Design Choices in Privatized Social Security Systems: Learning from the Swedish Experience

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Advertising and Portfolio Choice

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Background on Swedish Privatization

- In 2000, Sweden launched a partial privatization of their social security system, similar to that proposed by President Bush.
- 2.5% payroll tax contributed to individual accounts that are self-directed

Important Design Details

1. Participants were allowed to form their own portfolios by selecting up to 5 funds from an approved list.
2. One fund was chosen (with some care) to be a "default" fund for anyone who, for whatever reason, did not make an active choice.
3. Participants were encouraged (via a massive advertising campaign) <u>not</u> to choose the default fund, but rather choose their own portfolio.
4. Both balances and future contributions can be changed at any time, but unless some action is taken, the initial allocation determines future contribution flows.

Plan Details, Cont.

5. Any fund meeting certain fiduciary standards was allowed to enter the system. Thus, market entry determined the mix of funds participants could choose from. As a result of this process, there were **456 funds** to choose from.
6. Information about the funds, including fees, past performance, risk, etc., was provided in book form to all participants.
7. Funds set their own fees (except for managers included in the default fund, whose fees were negotiated).
8. Funds (except for the default fund) were permitted to advertise to attract money.

Analysis of Plan Details

- Every design choice is consistent with standard neoclassical economic principles—”pro choice”.

The Default Fund

- For many reasons, if a fund is designated as the default fund, many participants will choose it. Some reasons include:
  - Status quo bias (Samuelson and Zeckhauser, 1988)
  - Procrastination
  - Implicit endorsement by plan designers (possibly unintended).
- In 401(k) plans, when participants are automatically enrolled into the plan, the vast majority select the “default” fund. (e.g., Madrian and Shea, 2001).

Possible Default Fund Options

A. Participants are not given any choice: the default fund is the only fund offered
B. A default is picked, but its selection is <u>discouraged</u>.
C. A default is picked, and its selection is <u>encouraged</u>.
D. A default is picked, and its selection is neither encouraged nor discouraged.
E. There is no default option; participants must make an active choice or they forfeit their contributions.

The Swedish plan designers adopted option B and spent millions of dollars on an advertising campaign encouraging participants to choose their own portfolio.

Other Default Options

- The Swedish designers elected option B, but it is not obvious that this choice is best.
- If the plan designers think that participants will typically do well choosing for themselves, then perhaps E (forced choice-no default) should be preferred to B.
- Alternatively, if the planner thinks that participants would typically be better off with the default than with their own mix, then C (encourage the default) or even A (only the default) might be better.

Effective Lobbying for Active Choice

- The advertising campaign to encourage active choice worked. 66.9% formed their own portfolio.
- Those with more money at stake were more likely to form their own portfolio.

Equity Allocations in the Default Fund and Mean Selected Portfolios

	Default Fund	Mean Chosen Fund
Asset Allocation		
Equities	90%	96.2%
Sweden	17%	48.2%
Americas	35%	23.1%
Europe	20%	18.2%
Asia	10%	6.7%
Hedge Funds	4%	0%
Private Equity	4%	0%

Other Portfolio Characteristics

	Default Fund	Mean Chosen Fund
Fixed Income	10%	3.8%
Indexed	60%	4.1%
Average Fee	0.16%	0.77%
Beta	0.98	1.01
Ex Post (3 year) Performance	-29.9%	-39.6%

Return Chasing

- The largest market share (aside from the default fund) went to *Robur Aktiefond Contura* which received 4.2 percent of the investment pool.
- This fund invested primarily in technology and health care stocks in Sweden and elsewhere.
- Its performance over the five year period leading up to the choice was 534.2 percent, the highest of the 456 funds in the pool.
- In the three years since it has lost 69.5 percent of its value.

Long Lasting Effects

- Although the initial account balances were small (average was about $1,300), the welfare costs can be large if participants do not make changes.
- In the first three years, the percentage of participants who made <u>no</u> changes to their portfolio during the year was 98.3 , 97.3, and 96.9 respectively.

Conclusions for Social Security Privatization

- The free entry system adopted in Sweden is costly and doesn’t work well (new reform is likely)
- If any choice is given, it might be better to just have a small number (3-5) diversified (index) funds of with varying risk levels and negotiated fees.
- Even just one fund is probably ok. Let people adjust their portfolios elsewhere.

Fund Advertising

- Advertising is an increasingly important phenomenon in the mutual fund industry
  - Funds recruit “brand managers”
  - In the, U.S., funds spend 6+ billion dollars on advertising annually, about 10 times more than a decade ago
- Trends towards investor autonomy and trend towards an expansion in the number of investment alternatives available to retirement savers (more funds than stocks in the U.S.!)
- Still, financial economists have paid almost no attention to this phenomenon

Advertising Theories

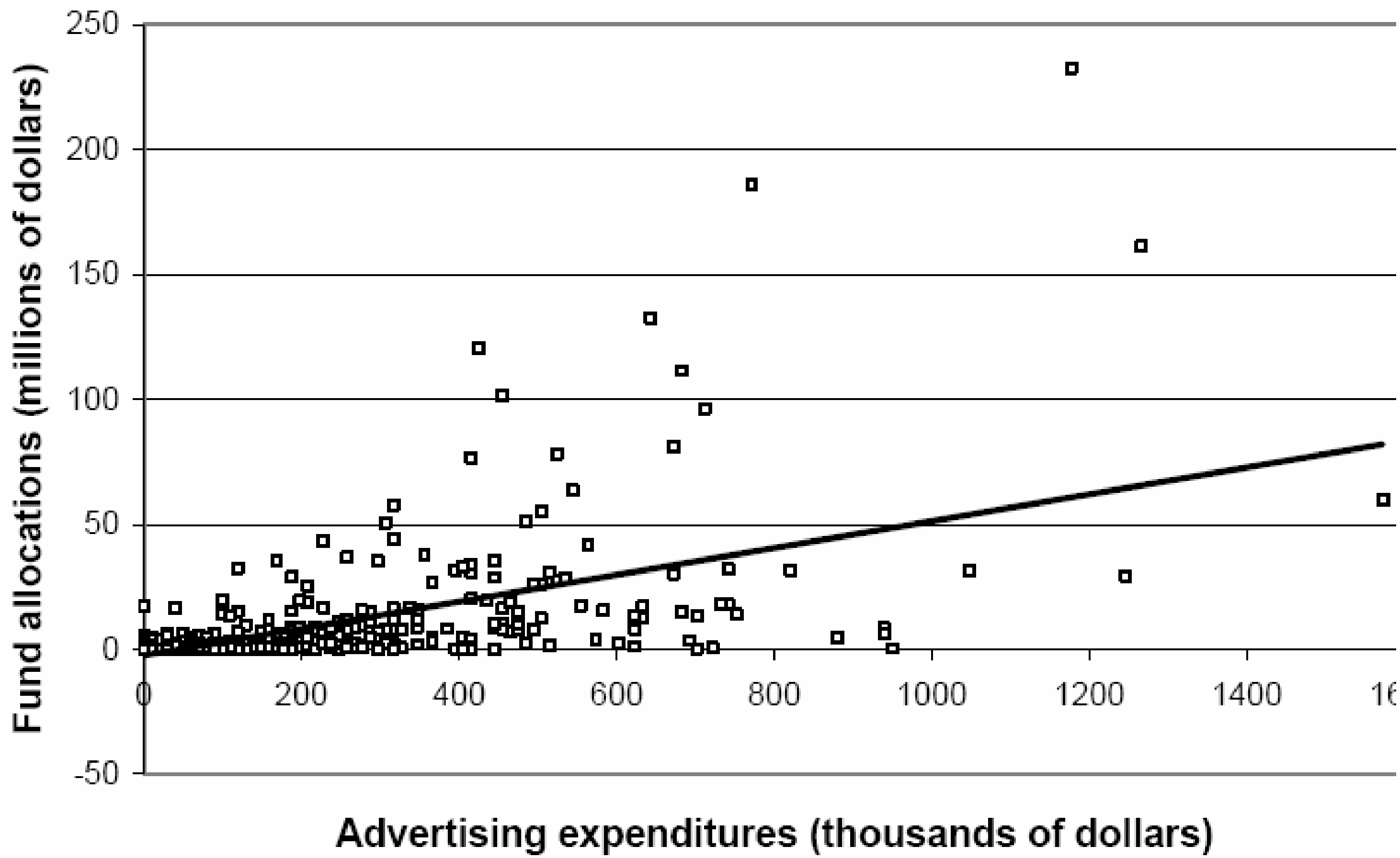
1. Advertising may provide direct information about characteristics of a product or brand that are relevant to consumers (Nelson (1970, 1974))
   – The “price” of the fund, i.e. fees

2. The level of “uninformative” advertising may be used as a signal of the initially unobservable quality of a product (Kihlstrom and Riordan (1984) and Milgrom and Roberts (1986))
   – Signal higher post-advertising fund returns

3. Mere exposure to an advertisement for a product may enhance people’s attitude towards the advertising product, *even if the advertisements provide no information* (Zajonc (1968))

Figure 3
Fund advertising and fund choices in year 2000

The figure shows the amount of fund advertising and the amount of dollars allocated to the funds at the year 2000 launch of the reformed social security reform in Sweden. The data on portfolio choices come from the Premium Pension Authority. The data on fund advertising come from MarketWatch.



Data

- Dataset on fund advertising
- Dataset on people's portfolio choices

Direct Information

<u>Content Analysis</u>

1. Fee cue
   – “price” (i.e., expense ratio)

2. Performance cue
   – past returns, Morningstar stars

3. Other cue

Fee cue


Om priset på mjölk går upp.
Blir den godare då?
Högt pris och hög kvalitet är inte alltid samma sak. Faktum är att vissa saker bara blir bättre och bättre ju mindre de kostar. Så är det för oss.
Många frågar sig hur vårt sparande kan kosta så lite. Svaret är enkelt. Vi arbetar bara med pensioner – ingenting annat. Det gör att det blir enkelt och billigt att ta hand om dina pengar.
Dessutom är vi en liten effektiv organisation, samlad under ett och samma tak.
Allt det här ger dig mer pengar när det är dags att gå i pension.
Så enkelt är det.

Performance cue

Other cue

Direct Information: Conclusion

Content	Percent of advertising expenditures
All fund advertising:	
Fee cue	7.9
Performance cue	30.0
Other cue	62.1
Advertisements:	
Fee cue	13.5
Performance cue	43.2
Other cue	43.3
Commercials:	
Fee cue	2.9
Performance cue	18.2
Other cue	79.0

- A very small portion of ads can be construed as directly informative about characteristics relevant for retirement savers and other mutual fund investors

Indirect Information

- No evidence of significantly higher abnormal (risk adjusted) returns over 12-month, post-advertising period
- Numerous robustness checks
- Problems:
  1. Short post-advertising period
  2. Little penalty for “false” signaling

Mere Exposure

- Does mere exposure to an advertisement for a fund enhance people's attitude towards the advertising fund? --YES
- People allocated relatively more towards funds that advertised more, controlling for a large set of other variables affect people's portfolio choices (home bias, fund size, market shares for other financial products, news media attention, etc.)

Economic Effects

1. Effects of advertising on portfolio returns
   - Advertising funds are associated with higher fees: a one-standard-deviation increase in fund advertising is associated with 50 basis points higher fees per year
     - 15 years till retirement: 7.2% less wealth
     - 45 years till retirement: 20.2% less wealth

Economic Effects

2. Effects of advertising on portfolio risk
   - Much more difficult to measure
   - Compare risk characteristics of "Advertising-Induced Portfolio" (AIP) to those of, say, the default fund

$$RC_{AIP} = \rho_i \, RC_i$$

$$\rho_i = \frac{ADEX_i}{\sum_{i=1}^{455} ADEX_i}$$

Table 10
The effect of advertising on portfolio risk

The table compares an advertising-induced portfolio and the default fund. The data are from Morningstar or hand-collected from funds' annual reports. The default fund is the fund chosen for those who did not actively choose any funds on their own. The advertising-induced portfolio is a portfolio constructed by investing in different funds in proportion to their levels of advertising expenditures.

Risk characteristics	Default fund	Advertising-induced portfolio
Asset allocation		
Equities	82.0%	98.9%
Fixed-income securities	10.0%	1.1%
Other	8.0%	0%
Indexing	60.0%	0.4%
Asset (equities) location		
Sweden	20.7%	81.2%
Europe	24.4%	2.9%
Americas	42.7%	13.2%
Asia	12.2%	2.7%
N	1	455

Conclusions

1. A very small portion of ads can be construed as directly informative about characteristics relevant for retirement savers and other mutual fund investors
2. Fund advertising does not signal higher post-advertising (risk-adjusted) returns
3. Fund advertising affect people's portfolio choices, *even if the advertisements provide no information*
4. Fund advertising has significant economic effects: lower net-of-fees returns; higher risk (higher exposure to stocks, more active fund management, much more local concentration)

General Conclusion

- Economists often think that the biases observed in psychologist and economist laboratories will be eradicated in open market settings.
- The Swedish experience reveals how just the opposite can happen. Markets and advertising reinforced individual biases:
  - Invest at home (familiarity)
  - Chase returns (extrapolation)
  - Active management (overconfidence)