Web appendix
"Understanding demand for flexible pension payouts: Evidence from the Netherlands"

Rik Dillingh, Maria Zumbuehl

September 19, 2023

1 Additional analyses

Table 1: Impact of environment and design of options (fixed effects model)

VARIABLES	p(constant)	p(high/low)	p(lump sum)
Partial replacement rate			
medium (80%)	0.027**	0.025**	-0.052***
	(0.011)	(0.012)	(0.011)
high (100%)	0.070***	0.007	-0.078***
	(0.013)	(0.013)	(0.012)
Interest rate			
high (6%)	0.058***	0.000	-0.059***
	(0.009)	(0.010)	(0.010)
Duration of high period			
long (10 years)	0.023***	-0.024**	0.001
	(0.009)	(0.010)	(0.008)
Size of lump sum			
large (10%)	-0.028***	-0.047***	0.074***
	(0.009)	(0.010)	(0.010)
Draw number	-0.008***	-0.007***	0.016***
	(0.003)	(0.003)	(0.003)
Constant	0.418***	0.336***	0.246***
	(0.014)	(0.014)	(0.013)
Observations	6,384	6,384	6,384
R-squared	0.021	0.009	0.038
Number of individuals	1,064	1,064	1,064

Note: Linear probability fixed effects estimates for the probability of choosing a specific pension payout scheme over the other two options. The base group for the partial replacement rate is 60%, for interest rate it is low (2%), for duration of high in high/low the base group is short (5 years), and for the size of the lump sum it is small (5%). We additionally control for the order in which the individual sees the options. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 2: Impact of environment and design of options (multinomial)

VARIABLES	p(constant)	p(high/low)	p(lump sum)
Net replacement rate			
medium (80%)	0.025**	0.018*	-0.044***
	(0.011)	(0.010)	(0.010)
high (100%)	0.074***	-0.002	-0.072***
	(0.013)	(0.011)	(0.011)
Interest rate			
high (6%)	0.056***	-0.003	-0.053***
	(0.009)	(0.008)	(0.008)
Duration of high period			
long (10 years)	0.019**	-0.020**	0.001
	(0.009)	(0.008)	(0.007)
Size of lump sum			
large (10%)	-0.023**	-0.037***	0.060***
	(0.009)	(0.008)	(0.009)
Draw number	-0.009***	-0.005**	0.014***
	(0.003)	(0.002)	(0.002)
Observations	6,384	6,384	6,384
Number of individuals	1,064	1,064	1,064

Note: Marginal effects from a multinomial random effects estimation for the probability of choosing a specific pension payout scheme over the other two options. The base group for the partial replacement rate is 60%, for interest rate it is low (2%), for duration of high in high/low the base group is short (5 years), and for the size of the lump sum it is small (5%). We additionally control for the order in which the individual sees the options. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 3: Pension payout preferences by personal characteristics (multinomial)

VARIABLES	constant	high/low	lump sum	constant	high/low	lump sum
retired	0.091**	-0.041	-0.051*	0.095***	-0.045	-0.050*
	(0.037)	(0.030)	(0.027)	(0.037)	(0.030)	(0.027)
age	0.004	-0.003	-0.000	0.001	-0.002	0.001
	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)
female	0.017	0.002	-0.019	-0.019	0.026	-0.007
	(0.021)	(0.017)	(0.015)	(0.021)	(0.017)	(0.016)
couple	0.004	-0.037*	0.033*	-0.010	-0.025	0.036*
	(0.026)	(0.021)	(0.019)	(0.026)	(0.021)	(0.019)
income group	-0.017***	0.014***	0.004	-0.012***	0.010***	0.002
	(0.005)	(0.004)	(0.003)	(0.005)	(0.004)	(0.004)
home ownership	0.034	0.028	-0.062***	0.044	0.016	-0.060***
	(0.028)	(0.021)	(0.022)	(0.028)	(0.021)	(0.022)
household savings	-0.024	0.035	-0.011	-0.010	0.019	-0.009
	(0.031)	(0.025)	(0.023)	(0.031)	(0.026)	(0.024)
health	0.029	-0.016	-0.014	0.040**	-0.022	-0.017
	(0.018)	(0.014)	(0.014)	(0.018)	(0.015)	(0.014)
risk				-0.025***	0.013***	0.012***
				(0.005)	(0.004)	(0.004)
discount rate				-0.031	0.006	0.025
				(0.022)	(0.018)	(0.017)
financial literacy				-0.044***	0.026***	0.018**
				(0.011)	(0.009)	(0.008)
trust in pension system				0.012	0.019*	-0.032***
				(0.013)	(0.011)	(0.010)
Observations	6,384	6,384	6,384	6,384	6,384	6,384
Individuals	1,064	1,064	1,064	1,064	1,064	1,064

Note: Marginal effects from multinomial random effects estimations for the probability of choosing a specific pension payout scheme over the other two options. We additionally include in all specifications binary control variables for missing income information, low income, missing information on savings, and in the extended specifications a control for negative discount rates. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 4: Impact of environment and design of options

	No inconsistent choices			No inconsistent individuals		
VARIABLES	p(constant)	p(high/low)	p(lump sum)	p(constant)	p(high/low)	p(lump sum)
Partial replacement rate						
medium (80%)	0.026**	0.028**	-0.054***	0.035***	0.023*	-0.057***
	(0.011)	(0.012)	(0.011)	(0.012)	(0.012)	(0.012)
high (100%)	0.068***	0.010	-0.079***	0.075***	0.011	-0.088***
	(0.013)	(0.013)	(0.012)	(0.014)	(0.014)	(0.013)
Interest rate						
high (6%)	0.058***	0.005	-0.062***	0.056***	0.002	-0.058***
	(0.009)	(0.009)	(0.010)	(0.010)	(0.010)	(0.010)
Duration of high period						
long (10 years)	0.020**	-0.019**	0.000	0.018**	-0.020**	0.003
	(0.009)	(0.009)	(0.008)	(0.009)	(0.010)	(0.009)
Size of lump sum						
large (10%)	-0.021**	-0.050***	0.070***	-0.022**	-0.047***	0.068***
	(0.009)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)
Draw number	-0.009***	-0.007**	0.015***	-0.007**	-0.007**	0.013***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Constant	0.434***	0.328***	0.237***	0.445***	0.310***	0.245***
	(0.031)	(0.028)	(0.026)	(0.035)	(0.031)	(0.030)
Observations	6,006	6,006	6,006	5,112	5,112	5,112
Individuals	1,058	1,058	1,058	852	852	852

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. The base group for the partial replacement rate is 60%, for interest rate it is low (2%), for duration of high in high/low the base group is short (5 years), and for the size of the lump sum it is small (5%). We additionally control for the order in which the individual sees the options. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 5: Pension payout preferences by personal characteristics

	No inconsistent choices						No inconsistent individuals					
VARIABLES	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum
female	0.014	-0.000	-0.013	-0.023	0.022	0.001	0.009	0.016	-0.025	-0.033	0.040*	-0.008
	(0.024)	(0.021)	(0.020)	(0.024)	(0.021)	(0.020)	(0.027)	(0.023)	(0.022)	(0.027)	(0.023)	(0.023)
age	0.003	-0.004	0.000	0.001	-0.003	0.002	0.003	-0.002	-0.001	-0.001	-0.001	0.001
	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
retired	0.098**	-0.036	-0.062*	0.102**	-0.039	-0.063*	0.119**	-0.062	-0.057	0.127***	-0.068*	-0.059
	(0.042)	(0.037)	(0.034)	(0.042)	(0.037)	(0.034)	(0.046)	(0.041)	(0.036)	(0.046)	(0.041)	(0.037)
couple	0.004	-0.037	0.032	-0.011	-0.024	0.036	-0.012	-0.029	0.040	-0.036	-0.010	0.047*
	(0.030)	(0.025)	(0.025)	(0.030)	(0.025)	(0.025)	(0.034)	(0.028)	(0.027)	(0.033)	(0.028)	(0.027)
income group	-0.018***	0.016***	0.002	-0.013**	0.013***	0.000	-0.022***	0.015***	0.007	-0.016***	0.011**	0.005
	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
home ownership	0.013	0.044*	-0.058**	0.024	0.030	-0.054**	0.040	0.041	-0.081***	0.058	0.021	-0.079**
	(0.033)	(0.025)	(0.028)	(0.032)	(0.025)	(0.028)	(0.037)	(0.029)	(0.031)	(0.036)	(0.028)	(0.031)
savings	-0.008	0.020	-0.012	0.006	0.003	-0.010	-0.004	0.019	-0.015	0.011	0.002	-0.013
	(0.036)	(0.030)	(0.031)	(0.036)	(0.030)	(0.032)	(0.041)	(0.034)	(0.035)	(0.040)	(0.034)	(0.035)
health	0.025	-0.015	-0.011	0.035*	-0.022	-0.013	0.033	-0.024	-0.009	0.046*	-0.032*	-0.013
	(0.021)	(0.017)	(0.018)	(0.021)	(0.017)	(0.018)	(0.024)	(0.019)	(0.021)	(0.024)	(0.019)	(0.021)
risk				-0.026***	0.011**	0.015***				-0.029***	0.012**	0.017***
				(0.006)	(0.004)	(0.005)				(0.006)	(0.005)	(0.005)
discount rate				-0.031	0.001	0.030				-0.029	0.005	0.024
				(0.026)	(0.022)	(0.021)				(0.028)	(0.024)	(0.023)
financial literacy				-0.043***	0.029***	0.014				-0.051***	0.033***	0.018
				(0.013)	(0.011)	(0.010)				(0.015)	(0.012)	(0.011)
trust in pension system				0.014	0.016	-0.030**				0.010	0.022	-0.033**
				(0.015)	(0.013)	(0.013)				(0.017)	(0.014)	(0.014)
Constant	0.224	0.453**	0.320*	0.518**	0.284	0.194	0.291	0.342	0.367*	0.653**	0.130	0.218
	(0.234)	(0.201)	(0.186)	(0.235)	(0.205)	(0.196)	(0.256)	(0.224)	(0.200)	(0.259)	(0.228)	(0.213)
Observations	6,006	6,006	6,006	6,006	6,006	6,006	5,112	5,112	5,112	5,112	5,112	5,112
Individuals	1,058	1,058	1,058	1,058	1,058	1,058	852	852	852	852	852	852

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. We additionally include in all specifications binary control variables for missing income information, low income, missing information on savings, and in the extended specifications a control for negative discount rates. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 6: Impact of environment and design of options

	No missing incomes			No low or missing incomes		
VARIABLES	p(constant)	p(high/low)	p(lump sum)	p(constant)	p(high/low)	p(lump sum)
Partial replacement rate						
medium (80%)	0.030**	0.024*	-0.054***	0.025*	0.029**	-0.055***
	(0.012)	(0.013)	(0.012)	(0.013)	(0.015)	(0.015)
high (100%)	0.072***	0.009	-0.083***	0.064***	0.021	-0.087***
	(0.014)	(0.014)	(0.013)	(0.016)	(0.017)	(0.015)
Interest rate						
high (6%)	0.061***	0.001	-0.060***	0.053***	0.008	-0.061***
	(0.010)	(0.010)	(0.011)	(0.011)	(0.012)	(0.012)
Duration of high period						
long (10 years)	0.021**	-0.021**	0.000	0.019*	-0.021*	0.003
	(0.010)	(0.010)	(0.009)	(0.011)	(0.012)	(0.011)
Size of lump sum						
large (10%)	-0.030***	-0.046***	0.075***	-0.028**	-0.058***	0.085***
	(0.010)	(0.011)	(0.011)	(0.011)	(0.013)	(0.013)
Draw number	-0.008***	-0.007**	0.015***	-0.006	-0.009**	0.014***
	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Constant	0.410***	0.335***	0.255***	0.404***	0.369***	0.228***
	(0.033)	(0.030)	(0.028)	(0.038)	(0.037)	(0.032)
Observations	5,400	5,400	5,400	4,110	4,110	4,110
Individuals	900	900	900	685	685	685

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. The base group for the partial replacement rate is 60%, for interest rate it is low (2%), for duration of high in high/low the base group is short (5 years), and for the size of the lump sum it is small (5%). We additionally control for the order in which the individual sees the options. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 7: Pension payout preferences by personal characteristics

	No individuals with missing income						No individuals with missing or low income					
VARIABLES	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum
retired	0.102**	-0.035	-0.067*	0.109**	-0.040	-0.069**	0.059	-0.018	-0.041	0.068	-0.026	-0.042
	(0.044)	(0.038)	(0.035)	(0.044)	(0.038)	(0.035)	(0.050)	(0.045)	(0.038)	(0.050)	(0.045)	(0.039)
age	0.003	-0.004	0.001	0.001	-0.003	0.003	0.005	-0.005	0.000	0.003	-0.004	0.002
	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
female	0.009	0.008	-0.017	-0.021	0.029	-0.008	0.008	0.011	-0.018	-0.023	0.032	-0.009
	(0.026)	(0.022)	(0.021)	(0.026)	(0.022)	(0.022)	(0.030)	(0.026)	(0.025)	(0.031)	(0.027)	(0.024)
couple	0.006	-0.038	0.032	-0.013	-0.024	0.037	-0.031	-0.021	0.052*	-0.044	-0.010	0.054*
	(0.031)	(0.026)	(0.025)	(0.031)	(0.026)	(0.026)	(0.036)	(0.031)	(0.028)	(0.035)	(0.031)	(0.028)
income group	-0.019***	0.014***	0.005	-0.014***	0.011**	0.003	-0.016***	0.013***	0.003	-0.012**	0.010**	0.002
	(0.005)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.005)	(0.004)
home ownership	0.044	0.018	-0.062**	0.053	0.004	-0.057**	0.030	0.026	-0.056	0.040	0.010	-0.049
	(0.036)	(0.028)	(0.029)	(0.035)	(0.028)	(0.029)	(0.043)	(0.034)	(0.034)	(0.043)	(0.034)	(0.034)
household savings	-0.027	0.034	-0.008	-0.020	0.021	-0.002	-0.016	0.045	-0.029	-0.011	0.032	-0.022
	(0.037)	(0.032)	(0.032)	(0.037)	(0.032)	(0.032)	(0.047)	(0.040)	(0.040)	(0.046)	(0.040)	(0.040)
health	0.050**	-0.028	-0.022	0.058***	-0.034*	-0.023	0.016	-0.019	0.003	0.026	-0.027	0.001
	(0.022)	(0.018)	(0.019)	(0.022)	(0.018)	(0.019)	(0.025)	(0.021)	(0.022)	(0.025)	(0.021)	(0.022)
risk				-0.028***	0.013***	0.015***				-0.028***	0.011*	0.018***
				(0.006)	(0.005)	(0.005)				(0.007)	(0.006)	(0.006)
discount rate				-0.035	0.007	0.028				-0.011	-0.012	0.024
				(0.027)	(0.023)	(0.022)				(0.031)	(0.027)	(0.025)
financial literacy				-0.032**	0.026**	0.006				-0.034**	0.030**	0.004
				(0.014)	(0.011)	(0.012)				(0.017)	(0.014)	(0.014)
trust in pension system				0.012	0.015	-0.027*				0.006	0.016	-0.022
				(0.016)	(0.014)	(0.014)				(0.018)	(0.016)	(0.015)
Constant	0.174	0.529**	0.297	0.480*	0.336	0.184	0.184	0.540**	0.276	0.456	0.382	0.162
	(0.249)	(0.215)	(0.198)	(0.253)	(0.221)	(0.208)	(0.285)	(0.257)	(0.216)	(0.287)	(0.265)	(0.227)
Observations	5,400	5,400	5,400	5,400	5,400	5,400	4,110	4,110	4,110	4,110	4,110	4,110
Individuals	900	900	900	900	900	900	685	685	685	685	685	685

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. We additionally include in all specifications binary control variables for missing income information, low income, missing information on savings, and in the extended specifications a control for negative discount rates. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 8: Pension payout preferences by personal characteristics

	Single households						Couple households					
VARIABLES	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum	constant	high/low	lump sum
retired	0.133*	-0.029	-0.103*	0.153**	-0.043	-0.110*	0.093*	-0.056	-0.038	0.083*	-0.052	-0.031
	(0.078)	(0.064)	(0.059)	(0.076)	(0.064)	(0.060)	(0.049)	(0.044)	(0.039)	(0.049)	(0.043)	(0.039)
age	0.004	-0.006	0.002	0.002	-0.005	0.002	0.002	-0.001	-0.001	0.000	-0.001	0.001
	(0.007)	(0.005)	(0.005)	(0.007)	(0.005)	(0.005)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
female	-0.030	-0.027	0.057*	-0.060	-0.008	0.067*	0.025	0.019	-0.044*	-0.017	0.047**	-0.030
	(0.042)	(0.035)	(0.034)	(0.043)	(0.036)	(0.036)	(0.028)	(0.024)	(0.023)	(0.028)	(0.024)	(0.023)
income group	-0.031**	0.019	0.011	-0.028**	0.018	0.010	-0.014**	0.012**	0.002	-0.009	0.009*	0.000
	(0.012)	(0.012)	(0.009)	(0.012)	(0.012)	(0.009)	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
home ownership	0.017	-0.001	-0.016	0.036	-0.015	-0.021	0.010	0.070**	-0.080**	0.021	0.050	-0.072*
	(0.049)	(0.038)	(0.039)	(0.049)	(0.038)	(0.038)	(0.043)	(0.032)	(0.036)	(0.042)	(0.032)	(0.037)
savings	-0.013	0.118***	-0.105**	0.011	0.103**	-0.114**	-0.024	-0.024	0.048	-0.015	-0.043	0.057
	(0.055)	(0.043)	(0.049)	(0.055)	(0.044)	(0.049)	(0.046)	(0.040)	(0.037)	(0.046)	(0.040)	(0.037)
health	0.059	-0.058**	-0.001	0.067*	-0.065**	-0.003	0.017	0.005	-0.022	0.026	-0.004	-0.022
	(0.036)	(0.029)	(0.029)	(0.035)	(0.029)	(0.029)	(0.025)	(0.021)	(0.021)	(0.024)	(0.021)	(0.021)
risk				-0.004	0.006	-0.002				-0.036***	0.014**	0.022***
				(0.009)	(0.007)	(0.007)				(0.007)	(0.005)	(0.005)
discount rate				-0.023	0.022	0.001				-0.022	-0.009	0.031
				(0.043)	(0.035)	(0.036)				(0.030)	(0.027)	(0.025)
financial literacy				-0.047**	0.020	0.027				-0.041**	0.034***	0.007
				(0.021)	(0.017)	(0.018)				(0.016)	(0.013)	(0.012)
trust in pension system				-0.029	0.032	-0.003				0.030*	0.012	-0.042***
				(0.024)	(0.020)	(0.020)				(0.018)	(0.017)	(0.016)
Constant	0.246	0.603*	0.151	0.493	0.411	0.096	0.322	0.241	0.437**	0.535*	0.112	0.353
	(0.410)	(0.333)	(0.313)	(0.416)	(0.339)	(0.336)	(0.278)	(0.243)	(0.219)	(0.275)	(0.245)	(0.226)
Observations	1,896	1,896	1,896	1,896	1,896	1,896	4,488	4,488	4,488	4,488	4,488	4,488
Number of nomem_encr	316	316	316	316	316	316	748	748	748	748	748	748

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. We additionally include in all specifications binary control variables for missing income information, low income, missing information on savings, and in the extended specifications a control for negative discount rates. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

Table 9: Pension payout preferences by personal characteristics

VARIABLES	constant	high/low	lump sum
retired	0.107***	-0.044	-0.063*
	(0.041)	(0.036)	(0.033)
age	0.000	-0.002	0.002
	(0.004)	(0.003)	(0.003)
female	-0.026	0.029	-0.003
	(0.024)	(0.020)	(0.020)
couple	-0.017	-0.016	0.033
	(0.029)	(0.025)	(0.024)
income group	-0.014***	0.011**	0.003
	(0.005)	(0.004)	(0.004)
home ownership	0.032	0.021	-0.053**
	(0.032)	(0.025)	(0.026)
household savings	0.000	0.010	-0.010
	(0.035)	(0.029)	(0.031)
health	0.040**	-0.024	-0.016
	(0.020)	(0.017)	(0.017)
risk	-0.026***	0.012***	0.014***
	(0.005)	(0.004)	(0.004)
discount rate	-0.030	0.006	0.024
	(0.025)	(0.021)	(0.021)
financial literacy			
1 correct answer	-0.072	0.001	0.071*
	(0.058)	(0.042)	(0.042)
2 correct answers	-0.156***	0.073*	0.083**
	(0.056)	(0.041)	(0.040)
3 correct answer	-0.192***	0.097**	0.095**
	(0.057)	(0.043)	(0.042)
4 correct answer	-0.169***	0.091*	0.078*
	(0.063)	(0.048)	(0.046)
trust in pension system			
little	0.015	0.020	-0.035
	(0.050)	(0.040)	(0.047)
some	0.045	0.033	-0.078*
	(0.047)	(0.038)	(0.043)
much	0.056	0.031	-0.087*
	(0.052)	(0.043)	(0.046)
very much	-0.108	0.249***	-0.141*
	(0.081)	(0.095)	(0.083)
Constant	0.618***	0.265	0.116
	(0.234)	(0.203)	(0.192)
Observations	6,384	6,384	6,384
Number of nomem_encr	1,064	1,064	1,064

Note: Linear probability random effects estimates for the probability of choosing a specific pension payout scheme over the other two options. We additionally include in all specifications binary control variables for missing income information, low income, missing information on savings, and a control for negative discount rates. Standard errors are in parentheses, clustered at household level, significant at *** p<0.01, ** p<0.05, * p<0.1

2 Survey questions

Health

How healthy do you expect you will be at the age of 67 compared to the average 67-year-old? (*if younger than 67*)
How healthy are you compared to other people of your age? (*if at least 67*)

1. Above average
2. Average
3. Below average

Income

Please indicate to which category your total net monthly household income per month belongs. (*if younger than 67*)
Please indicate to which category your total net monthly household income per month belonged, prior to your retirement.(*if at least 67*)
Your total net household income consists of your net income from work, benefits, [state and possible supplementary pension, *if at least 67*] and capital income. If you do not know exactly, please provide your best estimate.

1. No income
2. € 0 - € 499
3. € 500 - € 999
4. € 1,000 - € 1,499
5. € 1,500 - € 1,999
6. € 2,000 - € 2,499
7. € 2,500 - € 2,999
8. € 3,000 - € 3,499
9. € 3,500 - € 3,999
10. € 4,000 - € 4,499
11. € 4,500 - € 4,999
12. € 5,000 - € 5,499
13. € 5,500 - € 5,999
14. € 6,000 - € 6,499
15. € 6,500 - € 6,999
16. € 7,000 - € 7,499
17. € 7,500 - € 7,999
18. € 8,000 - € 8,499
19. € 8,500 - € 8,999

20. € 9,000 - € 9,499
21. € 9,500 - € 10,000
22. more than € 10,000
23. I don't know
24. I don't want to say

Household savings

How much money do you have saved up to be able to deal with setbacks or to make expensive purchases (e.g. washing machine or TV) without having to borrow money?

1. Little or no money
2. A few months' worth of my net monthly household income
3. More than half a year's worth of my net monthly household income
4. I don't know
5. I don't want to say

Mortgage

Do you expect to have / Did you have a mortgage debt at the time of your retirement?

1. No
2. Yes, but only for another 5 years at most
3. Yes, but only for another 10 years at most
4. Yes, an interest-only mortgage or partial interest-only mortgage
5. I don't know
6. I don't want to say

Knowledge high/low

Are you familiar with the option to divide your pension across two periods, with a higher benefit payout in the first phase and a lower benefit payout in the second phase?

1. Yes
2. No

Knowledge lump sum

Are you familiar with the new option announced by the government which allows you to receive part of your pension immediately in a once-off lump sum payment at the moment of your retirement, and then to receive a lower pension benefit for the rest of your life?

1. Yes
2. No

Trust in pension system

Do you have confidence in the pension system?

1. Very much
2. Quite a lot
3. Somewhat
4. Not a lot
5. Very little

Indexation

Based on expectations, to what extent can your future pension be indexed in the coming 5 years ?(*if younger than 67*)
Based on expectations, to what extent can your pension be indexed in the coming 5 years? (*if at least 67*)

1. Not at all
2. Partially
3. Fully
4. I don't know
5. I don't want to sa

Own pension choice, high low

If at least 67 years old:
Did you choose to have your pension paid out based on a high-low arrangement, with higher payments in the first years of your retirement and a lower payment in the later years of your retirement?

1. Yes
2. No
3. I don't know
4. I don't want to say

If younger than 67:
How likely is it that you will choose to have your pension paid out based on a high-low arrangement, with higher payments in the first years of your retirement and a lower payment in the later years of your retirement?

1. Probably or almost certainly yes
2. Probably or almost certainly no
3. I don't know
4. I don't want to say

Own pension choice, lump sum

How likely is it that you will choose a lump sum payment upon retirement: in other words, a sum of money paid out immediately upon retirement, with lower pension payments after that? (*if younger than 67*)
Would you, had it been possible, have preferred a lump sum payment upon retirement: in other words, a sum of money paid out immediately upon retirement, with lower pension payments after that? (*if at least 67*)

1. Probably or almost certainly yes
2. Probably or almost certainly no
3. I don't know
4. I don't want to say

Motive high/low

For what specific purpose would / did you use the higher pension payments provided under this high-low arrangement? Multiple answers possible

1. To pay off a loan
2. To give the children money to buy a house
3. To pay our ongoing mortgage
4. To go on an expensive trip far away
5. Uncertainty about the future of the pension system
6. Uncertainty about potential future medical expenses
7. Other
8. I don't know

Motive lump sum

For what specific purpose would you use / have you used the once-off payment if you choose / had chosen it after all? Multiple answers possible

1. To pay off a loan
2. To give the children money to buy a house
3. To pay our ongoing mortgage
4. To go on an expensive trip far away

5. Uncertainty about the future of the pension system
6. Uncertainty about potential future medical expenses
7. Other
8. I don't know

Financial literacy

Suppose you have 100 euros in a savings account, with an interest rate of 2% per year. How much money would be in your savings account after five years, if you did not take any money out?

1. More than 102 euros
2. Exactly 102 euros
3. Less than 102 euros
4. I don't know
5. I don't want to say

Imagine that the interest on your savings account is 1% per year and inflation is 2% per year. After 1 year, would you be able to buy more, exactly the same, or less than you could today with the money in your account?

1. More than today
2. Exactly the same as today
3. Less than today
4. I don't know
5. I don't want to say

A share in a single company normally offers more reliable returns than an investment fund that only invests in shares.

1. True
2. Untrue
3. I don't know
4. I don't want to say

When the interest rate increases, what should happen with bond prices?

1. They should increase
2. They should decrease
3. They should remain the same
4. None of the above
5. I don't know

6. I don't want to say

Risk

How do you see yourself? Generally speaking, are you someone who is completely prepared to take risks, or someone who prefers to avoid taking risks?

0 "Not at all prepared to take risks"

...

10 "Completely prepared to take risks"

Discount rate

Please enter an amount of money below (X1), so that you find option B as appealing as option A:
(A) Receive € 800 now
(B) Receive X1 next year
X1 = € 0...10000

3 Technical note: Documentation of calibration of numeric values for survey experiment

3.1 Annuity pension payment

The starting point is the net household income per month during the pre-retirement phase of the respondent. Based on this income, the respondent falls into one of the income categories i. Each income class has a representative household with a net household income $Y_i^{net,67-}$ on which we base the vignettes.

In the pension phase, the fictitious income first receives a net state pension ($Y_i^{net,aow}$). The amount of this depends on the composition of the household (single/living together). This benefit amounts to 925 euros for a single person and 1275 euros for a cohabiting couple, excluding holiday pay and payroll tax credit.[1]

In addition the fictitious household receives a net payment from the second pillar pension ($Y_{i,j}^{net,pillar2}$) in the retirement phase. This can be a standard annuity payment. The benefit is assumed to be a fraction σ_j of the difference between net income in the pre-pension phase and the net state pension benefit ($Y_i^{net,67-} - Y_i^{net,aow}$). The fraction σ_j is varied randomly (60%, 80% and 100%, **partial replacement rate**) for respondents in our experiments.

$$Y_{i,j}^{net,pillar2} = \sigma_j \left(Y_i^{net,67-} - Y_i^{net,aow} \right) \tag{1}$$

The total net income in the pension phase, made up of net state pension benefit and net second pillar pension benefit, is

$$Y_{i,j}^{net,total} = Y_i^{net,aow} + Y_{i,j}^{net,pillar2} \tag{2}$$

with the total replacement rate $rr_{i,j}$ as the ratio between the net income before and after retirement

$$rr_{i,j} = \frac{Y_{i,j}^{net,total}}{Y_i^{net,67-}} \tag{3}$$

[1]The values are taken from the SVB website. The corresponding gross state pension benefits are rounded off at 1,225 euros for singles and 1,700 euros for cohabitants. The payroll tax credit has not been taken into account here because it has been incorporated in the average tax rate.

In order to calculate the consequences of a lump sum benefit and high/low construction, the pension entitlements on which the (chosen) net second-pillar pension benefit is based must be determined. To this end, taking into account the gross/net trajectory, the gross household income in the retirement phase is calculated as

$$Y_{i,j}^{gross,total} = \frac{Y_{i,j}^{net,total}}{1 - t_{i,j}} \tag{4}$$

where $t_{i,j}$ is the average tax rate in the retirement stage for a representative household in income group i at the assigned replacement rate σ_j. Taking into account the gross state pension benefit of a household income ($Y_i^{gross,aow}$), the gross (annuity) second-pillar pension benefit follows in the retirement phase ($Y_{i,j}^{gross,pillar2}$) if

$$Y_{i,j}^{gross,pillar2} = Y_{i,j}^{gross,total} - Y_i^{gross,aow} \tag{5}$$

The gross second-pillar pension benefit includes a stock of pension rights $W_{i,j}^{pensionrights}$. This follows from the product of this payment, the translation from months to years (12) and an annuity factor R_n

$$W_{i,j}^{pensionrights} = R_n 12 Y_{i,j}^{gross,pillar2} \tag{6}$$

The annuity factor R_n is derived for simplicity assuming a constant probability of death π of 2%, a constant real interest rate r (2% or 6.34%, **interest rate**) and an annuity term (n) of 20 years as

$$R_n = \mu \frac{1 - \mu^n}{1 - \mu} \tag{7}$$

with μ

$$\mu = \frac{1 - \pi}{1 + r} \tag{8}$$

The average tax rate mentioned above is based on a table of gross/net trajectories. For gross monthly incomes from 1 euro in steps of 125 euros, the corresponding annual incomes and net annual and monthly incomes are determined. This process

is described in more detail in the appendix. With the net household income in the retirement phase, the average tax rates for the two surrounding net monthly incomes are searched for in the table, after which the average tax rate is calculated via interpolation between the threshold values.

When determining the average tax rate for cohabitants, it is assumed that the income is earned by 1.5 units.

3.2 Choice options

We offer the respondent two alternatives to the annuity pension payment described above.

The first alternative concerns a high/low construction where during m years (m = 5 or 10 and is randomly determined, **duration high/low**) a higher pension benefit ($Y_{i,j}^{gross,pillar2,hg}$) is received and then for $20-m$ years a lower benefit ($Y_{i,j}^{gross,pillar2,lg}$). Under the condition of actuarial fairness must then apply

$$W_{i,j}^{pensionrights} = R_m 12 Y_{i,j}^{gross,pillar2,hg} + R_{20-m} 12 Y_{i,j}^{gross,pillar2,lg} \tag{9}$$

with

$$R_m = \mu \frac{1-\mu^m}{1-\mu} \tag{10}$$

$$R_{20-m} = \mu^{m+1} \frac{1-\mu^{20-m}}{1-\mu} \tag{11}$$

The legal condition is that the low benefit must be at least 75% of the value of the high benefit. This sets extreme limits on the amounts in both distribution phases that follow

$$W_{i,j}^{pensionrights} = R_m 12 Y_{i,j,m}^{gross,pillar2,hg} + R_{20-m} 12 \frac{3}{4} Y_{i,j,m}^{gross,pillar2,hg} \tag{12}$$

This leads to

$$Y_{i,j,m}^{gross,pillar2,hg} = \frac{W_{i,j}^{pensionrights}}{12(R_m + \frac{3}{4} R_{20-m})} \tag{13}$$

$$Y_{i,j,m}^{gross,pillar2,lg} = \frac{3}{4} Y_{i,j,m}^{gross,pillar2,hg} \tag{14}$$

Together with the state pension income, the total gross household income during the high and low phase then follow as

$$Y_{i,j,m}^{gross,hg} = Y_{i,j,m}^{gross,pillar2,hg} + Y_{i}^{gross,aow} \tag{15}$$

$$Y_{i,j,m}^{gross,lg} = Y_{i,j,m}^{gross,pillar2,lg} + Y_{i}^{gross,aow} \tag{16}$$

The incomes in the high and low benefit phases correspond to different average tax rates than in the starting situation. These rates ($t_{i,j}^{hg}$, $t_{i,j}^{lg}$) are calculated using the equations described in Appendix 1. This leads to the net household incomes

$$Y_{i,j,m}^{net,hg} = (1 - t_{i,j}^{hg}) Y_{i,j,m}^{gross,hg} \tag{17}$$

$$Y_{i,j,m}^{net,lg} = (1 - t_{i,j}^{lg}) Y_{i,j,m}^{gross,lg} \tag{18}$$

The second alternative concerns a one time lump sum payment with which part (5 or 10%, **size lump sum**) of the pension rights may be withdrawn immediately ($Y_{i,j,k}^{gross,pillar2,onetime,l-s}$). For this one time payment it applies that

$$Y_{i,j,k}^{gross,pillar2,onetime,l-s} = \pi_k W_{i,j}^{pensionrights} \quad k = 1, 2 \tag{19}$$

with π_k as the lump sum fraction. Again under the condition of actuarial fairness, the amount of the (incidental) lump sum payment will then apply.

$$W_{i,j}^{pensionrights} = Y_{i,j,k}^{gross,pillar2,onetime,l-s} + R_n 12 Y_{i,j,k}^{gross,pillar2,l-s} \tag{20}$$

where $Y_{i,j,k}^{gross,2-pillar,l-s}$ is the remaining gross monthly annuity at the pension payment. This therefore applies to this structural benefit

$$Y_{i,j,k}^{gross,pillar2,l-s} = \frac{W_{i,j}^{pensionrights} - Y_{i,j,k}^{gross,pillar2,onetime,l-s}}{R_n 12} \tag{21}$$

Taking into account the state pension, the structural total pension income becomes

$$Y_{i,j,k}^{gross,l-s} = Y_{i,j,k}^{gross,pillar2,l-s} + Y_{i}^{gross,aow} \tag{22}$$

By analogy with the high/low construction, average tax rates for the first year and the structural situation (second year and beyond) are determined ($t_{i,j}^{l-s,inc}$, $t_{i,j}^{l-s,str}$).

In the case of a lump sum , the structural net pension income becomes

$$Y_{i,j,k}^{net,l-s} = (1 - t_{i,j}^{l-s,str}) Y_{i,j,k}^{gross,l-s} \tag{23}$$

We also present the net lump sum payment in the vignette. This one is the result of

1. the gross lump sum payment that is settled at the average tax rate in the first year ($t_{i,j}^{l-s,inc}$) and

2. an adjustment for the difference between the structural pension income ($Y_{i,j,k}^{net,l-s}$) and the (lower) net pension income that would have arisen in the first year if this had been settled against the (higher) average rate of that year ($t_{i,j}^{l-s,inc}$).[2]

$$\begin{aligned} Y_{i,j,k}^{net,pillar2,onetime,l-s} &= (1 - t_{i,j}^{l-s,inc}) Y_{i,j,k}^{gross,pillar2,onetime,l-s} \\ &- 12 \left[Y_{i,j,k}^{net,l-s} - (1 - t_{i,j}^{l-s,inc}) Y_{i,j,k}^{gross,l-s} \right] \end{aligned} \tag{24}$$

3.3 Appendix: Gross/Net trajectories

The rates from the 2020 Tax Plan are used for the gross/net trajectories. The average tax rate (t^{avg}) is the quotient of net paid payroll/income tax (T^{net}) and gross annualized income (Y).

$$t^{gem} = T^{net}/Y \tag{25}$$

The net tax rate paid is the difference between the payroll/income tax excluding tax credits (T^{gross}) and the two/three tax credits (general tax credit AHK, elderly person's tax credit OK and single elderly person's tax credit AOK).

$$T^{net} = T^{gross} - AHK - OK - AOK \tag{26}$$

This applies to the payroll/income tax excluding tax credits

$$T^{gross} = \sum_{i=1}^{4} T_i \tag{27}$$

as a sum of the tax paid in four different tax brackets T_i. This applies to each of the four separate tax brackets

$$T_i = t_i \min\{\max\{Y - G_{i-1}, 0\}, G_i - G_{i-1}\} \tag{28}$$

with t_i the institutional tax rate applicable to tax bracket i and G_i the upper limit of this bracket ($G_0 = 0$).

[2] Factor 12 refers to conversion of monthly to annual income.

A fixed amount (1,413 euros) and a reduction (2,945%) to 0 euros from the first tax bracket apply to the general tax credit (AHK)

$$AHK = \max\{0, 1413 - \frac{2.956}{100} \max\{0, Y - G_1\}\} \tag{29}$$

The elderly person's discount (OK) also has a fixed amount (1622 euros) and a reduction (15%) to 0 euros from an income of 37,372 euros

$$OK = \max\{0, 1622 - \frac{15}{100} \max\{0, Y - 37372\}\} \tag{30}$$

The single elderly person's tax credit is a fixed amount that is only linked to receiving a single person's state pension

$$AOK = \begin{cases} 0 & \text{if cohabiting} \\ 436 & \text{if single} \end{cases} \tag{31}$$