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**Consumer Demand for
Prize-Linked Savings:
A Preliminary Analysis**

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Consumer Demand for Prize-Linked Savings: A Preliminary Analysis

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Abstract: This paper reports on a small-scale survey of the potential American demand for prize-linked savings accounts, an account that awards prizes as part of the saving product's return. In October 2006, Centra Credit Union launched a prize-linked savings pilot. As part of that initiative, we conducted a mall intercept survey of over 500 people in Clarksville, Indiana, the community where the program was launched. This preliminary data suggests that low-to-moderate income Americans may have substantial demand for prize-linked savings, with a majority of survey participants expressing an interest in opening a prize-linked savings account. As predicted by theory and international experience, interest in prize-linked savings is greatest among people who do not have regular saving habits, who have little actual savings, who play lotteries extensively, and who are optimistic about their futures.

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Prize-linked savings (“PLS”) products offer savers a return in the form of the chance to earn large prizes, rather than in more traditional forms of interest or dividend income or capital appreciation. The probability of winning is typically determined by account balances, and the aggregate prize pool can be set to deliver market returns to all savers. Prize-linked assets are offered in over twenty countries around the world—including the U.K., Sweden, South Africa and many Latin American and Middle Eastern countries—but are not available in the United States, where state laws and federal regulations make the offering of prize-linked programs problematic. However, the demand for lotteries in the US suggests that demand for a savings vehicle offering chances to win a high payoff prize could be substantial. If so, prize-linked savings products could help raise aggregate savings among low- to-moderate income families.

Categorizing savings programs on a spectrum from coercive to exciting, Tufano and Schneider (2007) consider prize-linked savings a program that could make saving exciting, by leveraging the excitement generated by gambling and lotteries. This overlap between prize-linked savings and lotteries is important as survey results show that low-income American families believe they are more likely to build wealth by playing the lottery than by traditional saving with compound interest (Holton, 2000; Consumer Federation of America, 2006).

Despite their long and successful history, prize-linked savings are relatively unstudied by scholars with a few exceptions. Guillen and Tschoegl (2002) survey programs around the world, describing Latin American programs in some detail. They report that in Latin America, PLS products appealed to low income and unbanked individuals. In South Africa, the Million-a-Month Account offered by South Africa’s

First National Bank (Cole et al., 2007) generated 750,000 accounts and raised over 1.2 billion Rand in two years time (Mabuza, 2007). The product reportedly has appealed to a wide cross section of South Africans.

Recent work examines the U.K. Premium Bond program (Lobe and Hölzl, 2007; Tufano, 2007), one of the longest continuously operated programs with over £31.1 billion outstanding as of March 2006. Tufano (2008) reports that demand for Premium Bonds is stronger among lower income households than is their demand for alternative products, like stocks and shares. Premium Bond sales over nearly four decades are related to savings factors (the aggregate interest rate paid on the product relative to comparable rates) as well as to gambling factors (the size of the largest prize.) Furthermore, sales are higher when aggregate savings is lower, contrary to other savings products.

All together, this work paints a picture of a savings vehicle that may appeal to people with little savings and little interest in traditional savings products. While international evidence suggests a nearly universal appeal for PLS, one might wonder whether PLS would appeal to US consumers, and if so, which ones. A more fundamental question is whether PLS would increase overall household savings, and if so, would it draw funds away from consumption, gaming or some other. This short note addresses the first of these issues—likely demand—by using market research survey techniques.

The Centra Credit Union Super Savings Pilot

In 2007, Indiana-based Centra Credit Union launched “Super Savings,” the first ever prize-linked savings product in the United States across all of its 22 branches.¹ Prior to the full launch, in October 2006, a pilot and associated survey were launched in Clarksville, Indiana at a new credit union branch. The Clarksville Centra branch is located inside a Wal-Mart store, and the survey was conducted in the store by Centra contractors working in conjunction with the D2D Fund². Table 1 lists the demographic characteristics of Clark County, the location of the pilot, and compares it with national US data. In brief, the county has a mean income 13% lower than the US mean and can provide some insight into PLS demand among low income populations. We are aware however, that the results from Clarksville may not be nationally representative.

As part of the pre-pilot market research, 547 surveys were completed by intercepting Wal-Mart customers during the mid-November to December 2006 period. The principal question asked—which is a brief description of the Super Saver account—was the following:

Would you be interested in a savings account that awarded chances to win prizes based on the amount of money you save? The account would also have no fees, no minimum balance, and still earn interest.

This sentence-long description provided the essence of the product (prizes for savings) but obviously did not give the details, e.g., the number, size, or odds of winning the prizes, nor the relevant interest rate. It captures general interest for the product type as

¹ See Maynard 2007 for more detail on the Centra Super Savings experiment.

² D2D Fund is a non-profit organization that works to expand access to financial services, especially asset building opportunities, for low-income families by creating, testing and deploying innovative financial products and services (<http://www.d2dfund.org/>).

opposed to the specific product features. In addition to collecting potential interest in the product, the survey gathered demographic information. The **Appendix** reproduces the survey, and Table 2 reports the results of the survey.

In total, 58% of participants expressed a positive interest in the PLS accounts, 26% were not interested, and 16% answered “I don’t know.” The simple PLS concept appealed to a majority of the surveyed Wal-Mart customers in Clarksville, IN, but this finding is subject to three important caveats. First, as noted above, this population is not nationally representative but rather concentrated among low-income families. Second, since the program had not been fully marketed, this survey reflects indications of interest, not executed transactions. Finally, since the survey did not indicate the precise terms, e.g., what interest rate would be set in conjunction with the prizes, or what the prizes would be, it cannot inform about the precise demand. Nevertheless, we found that even this bare-bones description of the product was more appealing to some customers than to others, which we analyze below.

The Potential Appeal of Prize-Linked Savings.³

While delivering higher returns—e.g., higher rates of return or interest—may increase demand, psychological factors can be a potent stimulator of demand as well. Researcher in behavioral economics and behavioral finance are finding that certain systematic psychological biases can explain a great deal of consumer decisions. In this instance, the popularity of the PLS product may lie in its blend of the guarantee of no principal loss with a large, but low probability gain. PLS accounts are a textbook

³ This section is adapted from Tufano 2008.

application of certain behavioral economics principles. In particular, the product structure is engineered to appeal to people who are “loss averse,” i.e., who will pay more to avoid a loss than to guarantee a gain of the same size. In particular, the PLS product guarantees no principal loss. However, unlike the traditional products that guarantee no principal loss (such as bank deposits, CDs, bonds), PLS leverages the behavioral phenomena that investors may avoid large gambles, but will take on small ones, in this case, the forgone interest on their invested funds. Finally, PLS reflects the behavioral factor that people often misestimate the probabilities of low-probability events (e.g. accidents or winning gambles). For a theoretical discussion of PLS products, see Pfiffelmann 2006.

The popularity of PLS products also reflects their functional properties. Alternative products with no principal loss and good liquidity are typically low-yielding demand deposit accounts. The power of compound interest provides little incentives to savers with short and uncertain savings horizons and small principal balances that generate meager amounts of interest. Instead of receiving a certain but small payout, the PLS saver gets a small chance at a large payoff. This preference mirrors the opinions revealed by a recent survey by the Consumer Federation of America (CFA) and the Financial Planning Association (FPA), which that “more than one-fifth of Americans (21%)—38% of those with incomes below \$25,000—think that winning the lottery represents the most practical way for them to accumulate several hundred thousand dollars.”⁴

⁴ <http://www.americasaves.org/downloads/www.americasaves.org/01.09.2006.pdf>

Bankers offering prize-linked savings around the globe suggested that the products might particularly appeal to “non-savers,” (i.e., those who had not previously been attracted to existing savings or investing products). To test this conjecture, we sought to see if the PLS structure appealed to non-savers. We considered savers to be those individuals with some form of a savings plan. They might plan to save the income of one family member, spend one’s regular income but save other forms of income, or save regularly by putting money aside each month. We considered non-savers to be (for parallelism to last sentence) people who indicated that they had no regular savings plan, either spending more than their income or spending about as much as their income. Based on this categorization, 61% of all survey participants were non-savers (see Table 2). Among non-savers, 65% expressed an interest in the PLS product. Among savers, only 48% expressed an interest. Figure 1 illustrates this result graphically.

Writing about PLS accounts in Latin America, Guillén and Tschöegl (2002) conclude that “[T]he bankers we spoke with believe that (the products) are especially successful with low-income depositors.” This observation is consistent with evidence on the demographics of gambling; the 1999 National Gambling Impact Study showed that 80% of gambling revenue comes from households with income less than \$50K; the same report indicates that households with incomes less than \$10K spent 3 times as much gambling—in aggregate real dollars—as those with incomes greater than \$50K. To test if PLS is especially demanded by low income and low wealth persons, the survey collected information on financial assets, including checking, savings, and money market accounts; CDs; IRAs; 401(k)s; 403(b)s; Keoghs; mutual funds; savings bonds; stocks; bonds; and any cash saved at home. The survey results by savings assets range are

shown in Table 2 and illustrated in Figure 2. In these simple cuts, the product was most demanded among people with less savings. Among participants reporting between \$1 and \$2,000 in savings assets, 73% expressed interest in the PLS offer. In contrast, only 38% of those with \$40,000 in savings were interested.

The survey also gauged the participants' estimate of their earnings relative to the other people in the Clarksville, IN area. In general, the participants represented the full range of relative incomes. Among those participants that considered their earnings to be substantially less relative to the Clarksville population, 62% showed interest in the PLS product that was offered, while for those who thought they earned substantially more than the other people in Clarksville, IN, only 48% showed interest in the PLS offer. Table 2 also gives the results for the intermediate categories.

Because the PLS customer cannot improve the odds of winning (apart from saving more), one might expect that this activity, like gambling, may be attractive to optimistic individuals. Puri and Robinson (2007) provide evidence that optimism is related to a wide range of economic decisions that include portfolio choices and labor market decisions. They find that "Optimistic people are more likely to believe that their income will grow over the next five years, even controlling for past income growth." In our survey we measure optimism by asking participants about their future expectations of their financial well-being as compared to the previous five years. We consider optimists to be those participants that replied "improve" as compared to those that considered their future expectations to either remain the same or become worse than it has been over the previous five years. Some 60% of survey participants were optimistic about their future income and only 5% were pessimistic about their future income. Among these

optimistic participants, 65% showed interest in the PLS product, but only 33% of the pessimists were interested. See Table 2 and Figure 4.

Because PLS products combine saving with the thrill of winning prizes (but without the risk of losing principal), we hypothesized that PLS would appeal to lottery players and gamblers. We measure gambling and lottery activity by whether survey participants had spent over \$100 in the past 6 months on any combination of the following games: scratch-offs or pull tabs, Daily 3, Daily 4, Lucky 5, Pick 3, or Pick 4; lotteries such as Hoosier Lottery, Kentucky Cash, or Powerball, and gambling activities such as casino games or slots; and betting on horse-racing. Among all survey participants 11% reported to have spent over \$100 in the past 6 months on such games. Among this subsample of heavy lottery spenders, 75% showed interest in the PLS offer. In contrast, only 56% of the people spending less than \$100 were interested. Table 2 provides the data, and Figure 3 illustrates graphically.

Even a small substitution effect between lottery spending and prize-linked savings would lead to an increase in aggregate savings. In 2003 alone, U.S. residents spent nearly \$80 billion on legalized forms of gambling (Kearney, 2005) and \$90 billion by 2007. This amount outweighs the combined expenditure on movie tickets, recorded music, spectator sports, video games, and theme parks. Though large shares of the U.S. population engage in some form of gambling annually, evidence suggests that “on average, low-income households spend a larger percentage of their wealth on lottery tickets than other households” (Kearney, 2005: 16). If PLS can tap into this substantial demand, it might appeal to new savers.

The survey also asked for the participants' willingness to bear financial risk. While the product has certain low risk attributes (the absence of principal loss) it also has a more risky payout (the prizes). Consistent with the notion that low income families tend to be financially risk averse, the majority of those surveyed people indicated that they were either not willing to take any financial risk or only average financial risk. Among these participants, the interest in the PLS product offer was, respectively, 54% and 59%. Among the fraction of participants that reported that they would be willing to take substantial risks, some 72% indicated interest in the PLS product (see Table 2).

Guillen and Tschoegl (2002) in their review of PLS programs around the world also note that the products appealed to "*people outside the banking system*." The Spanish banks believe, though no systemic studies exist, that [Lottery-linked deposit accounts] enabled them to grow in those Latin American countries where they introduced the accounts by attracting new customers as well as stealing customers from other banks." To test if these factors are replicated in Indiana, we hypothesized that PLS might be especially appealing to people who are unbanked or underbanked. We judged as unbanked or underbanked those participants that typically cash checks at either cashing outlets, grocery stores, Wal-Mart, convenience stores, or any other way. Banked are those survey participants that cash most of their checks at either a bank or a credit union. Among the survey participants, 20% are underbanked, of which 62% expressed interested in the PLS product. Among the 80% of survey participants that are "banked," 58% showed interest. Table 2 provides the data.

A number of other factors might relate to the demand for PLS. A number of authors, e.g., Campbell (2006), Agarwal, Driscoll, Gabaix and Laibson (2007), and

Barber and Odean (2001) have found that financial decision making varies with education, age and gender. These traits may capture a variety of factors, ranging from financial sophistication, risk taking, or unobserved long-run wealth and income. To assess these qualities, we also collected data on gender, age, employment status, education, marital status, household size, and financial literacy. These are reported in Table 2 as well. In these simple cross tabs, there is slightly stronger demand among younger persons, men, employed people, less educated persons and certain types of households.

Expressed Preferences: Multivariate Analyses

The discussion above reports univariate differences between people who expressed a positive interest in PLS versus those expressing a negative interest. However, many of the variables are correlated with one another. For example, the level of savings is negatively correlated with being a non-saver ($\rho=-0.26$). Optimistic income expectations drop with increases in age among survey participants ($\rho=-0.38$). Being full-time employed correlates positively with optimistic income expectations ($\rho=0.31$). These correlations require a multivariate analysis.

Table 3 shows the results of a multivariate logistic regression of expressed interest in the offered PLS account using the explanatory variables discussed above that reflect demographic and socio-economic characteristics. We report two analyses, one that compares the interested individuals with those that were either not interested or replied that they didn't know (full sample). The second panel contrasts the interested individuals directly with those that were not interested, ignoring those who expressed no opinion (the

restricted sample). The logistic form produces odds ratios that allow for the prediction of an individual's propensity to take up PLS products.

As predicted by international anecdotal evidence, the product appeals to non-savers in this expanded analysis. First, the expressed preference is stronger for people who do not claim to have regular savings plans, i.e., those who either state that they do not save or merely save if they happen to have money that they haven't spent that month. As compared to individuals or households with a savings plan (i.e. they save the income of one family member, put money aside regularly each month, etc.), a non-saver is 70% more likely to show interest in the PLS product. This large result is statistically significant at the 5% level.

In addition to being related to savings plans, PLS demand is related to the level of savings, with the product appealing most to people with almost no savings. As compared to participants that reported having \$50,000 or more in financial assets, participants whose financial assets are in the \$1-\$2,000 range show a propensity for interest in the offered PLS product that is 2.5 times greater, significant at 5% and 10% levels for the two samples.

A third predictor for interest in PLS accounts is optimism, measured by the belief that one's financial well-being will improve over the next five years. Optimistic participants are 2.1 to 2.5 times more likely to show interest in the PLS product than those who foresee no change in their income over the coming five years. This positive correlation is significant at the 1% level for both data panels. Conversely, individuals that held negative expectations on their future income levels had similar levels of interest to

those who expected no growth in future income. The result is consistent with emerging academic work on the relationship between optimism and financial decision-making.

Another factor associated with strong demand in the PLS product is being a heavy spender on lottery and gambling activities. Participants that had spent \$100 or more over the past 6 months on such games had interest levels 2.9 or 2.6 times higher than those participants that had spent less than \$100. An important question for future research is whether this interest in PLS would add to or substitute for demand for lottery play by these individuals.

A few other explanatory variables are related to demand. Persons in the 55-64 age group are less interested in the PLS account with an odds ratio of 0.4 or 0.3 as compared to the youngest age group in our sample (18-24). Separated individuals show substantially more interest in the PLS product compared to married individuals (the odds ratio stands at 9.3 and shows significance at the 5% level). Counter to our joint measure for lottery and gambling expenses, the stand-alone activity of gambling (measured in the survey by playing the casino and horse-races) produces an odds ratio that predicts only half as much interest (0.49) relative to non-gamblers. This result is significant at the 10% level for the full sample only. While it is mere supposition, PLS may be closer in form to the “tame” gaming embodied in lottery play than to the more active gambling of casino or horse-racing.

In the multivariate specifications shown in Table 3, a number of variables are not significant, notwithstanding theoretical conjectures that they could be important. These include the stated financial risk profile of the survey participants and the self-assessed relative earnings. Furthermore, access to financial services, financial literacy, gender,

employment status, household size, and education were not strongly related with interest in the PLS product after controlling for other factors.

Conclusion

The Centra survey results provide a first look into demand for PLS in America. While merely demonstrating expressed (as opposed to revealed) demand, the results are still promising on a few dimensions. First, among the low income population we studied, there was substantial interest in a savings product that provides prizes as part of its return. Second, this product appeals to non-savers, who do not save with traditional products. Third, the product appeals to heavy lottery players, and by virtue of this fact, has the potential of turning their gambling activities into demand for savings.

As promising as we find this analysis, it is important to keep in mind the uphill battle that PLS products face in the US due significantly to well-established gambling and lottery industries that might oppose PLS and the roadblocks due to legal uncertainty and prohibitions around this new product. Furthermore, businesses or state treasurers might be reluctant to innovate around a product that must compete against heavily marketed alternatives. Nevertheless, our preliminary PLS findings suggest that the product is promising, despite the formidable barriers to its success in the US.

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Figure 1: PLS Consumer Demand and Saving Habits

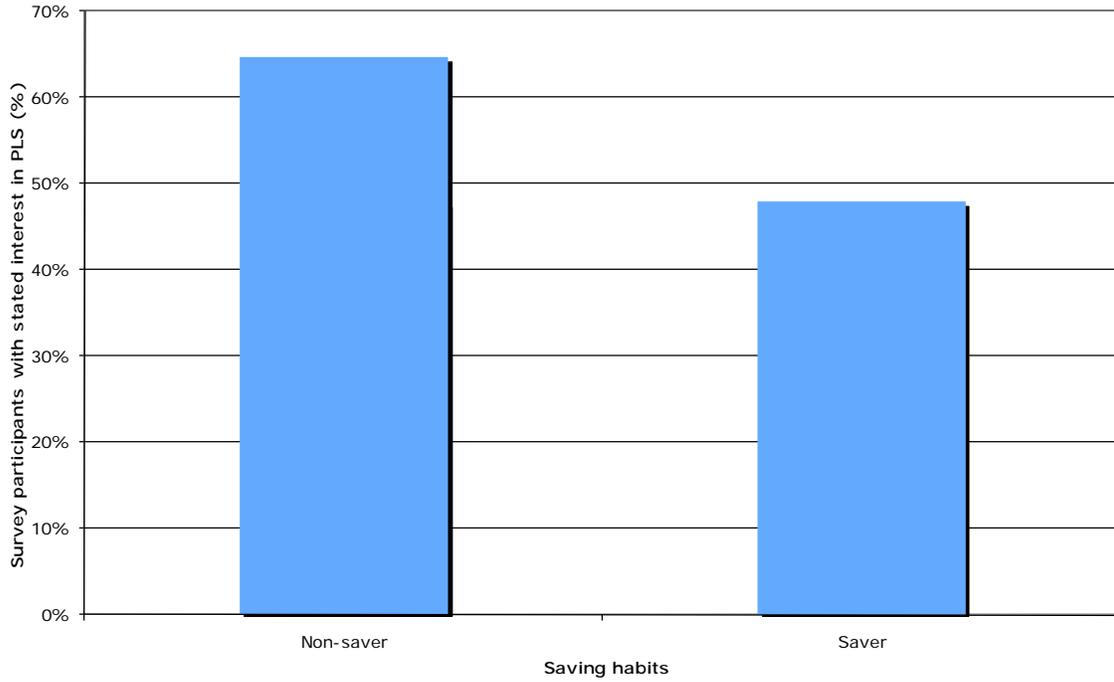


Figure 2: PLS Consumer Demand and Savings Assets

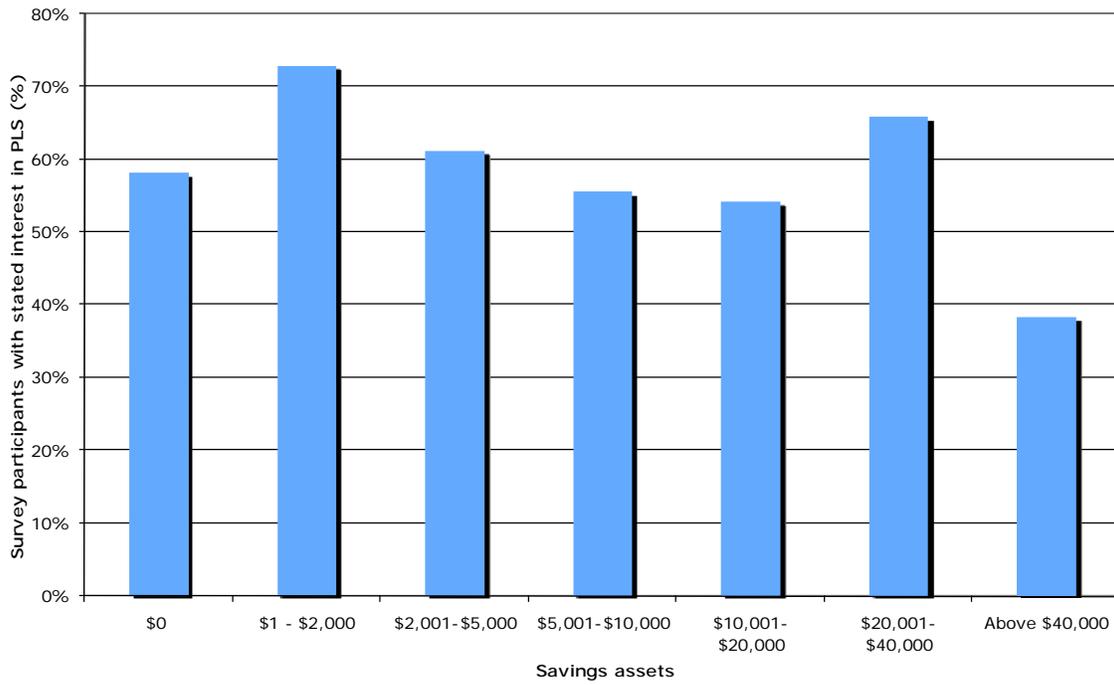


Figure 3: PLS Consumer Demand and Lottery Spending

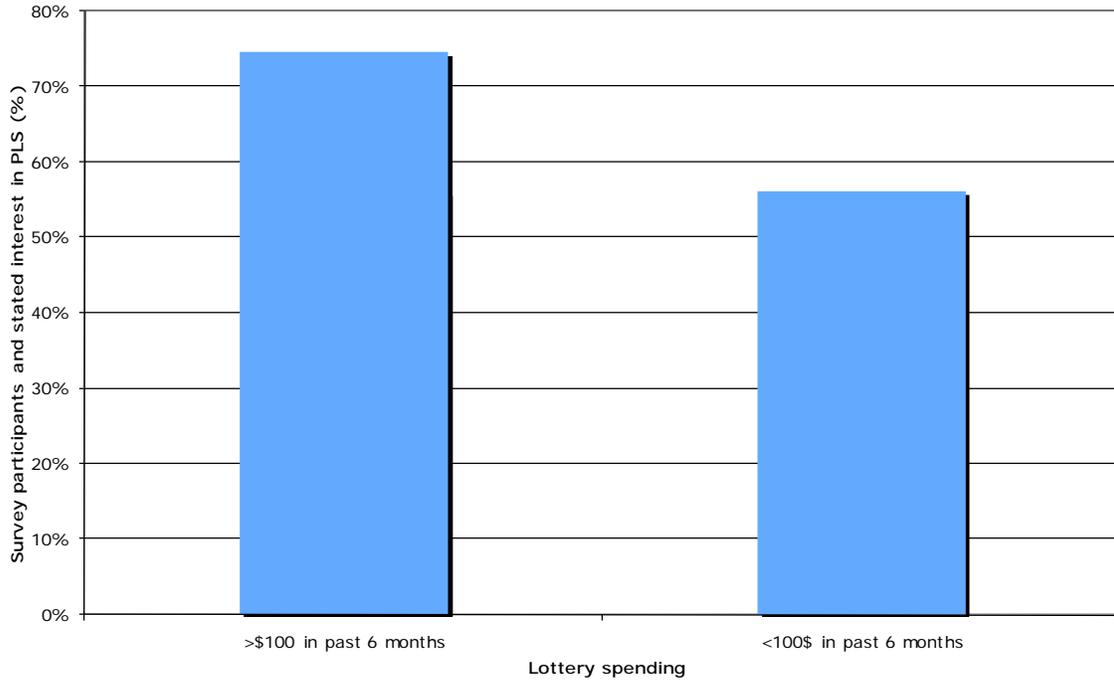


Figure 4: PLS Consumer Demand and Future Income Expectations

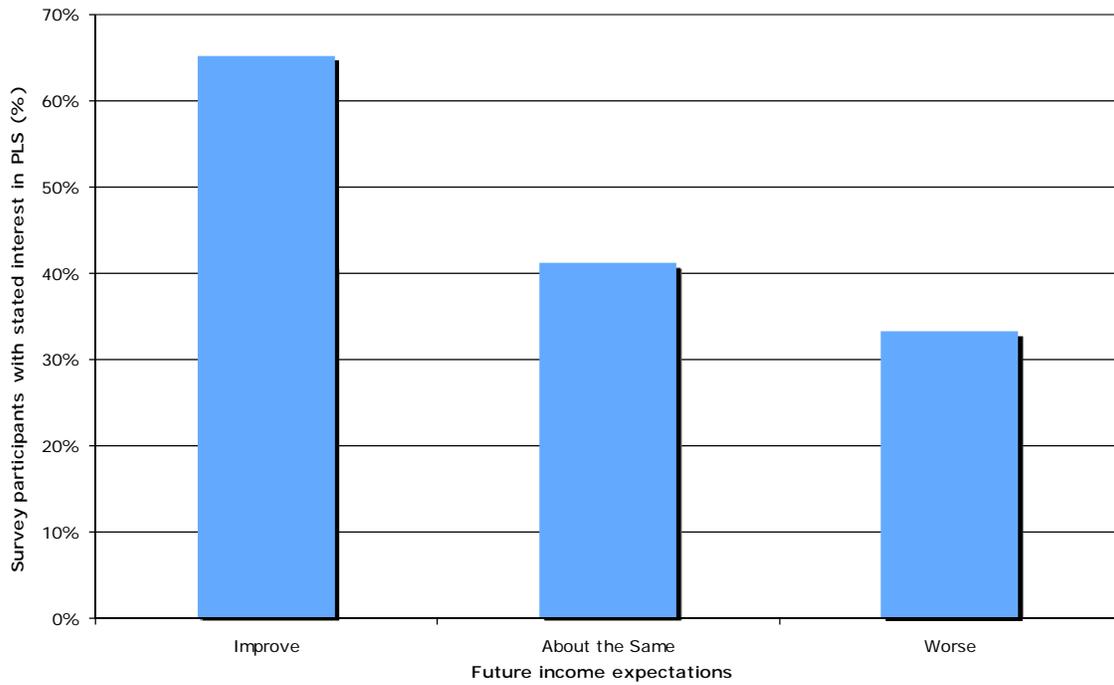


Figure 5: PLS Consumer Demand and Age

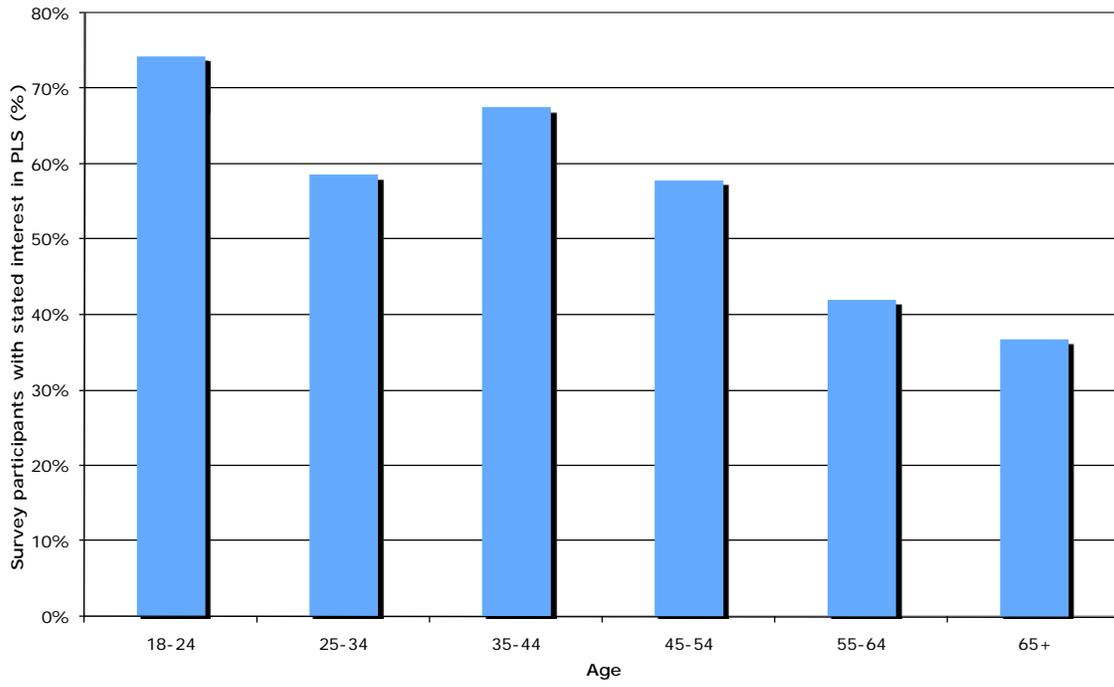


Table 1. Demographic characteristics of Clark County, Indiana versus USA, 2006 Census

	Clark County		USA	
POPULATION	103,569		299,398,485	
INCOME AND BENEFITS (IN 2006 INFLATIONADJUSTED DOLLARS)				
Total households	44,464		111,617,402	
Less than \$10,000	3,565	8%	8,898,696	8%
\$10,000 to \$14,999	2,885	6%	6,639,877	6%
\$15,000 to \$24,999	5,832	13%	12,721,628	11%
\$25,000 to \$34,999	5,920	13%	12,446,822	11%
\$35,000 to \$49,999	7,864	18%	16,511,457	15%
\$50,000 to \$74,999	8,458	19%	21,221,889	19%
\$75,000 to \$99,999	5,968	13%	13,214,551	12%
More than \$100,000	3,972	9%	19,962,482	18%
Median household income	\$41,719		\$48,451	
Mean household income	\$50,860		\$65,527	
EDUCATIONAL ATTAINMENT				
Population 25 years and over	70,693		195,932,824	
Less than 9th grade	3,294	5%	12,743,555	7%
9 th to 12th grade, no diploma	8,789	12%	18,502,540	9%
High school graduate (includes equivalency)	26,147	37%	59,123,954	30%
Some college, no degree	16,908	24%	38,185,678	19%
Associate's degree	4,856	7%	14,486,202	7%
Bachelor's degree	7,568	11%	33,496,187	17%
Graduate or professional degree	3,131	4%	19,394,708	10%
MARITAL STATUS				
Males 15 years and over	40,116		116,327,232	
Never married	11,675	29%	39,401,560	34%
Now married, except separated	21,609	54%	60,955,218	52%
Separated	774	2%	2,194,345	2%
Widowed	1,665	4%	2,959,354	3%
Divorced	4,393	11%	10,816,755	9%
Females 15 years and over	43,252		122,258,450	
Never married	10,642	25%	33,385,649	27%
Now married, except separated	20,167	47%	59,211,138	48%
Separated	1,491	3%	3,210,647	3%
Widowed	5,326	12%	12,223,537	10%
Divorced	5,626	13%	14,227,479	12%
RACE				
White	91,844	89%	221,331,507	74%
Black or African American	7,557	7%	37,051,483	12%
American Indian and Alaska Native	87	0%	2,369,431	1%
Asian	228	0%	13,100,095	4%
Hispanic or Latino (of any race)	2,760	3%	44,252,278	15%

Source: <http://factfinder.census.gov/> (last visited on December 6, 2007)

Table 2. Results from the Centra Credit Union survey in Clarksville, Indiana, November-December 2006

Shows the number and percentage results of the survey broken down by the characteristics of the respondents. The survey question asked: "Would you be interested in a savings account that awarded chances to win prizes based on the amount of money you save? The account would also have no fees, no minimum balance, and still earn interest."

		Percentage of Group by Preference		
	Sample (number)	Yes, I'm interested	No. I'm not interested	Don't know
All Respondents:	547	58%	26%	16%
Respondents by characteristics:				
<i>Saving habits</i>				
Non-saver ¹	331	65%	21%	14%
Saver	215	48%	33%	19%
<i>Savings assets</i>				
\$0	55	58%	29%	13%
\$1 - \$2,000	144	73%	15%	13%
\$2,001-\$5,000	80	61%	28%	11%
\$5,001-\$10,000	54	56%	26%	19%
\$10,001-\$20,000	59	54%	20%	25%
\$20,001-\$40,000	44	66%	20%	14%
Above \$40,000	94	38%	41%	20%
<i>Earnings relative to Clarksville, IN population</i>				
Substantially more	31	48%	39%	13%
Little more	112	58%	25%	17%
About the same	262	59%	26%	15%
Little less	94	56%	24%	19%
Substantially less	42	62%	24%	14%
<i>Future income expectations</i>				
Improve	392	65%	20%	15%
About the Same	126	41%	40%	19%
Worse	27	33%	44%	22%
<i>Lottery spending</i>				
More than \$100 in past 6 months	59	75%	15%	10%
Less than 100\$ in past 6 months	488	56%	27%	17%
<i>Investment risk profile</i>				
High financial risk profile	25	72%	24%	4%
Above average financial risk profile	67	61%	27%	12%
Average financial risk profile	217	59%	24%	18%
No financial risk	232	54%	28%	17%
<i>Financial services</i>				
Banked ²	431	58%	26%	17%
Unbanked	112	62%	25%	13%
<i>Financial literacy³</i>				
More literate	225	56%	28%	16%
Less literate	320	59%	24%	16%

Table 2 (continued)

		Percentage of group by preference		
	Sample (number)	Yes, I'm interested	No. I'm not interested	Don't know
All Respondents	547	58%	26%	16%
<i>Age groups</i>				
18-24	74	74%	14%	12%
25-34	87	59%	23%	18%
35-44	120	68%	16%	17%
45-54	135	58%	25%	17%
55-64	81	42%	43%	15%
65+	49	37%	47%	16%
<i>Gender</i>				
Male	160	62%	26%	13%
Female	386	56%	26%	18%
<i>Employment status</i>				
Full-Time	315	63%	20%	17%
Part-Time	56	63%	30%	7%
Student	13	38%	23%	38%
Retired	79	44%	41%	15%
Work in the Home	24	50%	33%	17%
Unemployed	60	57%	28%	15%
<i>Marital Status</i>				
Married	255	51%	30%	18%
Living with a partner	65	68%	15%	17%
Widowed	28	50%	39%	11%
Divorced	78	58%	28%	14%
Separated	23	74%	9%	17%
Never Married	98	68%	19%	12%
<i>Education</i>				
No high school degree	40	55%	25%	20%
High school degree	199	62%	24%	15%
Some College	157	59%	24%	18%
Associate and technical degree	70	59%	24%	17%
College and postgraduate degree	81	49%	37%	14%
<i>Household size</i>				
Household with 5 or more members	73	52%	22%	26%
Household with 4 members	77	69%	16%	16%
Household with 3 members	115	60%	23%	17%
Household with 2 members	184	52%	34%	14%
Household with 1 member	98	64%	24%	11%

Notes to Table 2

¹ Savers are those survey participants that show saving habits that are indicative of some form of savings plan. This could be saving habits that save income of one family member, that spend regular income but save other forms of income, or save regularly by putting money aside each month. Non-savers are survey participants that have no regular savings plan by either spending more than their income or about as much as their income.

² Banked are those survey participants that cash most of their checks at either a bank or a credit union. Unbanked are those participants that typically cash checks at either cashing outlets, grocery stores, Wal-Mart, convenience stores, or any other way.

³ Participants deemed more financially literate are considered to be those survey participants that knew the answer to the following question: "Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?"

Table 3. Multivariate logistic regression of expressed interest in Centra Credit Union PLS account on demographic and socio-economic characteristics.

The full sample compares those expressing a positive interest to all others (that are those without an interest and those selecting “don’t know” as their interest). The sample “expressing opinions” excludes those who selected “Don’t know.” The discrete variables that were omitted for fixed effects can be identified by comparison with Table 2. This table produces odds ratios with levels of statistical significance indicated as follows: *** p<0.01, ** p<0.05, * p<0.1.

Variable	Full sample		Sample expressing Opinions	
<i>Saving habits</i>				
Non-saver ¹	1.687	**	1.834	**
<i>Savings assets</i>				
\$0	1.523		1.004	
\$1 - \$2,000	2.456	**	2.184	*
\$2,001-\$5,000	1.561		1.272	
\$5,001-\$10,000	1.258		1.198	
\$10,001-\$20,000	1.341		1.528	
\$20,001-\$40,000	2.409	**	2.453	
<i>Earnings relative to Clarksville, IN population</i>				
Substantially more	0.672		0.420	
Little more	0.848		0.673	
About the same	0.871		0.716	
Little less	0.829		0.776	
<i>Future income expectations</i>				
Improve	2.108	***	2.454	***
Worse	0.641		0.748	
<i>Lottery spending</i>				
More than 100\$ in past 6 months	2.893	***	2.578	**
<i>Financial risk profile</i>				
High financial risk	1.741		1.093	
Above average financial risk	1.232		0.880	
Average financial risk	1.266		1.201	
<i>Financial services</i>				
Banked ²	0.832		0.837	
<i>Financial literacy³</i>				
Less financially literate	1.141		1.243	
<i>Age groups</i>				
25-34	0.548		0.461	
35-44	0.931		0.916	
45-54	0.635		0.519	
55-64	0.440	*	0.315	**
65+	0.445		0.354	
<i>Gender</i>				
Male	0.896		0.799	

Table 3 (continued)

<i>Employment status</i>		
Full-Time	1.126	1.309
Part-Time	1.294	0.876
<i>Marital Status</i>		
Widowed	1.066	0.910
Divorced	1.096	1.110
Separated	2.400	9.255 **
Never Married	1.099	1.079
<i>Education</i>		
High school degree	1.083	0.967
Some college	0.839	0.760
Associate and technical degree	0.633	0.428
College and postgraduate degree	0.885	0.736
<i>Household size</i>		
Large household (5 or more members)	0.858	0.959
Observations	511	430
Pseudo R2	0.128	0.174

¹ Savers are those survey participants that show saving habits that are indicative of some form of savings plan. This could be saving habits that save income of one family member, that spend regular income but save other forms of income, or save regularly by putting money aside each month. Non-savers are survey participants that have no regular savings plan by either spending more than their income or about as much as their income.

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³ Participants deemed more financially literate are considered to be those survey participants that knew the answer to the following question: "Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account?"

Appendix: Survey

Question 1

Do you currently have an account at Centra Credit Union?

- A. Yes
- B. No

Question 2

Would you be interested in a savings account that awarded chances to win prizes based on the amount of money you save? The account would also have no fees, no minimum balance, and still earn interest?

- A. Yes
- B. No
- C. Don't know

Question 3

Over the last six months, where did you go to cash most of your checks?

- A. Credit Union
- B. Bank
- C. Check Cashing Outlet
- D. Grocery Store
- E. Wal-Mart
- F. Convenience Store
- G. Other

Question 4

Which of the following statements best describes your saving habits?

- A. Usually **spend more** than income
- B. Usually **spend about as much** as income
- C. Save whatever is left over at the end of the month--**No regular plan**
- D. **Save income of one family member**, spend the other
- E. Spend regular income, **save other income**
- F. **Save regularly** by putting money aside each month

Question 5

Some investments offer higher returns but are more risky. Risk means you could lose some of the money you invested. Which of the statements below **best describes** the amount of financial risk that you [*and your spouse*] are willing to take when you save or make investments?

- A. Take **substantial** risks expecting to earn **substantial** returns
- B. Take **above average** financial risks expecting to earn **above average** returns.
- C. Take **average** financial risks expecting to earn **average** returns.
- D. Not willing to take financial risks.

Question 6

If you [and your spouse] were to add up all of your savings accounts and financial assets today (including checking, savings, and money market accounts; CDs; IRAs; 401(k)s; 403(b)s; Keoghs; Mutual Funds; Savings Bonds; Stocks; Bonds; or any cash saved at home), approximately how much would they amount to?

- A. \$0
- B. \$1 to \$2,000
- C. \$2001 to \$5,000
- D. \$5001 to \$10,000
- E. \$10,001 to \$20,000
- F. \$20,001 to \$40,000
- G. Above \$40,000

Question 7

Imagine that the *interest rate* on your savings account was 1% per year and *inflation* was 2% per year. After 1 year, would you be able to buy more than today, exactly the same as today, or less than today with the money in this account? [Or you don't know?]

- A. More than today
- B. Exactly the same
- C. Less than today
- D. Don't Know

Question 8

Relative to all the people here in Clarksville and around this area, do you think you earn substantially more, a little more, about the same, a little less, or substantially less?

- A. Substantially more
- B. Little more
- C. About the same
- D. Little less
- E. Substantially less

Question 9

I'd like to ask you about your expectations for the future. Over the next five years, do you expect your financial well being to improve, become worse, or remain the same as it has over the previous five years?

- A. Better
- B. Worse
- C. About the same

Question 10

Where do you go for the latest news and traffic updates?

- A. Internet
- B. Cell Phone
- C. Radio
- D. TV
- E. Newspaper

Question 11

Which radio station do you listen to most?

- A. 840 AM (WHAS)
- B. 97.5 (WAMZ)
- C. 90.9 (WKUE)
- D. 105.1 (WLRS)
- E. 102.3 (WXMA)
- F. Other
- G. I don't listen to the radio

Question 12

Which newspaper do you read most often?

- A. Louisville Courier-Journal
- B. Jeffersonville Evening News
- C. New Albany Tribune.
- D. Other local paper
- E. Other national paper
- F. I don't read the newspaper

Question 13

If you read the newspaper, which section do you like the most?

- A. Main News
- B. Sports
- C. Life Style
- D. Velocity / Entertainment
- E. Editorial

Questions 14-18

(HAVE THE SAME ANSWER CHOICES)

- A. Yes, regularly
- B. Yes, somewhat regularly
- C. Yes, but rarely
- D. No

Question 14

Do you play scratch-offs or pull tabs?

Question 15

Do you play games like Daily 3, Daily 4, Lucky 5, Pick 3, or Pick 4?

Question 16

Do you play the Lottery, such as Hoosier Lottery, Kentucky Cash, or Powerball?

Question 17

Do you play games or slots at riverboat casinos?

Question 18

Do you bet on horse-racing?

Question 19

In the last six months, about how much do you think you have spent on these games?

- A. \$0
- B. Less than \$50
- C. \$50-\$100
- D. \$101-200
- E. \$201 +

Question 20

What is your age group?

- A. 18-24
- B. 25-34
- C. 35-44
- D. 45-54
- E. 55-64
- F. 65 +

Question 21

Are you currently married, living with a partner, separated, divorced, widowed, or have you never been married?

- A. Married
- B. Living with a partner
- C. Widowed
- D. Divorced
- E. Separated
- F. Never Married

Question 22

How many people [including YOURSELF] live in your household?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5+ (Five or More)

Question 23

What was your last grade completed?

- A. Less than high school
- B. High school
- C. Some college
- D. Associates degree
- E. Bachelors
- F. Post-Graduate degree
- G. Technical degree

Question 24

Are you employed:_____?

- A. Full time
- B. Part time
- C. I'm a student
- D. I'm a retired
- E. I work in the home
- F. Unemployed