

Supplementary Table 1. Study 2 trait affect and cognitive ability. Means listed by age group. Standard deviations in parentheses. Asterisks denote significant differences between groups (* $p < .05$, ** $p < .01$).

	Younger Adults	Older Adults
Positive Affect (PANAS-T)	27.94 (0.89)	28.41 (0.55)
Negative Affect (PANAS-T)	18.53 (1.01) *	16.15 (0.63) *
Digit Span	11.09 (0.38) *	10.05 (0.32) *
Letter-Number Sequencing	11.43 (.48) **	9.93 (0.34) **
Trails (B – A)	32.96 (3.95) **	50.25 (3.63) **
Numeracy	11.28 (0.56)	10.92 (0.50)

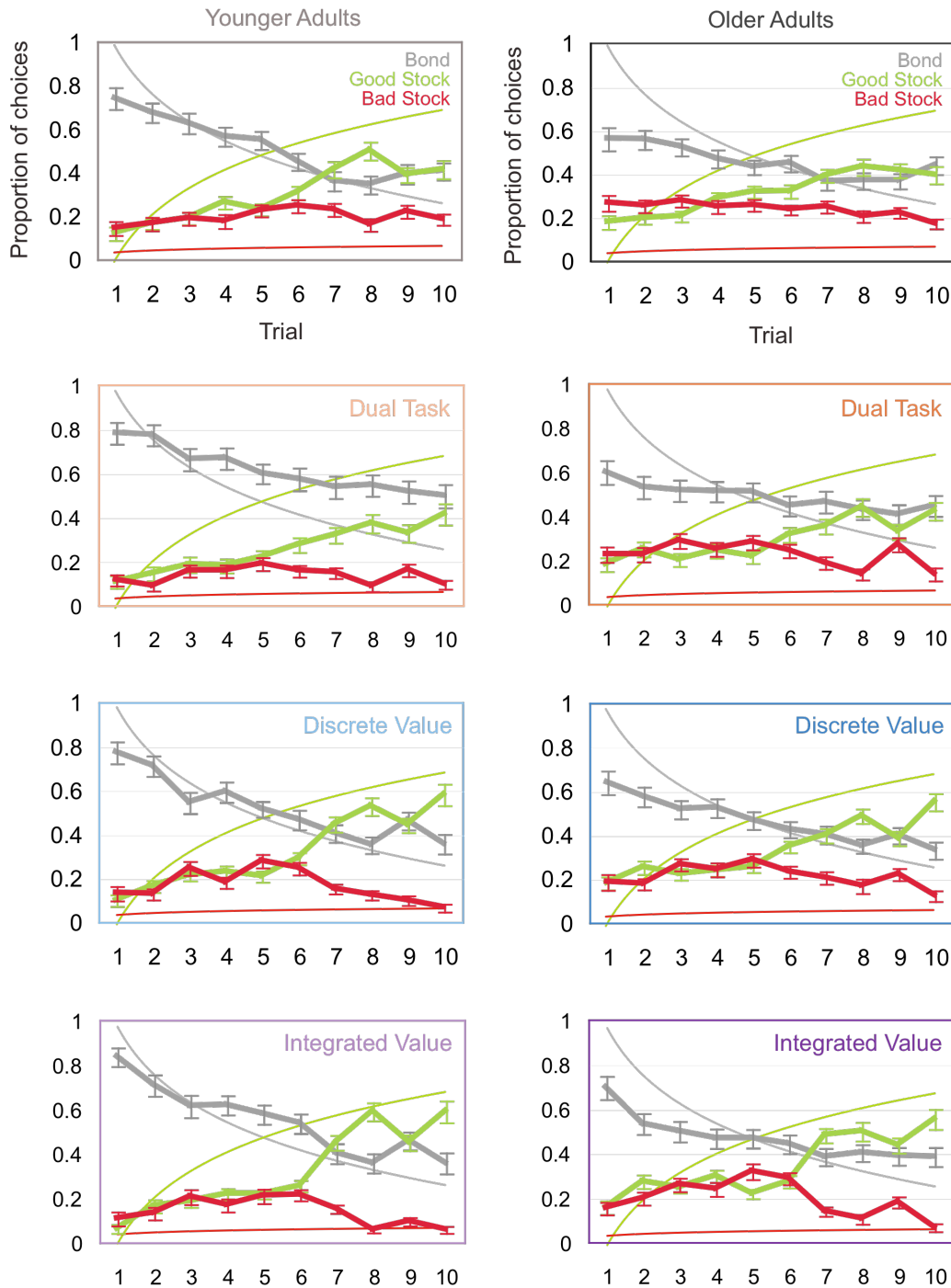
Supplementary Table 2. Study 2 rational choices (out of 50). Means listed by condition and age group. Standard deviations in parentheses. Asterisks denote significant differences between groups (* $p < .05$, ** $p < .01$).

	Younger Adults	Older Adults
Baseline	26.08 (1.07) *	22.68 (0.93) *
Dual Task	25.69 (0.78) **	22.08 (0.75) **
Discrete Value	30.04 (0.88) **	25.66 (1.12) **
Integrated Value	31.84 (1.06) *	27.86 (1.21) *

Supplementary Table 3. Study 2 asset knowledge (out of 5). Means listed by condition and age group. Standard deviations in parentheses.

	Younger Adults	Older Adults
Baseline	3.94 (0.14)	3.81 (0.14)
Dual Task	3.51 (0.17)	3.49 (0.15)
Discrete Value	4.71 (0.09)	4.56 (0.09)
Integrated Value	4.65 (0.10)	4.63 (0.08)

Supplementary Figure 1. Proportion of choices allocated to the bond, good stock, and bad stock over time (trials) averaged across the five blocks for each condition in younger (left column) and older (right column) adults in Study 2. Error bars correspond to standard error of the mean. Lightweight lines without error bars correspond to logarithmic trendlines representing the approximate proportion of choices allocated to the bond, good stock, and bad stock by the rational actor model averaged across blocks.



Supplementary Results

Study 2

Baseline condition. In the baseline condition, a non-significant main effect of asset (stock, bond), $F_{1, 106} = .853$, $p = .36$, revealed that subjects chose approximately equal numbers of stocks and bonds. A non-significant interaction of asset and age group (young, old), $F_{1, 106} = 1.87$, $p = .17$, suggested that the distribution of choices among stocks and bonds did not differ between younger and older adults. Tests of specific mistake types revealed that although younger and older adults did not differ in risk-aversion (bond) mistakes, $t_{106} = -0.10$, $P = .92$, or losing stock mistakes, $t_{106} = 1.03$, $P = .31$, older adults made significantly more risk-seeking (stock) mistakes, $t_{106} = 2.23$, $P < .05$ (see Supplementary Figure 2).

Dual-task condition. A significant rational choice \times group interaction, $F_{1, 106} = 9.84$, $p < .01$, suggested that performance differed between younger and older adults in both the baseline and dual-task conditions. Follow-up tests confirmed that older adults made fewer rational choices than younger adults in the dual-task condition, $t_{106} = -3.31$, $P < .01$. Tests of specific mistake types revealed that older adults did not differ from baseline in the number of rational choices, $t_{58} = -0.80$, $P = .43$, risk-aversion mistakes, $t_{58} = 1.38$, $P = .17$, risk-seeking mistakes, $t_{58} = -1.08$, $P = .29$, or losing stock mistakes, $t_{58} = -1.40$, $P = .17$ (see Supplementary Figure 2B). Although the number of rational choices, $t_{48} = -0.42$, $P = .67$, and losing stock mistakes, $t_{48} = -1.40$, $P = .17$, did not change for younger adults, they made fewer risk-seeking (stock) mistakes, $t_{48} = -2.55$, $P < .05$, and more risk-aversion (bond) mistakes, $t_{48} = 3.37$, $P < .01$ (see Supplementary Figure 2). These findings suggest that the secondary task may have increased younger adults' choices of the more conservative riskless asset (bond).

Discrete value condition. A significant rational choice \times group interaction, $F_{1, 106} = 8.80$, $p < .01$, suggested that performance differed between younger and older adults across both the baseline and discrete history conditions. Follow-up tests confirmed that older adults made fewer rational choices than younger adults in the discrete value condition, $t_{106} = -2.99$, $P < .01$. Tests of specific mistake types revealed that although risk-aversion mistakes did not differ from baseline for either younger, $t_{48} = -1.42$, $P = .16$, or older adults, $t_{58} = -1.32$, $P = .19$, both risk-seeking mistakes (younger, $t_{48} = -1.78$, $P = .08$; older, $t_{58} = -2.34$, $P < .05$) and losing stock mistakes were reduced for both younger and older adults (younger, $t_{48} = -3.46$, $P < .01$; older, $t_{58} = -2.42$, $P < .05$) (see Supplementary Figure 2). Younger and older adults did not differ in the change from baseline in rational choices or any of the mistake types (all $p > .2$).

Integrated value condition. A significant rational choice \times group interaction, $F_{1, 106} = 7.14$, $p < .01$, suggested that performance differed between older and younger adults in both the baseline and integrated history conditions. Follow-up tests confirmed that older adults made fewer rational choices than younger adults in the integrated value condition, $t_{106} = -2.41$, $P < .05$. Tests of specific mistake types revealed that although risk-aversion mistakes did not differ from baseline for either younger, $t_{48} = -0.87$, $P = .39$, or older adults, $t_{58} = -1.31$, $P = .20$, risk-seeking mistakes (younger, $t_{48} = -3.05$, $P < .01$; older, $t_{58} = -2.86$, $P < .01$) and losing stock mistakes were reduced for both younger and older adults (younger, $t_{48} = -5.47$, $P < .0001$; older, $t_{58} = -6.91$, $P < .0001$) (see Supplementary Figure 2). Younger and older adults did not differ in the change from baseline in rational choices or any of the mistake types (all $p > .5$).

Supplementary Figure 2. Study 2 mistake types by condition. RAM = risk-aversion mistake (bond choice), RSM = risk-seeking mistake (stock choice), CM = confusion mistake (stock choice). stk = stock choice; bnd = bond choice. Younger adults in light bars. Older adults in dark bars. Error bars correspond to standard error of the mean. Asterisk in the baseline condition denotes significant difference between younger and older adults in risk-seeking mistakes. Asterisks in remaining graphs denote significant differences in mistakes from baseline ($\dagger p < .1$, $* p < .05$).

