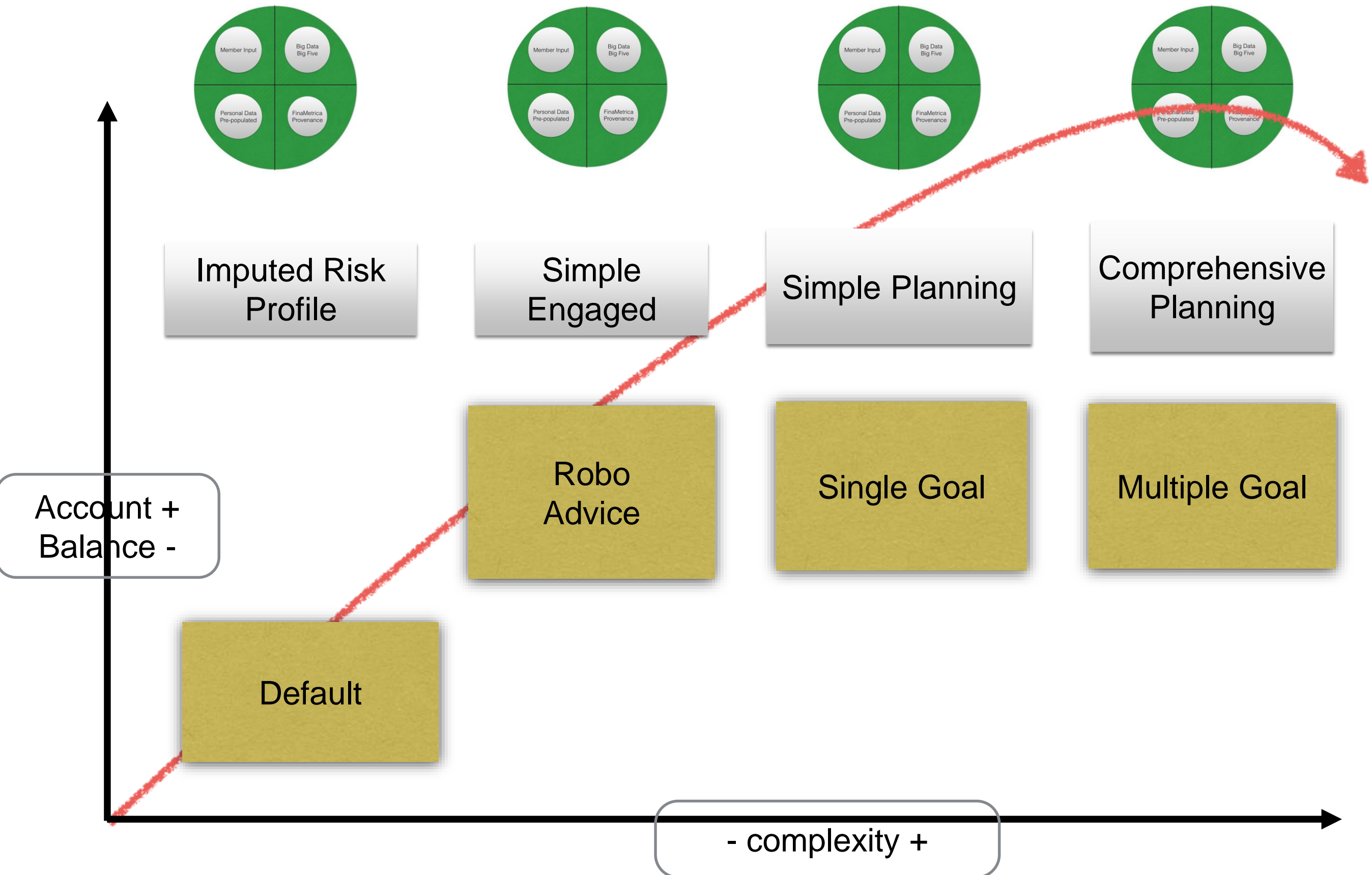
charles
SCHWAB

INTELLIGENT
PORTFOLIOS

Imputed Risk Tolerance and Risk Profile



Engagement Choices



Is this Robo really a Cowbo in Disguise?

8 simple ways to recognise a Cowbo

- It asks less than 10 questions about clients' needs (a short test increases the likelihood of a quick sale at the cost of making an unsuitable recommendation)
- It's scoring algorithm didn't deal with inconsistent answers effectively (to hard to build and explain)
- It didn't show any evidence (it didn't have any) to prove that its suitability process actually works
- It didn't tell you it was using a scientific approach to help assess needs such as a psychometric risk tolerance test (a quick risk test is often substituted for a valid and reliable one)
- There's no evidence that the portfolios that it offers actually deliver what they promise (they are theoretical constructs, and you are being experimented on)
- There's no clear detail of who manages your money
- There no simple and comprehensive explanation of the costs over time
- It's hard to find out who owns the site, who is giving the advice & who is liable when something goes wrong.



Robo Winners

All major suppliers in the value chain

- Banks
- Life Companies
- Platforms
- Data Consolidators
- Investment Managers
- Others?

• Those with access to

- Capital
- Clients
- Brand
- Intelligence