

As easy as pie: How retirement savers use prescribed investment disclosures

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BACKGROUND: regulated choice
architecture



Regulators want clear, comparable communication for better decisions.

- Concerned about consumers' 'financial mistakes'
- Stipulating content of investment disclosures
- Common elements in fund choice disclosures:
 - Type of investment fund
 - Objectives
 - Risk
 - Past performance
 - Fees

How do ordinary retirement plan members use these disclosures?



Existing evidence shows that things don't always go to plan...

- Complexity can lead to *ad hoc* diversification and reliance on defaults (Benartzi and Thaler 2001; Agnew et al. 2011; Morrin et al. 2012; Madrian and Shea 2001; Beshears et al. 2008)
- More choice is not always better (Benartzi and Thaler 2001; Brown et al. 2007; Scheibehenne et al. 2010)
- Stipulated changes to information disclosure may have unintended consequences (Navarro-Martinez et al. 2011)
- Non-salient information can tilt decisions (Choi et al. 2010)



Australian policy context

- Regulatory approach to mandatory private retirement saving (superannuation) → choice of pension fund and investment options, supported by product disclosure (and defaults)
- Phase 1: (From 2001) – long and detailed product disclosure statements (PDSs), lack of easy comparison
- Phase 2: (From June 2012) – Shorter Product Disclosure Statements (8 A4) with prescribed format and information

Shorter Product Disclosure Statements

From June 2012, prescriptive regulations for 8 A4 page PDS

Prescribed information:

1. About the superannuation fund x
2. How super works
3. Benefits of investing with superannuation fund x
4. Risks of super
5. How we invest your money
6. Fees and costs
7. How super is taxed
8. Insurance and your super
9. How to open an account

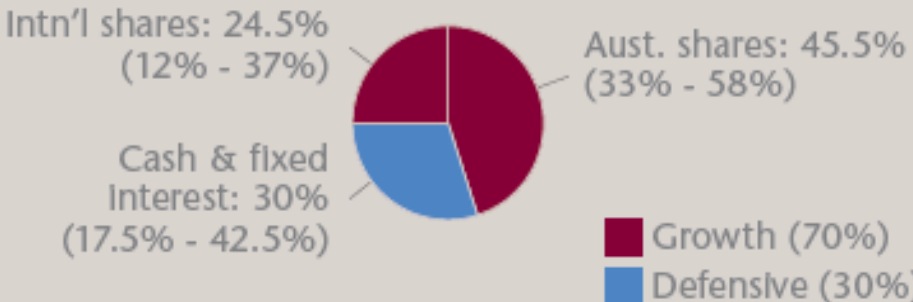
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INVESTMENT DETAILS FOR OUR SOCIALLY RESPONSIBLE BALANCED INVESTMENT OPTION

<p>Description of option/ Type of investor</p>	<p>Invests in a diversified portfolio comprising Australian and International shares that are selected on the basis of sustainable Investment criteria (refer to pages 22 to 25 for further details) and in fixed interest and cash assets. Designed for investors with a high risk tolerance who are seeking a high level of expected returns.</p>												
<p>Investment return objective*</p>	<p>To achieve returns (after Fund taxes and investment fees) that are at least 3.0% p.a. more than inflation (CPI).</p>												
<p>Strategic asset allocation and ranges</p>	 <p>The pie chart illustrates the strategic asset allocation of the investment option. It is divided into three main categories: International shares (24.5%, with a range of 12% to 37%), Australian shares (45.5%, with a range of 33% to 58%), and Cash & fixed interest (30%, with a range of 17.5% to 42.5%). A legend on the right indicates that the Australian shares are further categorized into Growth (70%) and Defensive (30%) components.</p> <table border="1"> <thead> <tr> <th>Asset Class</th> <th>Allocation (%)</th> <th>Range (%)</th> </tr> </thead> <tbody> <tr> <td>Intn'l shares</td> <td>24.5%</td> <td>12% - 37%</td> </tr> <tr> <td>Aust. shares</td> <td>45.5%</td> <td>33% - 58%</td> </tr> <tr> <td>Cash & fixed interest</td> <td>30%</td> <td>17.5% - 42.5%</td> </tr> </tbody> </table>	Asset Class	Allocation (%)	Range (%)	Intn'l shares	24.5%	12% - 37%	Aust. shares	45.5%	33% - 58%	Cash & fixed interest	30%	17.5% - 42.5%
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<p>Minimum suggested timeframe for investment</p>	<p>Six years</p>												
<p>Expected frequency of negative annual return</p>	<p>Four in twenty years</p>												
<p>Summary risk level</p>	<p>High</p>												

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Standard risk measure and Risk label

Risk band	Risk label	Estimated number of negative annual returns over any 20 year period
1	Very low	Less than 0.5
2	Low	0.5 to less than 1
3	Low to medium	1 to less than 2
4	Medium	2 to less than 3
5	Medium to high	3 to less than 4
6	High	4 to less than 6
7	Very high	6 or greater

Source: APRA Insight, 2012




How are superannuation fund members responding to the new communication regimes?

- Which specific information items are used by consumers?
- Does this match regulator intention?
- What is the cross-sectional variation in information use?
- What happens to default patterns?



Experimental design



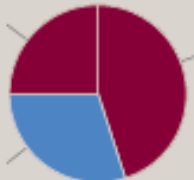
Experiment: How do pension fund members choose investments using prescribed information?

- September 2012 and May 2013
- 172 university staff and students
- Lab experiments: Research Lab at UNSW

- **TASK:** *Pairwise* comparisons of 10 investment options using UniSuper investment guide (single sector & pre-mixed)
- At least 45 comparisons per subject
- W/Wo labels (name/description of option)
- Holt-Laury lottery task; Dospert measure risk attitude
- Demographics, financial literacy, numeracy
- Show up fee + Incentive paid -> random return from most preferred investment option. (OR return from default option)

First reviewed information on 10 investment options

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...then make choices between 45 pairs.

Click on any option below to read about it.

Cash	Socially responsible balanced	Australian shares	Global environmental opportunities	Conservative balanced
Australian bond	Balanced	Capital stable	High growth	Growth


Which option would you rather choose for your superannuation?

	Investment option	Conservative balanced	Capital stable
	Description of option / Type of investor	Invests in a diversified portfolio, comprising defensive assets such as bonds and cash, and growth assets such as shares and property investments. Designed for investors with a medium to high risk tolerance who are seeking a medium to high level of expected returns.	Invests in a diversified portfolio, comprising largely defensive assets such as bonds and cash, and with some growth assets such as shares and property investments. Designed for investors with a medium risk tolerance who are comfortable with a medium level of expected returns.
	Investment return objective	To achieve returns (after Fund taxes and investment fees) that are at least 2.5% p.a. more than inflation (CPI).	To achieve returns (after Fund taxes and investment fees) that are at least 2.0% p.a. more than inflation (CPI).
	Strategic asset allocation and ranges		
	Minimum suggested timeframe for investment	Four years	Two years
	Expected frequency of negative annual return	Three in twenty years	Two in twenty years
	Summary risk level	Medium to high	Medium
	Clear	Choose this option	Choose this option

Key information disclosed: Investment returns and risk

Option name	Return	Risk		Performance
	Return over CPI (% p.a.)	Negative returns (years in 20)	Summary risk level	Inferred Sharpe ratio
<i>Capital stable</i>	2.0	2	medium	0.28
<i>Socially responsible balanced</i>	3.0	4	high	0.30
<i>Growth</i>	4.0	5	high	0.30
Cash	1.0	negligible	very low	-
Australian bonds	1.5	3	medium to high	0.13
Australian shares	5.0	6	very high	0.27
<i>Global environmental opportunities</i>	5.0	6	very high	0.27
<i>Conservative balanced</i>	2.5	3	medium to high	0.30
<i>Balanced</i>	3.0	4	high	0.30
<i>High growth</i>	5.0	5	high	0.34

Asset allocation information provides information on investment option features: concentration and share (deviation from $1/n$)

Option name			Measures
			Deviation from $1/n$
			0.27
Capital sta			0.02
Socially res		0.36	
Growth		0.30	0.10
Cash		1.00	1.00
Australian bonds		1.00	1.00
Australian shares		1.00	1.00
Global environmental opportunities		1.00	1.00
Conservative balanced		0.34	0.09
Balanced		0.27	0.07
High growth		0.42	0.17





Results




Which elements of the information set explain choices?

1. Investment return objective (% above CPI)
2. Expected frequency of negative returns (years in 20)
3. Strategic asset allocation (% of growth)
4. Concentration (Herfindahl index)
5. Deviation from 1/n (equally-weighted)
6. Minimum suggested time frame (years)
7. Summary risk level (*very low, medium, medium-high, high very high*)

Safer, premixed options are most popular

Option selected as best, per cent of choices

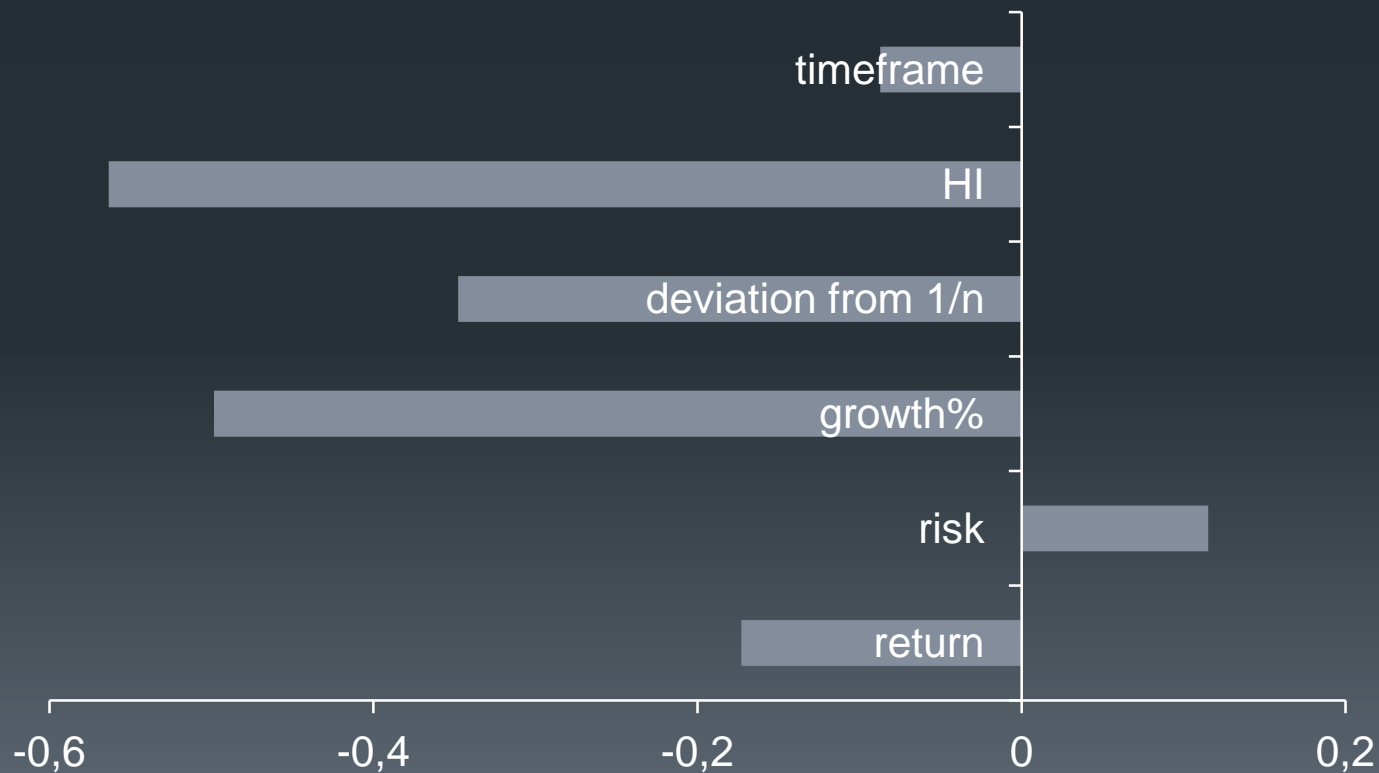
option	Labelled Pie Chart	Not labelled Pie Chart	Labelled Table
Capital stable	71	72	64
Socially responsible balanced	62	58	55
Growth	65	63	62
Cash	24	28	28
Australian bonds	26	29	28
Australian shares	24	27	39
Global environmental opportunities	27	22	41
Conservative balanced	75	76	62
Balanced	69	68	62
High growth	57	57	58



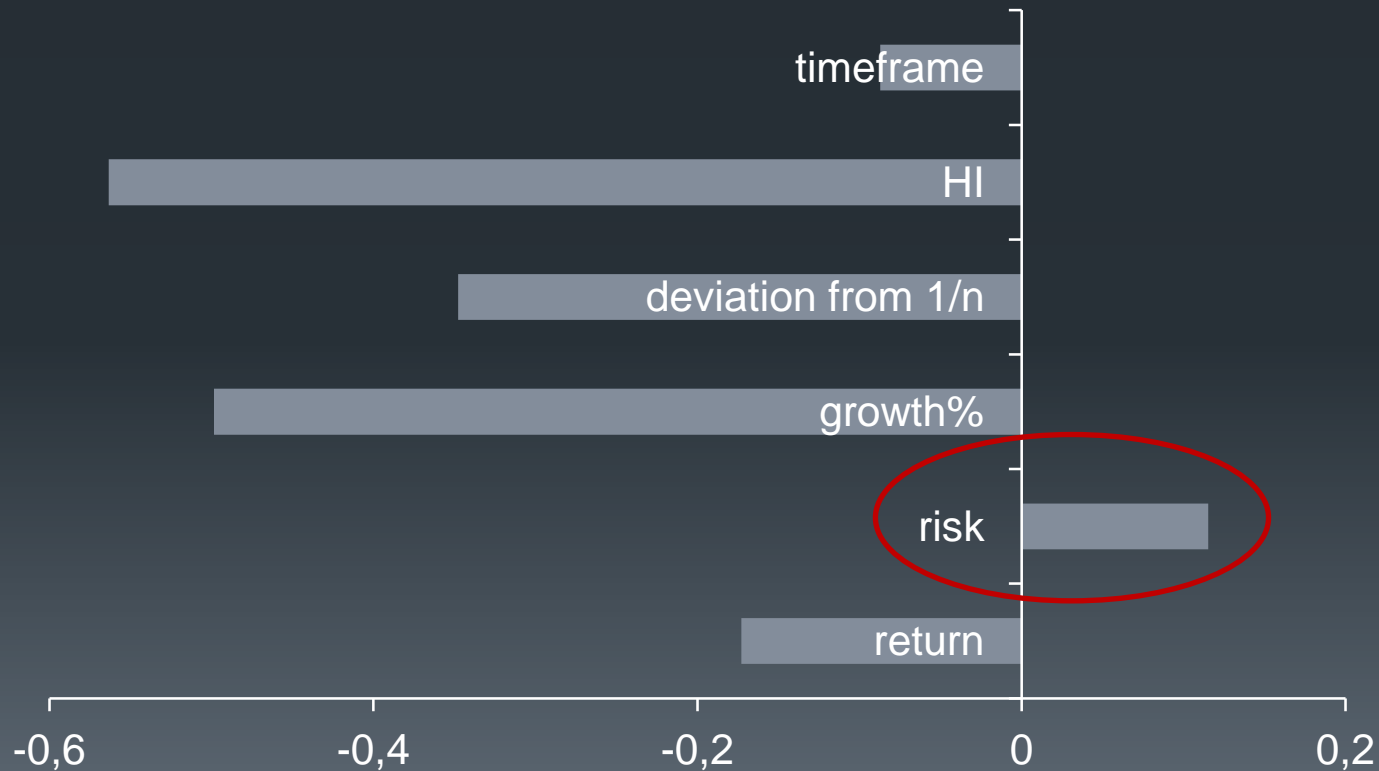
Estimation approach – to investigate use of the prescribed information

- Regress pairwise choices on *difference in returns, risk, growth %, concentration index, deviation from 1/n, timeframe, summary risk measure indicators, and interactions*
 1. Pooled choice model - add indicator for treatments and experiment rounds, staff/student indicator and demographics
 2. Individual choice models

Marginal effects from pooled model emphasise diversification



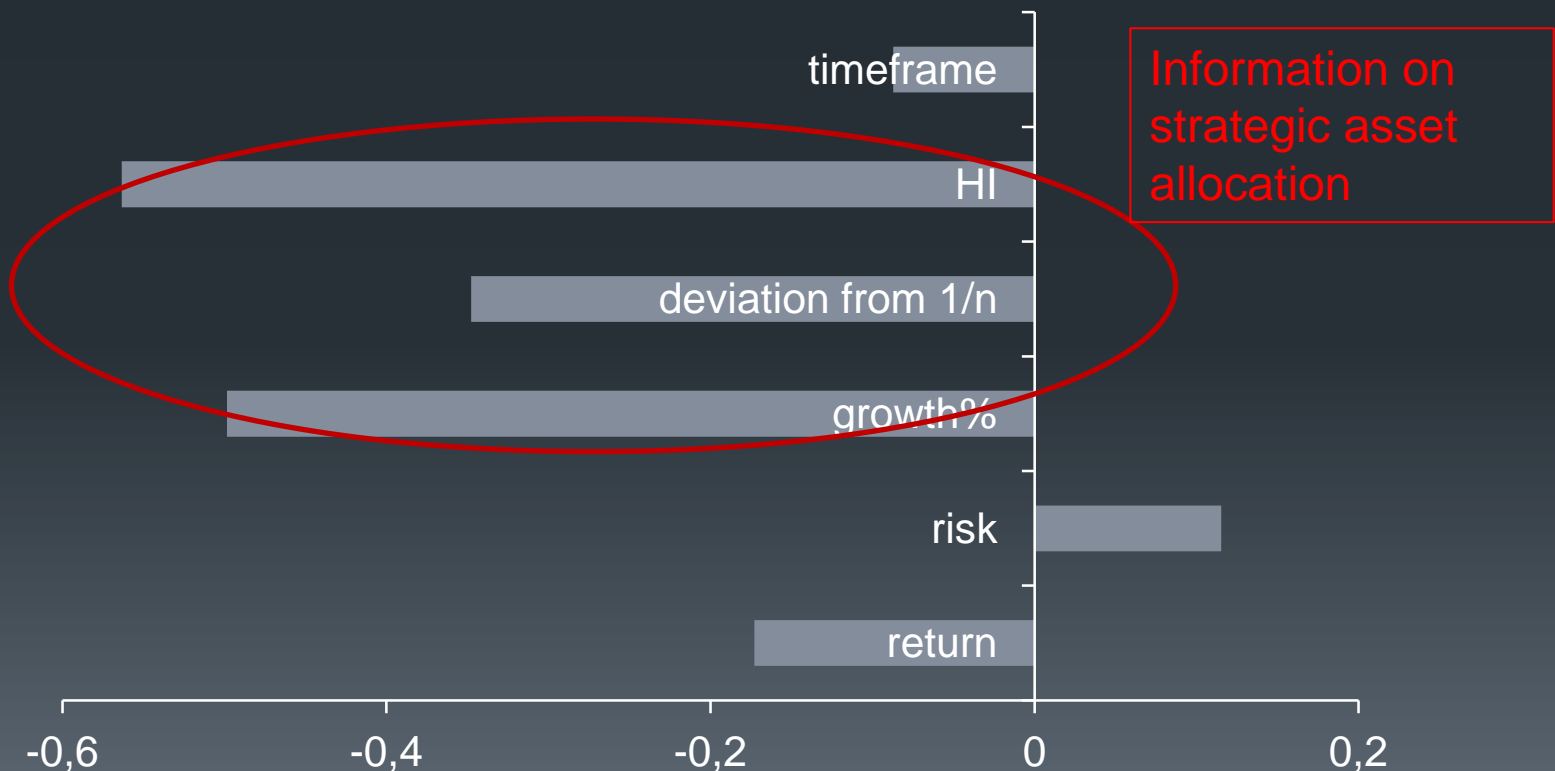
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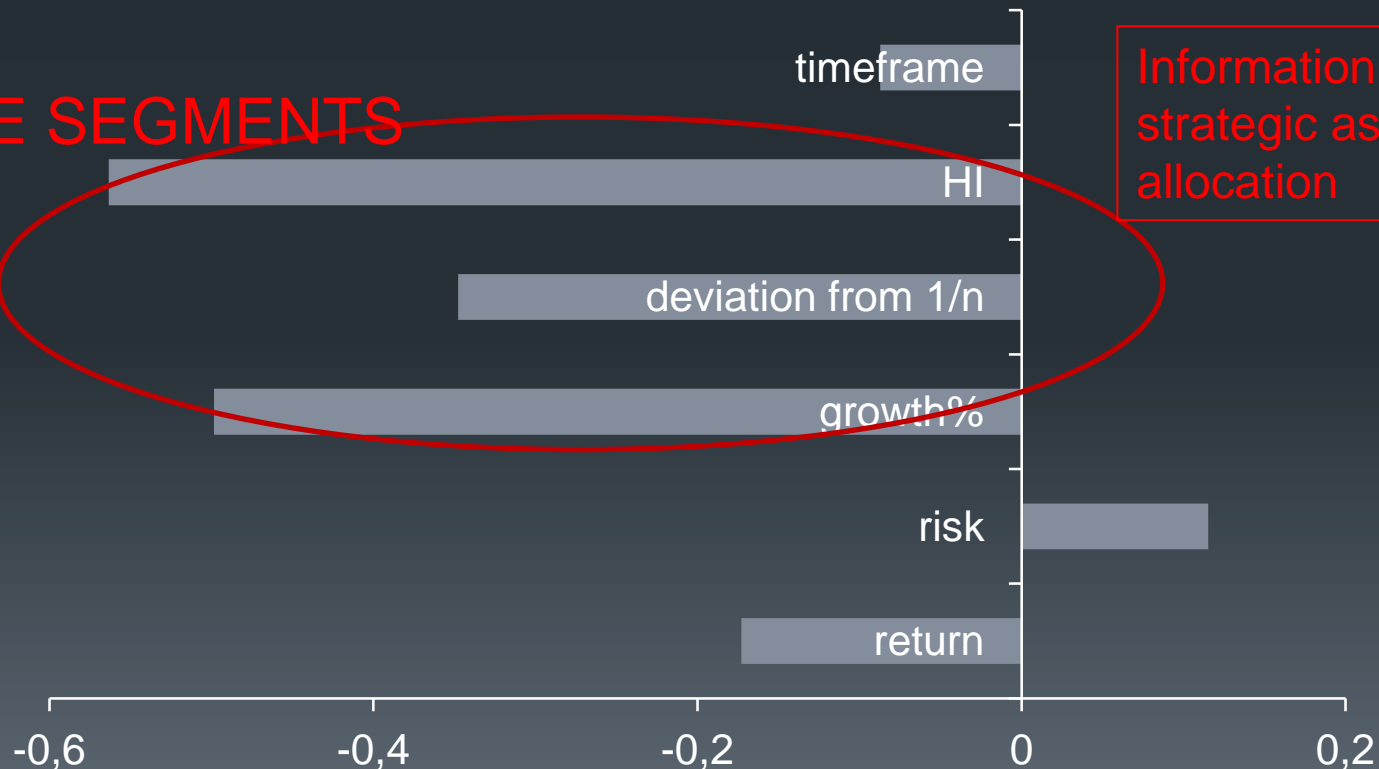


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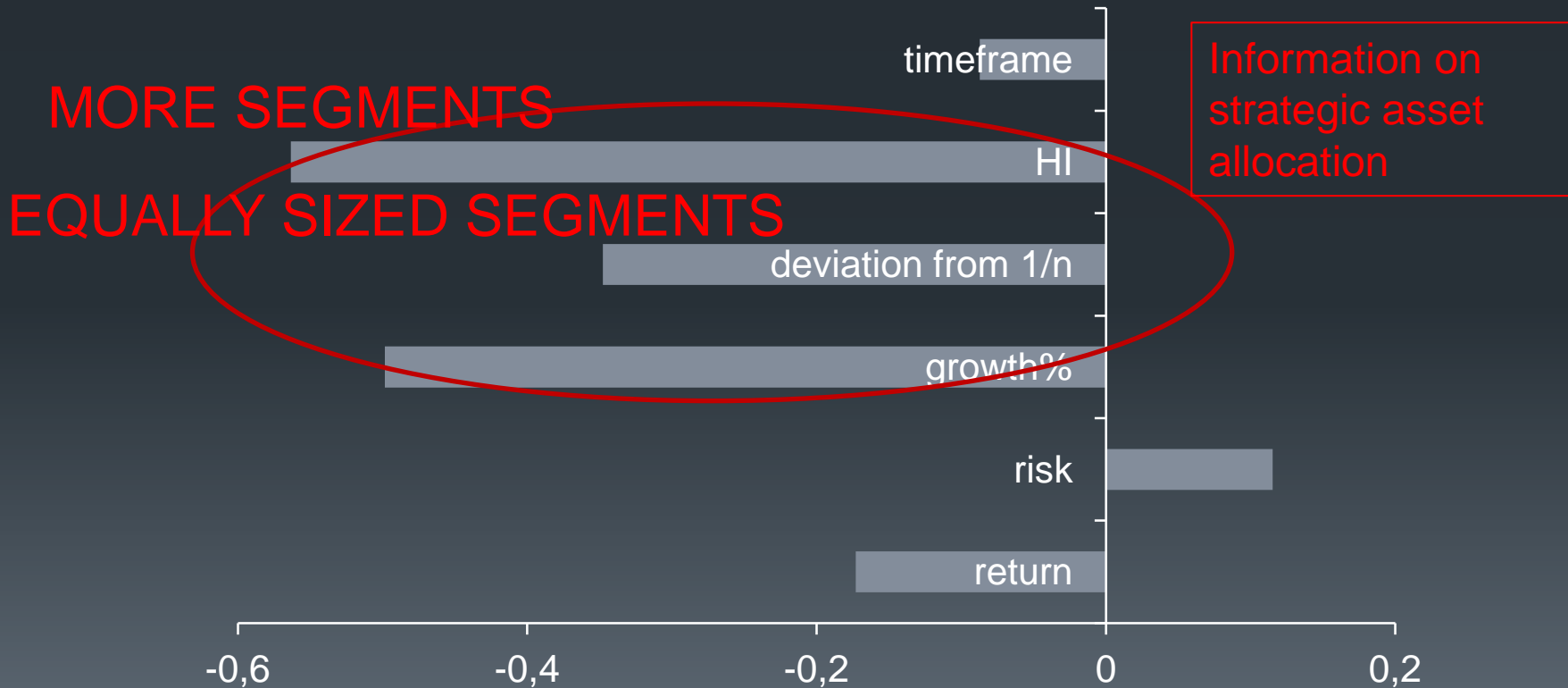
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MORE SEGMENTS



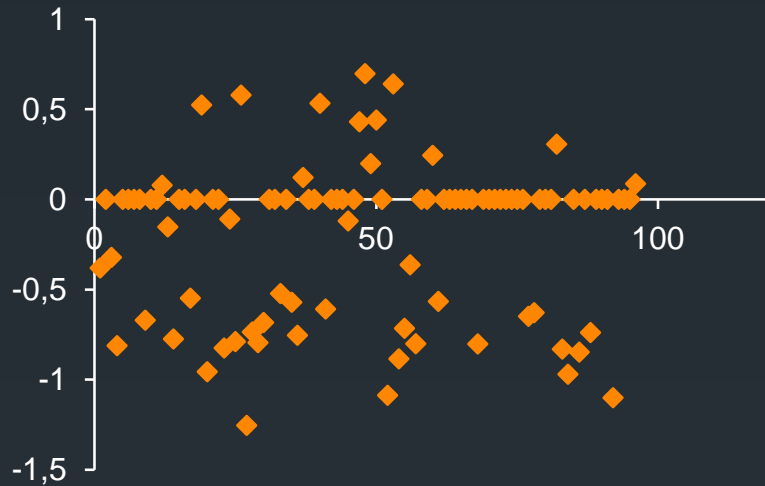
Information on strategic asset allocation

Marginal effects from pooled model emphasise diversification

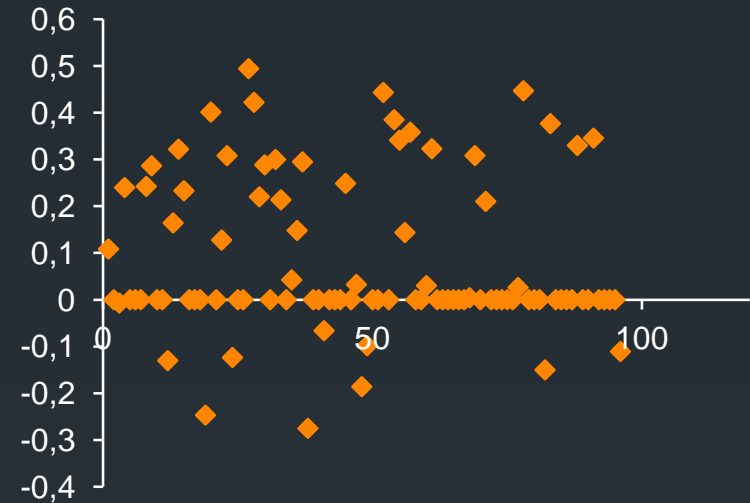


Significant marginal effect of individual models

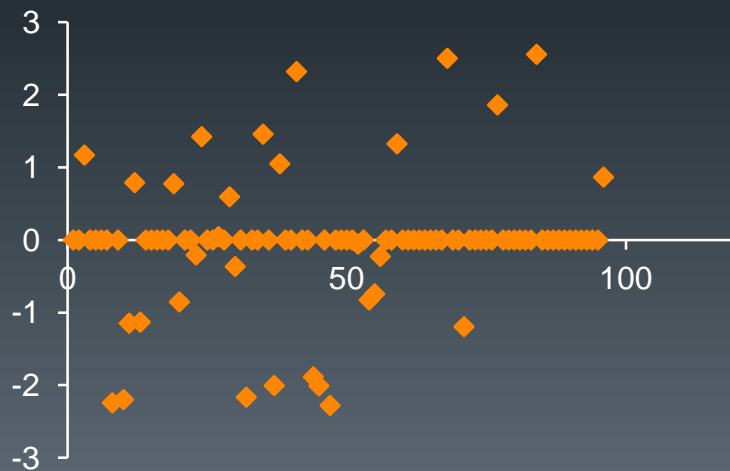
Returns



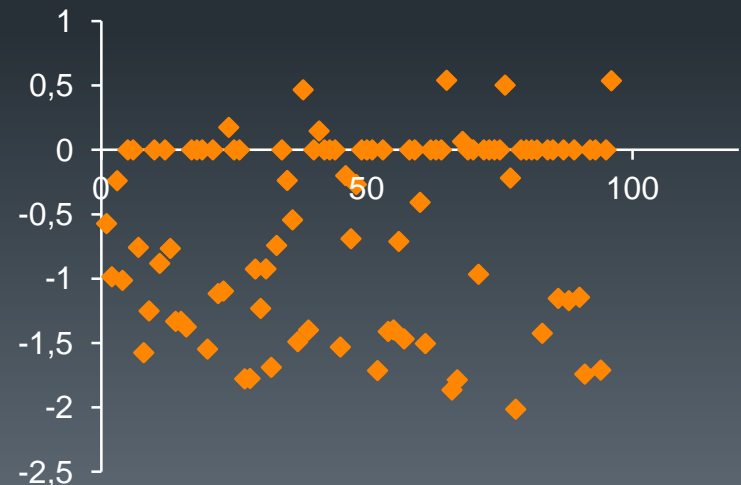
Risk



Growth asset proportion



Deviation from '1/n'





Subjects rarely prefer default

- Around 2/3 of members of Australian ‘industry funds’ default
- Default investment is ‘balanced’ option
- Subjects offered payout from default or preferred option
- Only 2 of 96 defaulted



Robustness treatments: Visuals? 'k'/n?

- Experiment 3: 76 subjects
- Pie chart v. Table:
 - 39 subjects saw **table** substituted for **pie chart**
- Unlimited choice:
 - 76 subjects chose **any number** of the 10 options

Table treatment: diversification was still the most important influence.

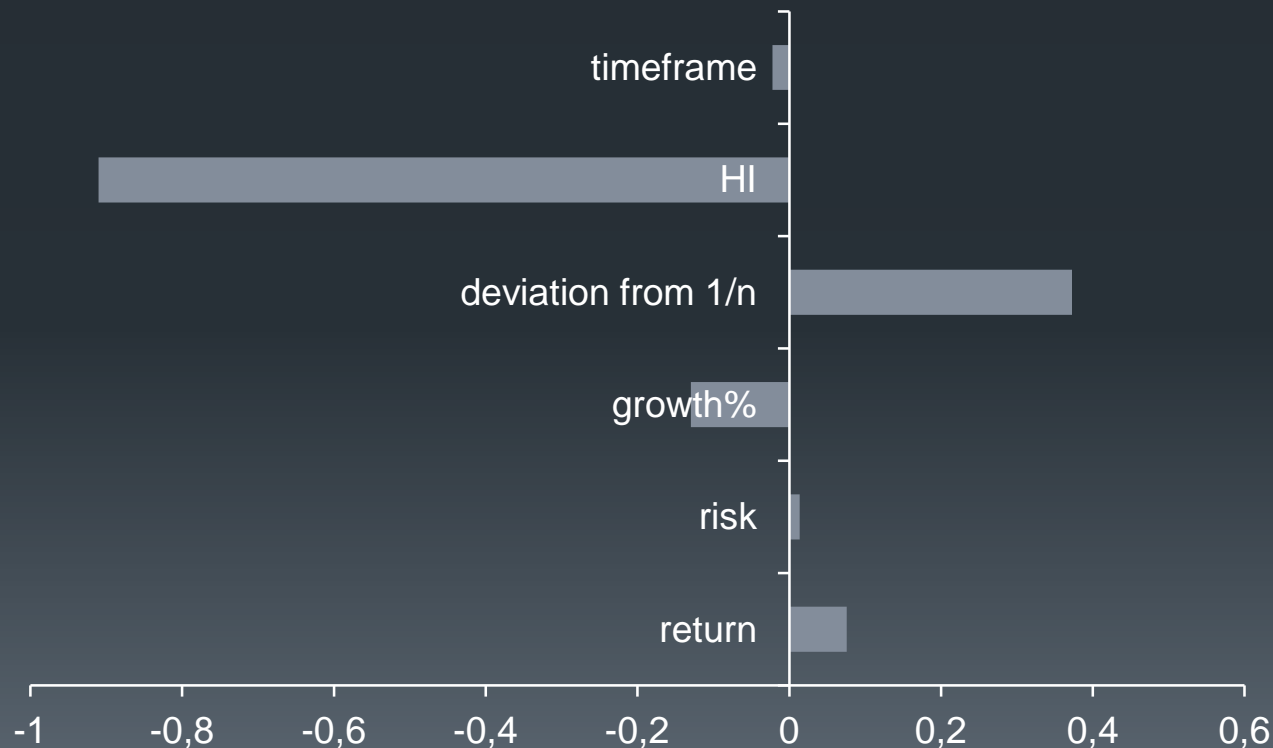
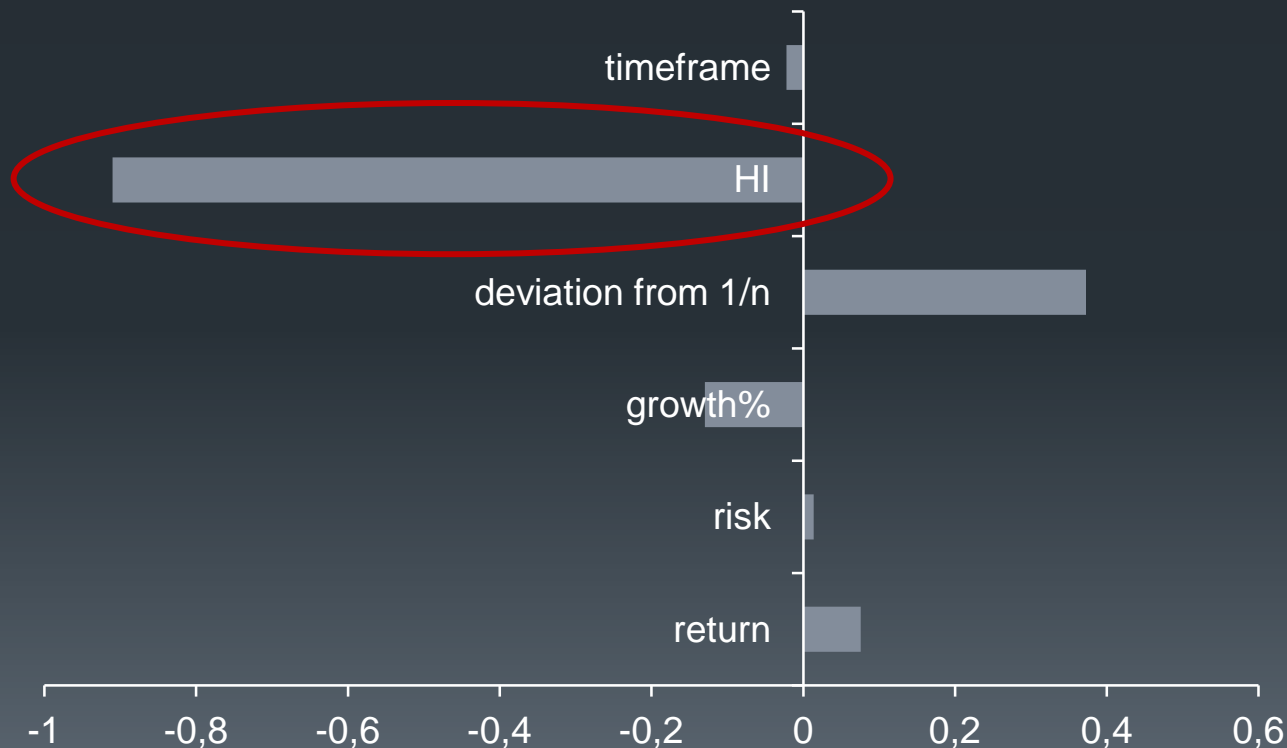
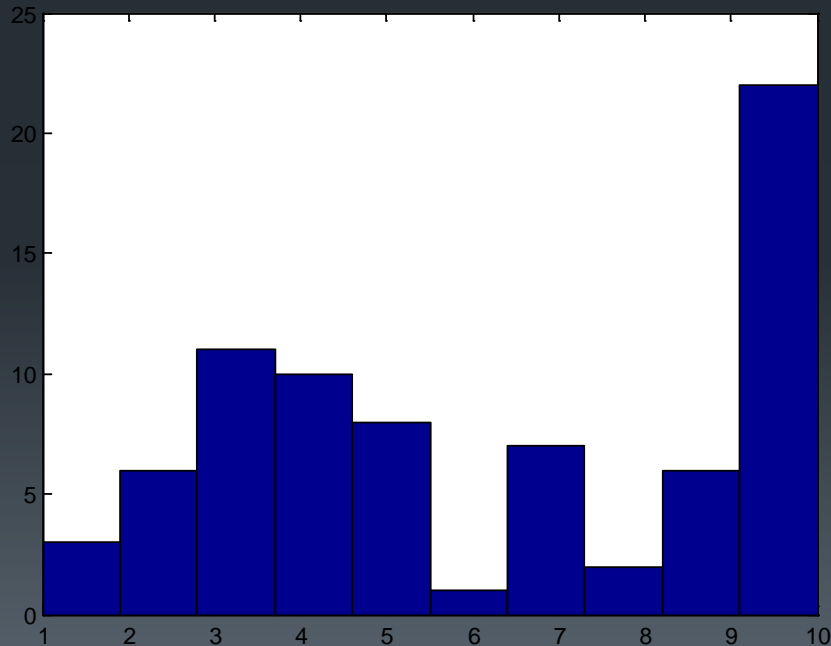


Table treatment: diversification was still the most important influence.



When offered choice from the full menu, most people choose some of everything.




	Average Allocation %
Capital stable	14
Socially responsible	11
Growth	11
Cash	8
Australian bonds	6**
Australian shares	5**
Global environmental	10
Conservative balanced	12
Balanced	11
High growth	13



Conclusions + discussion

- All pre-mixed options preferred to single sector options
- ‘Conservative Balanced’ most preferred and ‘Cash’ least preferred
- All information items are relevant to choices in pooled model
 - *Unexpected signs* for return and risk
 - *Diversification* measures (strategic asset allocation) are highly influential
- Large variation among individuals
 - 23% of subjects use *no* information predictably
 - 23% use *one* of five items
 - 30% used *all, or almost all*, prescribed items

- 
- **Salient information (returns targets/risk measures)** used in unexpected ways.
 - Subjects prefer ‘pies’ with many, equally sized segments
 - ‘ $1/n$ ’ heuristic applies to **pre-mixed option choice**
 - it persists ***without the visual*** pie-chart aid
 - subjects apply ‘ $1/n$ ’ in ‘mix-it-yourself’ task
 - labels, tables, demographics do not change the story
 - Are regulators testing for ***the way people use*** disclosures?



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Summary statistics: young, well educated subjects



- **Sample**
 - 172 => half staff; half students
- **Age**
 - Median = 25
- **Education**
 - Median = Bachelor degree or equivalent
- **Years of employment**
 - Median = 2.5
- **Health**
 - Median = very good