

Framing and the Annuity Decision

Eduard Ponds

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Framing and the annuitization decision

Experimental evidence from a Dutch pension fund

Christian Bockweg, Eduard Ponds, Onno Steenbeek and Joyce Vonken

NETSPAR ACADEMIC SERIES

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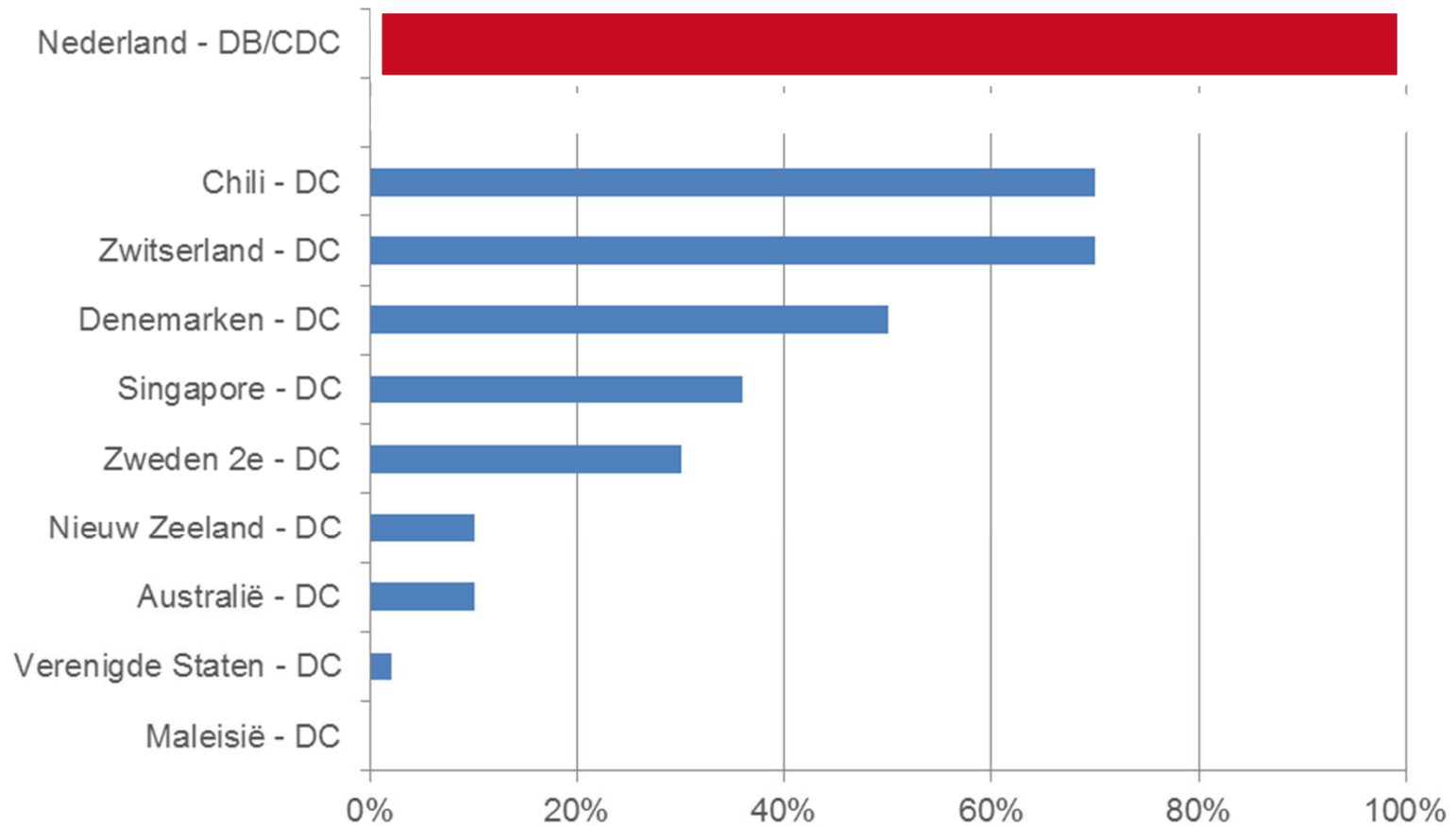
Joint work with



Motivation

- Reform of Pension sector in NLD will lead to choice options:
 1. Individual DC in accumulation phase
 2. Partial lump sum at retirement
- Which role for professionals?
- How to offer choice to individuals?
 - Can professional change individual choice behavior?
 - What is the preferred intervention, if any?
 - Uniform defaults not useful when heterogeneity is large

Annuitization: Netherlands as outlier



Degree of annuitization in retirement



Experiment: maximum 20% lumpsum

- Hypothetical choice
 - Decision to take a partial Lump Sum at retirement
 - Maximum Lump Sum is 20% of accrued pension
- Research question: How sensitive are individuals for active steering by professionals via:
 1. Framing
 2. Defaults

FRAMING

- Individuals change preferences by use of framing
- We construct four frames by combining:
 - Consumption and Investment language
 - Loss and Gain frames
- Construction frames based on: Brown et al. (2008) and Agnew et al. (2008)

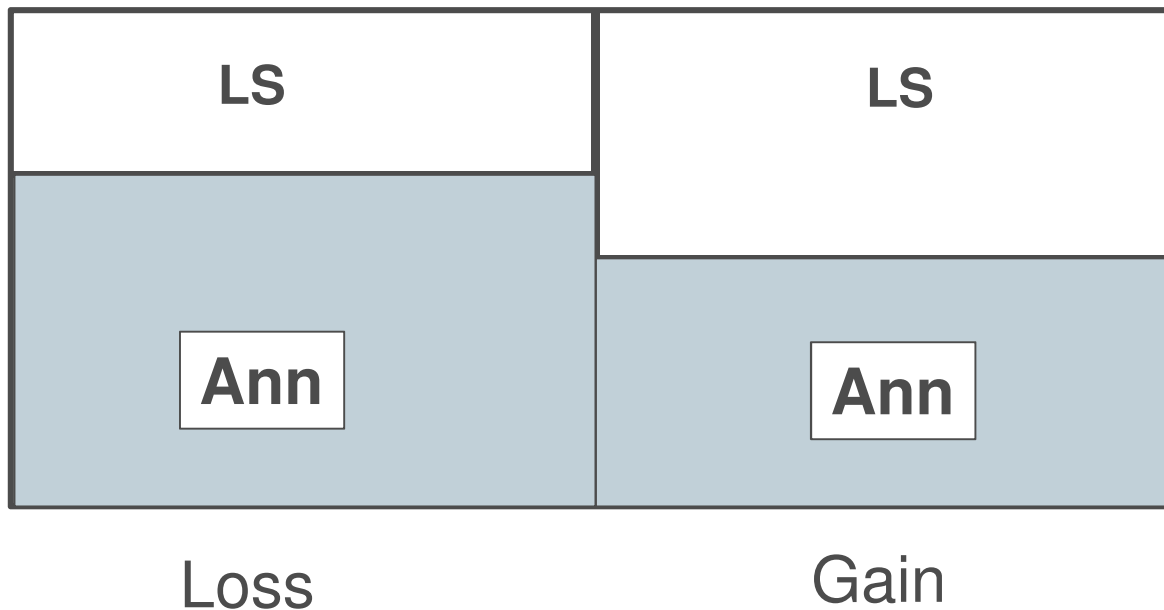
Consumption Frame	Investment Frame
<ul style="list-style-type: none">• Spending• Income• Annual income match annual spending• No deficit end of life <p>=> Annuities attractive</p>	<ul style="list-style-type: none">• Capital at hand• Return (benefits)• Liquidity• Total return annuities risky due to uncertain lifetime <p>=> Annuities NOT attractive</p>

LOSS AND GAIN FRAMES

- We construct examples to explain effects of More Annuities (Gain) and Less Annuities (Loss)
- Loss aversion implies more annuities in Loss examples compared to Gain examples

LOSS AND GAIN FRAMES

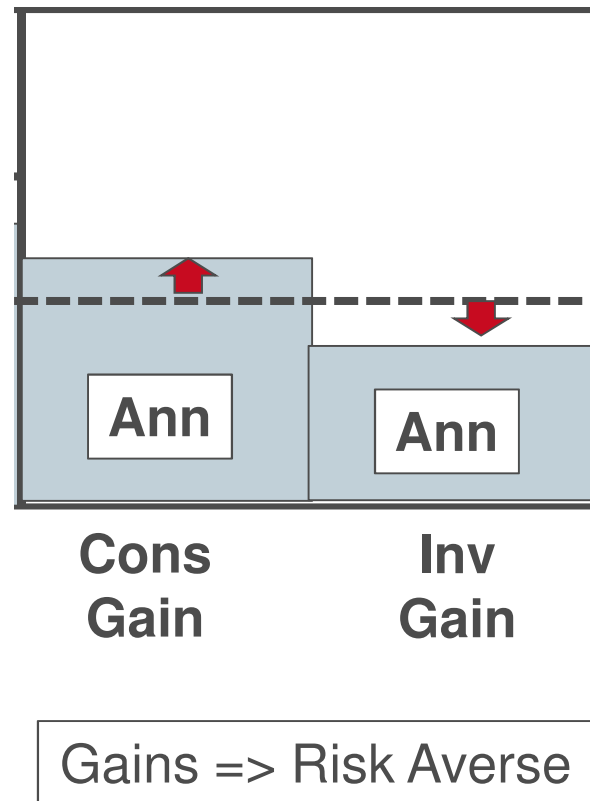
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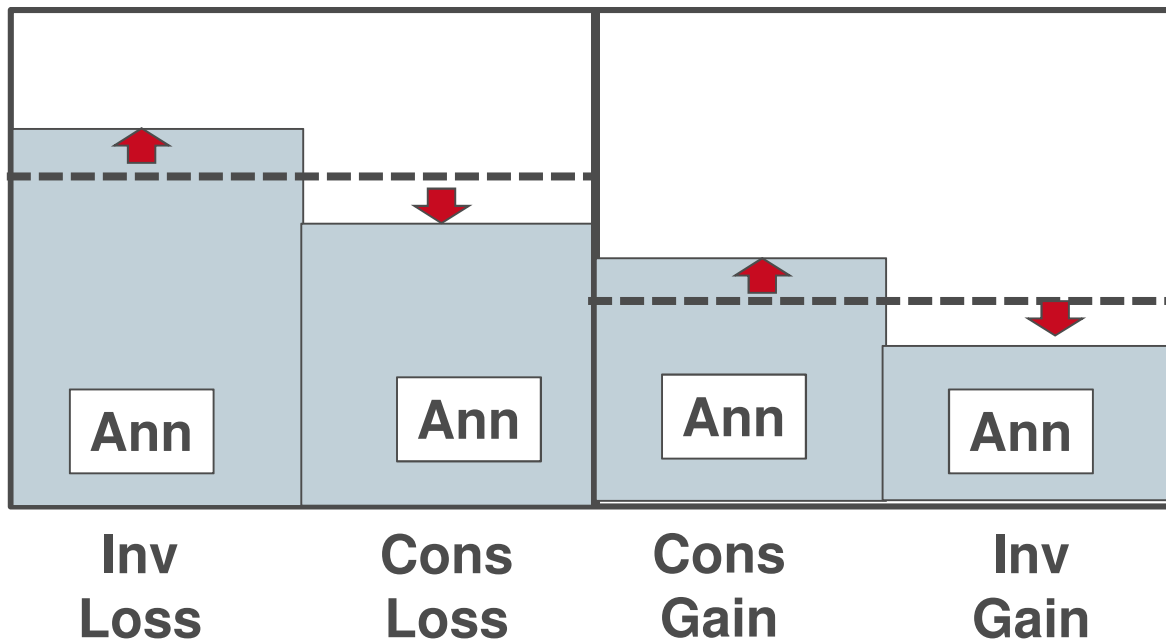
INTERACTION => REFLECTION EFFECT

- INTERACTION of Gain/Loss frames and Inv / Cons frames leads to Reflection effect
- Risk preferences may turn
- *“We are risk-averse when we have something to gain, but risk-seeking when we have something to lose”*

INTERACTION => REFLECTION EFFECT



INTERACTION => REFLECTION EFFECT



Loss => Risk Seeking

Gains => Risk Averse

DEFAULTS

- Individuals tend to follow standard solutions (defaults)
- We check for two defaults
 - Neutral frame + preselection 0% lump sum
 - Neutral frame + preselection 10% lump sum

7 Subgroups with each own framing

1. Neutral
2. Neutral + 0% default
3. Neutral + 10% default
4. Consumption + Gain
5. Consumption + Loss
6. Investment + Gain
7. Investment + Loss

Experiment among participants ABP pension fund



- Pension fund for Government and Education
- Size
 - 2.5 million participants
 - 350 billion AuM
- Pension Plan
 - DB with conditional indexation
 - 100% annuitization at retirement
 - Choice as to annuity profile during retirement

Experiment:

N = Almost 3200 active participants (from 15000 invited)

Two steps in experiment

1. Choose either 100% Annuity or Partial lump sum
2. Choice of annuity profile

Use of personal data individuals as known from ABP administration:

- Pension accrual (UPO)
- Income and parttime factor
- Partner
- ...

Step 1: size of lump sum

- What is your preferred size of partial lump sum at retirement?
- You may choose from 5 possibilities, and you are able to check impact on annual gross benefit payment:

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			Lump sum	Annuity
•	0%	➔	0	24000
•	5%	➔	16800	22800
•	10%	➔	33600	21600
•	15%	➔	50400	20400
•	20%	➔	67200	19200

Step 2: Annuity profile during retirement

- After lump sum choice individuals get the choice to select an annuity profile during retirement:
 1. Level annuity
 2. High – Low profile
 3. Low – High profile
- Individuals are allowed to switch between step 1 and step 2

EVALUATION CHOICES IN TWO STAGES

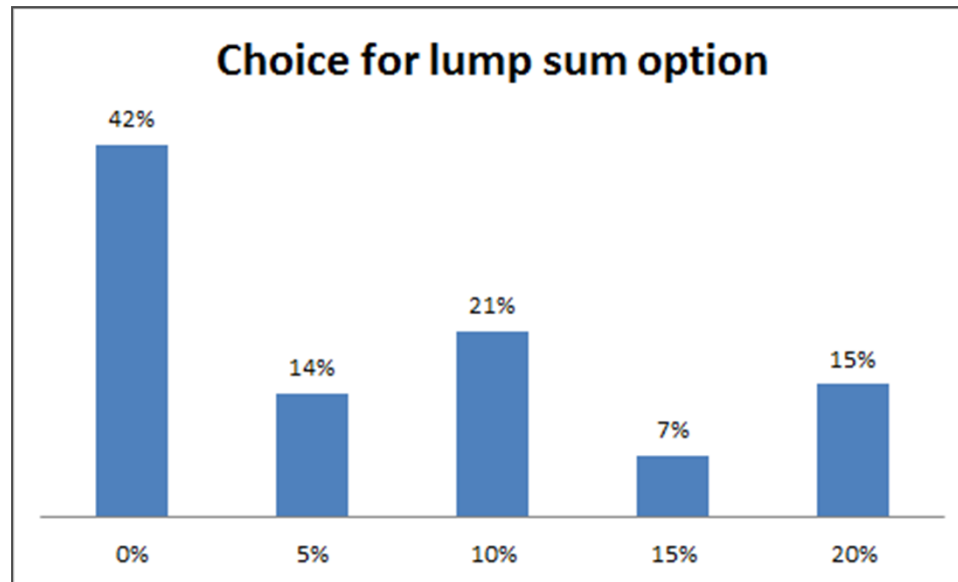
1. Neutral frame

- Evaluation of choice options without any framing

2. Effect of frames and default settings vis-à-vis neutral frame

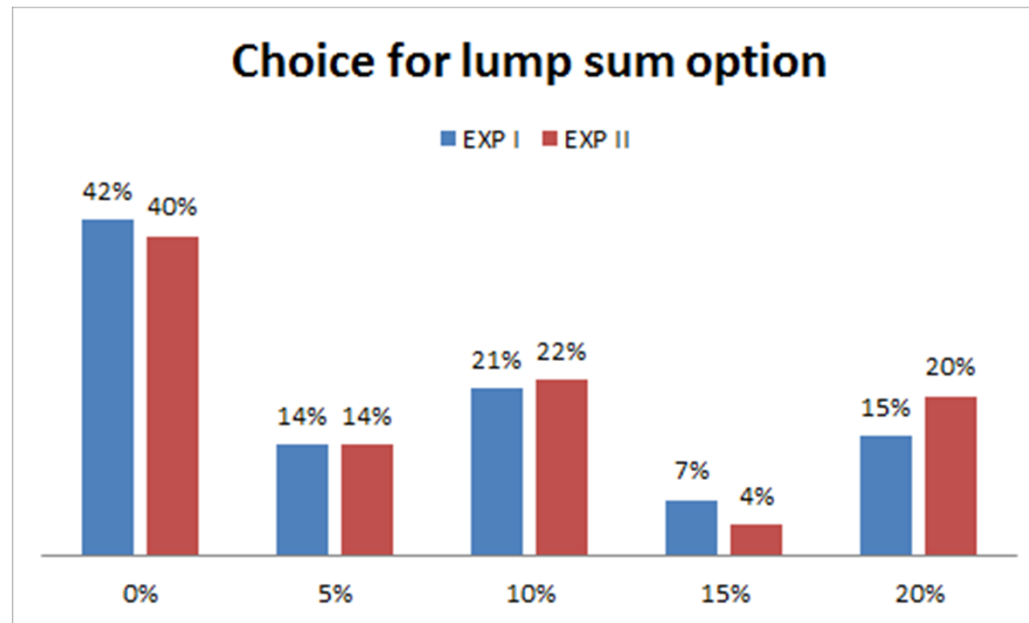
STAGE 1 CHOICE IN NEUTRAL FRAME

NEUTRAL FRAME (N=474): RESULTS



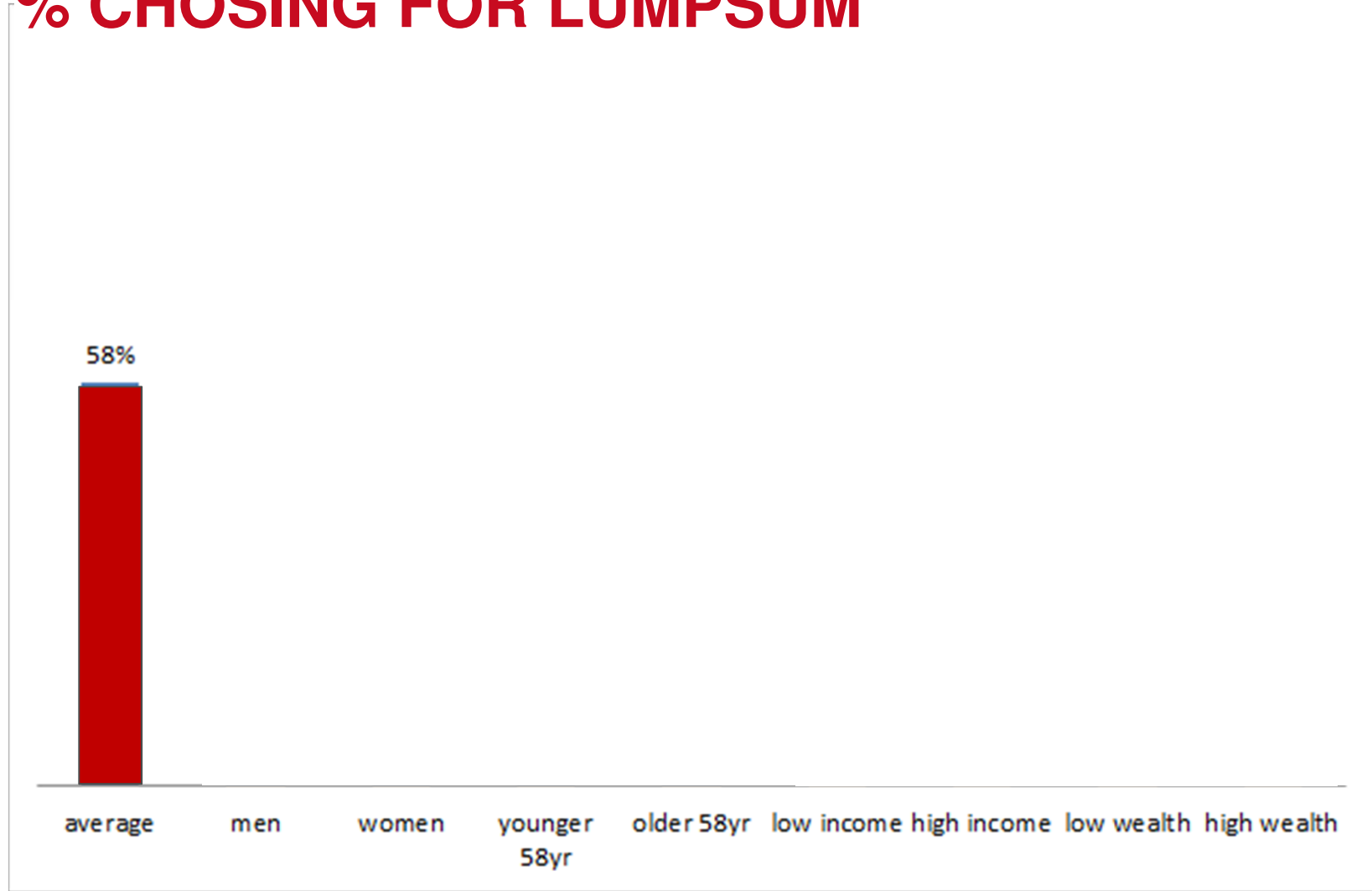
- 42% chose for 100% annuity
- 58% choose for partial lump sum
- Average lump sum frame = 7,1%
-

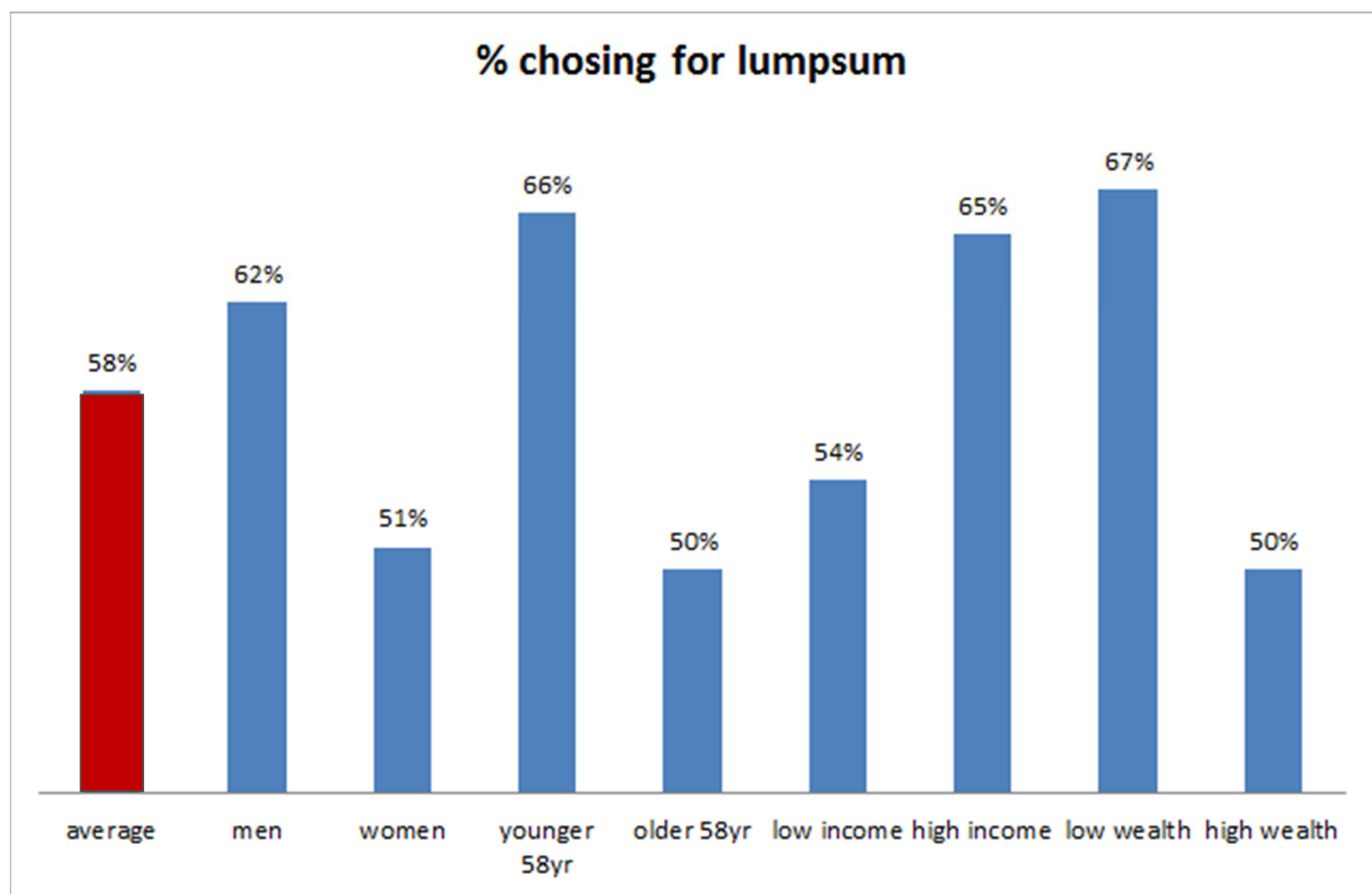
RESULTS CONFIRMED IN 2ND EXPERIMENT



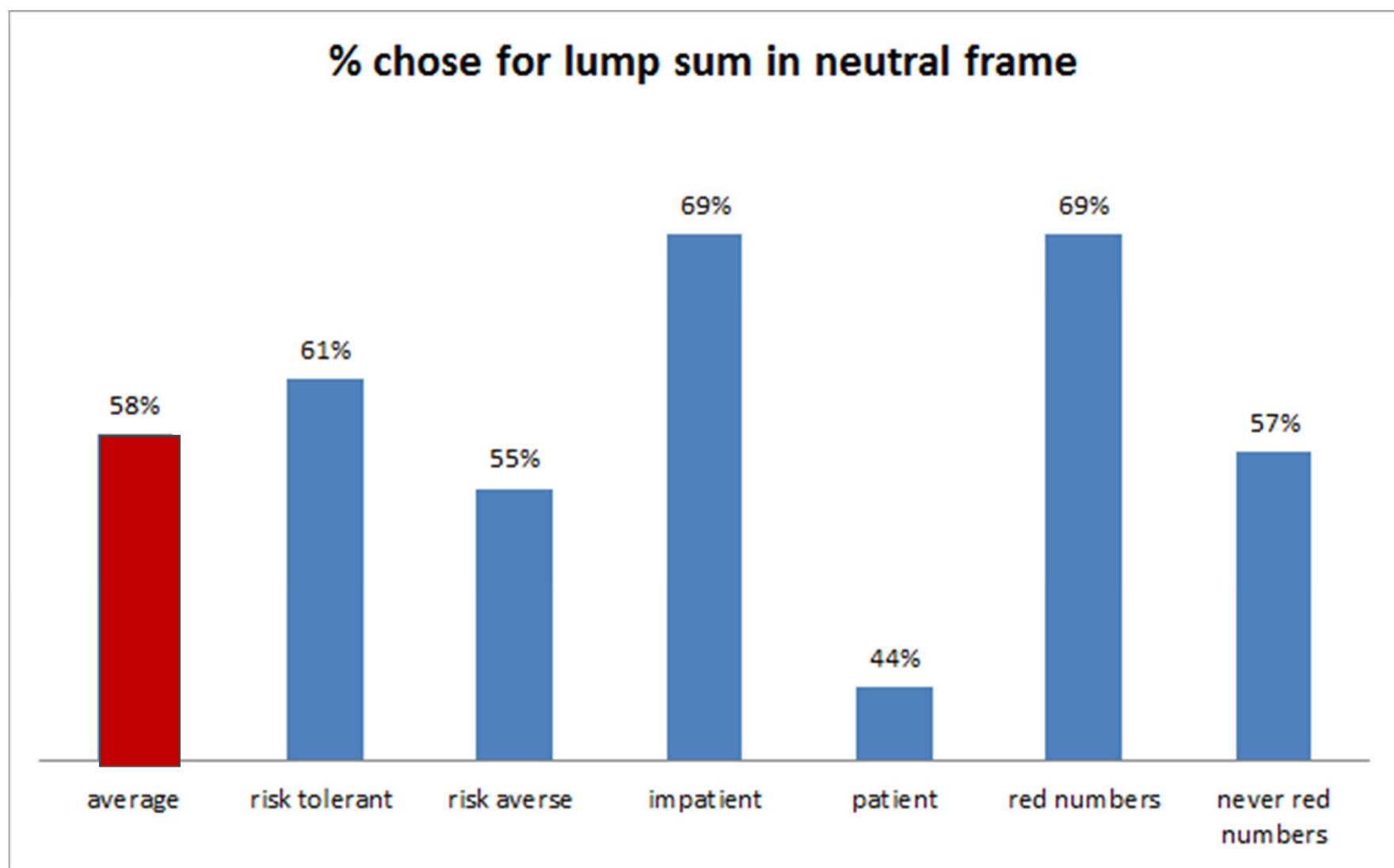
- Follow-up experiment confirms results first experiment

% CHOSING FOR LUMP SUM





% chose for lump sum in neutral frame



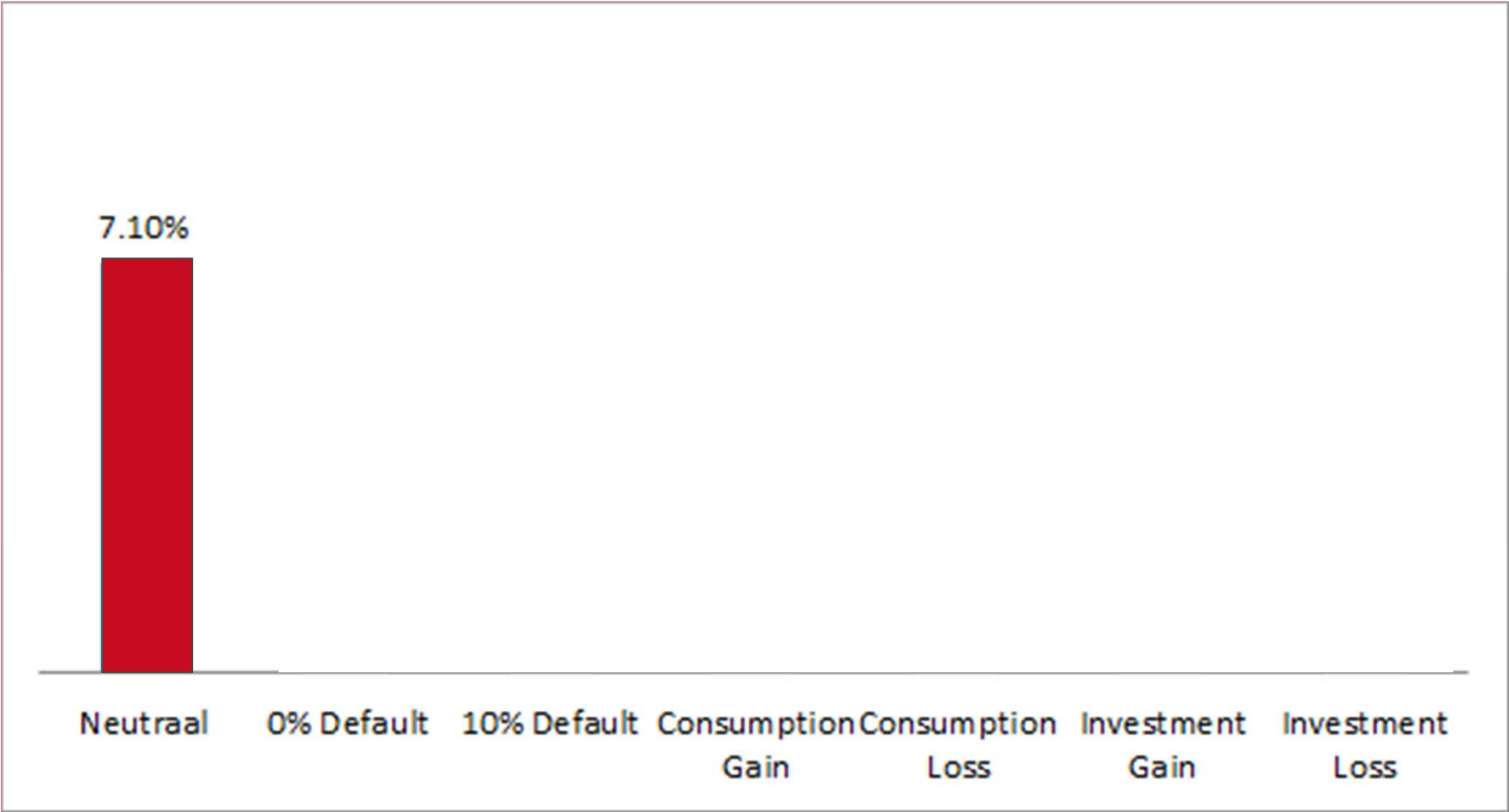
PHASE 2: ARE CHOICES OF INDIVIDUALS STEERABLE?

EFFECTS OF FRAMING AND DEFAULTS

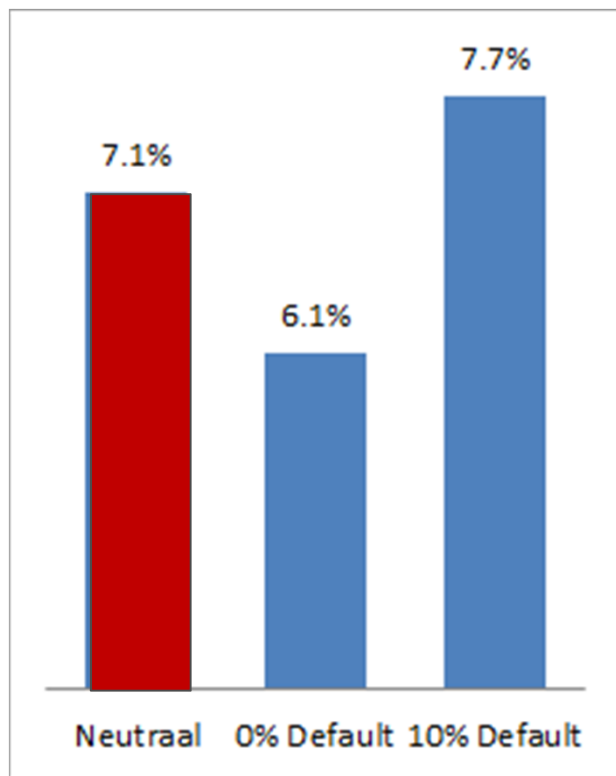
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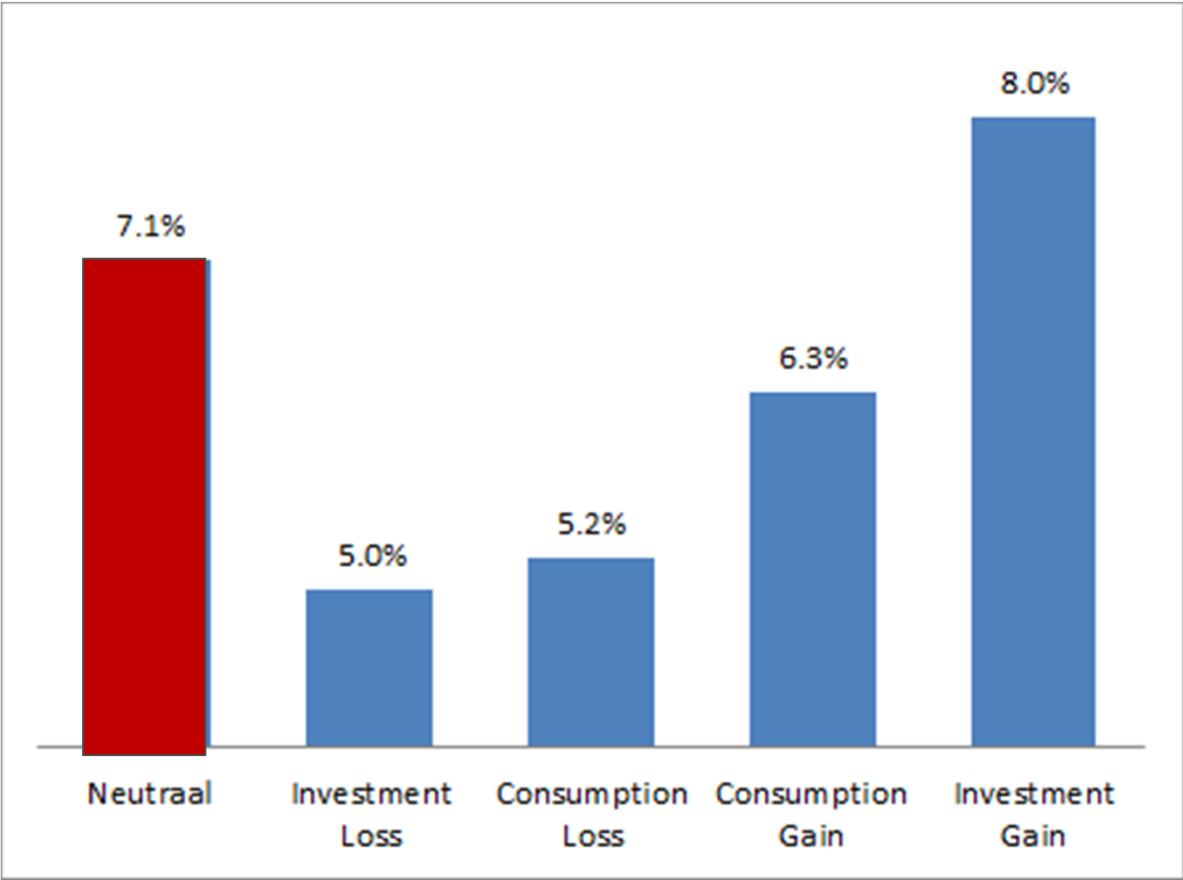
AVERAGE LUMP SUM PER FRAME



LUMP SUM IN NEUTRAL AND DEFAULTS



LUMP SUM IN NEUTRAL AND FRAMES



Regressions

- Regression analysis (“ordered probit”) to explain likelihood choices:
 1. Active steering by professionals
 2. Individual characteristics and preferences

Impact Hard variables on LS:

- Age (-)
- Divorce (+)
- Children (+)
- Wealth (-)
- Debt (+)

Impact personal variables on LS:

- Life Expectancy (-)
- Impatience (+)
- Risk tolerance (+)
- Trust in pension fund (-)
- Cognitive overload (-)
- Pension knowledge (-)
- Trust in self-arranging (+)

REGRESSIONS WITH INTERACTION

- Interaction Frames with other variables indicates large heterogeneity
- Women-Men and Young-Old differ in response to frames
- Individuals with High Debt do not respond to frames
- Risk Tolerants also not reacting to frames

Reversed Annuity Puzzle in NLD? Institutions may matter !

- NLD is annuity country, so one would expect full use of lump sum
- But take up lump sum is low (7% of max 20%)
- “Institutions” may matter to explain Annuity Puzzles
- USA: Annuity Puzzle
 - DC is dominant, so focus on pension as capital
 - One is inclined to Lump Sum
- NLD: Reversed Annuity Puzzle
 - Focus on pension as Income Stream
 - One prefers to stay close to full annuitization

Conclusions

1. Majority prefers partial lump sum above 100% annuitization
2. Insights behavioral economics confirmed (frames, loss aversion, defaults)
3. Choices are steerable via active intervention professionals
4. Also large role for individual characteristics and hard variables
5. Heterogeneity seems large

=> So Cautiousness is still needed with applying active steering

ISSUES IN ANNUITISATION

Annuity puzzle:

- Individuals do annuitize much less compared to optimal annuitization according to traditional economic theory

Explanations by behavioral economics

1. Undervaluation
2. Procrastination
3. Inertia
4. Investment frame
5. (...)

“PROVEN FAILURES” HELPFUL TO STEER

1. **Defaults:** Exploiting inertia
2. **Framing:** Turning preferences by specific frames