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How Does Simplified Disclosure Affect Individuals' Mutual Fund Choices?

John Beshears, James J. Choi, David Laibson,
and Brigitte C. Madrian

Some regulators believe that the average investor has a hard time reading the statutory prospectuses mutual funds distribute. In the words of the Securities and Exchange Commission (SEC), “Prospectuses are often long . . . Too frequently, the language of prospectuses is complex and legalistic, and the presentation formats make little use of graphic design techniques that would contribute to readability.”¹ Partly as a result, two-thirds of investors do not read the prospectus before purchasing mutual fund shares (Investment Company Institute 2006).

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1. SEC Release No. 33-8861.

Motivated by these concerns, the SEC recently proposed and subsequently adopted a new simplified disclosure document. Mutual funds now have the option of sending investors this two- to four-page document, dubbed the “Summary Prospectus,” instead of the statutory prospectus. The Summary Prospectus contains key information about the mutual fund’s investment objectives, strategies, risks, costs, and performance. This information can also be found in previously extant fund literature (the statutory prospectus, the Statement of Additional Information [SAI], and the shareholder report).

To our knowledge, there has been no direct empirical investigation of how the Summary Prospectus would affect investors’ portfolio choices. This chapter contributes toward filling this gap. We recruited 186 Harvard non-faculty, white-collar staff members to participate in a portfolio allocation experiment. All subjects allocated two portfolios: one among four actively managed equity mutual funds, and one among four actively managed bond mutual funds. Subjects’ payments depended on how their chosen portfolios actually performed subsequent to the experimental session and were approximately \$100 per subject in expectation.

We randomized each subject into one of three information conditions. In the first condition, subjects received only the funds’ statutory prospectuses. In the second condition, subjects received only the funds’ Summary Prospectuses, which we constructed using the original SEC proposal’s specifications. In the third condition, subjects received the Summary Prospectuses but could additionally request the statutory prospectuses (a request that only a few of the subjects in this condition actually made). Subjects were randomly assigned to be paid based on either their subsequent one-month portfolio return or their subsequent one-year portfolio return.

We find that providing the Summary Prospectus does not alter subjects’ investment choices. Dollar-weighted average fees and past returns of mutual fund choices are statistically indistinguishable across the three information conditions. However, subjects receiving the Summary Prospectus spent less time on their investment decision. Thus, the principal welfare gain from the Summary Prospectus comes from allowing investors to spend less time and effort to arrive at the same portfolio decision they would have come to after reading only the statutory prospectus. Of course, the shorter Summary Prospectus saves paper, printing, and shipping costs as well.

Our experiment also sheds new light on the scope of investor confusion about sales loads.² We find that subjects’ portfolio choices do not respond sensibly to loads and redemption fees, whether or not they receive the Summary Prospectus. Loads and redemption fees should be avoided to a greater

2. See also Elton, Gruber, and Busse (2004); Barber, Odean, and Zheng (2005); Cronqvist (2006); and Choi, Laibson, and Madrian (2010) for other evidence of irrational investor behavior with respect to mutual fund fees.

degree as the investment horizon shrinks. Nonetheless, subjects with a one-month investment horizon chose portfolios with loads plus redemption fees that are on average 200 basis points higher than the load-minimizing portfolio. This implies that subjects are either confused about loads, overlook them, or believe that their chosen portfolio has an annualized log return (before loads) that is an implausible 24 percentage points higher than the load-minimizing portfolio's.

In a study related to ours, Kozup, Howlett, and Pagano (2008) examine the impact of certain types of summary information on individuals' attitudes toward mutual funds. Contrary to our results, these authors find that summary information increases subjects' sensitivity to past fund performance. However, their experiment differs from ours in a number of respects: (a) their study was conducted before the release of the SEC proposal and therefore does not use the Summary Prospectus format specified in the proposal; (b) their summary information is much briefer and emphasizes comparisons between a fund and the universe of similar funds; (c) the mutual funds in their experiment are fictional; and (d) their subjects did not make incentivized portfolio choices but instead rated their investment intentions, attitudes, and perceptions of future performance and risk with regard to a fund using 7-point scales.

An advantage of using laboratory experiments to evaluate policy proposals is that results can be produced extremely rapidly. We learned of the Summary Prospectus proposal in mid-January 2008, and we were able to finish collecting data and tabulate preliminary results by the end of February 2008, which we sent to the SEC. We believe that in the future, laboratory experiments should become a common part of the policy proposal vetting process.

The chapter proceeds as follows. Section 2.1 provides additional detail on the Summary Prospectus. We describe our experimental design in section 2.2. Section 2.3 discusses the experimental results, and section 2.4 concludes.

2.1 Background on the Summary Prospectus

In Release No. 33-8861, published on December 14, 2007, the SEC describes its Summary Prospectus proposal as follows:

We are proposing an improved mutual fund disclosure framework that is intended to provide investors with information that is easier to use and more readily accessible, while retaining the comprehensive quality of the information that is available today. The foundation of the proposal is the provision to all investors of streamlined and user-friendly information that is key to an investment decision.

The SEC's aspirations for the Summary Prospectus, as described in Release No. 33-8861, are ambitious:

We anticipate that our proposal will improve investors' ability to make informed investment decisions and, therefore, lead to increased efficiency and competitiveness of the U.S. capital markets. Similarly, the ability of investors to directly locate the information they seek regarding a fund or funds through the use of the Internet may result in more fund investors or existing investors investing in more funds.

Mutual funds now have the option of satisfying their prospectus delivery obligations under the Securities Act of 1933 by sending a Summary Prospectus. In other words, investors going forward are more likely to receive only a two- to four-page document rather than a prospectus that sometimes runs hundreds of pages. Investors receiving the Summary Prospectus can also receive the longer statutory prospectus via mail or Internet upon request.

Appendix A shows the sample Summary Prospectus that the SEC included in its proposal. The document begins with a description of how one can receive the statutory prospectus and other fund documents. It then displays the following information about the fund:

- Investment objective
- Fees and expenses
- Historical portfolio turnover rate
- Principal investment strategies
- Principal risks
- Historical returns
- Top ten portfolio holdings
- Investment advisor
- Portfolio manager
- How to purchase and sell fund shares
- Dividend, capital gain, and tax information
- A disclaimer about payments the fund may make to broker-dealers and other financial intermediaries

All of this information can usually be found in the union of the statutory prospectus, the Statement of Additional Information (SAI), and the shareholder report.

The Summary Prospectus that was finally adopted is similar to the original proposal, and is described in SEC Release No. 33-8998. The amended document eliminates the top ten portfolio holdings and adds the ticker symbol, a slightly revised description of fund expenses,³ information about where to find additional detail on the fund's front-end load breakpoint discounts (based on investment amount), a description of the adverse tax

3. The wording, "expenses that you pay each year as a percentage of the value of your investment" replaces "expenses that are deducted from Fund assets."

consequences of portfolio turnover, and a stronger emphasis that payments from the fund to broker-dealers may create a conflict of interest.

In addition, the SEC now requires that every statutory prospectus begin with a section that replicates the fund's Summary Prospectus. In this chapter, we focus on the effect of introducing the stand-alone Summary Prospectus because it is the more radical change. The summary section added to the statutory prospectus would likely have an effect that is directionally similar to the Summary Prospectus, but attenuated because it is part of a long document that often goes unread.

2.2 Experimental Design

In February 2008, we recruited 186 nonfaculty Harvard employees drawn from the ranks of the administrative, professional, clerical, and technical staff.⁴ We paid subjects a \$20 participation fee and promised them an additional payment that depended on their investment decisions, as described below.

Upon entering the study, subjects received instructions that they were going to make investment choices for two hypothetical \$100,000 portfolios. One portfolio could only be invested in stock mutual funds; the other could only be invested in bond mutual funds. We would then select one portfolio based on whether the high temperature at Logan Airport on a future date was even or odd. We would pay subjects 0.1 percent of the selected portfolio's value at the end of the investment period. For example, if the portfolio's terminal value was \$100,000, subjects would receive a \$100 portfolio-based payment.

Subjects entered their portfolio allocations onto choice sheets. One sheet listed a menu of four equity mutual funds, and the other listed a menu of four bond mutual funds. Appendix B reproduces an example of a choice sheet.

Each choice sheet was one page long and had three sections. The first section explained the purpose of the experiment—to allocate 100,000 experimental dollars among the four listed equity or bond mutual funds—and described the payment scheme. The second section gave a numerical example of how the portfolio payout would be calculated. The third section contained a matrix in which participants entered their investment allocation. Participants were instructed to allocate their investment across as many or as few funds as they desired, subject to two constraints: (a) they had to allocate exactly \$100,000 in total, and (b) they had to satisfy the minimum opening

4. We actually recruited 314 subjects, but we discard the data of 125 subjects because errors in the experimental materials distributed to those subjects make interpreting their choices problematic. We discard an additional three subjects in order to make the frequency of menus in each condition equal. Our results do not qualitatively change if we analyze the larger sample of subjects.

balance requirement for any fund to which they made an allocation. We imposed the latter restriction to mimic the constraints that an investor would face when making a real investment in these funds. The minimum opening balance for each fund was listed next to the column where participants were to write their selected allocation.

We randomly assigned subjects to one of three information conditions. In the “Prospectus” condition, subjects received only the eight funds’ statutory prospectuses when making their investment decision. In the “Summary Prospectus” condition, subjects received only Summary Prospectuses, which we constructed for the funds based upon the sample Summary Prospectus provided in the SEC’s proposal. (Appendix C describes in more detail how we constructed these Summary Prospectuses.) In the “Summary Prospectus+” condition, subjects initially received only the Summary Prospectuses but could also receive the statutory prospectuses upon request. This latter condition was designed to mimic the SEC proposal, which allows firms to distribute only the Summary Prospectus while giving investors the option to request the statutory prospectus if desired.

Half of subjects made the equity allocation before the bond allocation; the other half made the allocations in reverse order. At any given moment in the experiment, subjects possessed only one investment choice sheet and one set of fund documents. That is, when subjects were making their equity allocation, they only possessed materials relevant to the equity funds available to them. Similarly, subjects only possessed materials relevant to bond funds when making their bond allocation.

We also randomly varied (independently of information condition) the subjects’ investment horizon. Half of subjects would receive their portfolio payments based upon what a real-life investor would receive if he bought their selected portfolio at 3:00 p.m. on February 29, 2008 and sold it at 3:00 p.m. on March 31, 2008. The other half would receive their portfolio payments assuming the investor bought their selected portfolio at 3:00 p.m. on February 29, 2008 and sold it at 3:00 p.m. on February 28, 2009.⁵ The investment horizon relevant for the subject was displayed on the choice sheet. We promised to pay subjects soon after their investment period ended.

Finally, we randomly assigned subjects (independently of the other two randomization dimensions) to receive one of ten menus of mutual funds. Each of the ten menus consists of four equity funds and four bond funds. To populate the menus, we began by randomly selecting ten equity funds and ten bond funds from the Center for Research in Security Prices (CRSP) mutual fund universe that satisfied the following criteria: (a) they had a share class with a front-end load (Class A) and a share class with no front-end load

5. Because February 28, 2009 is a Saturday, the sale would actually be executed on March 2, 2009. Hence, the investment horizon was slightly over one year. Charging back-end loads assuming that the investment horizon was exactly one year does not qualitatively change our conclusions about how the Summary Prospectus affected fees paid.

(Class C); (b) they were active in 2007; (c) their S&P style code was Equity Large Cap Growth, Equity Large Cap Value, or Equity Large Cap Blend for equity funds and Fixed Income High Yield for bond funds; (d) they were not a “fund of funds” or an index fund; (e) they were available to retail investors; (f) they were open to new investments in 2007; (g) they reported historical return information; and (h) they did not have special characteristics like a religious affiliation, social investment objectives, investments limited to a single sector, or a tax-managed strategy.

We then created ten distinct menus of funds from these ten equity and ten bond funds. The first five menus satisfied the following requirements: (a) each fund appeared in exactly two of the five menus, with one menu offering the Class A shares of the fund, and the second offering the Class C shares of the fund; (b) the same fund did not appear twice in the same menu (e.g., Fund 1’s Class A and Fund 1’s Class C were not in the same menu); and (c) every menu offered two fund share classes with front-end loads (Class A) and two fund share classes with no front-end loads (Class C). The next five menus were created based on the first five menus by inverting the share classes of each menu. For example, if one menu offered Bond Fund 1 (Class A), Bond Fund 2 (Class C), Bond Fund 3 (Class A), and Bond Fund 4 (Class C), its inverted menu would offer Bond Fund 1 (Class C), Bond Fund 2 (Class A), Bond Fund 3 (Class C), and Bond Fund 4 (Class A).

Unfortunately, there were errors in the Summary Prospectuses we constructed for one equity fund and one bond fund. We therefore drop subjects offered these two funds from our analysis, whether or not they received a Summary Prospectus.⁶ Because four out of the ten menus we constructed contained a problematic fund, our sample is reduced by 40 percent. Our results do not qualitatively change if we include subjects who received the problematic menus.

Table 2.1 displays features of the eighteen mutual funds that remain in our sample. Front-end loads for Class A shares range between 1.75 percent and 5.75 percent. There is almost no variation in back-end loads for Class C shares; all the funds except one charge a 1 percent load if the shares are held for less than twelve months, although some funds count the beginning of the calendar month or calendar year of purchase as the start of the holding period, rather than the exact day of purchase. Some funds also charge an additional redemption fee of up to 2 percent if shares are sold within a shorter time frame. (For ease of exposition, we will hereafter refer to loads and redemption fees collectively as “loads.”) Expense ratios lie between 0.80 percent and 1.53 percent for Class A shares and between 1.55 percent and 2.18 percent for Class C shares. As expected, there is more cross-sectional variation in the equity fund returns than the bond fund returns.

6. Every subject who was offered one problematic fund was offered the other problematic fund as well.

Table 2.1 Mutual fund shares offered in the experiment

	Share class	Front-end load (%)	Expense ratio (%)	Back-end load (%)	Additional redemption fee (%)	Past 1-year return in prospectus (%)	Longest-horizon return reported in prospectus (%)	Inception date
<i>A Equity funds</i>								
Allegiant Large Cap Growth Fund	A	3.75–5.50	1.17	0	0	7.35	7.23	04/15/1991
American Century Fundamental Equity	A	3.75–5.50	1.89	1 if held \leq 18 months ^a	0	23.88	18.10	01/27/2000
Dreyfus Premier Core Value Fund	A	3.50–5.75	1.26	1 if held \leq 12 months ^a	0	21.00	9.81	11/30/2004
MFS Emerging Growth Fund	A	3.75–5.75	2.01	1 if held \leq 12 months ^c	0	7.54	6.96	02/06/1947
MFS Value Fund	A	3.75–5.75	1.15	1 if held \leq 12 months ^b	0	20.67	13.24	09/13/1993
Oppenheimer Capital Appreciation	A	3.75–5.75	1.90	1 if held \leq 12 months ^b	0	7.51	10.04	04/01/1996
Sentinel Common Stock Fund	A	3.00–5.00	1.11	1 if held \leq 12 months ^b	0	16.00	9.07	01/02/1996
SunAmerica Growth and Income	A	3.75–5.75	1.76	1 if held \leq 12 months ^b	0	14.71	7.68	11/05/1997
Van Kampen Equity Growth	A	3.75–5.75	1.05	1 if held \leq 12 months ^a	0	5.76	4.19	01/22/1981
	A	3.75–5.75	1.81	1 if held \leq 12 months ^b	0			12/01/1993
	A	3.75–5.75	1.13	1 if held \leq 12 months ^a	0			01/02/1934
	C	0	2.16	1 if held \leq 12 months ^a	0			05/04/1998
	A	3.75–5.75	1.53	1 if held \leq 12 months ^c	0			07/01/1994
	A	3.75–5.75	2.18	1 if held \leq 12 months ^c	0			02/02/1998
	A	3.75–5.75	1.23	0	2 if held \leq 7 days			05/28/1998
	C	0	1.99	1 if held \leq 12 months ^b	2 if held \leq 7 days			05/28/1998

<i>B Bond funds</i>										
DWS High Income Fund	A	3.50-4.50	0.94							
	C	0	1.67	1 if held ≤ 12 months ^a	0	2 if held ≤ 30 days	10.27	5.99	01/26/1978	
Eaton Vance Floating-Rate & High Income	A	1.75-2.25	1.01		0	2 if held ≤ 30 days			05/31/1994	
	C	0	1.76	1 if held ≤ 12 months ^a	0	1 if held ≤ 90 days	6.14	4.21	05/07/2003	
Federated High Income Bond Fund	A	3.75-4.50	1.23		0	2 if held ≤ 90 days	10.48	5.71	09/05/2000	
	C	0	1.98	1 if held ≤ 12 months ^a	0	2 if held ≤ 90 days			11/30/1977	
Goldman Sachs High Yield	A	3.00-4.50	1.12		0	2 if held ≤ 60 days	11.29	7.12	04/30/1993	
	C	0	1.87	1 if held ≤ 12 months ^b	0	2 if held ≤ 60 days			08/01/1997	
HSBC Investor High Yield	A	3.50-4.75	0.80		0	2 if held ≤ 30 days	10.49	10.49	08/15/1997	
	C	0	1.55	1 if held ≤ 12 months ^a	0	2 if held ≤ 30 days			11/18/2005	
Fixed Income	A	3.50-4.50	1.15		0	2 if held ≤ 30 days	13.86	3.93	12/14/2005	
Loomis Sayles High Income	C	0	1.90	1 if held ≤ 12 months ^a	0	2 if held ≤ 60 days			02/22/1984	
Oppenheimer Champion Income	A	3.50-4.75	1.11		0	2 if held ≤ 30 days	9.19	5.96	03/02/1998	
	C	0	1.86	1 if held ≤ 12 months ^b	0	2 if held ≤ 30 days			11/16/1987	
Pioneer High Yield	A	3.50-4.50	1.10		0	2 if held ≤ 30 days	10.60	13.20	12/01/1993	
	C	0	1.81	1 if held ≤ 12 months ^c	0	2 if held ≤ 30 days			02/12/1998	
Wells Fargo Advantage Strategic Income	A	3.50-4.50	1.10		0	2 if held ≤ 30 days	11.04	9.96	02/12/1998	
	C	0	1.85	1 if held ≤ 12 months ^a	0	2 if held ≤ 30 days			11/30/2000	

^aHolding period begins on date of purchase.

^bHolding period begins on first day of purchase calendar month.

^cHolding period begins on first day of purchase calendar year.

Notes: This table lists characteristics of the mutual fund shares that were offered to subjects in the experiment. For Class A shares, the front-end load varied according to the investment amount. Expense ratios in the table reflect fee waivers. The prospectuses listed historical returns for only one of each fund's share classes. The table shows the returns for the share class reported in the prospectus. The longest-horizon return reported in the prospectus is either the return since fund inception (if the fund has been in existence for fewer than ten years) or the ten-year return.

The standard deviation of one-year past returns is 6.99 percent across equity funds and 2.03 percent across bond funds. For the longest-horizon past return reported in the prospectus, the standard deviation is 4.06 percent across equity funds and 3.14 percent across bond funds.

In total, there were thirty-six experimental conditions: three information treatments \times two investment horizons \times six fund menus. There are an equal number of subjects within each cell. In particular, each menu \times investment horizon combination appears the same number of times within each information condition. Therefore, we can compare mean allocations across information conditions without worrying that menu or investment horizon effects are confounding these comparisons.

After submitting their portfolio choices, subjects filled out a questionnaire that included demographic and financial literacy questions.

2.3 Results

Table 2.2 shows the characteristics of our subject sample for each information condition. Subjects are thirty-nine years old on average, and 37 percent are male. Almost all subjects are college graduates, and over half have some graduate education. About a fifth are able to correctly identify the types of securities a money market fund holds when asked a multiple-choice question modeled on a question in the John Hancock Eighth Defined Contribution Plan Survey.⁷ This compares favorably to the 8 percent of the John Hancock sample who were able to answer the question correctly. Thus, our subjects have higher levels of educational attainment and financial literacy than the overall U.S. population.

Our subjects also understand the concept of diversification. On average, they rate a typical Fortune 500 stock as riskier than a U.S. equity mutual fund on a 5-point scale. In contrast, John Hancock respondents on average thought that the stock of their own company was *less* risky than an equity mutual fund. However, this comparison is potentially confounded by the fact that John Hancock respondents were asked about the stock of their own employer, whereas our subjects were asked about the stock of a typical Fortune 500 company.

Despite being more financially literate than the average American, most of our subjects do not have much confidence in their investment abilities. About half describe themselves as an investor who is “less than knowledgeable” or “not at all knowledgeable.” This lack of financial knowledge is a common finding across surveys. For example, Lusardi, Keller, and Keller (2009) surveyed employees at a nonprofit institution, and 38 percent of

7. The question text is, “Which of the following types of investments are found in a money market fund? (*You may check more than one type.*)” The possible choices are short-term U.S. government bonds, corporate bonds, stocks, and none of the above.

Table 2.2 Subject characteristics

	Prospectus	Summary prospectus	Summary prospectus+
Average age	39.5	38.8	39.7
Percent male	44%	31%	37%
Highest education			
High school or less	2%	2%	3%
Some college	7%	6%	5%
College degree	34%	31%	26%
Some graduate school	10%	26%	23%
Graduate degree	47%	35%	44%
Knows what money market fund holds	21%	18%	24%
Average risk rating (1 to 5; higher = riskier)			
Typical Fortune 500 stock	3.51	3.25	3.37
Large U.S. equity mutual fund	3.00	3.02	2.93
How knowledgeable of an investor do you consider yourself to be?			
Very knowledgeable	0%	2%	0%
Relatively knowledgeable	10%	10%	13%
Somewhat knowledgeable	34%	31%	49%
Less than knowledgeable	39%	43%	17%
Not at all knowledgeable	17%	14%	21%
Sample size	N = 62	N = 62	N = 62

Note: This table shows experimental subject characteristics in each experimental information condition.

respondents reported that insufficient financial knowledge was a problem in their financial decisions.

Comparing across information conditions, the prospectus-only group is slightly more male than the others. Subjects in the prospectus-only group are also more likely to have a graduate degree, although subjects in the other groups are more likely to have at least some graduate school education. Controlling for gender and educational attainment through dummy variables in a regression does not qualitatively change our results.

Table 2.3 shows how the Summary Prospectus affected investment decisions. Because very few of the subjects in the Summary Prospectus+ condition asked to see a statutory prospectus, we pool the Summary Prospectus and Summary Prospectus+ conditions in the remaining analysis. The table reveals no statistically significant differences in average front-end load, back-end load, expense ratio, total fees, past one-year return, or past long-horizon return (defined as the longest-horizon past return reported in the fund's prospectus) when subjects receive the Summary Prospectus instead of the statutory prospectus. The point estimates indicate that in general, subjects receiving the Summary Prospectus pay more in fund fees and choose funds with higher past returns, although the bond portfolios have some point estimates that go in the opposite direction.

Table 2.3 Subjects' investment choices

	One-month investment horizon			One-year investment horizon		
	Prospectus	SP/SP+	Difference	Prospectus	SP/SP+	Difference
	<i>A Equity portfolio</i>					
Front-end load	2.23% (0.24)	2.56% (0.15)	0.32% (0.27)	2.14% (0.24)	2.58% (0.15)	0.43% (0.27)
Back-end load plus redemption fee	0.55% (0.05)	0.47% (0.03)	-0.08% (0.06)	0.11% (0.04)	0.06% (0.01)	-0.05% (0.04)
Expense ratio (prorated)	0.13% (0.00)	0.13% (0.00)	0.00% (0.00)	1.64% (0.04)	1.57% (0.03)	-0.07% (0.05)
Total fees	2.92% (0.19)	3.16% (0.11)	0.24% (0.21)	3.86% (0.20)	4.18% (0.13)	0.31% (0.23)
Past one-year return	13.61% (0.81)	13.99% (0.59)	0.38% (1.01)	13.68% (0.73)	14.55% (0.55)	0.88% (0.93)
Longest-horizon past return in prospectus	9.34% (0.38)	9.51% (0.34)	0.17% (0.55)	9.44% (0.45)	9.71% (0.32)	0.27% (0.56)
	<i>B Bond portfolio</i>					
Front-end load	1.84% (0.18)	1.81% (0.15)	-0.03% (0.25)	2.09% (0.24)	1.92% (0.14)	-0.17% (0.26)
Back-end load plus redemption fee	1.15% (0.08)	1.28% (0.08)	0.13% (0.13)	0.00% (0.00)	0.00% (0.00)	0.00% (0.00)
Expense ratio (prorated)	0.12% (0.00)	0.12% (0.00)	0.00% (0.00)	1.47% (0.04)	1.47% (0.03)	0.00% (0.05)
Total fees	3.11% (0.17)	3.21% (0.15)	0.10% (0.25)	3.54% (0.19)	3.37% (0.11)	-0.17% (0.21)
Past one-year return	10.50% (0.20)	10.69% (0.12)	0.19% (0.22)	10.79% (0.18)	10.55% (0.12)	-0.24% (0.21)
Longest-horizon past return in prospectus	7.64% (0.27)	7.41% (0.23)	-0.23% (0.38)	7.26% (0.33)	7.84% (0.25)	0.57% (0.43)

Notes: Standard errors are in parentheses below the point estimates. Expense ratios in the monthly condition are equal to the reported expense ratio net of waivers divided by twelve. Back-end loads in the yearly condition were not assessed for those funds whose back-end loads expire after twelve months (all but Allegiant Large Cap Growth Fund Class C).

One important test of sensible investment behavior is an increasing avoidance of loads as the investment horizon shrinks. With a one-year investment horizon, a fund with a 2 percent load would be preferred over a no-load fund with an equivalent expense ratio if the ratio of one plus the load fund's annual pre-load return to one plus the no-load fund's annual return is greater than $1/0.98 = 1.02$. With a one-month investment horizon, the ratio would have to be greater than $(1/0.98)^{12} = 1.27$. In other words, the load fund is preferred under a one-month investment horizon if it has an annualized log return that is larger than the no-load fund's annualized log return by at least $\log(1.27) = 24$ percent—an implausibly large amount to rationally expect.

Table 2.3 shows that subjects generally do not avoid loads in the one-month condition. Pooling the equity and bond allocation decisions, subjects chose funds with an average total load of 3.00 percent in the conditions with an investment horizon of one month, which is 200 basis points higher than the lowest available to them. To not minimize loads is to bet that one's chosen portfolio has a log pre-load return that is (implausibly) 24 percentage points per year higher than the load-minimizing portfolio.⁸ With a one-month horizon, minimizing loads is the only sensible strategy.

Does the Summary Prospectus affect the relationship between investment horizon and loads paid? Table 2.3 shows that loads are higher in the one-month condition than in the one-year condition, which is to be expected because back-end loads are 0 percent for most funds at the one-year horizon but not the one-month horizon. However, the amount by which loads increase from the one-year horizon to the one-month horizon is unaffected by the Summary Prospectus. For equity portfolios, subjects receiving the Summary Prospectus exhibit a 14 basis point smaller increase than subjects receiving the statutory prospectus; the reverse holds for bond portfolios, where subjects receiving the Summary Prospectus exhibit a 27 basis point *larger* increase than subjects receiving the statutory prospectus. None of these differences are statistically significant.

In summary, there is no evidence that the Summary Prospectus causes subjects to respond to mutual fund fees more optimally.

We can also analyze whether subjects who received Summary Prospectuses instead of statutory prospectuses differed in the extent to which their portfolios were concentrated in certain mutual funds as opposed to evenly spread among four mutual funds, as might be implied by a naïve diversification strategy (Benartzi and Thaler 2001). For our measure of portfolio concentration, we use the Euclidean distance between $(0.25, 0.25, 0.25, 0.25)$ and the portfolio as represented by a point in \mathbb{R}^4 . This measure ranges from

8. This calculation also takes into account expense ratios, assuming that one-twelfth of the annual expense ratio is charged each month. When more than one fund shares the minimum load, we equally weight the load-minimizing portfolio.

0 (portfolio allocated equally across four funds) to $\sqrt{3/4} \approx 0.87$ (portfolio allocated entirely to a single fund). For equity portfolios, the mean concentration measure for subjects receiving Summary Prospectuses was 0.396 (s.e. 0.020), and the mean concentration measure for subjects receiving statutory prospectuses was also 0.396 (s.e. 0.030). The analogous means for bond portfolios were 0.414 (s.e. 0.023) and 0.408 (s.e. 0.031). Neither difference is statistically significant. Thus, it does not seem that the Summary Prospectus led subjects to change the extent to which they deviate from the naïve diversification strategy of equal allocations to four funds.

There is also no strong evidence that the Summary Prospectus made subjects feel better about their investment decision. Table 2.4 shows the distribution of answers to two sets of questions subjects answered after making their portfolio allocations. The first set of questions asked—separately for the equity portfolio and the bond portfolio—how likely subjects were to change their allocation if they consulted a professional investment advisor. The second set asked—again separately for the two portfolios—how confident subjects were that the allocation was the right one for them. None of the answer frequencies differ significantly between the prospectus-only and Summary Prospectus conditions.

Even though the actual quality of portfolio choices appears to be unaffected by the Summary Prospectus, subjects who received the Summary Prospectus spent significantly less time on average making their two portfolio allocations—only 22.5 minutes, versus 31.2 minutes for subjects who received the statutory prospectuses.⁹ Therefore, the Summary Prospectus's welfare benefit operates through the time-saving channel, rather than the portfolio-improvement channel.

Table 2.5 shows how participants rated the importance of various factors for their investment choice on a 5-point scale. Fund performance over the past year, fund performance since inception, and investment objectives are ranked as the three most important factors across all information conditions. However, subjects receiving the Summary Prospectus tended to rank past one-year performance as more important and fund performance since inception as a little less important. A desire to diversify across funds and the quality of the documents explaining the mutual fund were also ranked as somewhat important.

2.4 Conclusion

We have evaluated the effect of simplifying mutual fund disclosure by studying the effect of the Summary Prospectus recently adopted by the SEC.

9. The typical amount of time subjects spent on the experimental task is not dramatically dissimilar from the amount of time they might spend choosing a portfolio for their real-world savings. In a survey of nonfaculty employees at the University of Southern California, Benartzi and Thaler (1999) found that the majority of respondents spent an hour or less on the portfolio allocation decision for their defined contribution plan.

Table 2.4 Subjects' confidence in their investment choices

	Equity portfolio			Bond portfolio		
	Prospectus	SP/SP+	Difference	Prospectus	SP/SP+	Difference
How likely is it that you would change your allocation among equity/bond mutual funds if you consulted a professional investment advisor?						
Not at all likely	4.9% (2.8)	6.5% (2.2)	1.6% (3.7)	1.7% (1.7)	4.0% (1.8)	2.4% (2.8)
Somewhat likely	49.2% (6.5)	48.0% (4.5)	-1.2% (7.9)	50.0% (6.5)	46.0% (4.5)	-4.0% (7.8)
Very likely	45.9% (6.4)	45.5% (4.5)	-0.4% (7.8)	48.3% (6.5)	50.0% (4.5)	1.7% (7.8)
How confident are you that the allocation among equity/bond mutual funds you chose is the right allocation for you?						
Very confident	3.3% (2.3)	4.9% (2.0)	1.6% (3.2)	5.0% (2.8)	1.6% (1.1)	-3.4% (2.6)
Relatively confident	29.5% (5.9)	29.3% (4.1)	-0.2% (7.2)	15.0% (4.6)	25.0% (3.9)	10.0% (6.5)
Somewhat confident	31.1% (6.0)	39.0% (4.4)	7.9% (7.6)	38.3% (6.3)	40.3% (4.4)	2.0% (7.7)
Less than confident	31.1% (6.0)	21.1% (3.7)	-10.0% (6.7)	36.7% (6.3)	25.8% (3.9)	-10.9% (7.2)
Not at all confident	4.9% (2.8)	5.7% (2.1)	0.8% (3.6)	5.0% (2.8)	7.3% (2.3)	2.3% (3.9)

Notes: Each of the questions above was asked separately for the equity portfolio and the bond portfolio. The top number in each cell is the percent of respondents who gave the corresponding answer. Standard errors are in parentheses below.

Table 2.5 Importance of various factors in subjects' investment choices

	Equity portfolio		Bond portfolio	
	Prospectus	SP/SP+	Prospectus	SP/SP+
Quality of document(s) explaining mutual fund	3.21 (4)	3.24 (5)	3.08 (5)	3.16 (5)
Brand recognition	2.16 (8)	2.85 (7)	2.38 (8)	2.74 (8)
Past experience with fund companies	1.98 (9)	2.15 (9)	1.85 (9)	2.15 (9)
Fund fees, expenses, and loads	2.93 (6)	3.14 (6)	2.93 (6)	3.07 (6)
Minimum opening balance requirements	1.50 (11)	1.78 (11)	1.53 (11)	1.84 (11)
Investment objectives	3.64 (3)	3.75 (2)	3.70 (3)	3.83 (2)
Fund performance over the past year	3.67 (2)	3.83 (1)	3.72 (2)	3.84 (1)
Fund performance since inception	3.84 (1)	3.60 (3)	3.77 (1)	3.58 (3)
Fund performance over different horizon	2.90 (7)	2.76 (8)	2.83 (7)	2.84 (7)
Customer service of fund	1.73 (10)	1.99 (10)	1.78 (10)	1.97 (10)
Desire to diversify across funds	3.10 (5)	3.31 (4)	3.10 (4)	3.17 (4)

Notes: Each cell reports the average importance the factor had on the relevant subsample's investment decision, as elicited in the debriefing surveys. There were five possible responses, from "not important at all" to "very important." We assigned integers 1 through 5 to each possible response, with higher integers corresponding to greater importance. Each factor's ordinal rank for the relevant subsample is in parentheses, with lower integers corresponding to greater ordinal importance.

To determine the causal impact of this simplified document, we use randomized trials in which different groups of investors are given different types of prospectuses.

On the positive side, the Summary Prospectus reduces the amount of time spent on the investment decision without adversely affecting portfolio quality. On the negative side, the Summary Prospectus does not change, let alone improve, portfolio choices. Hence, simpler disclosure does not appear to be a useful channel for making mutual fund investors more sophisticated and for creating competitive pricing pressure on mutual fund companies.

Our experiments also shed light on the scope of investor confusion regarding loads. Even when our subjects have a one-month investment horizon—where minimizing loads is the only sensible strategy—they do not avoid loads. In our experiment, subjects chose funds with an average load of 3.00 percent in the conditions with an investment horizon of one month. This choice is like betting that the chosen portfolio has an (implausible) excess log return relative to the load-minimizing portfolio of 24 percentage points per year. We conclude that our subjects either do not understand how loads work or do not take them into account. We also conclude that the Summary Prospectus does nothing to alleviate these kinds of errors.

Appendix A

The SEC's Sample Summary Prospectus (from Release No. 33-8861)

Hypothetical Summary Prospectus – Prepared By SEC Staff – For Illustrative Purposes Only

THE XYZ BALANCED FUND

(Class A and Class B Shares)

SUMMARY PROSPECTUS

November 1, 2007

Before you invest, you may want to review the Fund's prospectus, which contains more information about the Fund and its risks. You can find the Fund's prospectus and other information about the Fund, including the statement of additional information and most recent reports to shareholders, online at [Web address]. You can also get this information at no cost by calling 1-800-000-0000 or by sending an e-mail request to [e-mail address]. The Fund's prospectus and statement of additional information, both dated April 27, 2007, and most recent report to shareholders, dated June 30, 2007, are all incorporated by reference into this Summary Prospectus.

Investment Objective: Income and capital growth consistent with reasonable risks.

Fees and Expenses of the Fund: The tables below describe the fees and expenses that you may pay if you buy and hold shares of the Fund. You may qualify for sales charge discounts if you and your family invest, or agree to invest in the future, at least \$25,000 in XYZ Funds.

Shareholder Fees (fees paid directly from your investment)		
	Class A	Class B
Maximum Sales Charge (Load) Imposed on Purchases (as percentage of offering price)	5.75%	None
Maximum Deferred Sales Charge (Load) (as percentage of the lower of original purchase price or sale proceeds)	None	5.00%

Annual Fund Operating Expenses (ongoing expenses that you pay each year as a percentage of the value of your investment)		
	Class A	Class B
Management Fees	0.66%	0.66%
Distribution (12b-1) Fees	0.00%	0.75%
Service (12b-1) Fees	0.23%	0.23%
Other Expenses	0.28%	0.46%
Total Annual Fund Operating Expenses	1.17%	2.10%

Example

The Example below is intended to help you compare the cost of investing in the Fund with the cost of investing in other mutual funds. The Example assumes that you invest \$10,000 in the Fund for the time periods indicated. The Example also assumes that your investment has a 5% return each year and that the Fund's operating expenses remain the same. Although your actual costs may be higher or lower, based on these assumptions your costs would be:

	1 year	3 years	5 years	10 years
Class A (whether or not shares are redeemed)	\$687	\$925	\$1,182	\$1,914
Class B (if shares are redeemed)	\$713	\$958	\$1,329	\$1,974
Class B (if shares are not redeemed)	\$213	\$658	\$1,129	\$1,974

Hypothetical Summary Prospectus – Prepared By SEC Staff – For Illustrative Purposes Only

Portfolio Turnover

The Fund pays transaction costs, such as commissions, when it buys and sells securities (or “turns over” its portfolio). A higher portfolio turnover may indicate higher transaction costs. These costs, which are not reflected in annual fund operating expenses or in the example, affect the Fund’s performance. During the most recent fiscal year, the Fund’s portfolio turnover rate was 63% of the average value of its whole portfolio.

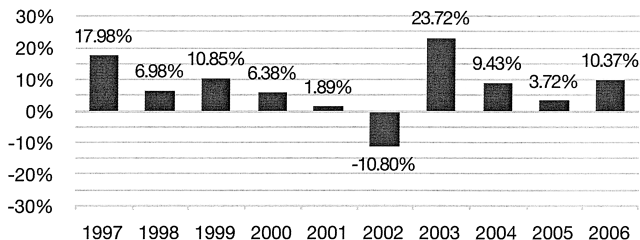
Principal Investment Strategies: The Fund invests mainly in common stocks, bonds, and notes of U.S. and foreign companies.

Principal Risks:

- You could lose money by investing in the Fund.
- Risk Number Two –
- Risk Number Three –
- Risk Number Four –
- Risk Number Five –

Annual Total Return: The following bar chart and table provide some indication of the risks of investing in the Fund. The bar chart shows changes in the Fund’s performance from year to year for Class A shares. The table shows how the Fund’s average annual returns for 1, 5, and 10 years compared with those of a broad measure of market performance. The Fund’s past performance (before and after taxes) is not necessarily an indication of how the Fund will perform in the future.

Sales charges are not reflected in the bar chart, and if those charges were included, returns would be less than those shown.



Best Quarter (ended 6/30/03): 12.08%. Worst Quarter (ended 9/30/01): -11.06%. The year-to-date return as of the most recent calendar quarter, which ended September 30, 2007, was 7.03%.

Hypothetical Summary Prospectus – Prepared By SEC Staff – For Illustrative Purposes Only

Average Annual Total Returns for Periods Ended December 31, 2006			
	1 Year	5 Years	10 Years
Class A (Return Before Taxes)	4.04%	5.72%	7.26%
Class A (Return After Taxes on Distributions)	2.48	4.52	5.05
Class A (Return After Taxes on Distributions and Sale of Fund Shares)	2.30	4.34	4.90
Class B (Return Before Taxes)	4.38	5.62	7.12
S&P 500 Index (reflects no deduction for fees, expenses or taxes)	15.79%	6.19%	8.42%

The after-tax returns are shown only for Class A shares and are calculated using the historical highest individual federal marginal income tax rates and do not reflect the impact of state and local taxes. Actual after-tax returns depend on an investor's tax situation and may differ from those shown. After-tax returns are not relevant to investors who hold their Fund shares through tax-deferred arrangements, such as 401(k) plans or individual retirement accounts.

Top Ten Portfolio Holdings (percent of total net assets) as of September 30, 2007			
Rank	Security	Rank	Security
1	XYZ, Inc. (3.0%)	6	The DEF Co. (1.3%)
2	The ABC Co. (2.3%)	7	The NOP Corp. (1.3%)
3	XYZ Growth, Inc. (1.7%)	8	HIJ Co. (1.1%)
4	The TUV Corp. (1.6%)	9	ABC Corp. (1.0%)
5	QRS Co. (1.4%)	10	OPQ, Inc. (0.9%)

Investment Adviser: XYZ Management Company, LLC

Portfolio Manager: John E. Smith, CFA, Vice President and Equity Portfolio Manager of XYZ Management Company, LLC. Mr. Smith has managed the Fund since 2005.

Purchase and Sale of Fund Shares: You may purchase or redeem shares of the Fund on any business day online or through our Web site at [Web address], by mail (XYZ Funds, Box 1000, Anytown, USA 10000), or by telephone at 800-000-0000. Shares may be purchased by electronic bank transfer, by check, or by wire. You may receive redemption proceeds by electronic bank transfer or by check. You generally buy and redeem shares at the Fund's next-determined net asset value (NAV) after XYZ receives your request in good order. NAVs are determined only on days when the NYSE is open for regular trading. The minimum initial purchase is \$2,500. The minimum subsequent investment is \$100 (or \$50 under an automatic investment plan).

Dividends, Capital Gains, and Taxes: The Fund's distributions are taxable, and will be taxed as ordinary income or capital gains, unless you are investing through a tax-deferred arrangement, such as a 401(k) plan or an individual retirement account.

Payments to Broker-Dealers and Other Financial Intermediaries: If you purchase the Fund through a broker-dealer or other financial intermediary (such as a bank), the Fund and its related companies may pay the intermediary for the sale of Fund shares and related services. These payments may influence the broker-dealer or other intermediary and your salesperson to recommend the Fund over another investment. Ask your salesperson or visit your financial intermediary's Web site for more information.

Appendix B

Sample Experimental Investment Choice Sheet

Subject number: 1

Choose a stock mutual fund portfolio

Please allocate \$100,000 among the four **stock** mutual funds listed below. You may choose to allocate all \$100,000 to one fund or allocate your investment evenly or unevenly across as many funds as you like.

If your stock portfolio is chosen for payment based on Logan Airport's February 28 temperature, we will calculate how much money a real investor would get back if he or she sent \$100,000 to the stock funds below according to the allocation that you choose, assuming that each fund received the investment at 3:00 P.M. on February 29, 2008, and the investments were sold at 3:00 P.M. on March 31, 2008. We will pay you 0.1% of whatever the investment is worth at the end of the investment period.

PAYOFF CALCULATION EXAMPLES

Example #1: Suppose selling your hypothetical investment on March 31, 2008 would give you \$110,000. Then we would pay you (in addition to the \$20 participation payment you will receive today) \$110, which is 0.1% of \$110,000.

Example #2: Suppose selling your hypothetical investment on March 31, 2008 would give you \$85,000. Then we would pay you (in addition to the \$20 participation payment you will receive today) \$85, which is 0.1% of \$85,000.

Below is the menu of mutual funds from which you may choose.

- Write the dollar amount you would like to allocate to each fund in the last column
- You may invest in as many or as few funds as you choose
- Within each fund, you may only invest in the share class listed after its name below
- Please be careful to allocate a total of exactly \$100,000
- If you put money in a fund, that amount must satisfy the minimum opening allocation requirement

Stock Mutual Fund	Symbol	Minimum Opening Allocation if Buying Shares in Fund	Your Allocation in Dollars (column must sum to \$100,000)
American Century Fundamental Equity - Class A	AFDAX	\$2500	
Dreyfus Premier Core Value Fund - Class C	DCVCX	\$1000	
MFS Emerging Growth Fund - Class A	MFEGX	\$1000	
Sentinel Common Stock Fund - Class C	SCSCX	\$1000	

→ Information about these 4 stock mutual funds is attached ←

Any portfolio allocations which violate minimum opening allocation requirements or which fail to total \$100,000 will be ineligible for the investment payout.

Appendix C

Creating the Summary Prospectus

To create the Summary Prospectus documents used in the experiment, we attempted to mimic as closely as possible the sample Summary Prospectus provided by the SEC. In the instances of ambiguity, we made a few decisions and assumptions:

- We limited the number of share classes included in the Summary Prospectus to five due to space limitations. If a fund had more than five share classes, we chose the first five share classes presented in the prospectus, while ensuring that the relevant Class A and Class C shares were included.
- When possible, we used the exact text from the statutory prospectus in the “Investment Objective,” “Principal Investment Strategies,” “Principal Risks,” and “Portfolio Manager” sections of the Summary Prospectus. In instances where the descriptions provided in the statutory prospectus were too long, we extracted the most relevant sentences.
- For the sake of not introducing any new information, we generally did not include any information in the Summary Prospectuses that could not be found in the statutory prospectus, the Statement of Additional Information (SAI), annual report, or most recent shareholder report distributed to subjects. The only exception was the data on top ten portfolio holdings. In instances that funds did not provide this information in their fund literature, we used information from the Google Finance website.
- Below the “Shareholder Fees” table we included a footnote about additional restrictions relevant to the profiled share classes, such as minimum investment amounts and whether share classes were restricted to institutional investors or retirement plans. We did so because fees are often considerably lower for institutions, retirement plans, and large investment amounts. We did not want experimental subjects to think that we were systematically offering them the least attractive share classes available, when in fact we were offering them share classes consistent with their hypothetical principal amount and retail status. Furthermore, we believed that in any final regulation, the SEC would require the Summary Prospectus to disclose these restrictions.
- Some funds did not decompose 12b-1 fees into “Distribution” and “Service” fees. When this occurred, the total amount of 12b-1 fees was listed under “Distribution” fees.

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Comment Steven F. Venti

Beshears, Choi, Laibson, and Madrian have produced a series of influential and insightful studies that evaluate how often-neglected features of pension design affect saving and enrollment decisions. This chapter continues that tradition. It provides an experimental evaluation of the effectiveness of the Summary Prospectus (SP), a shortened and simplified document made available to investors. The experiment is well-designed and executed. The results show no direct effect of the SP on portfolio returns, suggesting that the summary prospectus saves time but does not lead to better investment choices. This result may not, for reasons noted later, be unexpected. Perhaps more surprising and of broader interest is what the experimental results say about the information investors consider, how investors use this information, how indecisive investors are, and how sensitive their portfolio choices are to seemingly irrelevant features of the choice environment.

Thirty years ago most workers participating in private pension plans could look forward to receiving benefits in the form of an annuity that depended