CORTEX
Technologies
Limited

Wisconsin Public Employees Deferred Compensation Plan and Trust

2002 WDC MEMBER SURVEY

DRAFT REPORT OF FINDINGS

FEBRUARY 2003

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INTRODUCTION

Over the past ten years, there has been a number of fundamental changes to the pension industry including the insurgence and increasing number of Defined Contribution (DC) plans being offered by plan sponsors, the greater use of third party record keepers and administrators, greater levels of competition and service quality among third party providers, and the greater availability of investment options and specialty funds to include in the investment program, to name but a few.

Defined Contribution plans may have allowed sponsors to relinquish some control and responsibility for making investment decisions to plan members, but, in so doing, they may also have increased their responsibilities for providing adequate member communications and information dramatically.

The main purpose of Cortex's Pension Knowledge Assessment Program (PKAP) is to provide sponsors with a tool that they may use to assess how well members understand general investment and retirement planning concepts and key features of the plan necessary to make informed and sound decisions. By proactively assessing members knowledge on a regular basis, sponsors will be able to track the effectiveness of their communications programs, have valuable insight for preparing communications budgets and plans, and have tangible evidence to show that they were acting as prudent and diligent fiduciaries.

Cortex has been conducting the PKAP annually since 1997 and has experience in administrating the PKAP by letter, phone and Internet.

The structure of the 2002 PKAP for the Wisconsin Public Employees Deferred Compensation Plan and Trust (WDC) is shown in the Testing Methodology and Composition section of the Report. Although PKAP covers many important investment and plan design issues, key issues targeted in this year's PKAP include:

- Whether members understand and can distinguish the responsibilities they and the sponsor have regarding the current pension arrangement.

- Whether members understand the concept of diversification and the characteristics of different investment options.

- Whether members are familiar with the options currently available in the investment program.

- Whether members themselves are cognisant of their own levels of investment knowledge, and whether or not they know where to go to obtain further information and support concerning the plan and investment options should they feel they need it.

- Whether members make use of the tools and support currently being provided and is there a relationship between use of these tools and levels of knowledge held by members.

Exhibit 1: Overall PKAP Participation

PKAP Administration	Email Invitations	Mail Invitations	Totals
Total Membership			38957
Asked to Participate	7458	6000	13458
Completed Survey	1858	392	2250
Participation Rate (%)	24.9	6.5	16.7

The 2002 WDC Member Survey was administered by electronic means through the Internet to members of the WDC during the three-week period beginning October 5th and ending October 8th, 2002. Members who had email addresses know to WDC were invited to participate via email invitation while those without know email addresses were invited via mail. All members were given instructions on how to navigate to and access the Internet survey site using unique usernames and passwords that were assigned to them as part of the invitation.

This was the first time PKAP was used to assess members of this Plan. Plan members were invited to participate in the PKAP on a voluntary basis without the use of incentives.

In total, two thousand two hundred and fifty plan members participated in this year's PKAP. This represents a total participation rate of almost seventeen percent overall.

FINDINGS

PARTICIPATION

As stated in the Introduction above, seventeen percent of the members who were invited to participate in this year's PKAP responded using an online survey tool. This is an excellent level of participation and is more than ample to state our results with a high level of confidence. We attribute the high participation rate to the considerable efforts made by staff to inform the

participants of the test and its purpose and the genuine interest that members may have with respect to their retirement plan. Participants may also have found the survey by Internet to require less effort than paper-based surveys and may have found the experience novel.

Although seventeen percent was the average level of participation among all invitees, members who were invited to participated by email were much more likely to participate than those who were invited via mail.

On the one hand, only six and a half percent of the members that were invited to participate by mail responded to the survey. This level of participation may seem on the low side, but it does indicated that there is a significant portion of the population that has Internet access and is comfortable responding to Internet-based surveys.

On the other hand, almost twenty five percent of the members who were invited to participate by email responded to the survey. This level of participation is much higher than you would see in the industry using paper based surveys and is very close to the normal levels of participation we see among other organizations that participate in our PKAP program using email invitations.

Email invitations tend to be more effective at soliciting a response from plan members than paper-based invitations due to the ease with which members may immediately respond to the survey, and the fact that we can (at very low cost) target and send reminders to members who have not completed the survey during the administration period.

Exhibit 2: Member Participation Over Time

Our experience has been that reminders add roughly five percent participation each time they are sent. As can be seen in Exhibit 2 above, the two reminders we used were able to increase participation among members by an additional five to ten percent within a two-day period following their release.

It is noteworthy, that many WDC members choose to participate during the weekends rather than during business hours. This could be due to the fact that they only have Internet access at home, that the email address we used were not work-related addresses, or that some members preferred to respond to this kind of survey outside of working hours.

All of the various demographic sub-groupings of plan members are adequately represented in the results; representation of both females and males was fairly similar at five and six percent respectively, representation of various work locations was between four and ten percent, representation of age groupings ranged from one and a half percent to seven percent, and representation of various years of service ranged from four to almost eight percent. There were only three members who had twenty-one or more years in the plan. Although these members are not represented in the results, we do not believe that the results are any less relevant within this report.

We were anticipating that the total time taken for members to complete the Internet-based PKAP would be roughly twenty minutes. In fact, the average time taken to complete the PKAP among WDC plan members was just over eighteen minutes. So, this is good evidence to suggest that the administration was successful and slightly shorter than what we have experienced with other PKAP assessments.
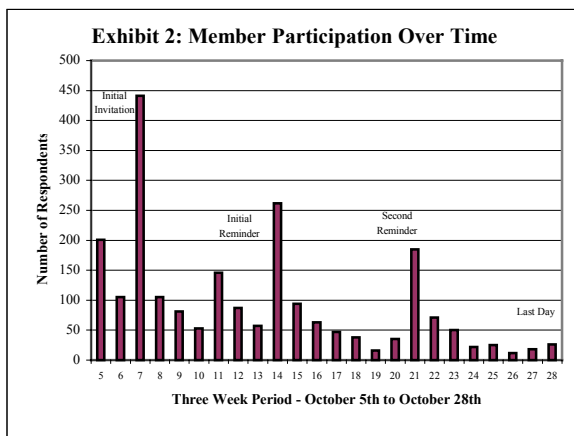
KNOWLEDGE ASSESSMENT

Overall, plan members achieved an average PKAP score of $60.5\% \pm 0.7\%$[1]. Although Cortex does not have a Universe Score for U.S. public sector pension plans at this time, the average score our 2002 Canadian pension plan Universe that uses the same set of core questions as the WDC PKAP was 55.8%. Though this may not be a directly comparable benchmark, it does provide anecdotal evidence suggesting that the WDC plan members performed much better than expected.

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[1] The mean test score was 60.5% (95% confidence interval = 59.8% – 61.2%; SD = 17.4%). Thus we would expect that 19 times out of 20, the true mean of the population will lie somewhere within our calculated confidence band, i.e. in this case within 60% and 61%. The expected score for pure guessing was 25% (1/4 per item).

As was expected, the distribution of overall PKAP scores was negatively skewed. Although several participants scored far below the average, more than half the participants scored better than the average (the median PKAP score was 64.3%). Distribution of scores is shown below.

Exhibit 3: Distribution of Scores
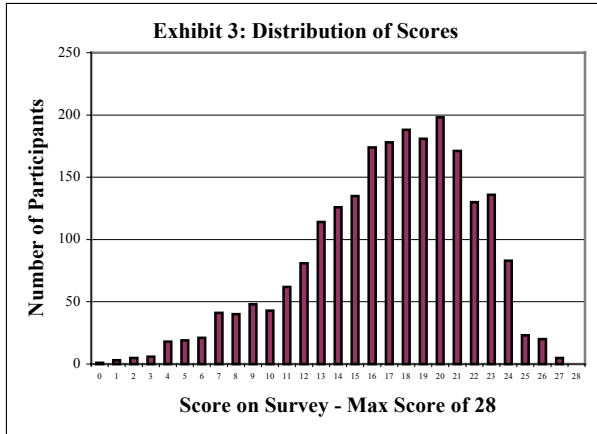
In comparing scores among the demographic sub-groups, we noted several important observations:

The first observation we made was the members of the Administration Division had a very high response rate (10% of such members responded) and that they had a much higher score than members of any other employer group.

A second notable observation is the fact that female participants scored significantly lower on investment related questions and, to a lesser extent, lower on plan design related questions than did their male counterparts.[2] This may signal a need for WDC to investigate ways in which female plan members can become more involved in their retirement planning and/or target this group for informational sessions regarding investments and financial planning.

A third observation was that older members tend to be more knowledgeable. Statistics show that members who are aged 45 and older are more knowledgeable then members who are aged 44 and younger[3]. Though the results appear to show a more general trend, i.e. score and knowledge increases as a function of age, this finding was not strongly supported using regression statistics[4].

A fourth observation was that plan members who have been in the plan longer (i.e. have greater years of

service) tend to be more knowledgeable. Like age, current data and regression statistics do not support a general trend[5], but members who have more than 5 years in the plan are much more knowledgeable than members with 5 or less years of service[6]. It is also important to note that age is positively correlated with years of service[7] (as one would expect) and would explain some of the similarities in the findings.

Exhibit 4: Scores by Demographics

Summary of Scores (%)	PKAP	Invest ment	Plan Design	Diff. (Invst – PD)
Total Population	60.5	65.6	53.7	12.0
Employer:				
State of Wisconsin	59.4	64.0	53.4	10.6
Univ. of Wisconsin System-Cen Admin	62.7	69.6	53.5	16.1
Dept. of Trans.	62.6	67.2	56.3	10.9
Dept. Natural Rscs	63.6	70.7	54.3	16.4
Work Force Dvlpmnt	58.6	61.5	54.8	6.7
Dane County	56.6	59.9	52.2	7.7
City of Green Bay	61.4	69.4	50.6	18.8
Dept. Of Revenue	61.1	64.4	56.7	7.7
Dept. of Admin	71.0	79.2	60.1	19.1
Corrections Dept. – Div. of Community	64.5	69.9	57.1	12.8
Other	61.1	66.9	53.4	13.5
Gender:				
Female	55.1	57.8	51.5	6.3
Male	64.4	71.3	55.2	16.1
Age:				
< = 24	40.3	39.3	41.7	-2.4
25 - 34	56.7	61.5	50.3	11.3
35 - 44	59.6	64.5	53.1	11.4
45 - 54	60.4	65.3	54.0	11.3
55 - 64	62.1	67.5	54.9	12.6
65 +	65.5	73.7	54.5	19.2
Years of Service:				
< =5	55.7	60.9	48.8	12.1
6 - 10	61.0	66.0	54.4	11.6
11 - 15	63.9	69.6	56.4	13.2
16 - 20	62.6	67.4	56.2	11.1
21 +	N/A	N/A	N/A	N/A

A final, albeit anecdotal, observation is that participants scored better on investment related questions than on plan design related questions. Though this would appear statistically significant, we cannot state that participants understand investment related issues moreso than plan design issues since we cannot also state with certainty that the set of investment related questions asked were of the same

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[2] T-Statistic was $t_{(1924)} = 1.96$, $p < 0.05$
[3] T-Statistic was $t_{(1280)} = 3.48$, $p < 0.05$
[4] F-Statistic was $F_{(5, 2244)} = 6.80$, $p << 0.02$ but regressing age to PKAP Score the R value obtained was $r_{(2249)} = 0.11$, indicating not as strong as relationship as one might expect

[5] F-Statistic was $F_{(3, 2246)} = 24.61$, $p << 0.02$ but regressions statistics were $r_{(2249)} = 0.15$, i.e. not a strong relationship
[6] T-Statistic was $t_{(1014)} = 7.82$, $p << 0.05$
[7] Correlation between age and years of service was 0.51

level of difficulty as the set of plan design related questions within the survey.

PERCEIVED LEVELS OF INVESTMENT KNOWLEDGE

Members were asked how strong they perceived their own levels of investment knowledge to be and were asked if they knew where they could get additional information about the plan if they required it. The results are quite interesting.

- Members are able to accurately gauge their current levels of investment knowledge[8]. Meaning, that members who perceived themselves to be more knowledgeable tended to score higher than members who perceived themselves to be less knowledgeable.

- Members, on the whole, know where to obtain help and further information about the plan should they need it.

These results are important for two reasons: First, these results establish the fact that members are aware that they may need help or further information in order to make sound investment decisions. Second, these results establish the fact that members who know that they may require further information also know where they may obtain it.

Exhibit 5: Scores relative to Perceived Level of Knowledge

Perceived Levels of Knowledge	Average Score (%)		
	Overall PKAP	Investment	Plan Design
All levels	60.5	65.6	53.7
Extremely poor	37.7	34.3	42.3
Slightly poor	50.0	51.1	48.5
So-so	60.9	66.5	53.4
Quite good	73.7	83.0	61.3
Extremely good	77.5	88.1	63.5

USE OF AVAILABLE TOOLS

At the close of the survey, members were asked to identify how frequently they made use of the tools and resources available to them. The following findings were identified:

In general, members used less than one tool per month and less than two tools per year. This number, however, takes into consideration the fact that seven

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[8] r(2249) = 0.58, strong and significant association (p<< 0.001) between self-perceived level of Investment Knowledge and Investment Score.

percent of participants have not used a single tool within the last year.

Members, by far, made the most use of the Web site - www.wdc457.com - offered by WDC and Nationwide. In fact, less than twenty two percent of the participants have never used this website to date. After the Web site, members made greatest use of the Toll Free (1-800 #) Service, the Seminars and employee meetings, and the Asset Allocation Service and rebalancing tool that is offered. The members made least use of the Fax and E-mail services: **WDoffice@nationwide.com** that are available.

Exhibit 6: Tools Used

Tool	% Participants Using Specified Tool Within Previous				
	Week	Month	6 Months	Year	Never Used
Toll Free (1-800#) service	3.1	6.3	16.3	38.1	36.2
Web site (www.wdc457.org)	17.7	20.0	21.1	19.4	21.9
E-mail (WDoffice@nationwide.com)	0.5	1.2	4.3	12.0	82.0
Fax service	0.0	0.0	0.4	0.9	98.6
Asset Allocation Service and rebalancing tool	1.2	2.9	8.3	16.0	71.7
Seminars and employee meetings	0.6	1.4	8.8	31.8	57.4

	Average Number of Tools Used per Participant within the previous…				
	Week	Month	6 Months	Year	Never Used
Max # Tools is Six	0.2	0.3	0.6	1.2	3.7

UNDERSTANDING AND USE OF ACCOUNT STATEMENTS

Lastly, we asked members to indicate how well they understood their account statements and how useful they found the information contained within them for decision-making purposes. We then related these results back to members perceived levels of investment knowledge and scores. The following observations were made:

Over ninety three percent of the participants felt the monthly Account Statements provided valuable information, but less than seventy four percent actually made use of them for investment decision-making. In addition, just over eighty three percent of the participants felt that the monthly Account Statements were easy to use and understand. The corollary to this is that just under seventeen percent of

the participants felt that they were not easy to understand or indicated that they did not know if they were easy to understand.

These results are surprising since much of the investment decision-making process rests on the asset allocation decision and rebalancing the members' portfolio to an appropriate asset allocation over time and a primary purpose of the Account Statements is to provide members with exactly this type of information.

So what do members use to help them make investment decisions? Most members (forty three percent) indicated later in the survey that the WDC informational brochures and newsletters were the most helpful resource when making investment choices. Members indicated that the least helpful were actually other sources of help such as an independent financial consultant (thirty one percent), and the WDC participant service representatives (twenty seven percent). This last finding, however, may not necessarily be negative in that members may be construing the inability of service representatives to make an investment decision on the members' behalf, rather than in their ability to provide relevant information so that the member may make an informed investment decision.

LINKING TOOL USAGE TO KNOWLEDGE

In order to gain a better understanding of the members, we cross-referenced the use and understanding of tools and account statements to members' perceived levels of investment knowledge and to PKAP scores. To summarize, we found that we could segregate plan members into two broad profiles:

The first major profile describes about twenty four percent of the participants who indicated they were quite good or extremely good with investment related issues. By and large, these members:

- Scored better on investment related questions;

- Scored better on plan design related questions;

- Understood better, where to get further information and make greater use of the tools available to all plan members;

- More strongly agreed that account statements are a valuable source of info and use them to make important investment decisions; and

- Indicated that they have an easier time understanding the account statement and information contained.

This portion of the population appears to be actively planning for their retirement and are making good use of the tools and resources available to them as members of the plan.

The second profile describes another twenty three percent of plan members who indicated that they had either slightly poor or extremely poor investment knowledge. In contrast to the first group, this group of participants scored lower on the investment questions, were less likely to know where to go to get further information and plan assistance, indicated a harder time understanding the account statements, and made less use of the tools available to them. In fact, on average, just over fifteen percent of plan participants who either perceived themselves as having slightly poor or extremely poor investment knowledge, claimed to have not used any of the available tools in the past year.

This portion of the population needs to become more involved in their plan and make better use of the tools and resources available to them. In so doing, they may be able to make sound and informed investment decisions and be satisfied with the results upon retirement.

Overall, these results are not unexpected but, it again emphasizes the challenge facing sponsors to provide a set of investment and planning tools that both interests and educates plan members.

Exhibit 7: Tools Used relative to Perceived Level of Knowledge

	Participant's Level of Perceived Investment Knowledge					
	All Levels	Extremely Poor	Slightly Poor	So-so	Quite Good	Extremely Good
Average # Tools Used Per Participant						
In Last Month	0.5	0.3	0.3	0.6	0.7	0.7
In Last Year	2.3	1.7	2.1	2.4	2.5	2.4
% Participants that						
Used No Tools	7.4	20.6	11.9	5.8	3.5	3.8
% Participants Agreeing that Account Statements are…						
A valuable source of info	93.1	78.4	89.9	94.8	97.1	90.4
Used to make investment decisions	73.5	39.2	58.2	78.4	86.4	63.5
Easy to understand and use	83.2	54.6	73.3	86.1	92.6	94.2

MEMBER RESPONSIBILITIES AND FAMILIARITY WITH THE INVESTMENT PROGRAM

One of the biggest challenges many DC plan sponsors face is in communicating and ensuring that members understand the benefits they will receive by participating in the plan, as well as their investment roles and responsibilities within the plan.

The following is a summary of the findings with respect to each of these keys topics:

- Basic Understanding of the Plan and Benefits of Participating in the Plan
- Asset Allocation and Diversification
- Allocation of Plan Contributions
- Familiarity with the Investment Program
- Options upon Leaving the Plan or at Retirement

Basic Understanding of the Plan and Benefits of Participating in the Plan

A vast majority of the WDC participants (eighty eight percent) knew that the fundamental benefit of participating in the WDC plan was that they were able to defer income – meaning that they would not have to pay any income taxes on contributions made or investment earnings until they withdrew these funds from their accounts sometime in the future. Only seven percent thought that they were still paying income taxes on the contributions and investment earnings, but at a lower rate.

As members of the WDC, participants have access to a Self-Directed Option (SDO) through Charles Schwab. However, eighty four percent of the participants indicated that they did not know the basis for participating in this program. Only four percent of the members knew, for example, that transfers from the Core Investment account to the SDO did not have to be in increments of $500 after the initial transfer to start the SDO was made. Over twelve percent, did not know this and thought three other requirements for participating in the SDO were actually false.

Members were also asked a question to determine whether they knew how the WDC administration was funded and whether they knew that participant fees helped, in part, to fund the WDC administration. Most participants (fifty eight percent) indicated that they did not know the basis for funding, but another twenty six person incorrectly thought that either the State funds were being used, or that participant fees and reimbursements from investment companies were not

providing funding, or that annual participant fees were not based on the total amount of assets held in both of their Core Investment Account and the Person Choice Retirement Accounts. Only fifteen percent correctly identify the above and knew that participating in the SDO did not require members to pay an additional fee based on the total amount of assts held in the Schwab Personal Choice Retirement accounts.

Asset Allocation and Diversification

Members understand the key benefits of diversification and are able to identity appropriate asset allocations for persons just starting out in their career or for persons nearing retirement. They seem, however, to have greater difficulty in applying diversification within the portfolio itself.

For example, almost eighty nine percent of members knew that diversification would reduce the expected volatility of their portfolio returns. With regards to choosing an appropriate asset allocation, eighty six percent of the participants understood it was better to have a well diversified portfolio weighted towards equities at the beginning of a persons' career and another fifty nine percent of participants knew that it was better to have a well diversified portfolio weighted towards fixed income late in a persons career (i.e. near retirement).

Only twenty nine percent, however, knew that a balanced fund is more diversified than a stock fund or a collection of up to three stock funds. It would appear that when it comes to actually picking options within the portfolio, members believe they are able to increase diversification by investing in more funds rather than by selecting and investing in a fund(s) with differing risk and return characteristics.

Allocation of Plan Contributions

Members appear to have a firm grasp of their responsibilities vis-à-vis the employers with regards to allocating and investing contributions made to their retirement accounts. Over ninety six percent of the participants knew that it was their responsibility for deciding how their deferred earnings are to be allocated among the investment funds available in the WDC.

There was more confusion, however, with members' ability to distinguish the difference between making an allocation request and a request to change their deferral allocation.

Although seventy five percent of participants knew that when they made a request to change their deferral allocation it only affects the allocation of future contributions. Almost thirteen percent believed that such a request would effect both the allocation of assets among existing funds as well as the allocation of funds coming from future contributions. Sixty three and a half percent knew that they could request such changes as often as they wished, and only forty two percent knew that if such requests were made prior to 3:00 pm CST, that it would take effect by the end of the business day.

Familiarity with the Investment Program

In terms of investment decision-making, the plan sponsor is responsible for selecting the options to be included within the investment program, whereas, the plan member is responsible for choosing which options to invest in and in what amounts.

Although plan members understand that they are to select which options to invest in, they was confusion regarding who is responsible for determining which options will be offered in the investment program and which options are currently available.

For example, over ninety six percent of the participants knew they were responsible for selecting which options to invest in but less than twenty percent knew the basis upon which the WDC investment choices are divided into three separate tiers of investments. In addition, only seventy seven percent knew that the Members of the Wisconsin Deferred Compensation Board determined which options and what types of platforms would be available in the investment program. Over nine percent of the participants, for example, believed NRS to be responsible for the design of the current investment program.

This apparent lack of familiarity with the availability of investment options and the basis for making fund transfers and changes to their contribution allocations, may be related to their overall level of risk towards market volatility and the frequency in which members review their investment performance and review their asset allocations and available choices.

When asked how much their stock fund would have to fall in value in one day before they would sell all or part of it, seventy percent stated that they would not sell regardless of how much it falls in value. Still, another eighteen percent said that it would have to fall more than twenty percent for them to consider selling.

When asked how often they should review the performance of their retirement portfolios, almost seventy five percent believe they should be reviewing their accounts on a quarterly or yearly basis. Less than eighteen percent believed they should be monitoring this on a more frequent basis.

Given the considerable fortitude members appear to have with regard to stock market volatility, and the frequency with which they review their portfolio's performance, there may be some lag between the roll out of changes to the investment program and the corresponding knowledge of these changes among plan members in future.

Members were also asked how familiar they were with investment options typically available in the industry, and were asked several questions to determine whether they knew the basic composition and risk characteristics of these options.

Not surprising, members believed themselves to be most familiar with stock funds and money market funds, and least familiar with value stock funds, global stock funds and bond funds. Also of no surprise was the ability of participants to correctly identify the composition of these funds (over eighty percent of the participants could correctly identify the composition of stock funds, balanced funds, and bond funds).

What was surprising was the fact that only thirty six percent of the participants could correctly identify the composition of a money market fund and less than fifty five percent believed that a bond fund would outperform a money market fund, on average, over a 10-year period. This is a highly important finding given the relative tendency of many plan members to allocate a significant portion of the retirement accounts to money market fund options. Within the surveyed participants, fifty seven percent either did not know the composition of a money market fund or incorrectly thought it contained shares of companies and bonds as well as short term securities. Twenty nine percent of the participants thought that a money market fund would outperform a bond fund over a 10-year period.

Options upon Leaving the Plan or at Retirement

To help determine whether plan members understood their options at retirement or upon leaving the plan, members were asked a number of questions:

Firstly, members were asked what their total retirement income would be based on. An overwhelming ninety five percent understood that it

would be based on their benefits from the Wisconsin Retirement System and the Wisconsin Deferred Compensation Plan, Government benefits (such as Social Security) and personal savings. Less than five percent believed only one of these would comprise their retirement incomes or did not know the answer to this question.

Secondly, members were asked whether they could identify valid conditions under which they could withdraw funds from their account. Less than thirty six percent of the participants knew that valid conditions included severe financial hardship that is beyond their ability to control, having an account balance under $5,000 and not having made any deferrals to the plan for two or more years, or upon leaving employment or reaching age 70 ½. Forty four percent thought that at least one of these was invalid and that a valid reason for withdrawing funds included paying for a home or college education.

Lastly, members were asked what they could do with their account balances if they were to leave employment with WDC or retire. Thirty three percent understood that they did not have to take a distribution from their account within 60 days from terminating or retiring. However, another fifty percent of participants did not understand this, and eighteen percent could not identify a valid option among those presented by the question.

CONCLUSION

The Plan and its membership will evolve and change over time, and although this assessment is only a snapshot at a single point in time and based upon a sample of the total members, the results are encouraging.

Members appear to have a good grasp of many of the basic investment and retirement planning concepts and features of the plan such as knowing what the basis for determining a member's retirement income is, understanding that members are responsible for selecting options to invest in, knowing which allocations are appropriate for a member of various investment horizons, etc.

Areas that appear to represent the greatest opportunity for improvement include:

- Getting members involved and interested in the resources available to all plan members

- Getting female members more interested in the retirement planning process

- Understanding how to apply the concept of diversification when choosing investment options

- Becoming familiar with the current investment program

- Understanding the composition and risk characteristics of money market funds

Given the very positive participation in PKAP, it would appear that members are interested in becoming more involved with, and informed about, their retirement plan. Clearly, the first steps in the educational process are to help plan members understand that they may require additional information and help and provide them with the access and tools so that they may obtain such assistance. Indeed, the results of this PKAP show that members not only were able to accurately evaluate their current level of knowledge, but that they knew where they could obtain further information.

This was the first time the PKAP was used to assess plan member knowledge. The results of this PKAP can now be used to judge the relative success of future educational initiatives, and to determine whether or not specific trends exist among the membership over time. ❖

TESTING METHODOLOGY AND COMPOSITION OF WDC'S PKAP

The Pension Knowledge Assessment Program (PKAP) is Cortex's proprietary Internet-based testing tool used to assess Plan members' knowledge of investment and retirement planning concepts. PKAP is not a survey. It is a testing tool designed to provide statistically sound data and analysis of Plan member knowledge on a year-over-year basis.

Although Wisconsin Public Employees Deferred Compensation Plan and Trust may use the results of this study to help benchmark and focus its training efforts in future, it is hoped that participants will become more knowledgeable immediately, as a result of preparing for and completing the knowledge assessment.

At PKAP's core is a proprietary knowledge framework and database of questions. These were developed using a rigorous process:

i. Based on our extensive consulting experience and research, we identified the key investment and plan design issues members should understand in order to make sound decisions. Figure 1 provides examples of the issues identified.

ii. All issues were organized into five broad investment categories and three plan design categories, creating our Knowledge Framework.

iii. For each knowledge category, questions were drafted and tested and then entered into our database. Member scores for all questions are monitored and reviewed to ensure that questions continue to be appropriate.

iv. Since all issues cannot be covered in a single test we prioritized issues based on a variety of criteria such as key areas of risk for Plan sponsors/ employers, whether an issue is particularly problematic for most Plans, the frequency with which an issue has been addressed in past PKAP test, etc.

v. In designing the PKAP test, we ensured that all knowledge categories and high priority issues are adequately covered.

WDC'S PKAP consisted of 36 questions. Some of these questions had multiple parts and were assigned a point value greater than one, whereas demographic and perception-based questions were not scored. As a result, a member could score a maximum of 38 points in this year's PKAP.

Answers to Plan Design questions were derived based upon pension plan documentation supplied by the WDC.

All members of the WDC were asked to participate in PKAP on a voluntary basis with no incentives being offered. The 7,468 members for whom NRS had email addresses were all invited to participate via email-based invitation. Another 6,000 members were randomly selected from among the membership and sent a mail-based invitation to participate. Both sets of members that were asked to participate were given the location and instructions for entering the Internet survey site.

Knowledge Framework and Composition of PKAP	Number of Questions in Test	Total Point Value Assigned
General Investment Knowledge	**19**	**17**
Investment Objectives and Retirement Planning	4	4
Asset Classes and Fund Options	6	8
Diversification and Asset Allocation	2	2
Investment Strategies	1	1
Performance Measurement	3	2
Member Preferences and Perceptions	3	0
DC Plan Design	**17**	**11**
Plan Design and Provisions	8	8
Plan Contributions	3	3
Plan Services and Member Communications	5	0
Member Preferences and Perceptions	1	0
Totals	**36**	**28**

Scores of Email Invitees Versus Mail Invitees

PKAP Administration	Email Invitations	Mail Invitations	All Participants
PKAP Score	61.9	53.7	60.5
Investment Score	67.2	58.0	65.6
Plan Design Score	54.9	47.9	53.7

CHARTS AND STATISTICS

Distribution of Score

Exhibit 3: Distribution of Scores

Number of Participants vs. Score on Survey - Max Score of 28

Quartile Ranking of Scores
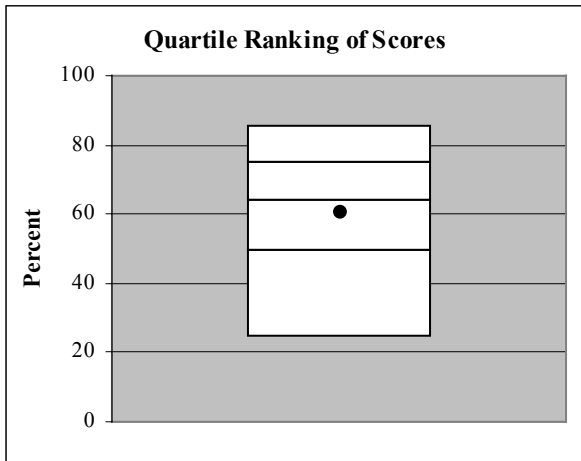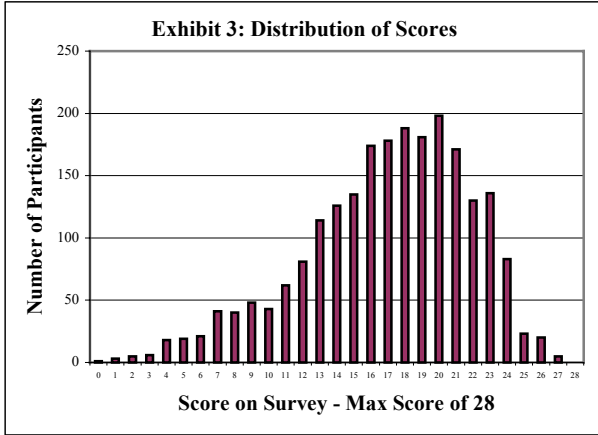
	PKAP Score (%)
Mean Average	60.5
Percentile	
5th	25.0
25th	50.0
50th	64.3
75th	75.0
95th	85.7

	Population Totals	# Respondents	% Representation
Total Population	38,957	2,250	5.8
Employer:			
State of Wisconsin	15,608	1121	7.2
Univ. of Wisconsin System-Cen Admin	1,246	93	7.5
Dept. of Trans.	1,107	83	7.5
Dept. Natural Rscs	843	72	8.5
Work Force Dvlpmnt	666	50	7.5
Dane County	661	31	4.7
City of Green Bay	606	27	4.5
Dept. Of Revenue	278	26	9.4
Dept. of Admin	241	24	10.0
Corrections Dept. – Div. of Community	366	21	5.7
Other	17,335	702	4.0
Gender:			
Female	18400	941	5.1
Male	20557	1309	6.4
Age:			
< = 24	462	7	1.5
25 - 34	5191	209	4.0
35 - 44	9365	493	5.3
45 - 54	13241	860	6.5
55 - 64	8192	580	7.1
65 +	2506	101	4.0
Years of Service:			
< =5	14730	604	4.1
6 - 10	12109	740	6.1
11 - 15	6486	470	7.2
16 - 20	5629	436	7.7
21 +	3	0	0.0

*Participation based on a total of 6,000 members invited via mail and 7458 members being invited via email.

Average PKAP Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Total Population	60.5													
Employer:														
State of Wisconsin	59.4	53.2	60.2	63.9	62.1	N/A	36.3	55.0	59.8	59.9	60.6	65.2	53.2	64.1
Univ. of Wisconsin System- Cen Admin	62.7	64.6	65.2	60.0	57.4	N/A	N/A	59.1	68.9	58.6	65.2	63.1	56.1	69.8
Dept. of Transportation	62.6	63.5	59.2	67.4	61.1	N/A	N/A	61.6	60.3	62.8	61.5	69.0	57.0	64.7
Dept. of Natural Resources	63.6	56.6	66.4	64.5	63.2	N/A	N/A	42.9	72.9	63.3	63.2	51.8	63.5	63.7
Work Force Development	58.6	53.6	49.4	64.3	60.6	N/A	N/A	N/A	57.1	52.1	59.1	66.7	53.7	61.9
Dane County	56.6	58.9	55.7	N/A	N/A	N/A	N/A	57.1	54.8	59.3	47.6	67.9	56.1	56.9
City of Green Bay	61.4	63.2	60.3	N/A	N/A	N/A	N/A	58.9	56.6	61.7	69.3	N/A	57.1	61.5
Dept. Of Revenue	61.1	58.6	57.8	63.7	69.6	N/A	N/A	67.9	65.2	58.8	61.2	N/A	59.1	63.2
Dept. of Administration	71.0	65.5	75.0	68.9	72.5	N/A	N/A	N/A	64.3	74.3	71.4	69.2	60.7	71.9
Corrections Dept. - Division of Community	64.5	66.7	60.1	64.3	67.3	N/A	N/A	75.0	58.3	55.4	67.9		57.7	67.9
Other	61.1	56.5	62.3	63.7	63.4	N/A	64.3	58.5	57.4	61.8	62.8	65.0	57.2	64.5
Gender:														
Female	55.1	50.9	56.6	58.2	55.7	N/A	31.0	50.0	55.4	54.5	57.2	62.2		
Male	64.4	59.7	64.3	67.6	66.7	N/A	47.3	62.0	62.6	65.3	65.0	67.0		
Age:														
< = 24	40.3	40.3	N/A	N/A	N/A	N/A								
25 - 34	56.7	55.7	60.6	41.1	N/A	N/A								
35 - 44	59.6	55.2	60.4	64.9	65.5	N/A								
45 - 54	60.4	54.7	61.1	64.1	61.6	N/A								
55 - 64	62.1	59.4	61.8	62.8	62.7	N/A								
65 +	65.5	73.6	61.4	68.2	64.1	N/A								
Years of Service:														
<=5	55.7													
6 - 10	61.0													
11 - 15	63.9													
16 - 20	62.6													
21 +	N/A													

Standard Deviations of Average PKAP Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Total Population	17.4													
Employer:														
State of Wisconsin	18.0	18.4	17.4	16.4	17.5	N/A	23.2	19.9	17.6	17.9	17.0	11.4	18.0	16.4
Univ. of Wisconsin System- Cen Admin	18.3	19.7	13.2	21.7	17.0	N/A	N/A	23.1	14.2	19.6	17.5	11.5	17.3	16.8
Dept. of Transportation	14.7	9.9	15.8	16.6	13.0	N/A	N/A	10.8	16.9	11.9	16.1	12.7	14.8	14.1
Dept. of Natural Resources	14.2	12.1	13.3	11.5	16.0	N/A	N/A	N/A	10.9	13.9	13.6	17.9	6.6	15.0
Work Force Development	17.9	15.7	18.3	19.1	17.8	N/A	N/A	N/A	2.9	24.9	14.7	17.9	18.1	17.3
Dane County	18.9	18.0	19.6	N/A	N/A	N/A	N/A	10.1	24.4	16.9	9.0	N/A	17.2	20.7
City of Green Bay	13.4	5.8	16.5	N/A	N/A	N/A	N/A	3.6	20.8	12.0	6.0	N/A	N/A	13.7
Dept. Of Revenue	17.7	23.2	16.8	17.7	16.6	N/A	N/A	5.1	20.1	21.4	12.4	N/A	21.9	12.9
Dept. of Administration	10.1	9.0	10.1	8.7	11.5	N/A	N/A	N/A	N/A	8.9	11.0	10.6	10.1	9.8
Corrections Dept. - Division of Community	13.3	23.8	12.5	11.3	12.6	N/A	N/A	N/A	5.5	12.2	14.0	N/A	13.1	12.5
Other	17.1	17.4	17.4	16.4	15.2	N/A	N/A	16.9	18.8	16.7	16.9	13.0	17.0	16.5
Gender:														
Female	17.6	18.2	17.2	16.8	16.9	23.8	18.7	16.7	18.0	16.9	12.3	N/A		
Male	16.2	16.8	16.5	15.1	14.8	24.3	16.6	18.3	15.5	15.4	13.4	N/A		
Age:														
< = 24	23.7	23.7	N/A	N/A	N/A	N/A								
25 - 34	18.5	18.9	17.0	12.6	N/A	N/A								
35 - 44	18.0	16.0	19.5	15.5	17.2	N/A								
45 - 54	17.5	18.6	15.9	17.7	17.3	N/A								
55 - 64	16.4	17.6	16.5	15.8	16.4	N/A								
65 +	13.2	7.8	14.9	11.1	13.9	N/A								
Years of Service:														
<=5	18.0													
6 - 10	17.2													
11 - 15	16.4													
16 - 20	16.5													
21 +	N/A													

Summary of Overall PKAP Scores (%)	Average	Standard Deviation	Standard Error	95% Confidence Interval
Total Population	60.5	60.5	0.4	60.5 ± 0.7
Employer:				
State of Wisconsin	59.4	18.0	0.5	59.4 ± 1.0
Univ. of Wisconsin System- Cen Admin	62.7	18.3	1.8	62.7 ± 3.6
Dept. of Transportation	62.6	14.7	1.5	62.6 ± 3.0
Dept. of Natural Resources	63.6	14.2	1.6	63.6 ± 3.1
Work Force Development	58.6	17.9	2.4	58.6 ± 4.8
Dane County	56.6	18.9	3.3	56.6 ± 6.5
City of Green Bay	61.4	13.4	2.5	61.4 ± 5.0
Dept. Of Revenue	61.1	17.7	3.3	61.1 ± 6.5
Dept. of Administration	71.0	10.1	2.0	71.0 ± 3.8
Corrections Dept. - Division of Community	64.5	13.3	2.8	64.5 ± 5.5
Other	61.1	17.1	0.6	61.1 ± 1.2
Gender:				
Female	55.1	17.6	0.6	55.1 ± 1.1
Male	64.4	16.2	0.4	64.4 ± 0.8
Age:				
< = 24	40.3	23.7	8.9	40.3 ± 17.4
25 - 34	56.7	18.5	1.3	56.7 ± 2.5
35 - 44	59.6	18.0	0.8	59.6 ± 1.5
45 - 54	60.4	17.5	0.6	60.4 ± 1.1
55 - 64	62.1	16.4	0.7	62.1 ± 1.3
65 +	65.5	13.2	1.3	65.5 ± 2.5
Years of Service:				
< =5	55.7	18.0	0.7	55.7 ± 1.4
6 - 10	61.0	17.2	0.6	61.0 ± 1.2
11 - 15	63.9	16.4	0.7	63.9 ± 1.4
16 - 20	62.6	16.5	0.8	62.6 ± 1.5
21 +	N/A	N/A	N/A	N/A

Average Investment Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Employer:														
State of Wisconsin	64.0	57.6	64.3	69.7	66.5	N/A	34.4	59.1	64.5	64.1	66.1	74.5	54.8	70.8
Univ. of Wisconsin System-Cen Admin	69.6	73.0	72.4	67.0	59.6	N/A	N/A	63.2	78.1	64.5	73.4	64.6	59.5	80.4
Dept. of Transportation	67.2	68.8	63.7	72.2	65.5	N/A	N/A	67.2	63.2	69.2	64.5	78.1	57.3	71.0
Dept. of Natural Resources	70.7	62.5	72.7	74.6	69.5	N/A	N/A	43.8	81.9	71.1	69.6	57.8	68.1	71.0
Work Force Development	61.5	56.9	53.1	68.1	62.7	N/A	N/A		62.5	51.6	61.8	73.6	53.8	66.7
Dane County	59.9	64.8	58.2	N/A	N/A	N/A	N/A	56.3	58.3	62.5	47.9	87.5	60.3	59.6
City of Green Bay	69.4	74.4	66.5	N/A	N/A	N/A	N/A	70.3	62.5	69.9	77.5	N/A	68.8	69.5
Dept. Of Revenue	64.4	60.0	62.5	69.8	67.2	N/A	N/A	75.0	76.6	58.2	66.1	N/A	60.6	68.3
Dept. of Administration	79.2	77.1	84.4	75.0	80.6	N/A	N/A		81.3	82.5	76.3	80.5	59.4	81.0
Corrections Dept. - Division of Community	69.9	75.0	64.6	72.5	70.5	N/A	N/A	93.8	62.5	56.3	74.0	N/A	58.9	75.4
Other	66.9	62.2	68.4	68.8	69.6	N/A	68.8	64.4	62.0	68.1	68.3	73.0	61.5	71.4
Gender:														
Female	57.8	53.7	59.6	61.3	57.1	N/A	29.2	52.6	58.3	56.7	59.8	69.3		
Male	71.3	66.9	70.8	74.9	73.5	N/A	46.9	68.6	68.9	72.3	72.1	75.8		
Age:														
<= 24	39.3	39.3	N/A	N/A	N/A	N/A								
25 - 34	61.5	60.7	65.2	43.8	N/A	N/A								
35 - 44	64.5	60.4	65.0	69.7	71.5	N/A								
45 - 54	65.3	60.0	66.0	69.3	65.6	N/A								
55 - 64	67.5	65.5	67.1	69.2	67.0	N/A								
65 +	73.7	81.3	70.5	75.6	72.7	N/A								
Years of Service:														
<=5	60.9													
6 - 10	66.0													
11 - 15	69.6													
16 - 20	67.4													
21 +	N/A													

Standard Deviation of Average Investment Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Employer:														
State of Wisconsin	24.5	25.6	24.3	22.0	24.1	N/A	30.8	27.6	23.7	24.5	23.2	16.5	25.3	21.5
Univ. of Wisconsin System-Cen Admin	24.5	26.8	17.3	28.4	21.9	N/A	N/A	31.9	18.0	27.3	21.6	9.5	23.8	20.5
Dept. of Transportation	20.5	14.7	22.2	22.0	20.2	N/A	N/A	15.2	24.6	14.4	23.5	10.8	22.4	18.5
Dept. of Natural Resources	17.0	18.4	15.9	13.5	18.7	N/A	N/A	N/A	11.6	16.8	16.6	21.3	10.1	17.8
Work Force Development	22.6	19.6	24.6	28.7	21.3	N/A	N/A	N/A	7.2	30.5	20.4	16.8	23.2	21.0
Dane County	25.2	25.2	25.5	N/A	N/A	N/A	N/A	26.5	28.1	25.5	15.7	N/A	26.9	24.5
City of Green Bay	19.9	10.4	23.6	N/A	N/A	N/A	N/A	6.0	33.5	15.0	11.4	N/A		20.3
Dept. Of Revenue	26.6	36.9	28.6	20.3	23.0	N/A	N/A	17.7	23.6	32.0	18.3	N/A	32.8	19.0
Dept. of Administration	14.2	19.1	10.8	15.7	14.3	N/A	N/A	N/A	N/A	10.3	17.1	14.3	13.3	13.1
Corrections Dept. - Division of Community	16.8	22.5	18.4	16.3	16.4	N/A	N/A	N/A	6.3	11.4	17.1	N/A	15.7	15.0
Other	22.8	22.9	23.2	22.3	21.5	N/A	N/A	22.0	25.5	22.2	22.5	17.2	23.0	21.6
Gender:														
Female	24.5	25.1	24.5	23.4	23.7	N/A	25.3	26.7	23.6	25.2	23.3	15.0		
Male	21.1	22.5	21.7	19.4	19.3	N/A	36.3	22.1	23.8	20.2	20.0	16.6		
Age:														
< = 24	31.0	31.0	N/A	N/A	N/A	N/A								
25 - 34	25.5	25.9	24.0	17.7	N/A	N/A								
35 - 44	24.3	22.2	26.3	21.4	23.1	N/A								
45 - 54	23.9	25.4	22.1	24.1	23.9	N/A								
55 - 64	22.1	23.7	22.6	20.8	22.2	N/A								
65 +	16.3	11.7	16.3	15.4	17.2	N/A								
Years of Service:														
< =5	24.6													
6 - 10	23.6													
11 - 15	22.1													
16 - 20	22.5													
21 +	N/A													

Summary of Investment Scores (%)	Average	Standard Deviation	Standard Error	95% Confidence Interval
Total Population	65.6	23.5	0.5	65.6 ± 0.9
Employer:				
State of Wisconsin	64.0	24.5	0.7	64.0 ± 1.4
Univ. of Wisconsin System-Cen Admin	69.6	24.5	2.4	69.6 ± 4.8
Dept. of Transportation	67.2	20.5	2.2	67.2 ± 4.2
Dept. of Natural Resources	70.7	17.0	1.9	70.7 ± 3.8
Work Force Development	61.5	22.6	3.1	61.5 ± 6.0
Dane County	59.9	25.2	4.4	59.9 ± 8.7
City of Green Bay	69.4	19.9	3.7	69.4 ± 7.3
Dept. Of Revenue	64.4	26.6	5.0	64.4 ± 9.7
Dept. of Administration	79.2	14.2	2.8	79.2 ± 5.4
Corrections Dept. -Division of Community	69.9	16.8	3.6	69.9 ± 7.0
Other	66.9	22.8	0.8	66.9 ± 1.7
Gender:				
Female	57.8	24.5	0.8	57.8 ± 1.5
Male	71.3	21.1	0.6	71.3 ± 1.1
Age:				
< = 24	39.3	31.0	11.6	39.3 ± 22.8
25 - 34	61.5	25.5	1.7	61.5 ± 3.4
35 - 44	64.5	24.3	1.1	64.5 ± 2.1
45 - 54	65.3	23.9	0.8	65.3 ± 1.5
55 - 64	67.5	22.1	0.9	67.5 ± 1.7
65 +	73.7	16.3	1.6	73.7 ± 3.1
Years of Service:				
< =5	60.9	24.6	1.0	60.9 ± 1.9
6 - 10	66.0	23.6	0.8	66 ± 1.6
11 - 15	69.6	22.1	1.0	69.6 ± 1.9
16 - 20	67.4	22.5	1.0	67.4 ± 2.0
21 +	N/A	N/A	N/A	N/A

Average Plan Design Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Employer:														
State of Wisconsin	53.4	47.5	54.8	56.3	56.2	N/A	38.9	49.6	53.6	54.4	53.3	52.8	50.9	55.2
Univ. of Wisconsin System-Cen Admin	53.5	53.3	55.6	50.8	54.5	N/A	N/A	53.7	56.7	50.7	54.2	61.1	51.6	55.6
Dept. of Transportation	56.3	56.5	53.2	61.0	55.2	N/A	N/A	54.2	56.4	54.2	57.6	56.9	56.5	56.3
Dept. of Natural Resources	54.3	48.8	57.9	51.2	54.7	N/A	N/A	41.7	60.8	53.1	54.6	43.8	57.4	53.8
Work Force Development	54.8	49.1	44.4	59.3	57.7	N/A	N/A	N/A	50.0	52.8	55.7	57.4	53.8	55.6
Dane County	52.2	51.0	52.5	N/A	N/A	N/A	N/A	58.3	50.0	55.1	47.2	41.7	50.6	53.4
City of Green Bay	50.6	48.3	52.0	N/A	N/A	N/A	N/A	43.8	48.8	50.8	58.3	N/A	41.7	51.0
Dept. Of Revenue	56.7	56.7	51.5	55.6	72.9	N/A	N/A	58.3	50.0	59.6	54.8	N/A	57.1	56.4
Dept. of Administration	60.1	50.0	62.5	60.7	61.7	N/A	N/A	N/A	41.7	63.3	65.0	54.2	62.5	59.8
Corrections Dept. - Division of Community	57.1	55.6	54.2	53.3	63.1	N/A	N/A	50.0	52.8	54.2	59.6	N/A	56.0	57.7
Other	53.4	49.0	54.1	56.9	55.2	N/A	58.3	50.7	51.4	53.4	55.5	54.5	51.4	55.1
Gender:														
Female	51.5	47.1	52.6	54.2	53.9	N/A	33.3	46.6	51.4	51.5	53.8	52.8		
Male	55.2	50.2	55.7	57.8	57.6	N/A	47.9	53.2	54.3	56.0	55.6	55.3		
Age:														
< = 24	41.7	41.7	N/A	N/A	N/A	N/A								
25 - 34	50.3	49.2	54.5	37.5	N/A	N/A								
35 - 44	53.1	48.4	54.2	58.5	57.6	N/A								
45 - 54	54.0	47.7	54.5	57.1	56.3	N/A								
55 - 64	54.9	51.2	54.7	54.4	57.1	N/A								
65 +	54.5	63.3	49.2	58.3	52.7	N/A								
Years of Service:														
< =5	48.8													
6 - 10	54.4													
11 - 15	56.4													
16 - 20	56.2													
21 +	N/A													

Standard Deviations of Average Plan Design Scores (%)	Totals	Years of Service					Age						Gender	
		<=5	6-10	11-15	16-20	21+	<=24	25-34	35-44	45-54	55-64	65+	Female	Male
Employer:														
State of Wisconsin	15.0	14.3	14.4	14.5	15.1	N/A	18.8	14.8	14.9	15.0	14.7	12.0	14.1	15.3
Univ. of Wisconsin System- Cen Admin	15.2	14.7	12.7	18.4	15.8	N/A	N/A	16.2	12.9	13.5	18.4	21.0	14.8	15.5
Dept. of Transportation	13.4	13.5	11.8	13.9	14.1	N/A	N/A	15.4	11.2	13.4	12.9	17.3	12.6	13.8
Dept. of Natural Resources	15.4	10.1	16.1	13.4	16.7	N/A	N/A	N/A	15.7	16.5	14.3	18.5	9.7	16.0
Work Force Development	18.2	17.4	11.4	12.8	20.5	N/A	N/A	N/A	6.8	20.2	16.6	24.5	17.4	19.0
Dane County	16.1	12.1	17.5	N/A	N/A	N/A	N/A	11.8	22.8	11.0	4.8	N/A	10.1	20.0
City of Green Bay	15.5	13.5	16.8	N/A	N/A	N/A	N/A	8.0	18.3	15.6	16.7	N/A	N/A	15.7
Dept. Of Revenue	13.7	10.9	7.3	20.2	10.5	N/A	N/A	11.8	18.0	11.2	17.3	N/A	14.0	14.1
Dept. of Administration	11.0	8.3	10.8	6.3	13.7	N/A	N/A	N/A	N/A	9.5	8.6	10.9	5.9	11.4
Corrections Dept. - Division of Community	15.2	26.8	11.5	13.9	15.1	N/A	N/A	N/A	4.8	22.0	15.5	N/A	14.2	16.2
Other	15.2	15.8	14.7	15.3	13.7	N/A	N/A	15.3	15.5	15.3	15.0	14.9	15.3	15.0
Gender:														
Female	14.5	15.1	13.5	13.7	14.7	N/A	22.0	14.8	13.3	14.5	14.7	16.4		
Male	15.3	14.5	14.9	15.4	15.3	N/A	15.8	14.1	16.3	15.1	15.0	15.4		
Age:														
< = 24	18.6	18.6	N/A	N/A	N/A	N/A								
25 - 34	14.8	15.0	13.2	5.9	N/A	N/A								
35 - 44	15.1	13.2	16.0	14.0	14.2	N/A								
45 - 54	15.0	15.2	13.7	15.0	15.0	N/A								
55 - 64	14.9	15.9	13.7	15.1	15.2	N/A								
65 +	15.7	17.3	16.0	13.9	16.1	N/A								
Years of Service:														
< =5	14.8													
6 - 10	14.4													
11 - 15	14.9													
16 - 20	15.2													
21 +	N/A													

Summary of Plan Design Scores (%)	Average	Standard Deviation	Standard Error	95% Confidence Interval
Total Population	53.7	15.1	0.3	53.7 ± 0.6
Employer:				
State of Wisconsin	53.4	15.0	0.4	53.4 ± 0.8
Univ. of Wisconsin System- Cen Admin	53.5	15.2	1.5	53.5 ± 3.0
Dept. of Transportation	56.3	13.4	1.4	56.3 ± 2.8
Dept. of Natural Resources	54.3	15.4	1.7	54.3 ± 3.4
Work Force Development	54.8	18.2	2.5	54.8 ± 4.9
Dane County	52.2	16.1	2.8	52.2 ± 5.5
City of Green Bay	50.6	15.5	2.9	50.6 ± 5.7
Dept. Of Revenue	56.7	13.7	2.6	56.7 ± 5.0
Dept. of Administration	60.1	11.0	2.1	60.1 ± 4.2
Corrections Dept. - Division of Community	57.1	15.2	3.2	57.1 ± 6.3
Other	53.4	15.2	0.6	53.4 ± 1.1
Gender:				
Female	51.5	14.5	0.5	51.5 ± 0.9
Male	55.2	15.3	0.4	55.2 ± 0.8
Age:				
< = 24	41.7	18.6	7.0	41.7 ± 13.7
25 - 34	50.3	14.8	1.0	50.3 ± 2.0
35 - 44	53.1	15.1	0.7	53.1 ± 1.3
45 - 54	54.0	15.0	0.5	54.0 ± 1.0
55 - 64	54.9	14.9	0.6	54.9 ± 1.2
65 +	54.5	15.7	1.5	54.5 ± 3.0
Years of Service:				
< =5	48.8	14.8	0.6	48.8 ± 1.2
6 - 10	54.4	14.4	0.5	54.4 ± 1.0
11 - 15	56.4	14.9	0.7	56.4 ± 1.3
16 - 20	56.2	15.2	0.7	56.2 ± 1.4
21 +	N/A	N/A	N/A	N/A

Scores For Various Perceived Levels of Investment Knowledge

F1 – Participants Perceived Levels of Investment Knowledge	# of Respondents	% Respondents Indicating Their Levels of Knowledge as…				
		extremely poor	slightly poor	so-so	quite good	extremely good
Total Respondents	2250	8.6	14.1	53.4	21.5	2.3
Employer:						
State of Wisconsin	1121	9.3	16.9	52.1	19.8	2.0
Univ. of Wisconsin System- Cen Admin	93	9.7	15.1	49.5	24.7	1.1
Dept. of Transportation	83	7.2	8.4	53.0	28.9	2.4
Dept. of Natural Resources	72	5.6	6.9	58.3	27.8	1.4
Work Force Development	50	12.0	12.0	60.0	16.0	0.0
Dane County	31	6.5	16.1	64.5	12.9	0.0
City of Green Bay	27	7.4	18.5	51.9	22.2	0.0
Dept. Of Revenue	26	7.7	11.5	50.0	30.8	0.0
Dept. of Administration	24	0.0	8.3	45.8	37.5	8.3
Corrections Dept. - Division of Community	21	0.0	9.5	61.9	28.6	0.0
Other	702	8.4	11.4	54.8	21.9	3.4
Gender:						
Female	941	14.7	18.4	53.6	12.4	1.0
Male	1309	4.3	11.1	53.3	28.0	3.3
Age:						
< = 24	7	14.3	14.3	57.1	14.3	0.0
25 - 34	209	8.6	15.3	54.1	20.1	1.9
35 - 44	493	8.5	14.2	55.4	19.7	2.2
45 - 54	860	10.0	13.7	53.4	20.5	2.4
55 - 64	580	7.4	15.7	51.6	23.1	2.2
65 +	101	4.0	5.9	53.5	33.7	3.0
Years of Service:						
< =5	604	9.6	18.9	52.6	16.9	2.0
6 - 10	740	9.6	13.1	55.8	18.9	2.6
11 - 15	470	7.2	12.6	52.1	26.8	1.3
16 - 20	436	7.1	11.0	51.8	26.6	3.4
21 +	0	0.0	0.0	0.0	0.0	0.0

*Note: Numbers shown represent the actual number of participants selecting this response followed by the percentage of total participants selecting this response

F2 – Avg. Investment Scores Based on Participants' Perceived Levels of Investment Knowledge	Average Investment Score Per Indicated Level of Knowledge					
	All Levels	extremely poor	slightly poor	so-so	quite good	extremely good
Total Respondents	65.6	34.3	51.1	66.5	83.0	88.1
Employer:						
State of Wisconsin	64.0	29.9	51.8	65.6	83.7	89.2
Univ. of Wisconsin System-Cen Admin	69.6	31.9	54.5	72.4	86.7	100.0
Dept. of Transportation	67.2	36.5	48.2	66.8	80.2	81.3
Dept. of Natural Resources	70.7	40.6	56.3	70.4	81.9	50.0
Work Force Development	61.5	36.5	37.5	66.3	80.5	N/A
Dane County	59.9	6.3	62.5	59.7	84.4	N/A
City of Green Bay	69.4	46.9	52.5	75.4	77.1	N/A
Dept. Of Revenue	64.4	37.5	43.8	59.1	87.5	N/A
Dept. of Administration	79.2	N/A	65.6	73.3	86.8	90.6
Corrections Dept. - Division of Community	69.9	N/A	68.8	64.9	81.3	N/A
Other	66.9	42.1	48.6	67.1	82.0	88.5
Gender:						
Female	57.8	32.2	48.7	62.0	81.1	85.4
Male	71.3	39.6	54.0	69.8	83.6	88.7
Age:						
< = 24	39.3	0.0	43.8	40.6	68.8	N/A
25 - 34	61.5	27.4	52.0	61.6	80.1	96.9
35 - 44	64.5	34.2	47.9	65.8	83.4	87.5
45 - 54	65.3	32.3	52.1	66.6	84.3	88.1
55 - 64	67.5	40.1	51.3	68.8	82.4	87.0
65 +	73.7	56.3	62.5	70.5	82.0	83.3
Years of Service:						
< =5	60.9	30.8	50.2	62.7	81.2	86.5
6 - 10	66.0	35.7	50.1	67.9	83.5	89.5
11 - 15	69.6	36.2	55.6	69.3	84.6	92.7
16 - 20	67.4	35.7	49.7	66.5	82.3	85.8
21 +	N/A	N/A	N/A	N/A	N/A	N/A

Question Scores

Question	Correct Answer	% Pop. Answering Correctly	G1 - Distribution of Selected Answers by Total Population*										Avg. Time (sec.)
			a) or True		b) or False		c)		d)		e) or I don't know		
1	n/a	n/a	194	8.6	318	14.1	1202	53.4	484	21.5	52	2.3	21
2a	n/a	n/a	186	8.3	513	22.8	729	32.4	555	24.7	267	11.9	6
2b	n/a	n/a	424	18.8	682	30.3	629	28.0	363	16.1	152	6.8	6
2c	n/a	n/a	279	12.4	553	24.6	706	31.4	495	22.0	217	9.6	6
2d	n/a	n/a	487	21.6	671	29.8	551	24.5	357	15.9	184	8.2	6
2e	n/a	n/a	300	13.3	726	32.3	681	30.3	397	17.6	146	6.5	6
2f	n/a	n/a	238	10.6	572	25.4	655	29.1	515	22.9	270	12.0	6
2g	n/a	n/a	432	19.2	566	25.2	644	28.6	430	19.1	178	7.9	6
2h	n/a	n/a	442	19.6	614	27.3	522	23.2	415	18.4	257	11.4	6
3	B	36.0	77	3.4	809	36.0	101	4.5	549	24.4	714	31.7	36
4	A	81.8	1841	81.8	17	0.8	11	0.5	103	4.6	278	12.4	18
5	C	83.8	7	0.3	50	2.2	1885	83.8	61	2.7	247	11.0	15
6	D	80.0	44	2.0	16	0.7	14	0.6	1800	80.0	376	16.7	14
7a	T	87.9	1978	87.9	71	3.2	n/a	n/a	n/a	n/a	201	8.9	13
7b	F	54.4	653	29.0	1224	54.4	n/a	n/a	n/a	n/a	373	16.6	13
7c	T	74.7	1680	74.7	127	5.6	n/a	n/a	n/a	n/a	443	19.7	13
8	B	52.0	436	19.4	1171	52.0	111	4.9	130	5.8	402	17.9	27
9	D	61.5	8	0.4	697	31.0	3	0.1	1383	61.5	159	7.1	21
10	D	44.6	381	16.9	37	1.6	8	0.4	1004	44.6	820	36.4	30
11	A	29.0	652	29.0	79	3.5	864	38.4	221	9.8	434	19.3	36
12	n/a	n/a	46	2.0	128	5.7	13	0.6	1936	86.0	127	5.6	21
13	C	58.7	134	6.0	528	23.5	1321	58.7	61	2.7	206	9.2	27
14	A	86.1	1937	86.1	110	4.9	28	1.2	40	1.8	135	6.0	15
15	B	88.8	14	0.6	1999	88.8	101	4.5	39	1.7	97	4.3	25
16	C	68.0	316	14.0	10	0.4	1529	68.0	34	1.5	361	16.0	32
17	n/a	n/a	62	2.8	331	14.7	1215	54.0	471	20.9	171	7.6	18
18	B	62.8	25	1.1	1413	62.8	183	8.1	43	1.9	586	26.0	28
19	n/a	n/a	17	0.8	69	3.1	179	8.0	408	18.1	1577	70.1	28
20	D	95.3	89	4.0	1	0.0	3	0.1	2144	95.3	13	0.6	20
21	C	87.7	30	1.3	58	2.6	1974	87.7	157	7.0	31	1.4	42
22	A	19.7	443	19.7	979	43.5	14	0.6	65	2.9	749	33.3	46
23	C	76.7	3	0.1	4	0.2	1725	76.7	210	9.3	308	13.7	23
24	n/a	n/a	971	43.2	430	19.1	130	5.8	248	11.0	471	20.9	34
25	n/a	n/a	182	8.1	267	11.9	498	22.1	605	26.9	698	31.0	26
26	A	96.4	2169	96.4	0	0.0	32	1.4	1	0.0	48	2.1	19
27	B	35.5	164	7.3	799	35.5	560	24.9	260	11.6	467	20.8	51
28	D	32.6	82	3.6	159	7.1	880	39.1	734	32.6	395	17.6	47
29	A	74.8	1684	74.8	283	12.6	10	0.4	18	0.8	255	11.3	36
30	D	63.5	35	1.6	63	2.8	53	2.4	1429	63.5	670	29.8	23
31	B	42.2	108	4.8	950	42.2	573	25.5	17	0.8	602	26.8	29
32	D	4.1	66	2.9	139	6.2	73	3.2	92	4.1	1880	83.6	37
33	C	15.2	167	7.4	216	9.6	341	15.2	206	9.2	1320	58.7	46

Question	Correct Answer	% Pop. Answering Correctly	G1 - Distribution of Selected Answers by Total Population*										Avg. Time (sec.)
			a) or True		b) or False		c)		d)		e) or I don't know		
34a	n/a	n/a	69	3.1	142	6.3	367	16.3	858	38.1	814	36.2	8
34b	n/a	n/a	399	17.7	449	20.0	474	21.1	436	19.4	492	21.9	8
34c	n/a	n/a	11	0.5	28	1.2	96	4.3	269	12.0	1846	82.0	8
34d	n/a	n/a	1	0.0	1	0.0	8	0.4	21	0.9	2219	98.6	8
34e	n/a	n/a	26	1.2	65	2.9	186	8.3	360	16.0	1613	71.7	8
34f	n/a	n/a	13	0.6	32	1.4	198	8.8	716	31.8	1291	57.4	8
35a	n/a	n/a	29	1.3	59	2.6	68	3.0	1276	56.7	818	36.4	10
35b	n/a	n/a	75	3.3	348	15.5	173	7.7	1208	53.7	446	19.8	10
35c	n/a	n/a	69	3.1	201	8.9	109	4.8	1393	61.9	478	21.2	10
36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52

*Note: Numbers shown represent the actual number of participants selecting this response followed by the percentage of total participants selecting this response.

Average time for entire PKAP was 18.4 minutes (1106 seconds).

Familiarity With Investment Options

H1 - Levels of Familiarity	Avg. Level of Familiarity Among Participants	Level of Familiarity								
		1 Completely Unfamiliar		2		3		4		5 Very Familiar	
Option		# Part.	% Part.	# Part.	% Part.	# Part.	% Part.	# Part.	% Part.	# Part.	% Part.
Stock funds	3.1	186	8.3	513	22.8	729	32.4	555	24.7	267	11.9
International stock funds	2.6	424	18.8	682	30.3	629	28.0	363	16.1	152	6.8
Growth stock funds	2.9	279	12.4	553	24.6	706	31.4	495	22.0	217	9.6
Value stock funds	2.6	487	21.6	671	29.8	551	24.5	357	15.9	184	8.2
Bond funds	2.7	300	13.3	726	32.3	681	30.3	397	17.6	146	6.5
Short term and money market funds	3.0	238	10.6	572	25.4	655	29.1	515	22.9	270	12.0
Balanced funds	2.7	432	19.2	566	25.2	644	28.6	430	19.1	178	7.9
Market index funds	2.7	442	19.6	614	27.3	522	23.2	415	18.4	257	11.4

ANOVA and Regression

I1 – AGE

Anova: Single Factor

Overall PKAP Score

Groups	Count	Sum	Average	Variance
<= 24 yrs	7	282.1429	40.30612	560.0097
25 to 34 yrs	209	11853.57	56.71565	342.9166
35 to 44 yrs	493	29385.71	59.60591	323.6352
45 to 54 yrs	860	51982.14	60.44435	306.4207
55 to 64 yrs	580	36000	62.06897	269.169
>= 65 yrs	101	6610.714	65.45262	173.7523

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	10149.54	5	2029.908	6.795079	2.68E-06	2.218087
Within Groups	670354.7	2244	298.7321			
Total	680504.3	2249				

Regression of Age Versus PKAP Score: SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.116671
R Square	0.0136121
Adjusted R Square	0.0131733
Standard Error	9.8261743
Observations	2250

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2995.3222	2995.3222	31.022344	2.855E-08
Residual	2248	217052.72	96.553702		
Total	2249	220048.04			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	45.335387	0.7497783	60.465057	0	43.865056	46.805717	43.865056	46.805717
PercentagePKAPScore	0.0663447	0.0119116	5.5697706	2.855E-08	0.0429859	0.0897036	0.0429859	0.0897036

t-Test: Two-Sample Assuming Unequal Variances

	<= 44 yrs	*45 to 54 yrs*
Mean	58.56336893	61.38407342
Variance	335.4490298	285.1577059
Observations	709	1541
Hypothesized Mean Difference	0	
df	1280	
t Stat	-3.476852323	
P(T<=t) one-tail	0.000262166	
t Critical one-tail	1.646044439	
P(T<=t) two-tail	0.000524331	
t Critical two-tail	1.961816452	

CORRELATION OF AGE VERSUS YEARS IN THE PLAN

	YearsOld	*YearsInPlan*
YearsOld	1	
YearsInPlan	0.505627665	1

I2 – GENDER

Anova: Single Factor

Overall PKAP Score

Groups	Count	Sum	Average	Variance
Female	941	51828.57	55.07818	308.4768
Male	1309	84285.71	64.38939	262.288

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	47463.39	1	47463.39	168.5479	3.23E-37	3.845599
Within Groups	633040.9	2248	281.6018			
Total	680504.3	2249				

t-Test: Two-Sample Assuming Unequal Variances

	Overall PKAP Score	
	Female	Male
Mean	55.07818	64.38939
Variance	308.4768	262.288
Observations	941	1309
Hypothesized Mean Difference	0	
df	1924	
t Stat	-12.8118	
P(T<=t) one-tail	2.02E-36	
t Critical one-tail	1.645647	
P(T<=t) two-tail	4.03E-36	
t Critical two-tail	1.961198	

I3 – YEARS OF SERVICE

Anova: Single Factor

Overall PKAP Score

Groups	Count	Sum	Average	Variance
<= 5 yrs	604	33632.14	55.68236	323.5944
6 to 10 yrs	740	45142.86	61.00386	296.0277
11 to 15 yrs	470	30050	63.93617	269.3393
16 to 20 yrs	436	27289.29	62.5901	272.7165
>= 21 yrs	0	0	N/A	N/A

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	65535	4	65535	65535	#NUM!	2.375891
Within Groups	65535	2245	65535			
Total	680504.3	2249				

Anova: Single Factor (with Group >= 21 yrs removed from the analysis)

Overall PKAP Score

Groups	Count	Sum	Average	Variance
<= 5 yrs	604	33632.14	55.68236	323.5944
6 to 10 yrs	740	45142.86	61.00386	296.0277
11 to 15 yrs	470	30050	63.93617	269.3393
16 to 20 yrs	436	27289.29	62.5901	272.7165

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	21660.57	3	7220.19	24.61365	1.14E-15	2.608864
Within Groups	658843.7	2246	293.3409			
Total	680504.3	2249				

Regression of Years of Service versus Score: SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.153993244
R Square	0.023713919
Adjusted R Square	0.023279628
Standard Error	5.318960008
Observations	2250

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1544.813285	1544.813	54.60376	2.07E-13
Residual	2248	63598.92236	28.29134		
Total	2249	65143.73565			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	7.239854828	0.405858938	17.83835	1.13E-66	6.443957	8.035753	6.443957	8.035753
PercentagePKAPScore	0.047645574	0.006447796	7.389436	2.07E-13	0.035001	0.06029	0.035001	0.06029

t-Test: Two-Sample Assuming Unequal Variances

	<= 5 yrs	*6+ yrs*
Mean	55.68235572	62.26132616
Variance	323.5944369	283.4358046
Observations	604	1646
Hypothesized Mean Difference	0	
df	1014	
t Stat	-7.8191027	
P(T<=t) one-tail	6.64278E-15	
t Critical one-tail	1.646358214	
P(T<=t) two-tail	1.32856E-14	
t Critical two-tail	1.962307579	

I4 – EMPLOYER

Anova: Single Factor

Overall PKAP Scores

Groups	Count	Sum	Average	Variance
STATE OF WISCONSIN	1121	66625	59.43354	322.7023
UNIV. OF WIS. SYSTEM-CEN. ADMIN.	93	5832.143	62.71121	335.6428
TRANSPORTATION, DEPARTMENT OF	83	5192.857	62.56454	214.7715
NATURAL RESOURCES, DEPT. OF	72	4582.143	63.64087	200.6059
WORK FORCE DEVELOPMENT	50	2932.143	58.64286	319.1847
DANE COUNTY	31	1753.571	56.56682	358.0755
GREEN BAY, CITY OF	27	1657.143	61.37566	180.5701
REVENUE, DEPT. OF	26	1589.286	61.12637	314.6193
ADMINISTRATION, DEPT. OF	24	1703.571	70.98214	101.2783
CORR. DEPT DIVISION OF COMMUNITY CORRECTIONS	21	1353.571	64.45578	177.9033
Other	702	42892.86	61.10094	292.1805

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	6695.73	10	669.573	2.224926	0.014219	1.83492
Within Groups	673808.6	2239	300.9417			
Total	680504.3	2249				

I5 – PERCEIVED LEVEL OF INVESTMENT KNOWLEDGE

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.584517
R Square	0.34166
Adjusted R Square	0.341367
Standard Error	19.10617
Observations	2250

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	425880.9	425880.9	1166.651	2.5E-206
Residual	2248	820623	365.0458		
Total	2249	1246504			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	20.03258	1.394346	14.36701	7.58E-45	17.29824	22.76692	17.29824	22.76692
Perceived Investment Knowledge Category	15.46882	0.452884	34.15627	2.5E-206	14.5807	16.35693	14.5807	16.35693

2002 PENSION KNOWLEDGE ASSESSMENT QUESTIONS

WDC'S PKAP was composed of the following questions. Where appropriate, the correct response has been underlined. In order to provide an indication of response distribution, the total number and relative number of participants choosing each option for each question has been added in brackets.

PART 1. GENERAL INVESTMENT AND RETIREMENT PLANNING CONCEPTS

1) Which of the following best describes your knowledge of investing?

   a) My investment knowledge is extremely poor (194, 8.6%)
   b) My investment knowledge is slightly poor (318, 14.1%)
   c) My investment knowledge is so-so (1202, 53.4%)
   d) My investment knowledge is quite good (484, 21.5%)
   e) My investment knowledge is extremely good (52, 2.3%)

2) Please indicate the extent to which you are familiar with each of the following types of investments:

	LEVEL OF FAMILIARITY				
	Completely Unfamiliar				Very Familiar
	1	**2**	**3**	**4**	**5**
a) Stock funds	186, 8.3%	513, 22.8%	729, 32.4%	555, 24.7%	267, 11.9%
b) International stock funds	424, 8.3%	682, 30.3%	629, 28.0%	363, 16.1%	152, 6.8%
c) Growth stock funds	279, 12.4%	553, 24.6%	706, 31.4%	495, 22.0%	217, 9.6%
d) Value stock funds	487, 21.6%	671, 29.8%	551, 24.5%	357, 15.9%	184, 8.2%
e) Bond funds	300, 13.3%	726, 32.3%	681, 30.3%	397, 17.6%	146, 6.5%
f) Short term and money market funds	238, 10.6%	572, 25.4%	655, 29.1%	515, 22.9%	270, 12.0%
g) Balanced funds	432, 19.2%	566, 25.2%	644, 28.6%	430, 19.1%	178, 7.9%
h) Market index funds	442, 19.6%	614, 27.3%	522, 23.2%	415, 18.4%	257, 11.4%

3) What types of securities are typically found in a money market fund?

   a) Shares in companies (77, 3.4%)
   b) Short term securities such as treasury bills (809, 36.0%)
   c) Bonds issued by corporations or governments (101, 4.5%)
   d) A combination of shares, bonds and short term securities (549, 24.4%)
   e) I don't know (714, 31.7%)

4) What types of securities are typically found in a stock fund?

   a) Shares in companies (1841, 81.8%)
   b) Short term securities such as treasury bills (17, 0.8%)
   c) Bonds issued by corporations or governments (11, 0.5%)
   d) A combination of shares, bonds and short term securities (103, 4.6%)
   e) I don't know (278, 12.4%)

5) What types of securities are typically found in a bond fund?

   a) Shares in companies (7, 0.3%)
   b) Short term securities such as treasury bills (50, 2.2%)
   <u>c) Bonds issued by corporations or governments (1885, 83.8%)</u>
   d) A combination of shares, bonds and short term securities (61, 2.7%)
   e) I don't know (247, 11%)

6) What types of securities are typically found in a balanced fund?

   a) Shares in companies (44, 2%)
   b) Short term securities such as treasury bills (16, 0.7%)
   c) Bonds issued by corporations or governments (14, 0.6%)
   <u>d) A combination of shares, bonds and short term securities (1800, 80%)</u>
   e) I don't know (376, 16.7%)

7) For each of the following statements, place a check mark in the appropriate box indicating whether the statement is True or False.

Over a 10 year period, I would expect …	True	False	I don't know
a) A stock fund to have a higher return than a bond fund	<u>1978, 87.9%</u>	71, 3.2%	201, 8.9%
b) A money market fund to have a higher return than a bond fund	653, 29%	<u>1224, 54.4%</u>	373, 16.6%
c) A balanced fund to have a higher return than a bond fund	<u>1680, 74.7%</u>	127, 5.6%	443, 19.7%

8) In general, if interest rates increase, the value of a bond fund will…

   a) Increase (436, 19.4%)
   <u>b) Decrease (1171, 52%)</u>
   c) Stay the same (111, 4.9%)
   d) There is no relationship between interest rates and the value of a bond fund (130, 5.8%)
   e) I don't know (402, 17.9%)

9) Which of the following investments is <u>LEAST</u> likely to lose money over a one year time period?

   a) Stock funds (8, 0.4%)
   b) Bond funds (697, 31%)
   c) International stock funds (3, 0.1%)
   <u>d) Money market funds (1383, 61.5%)</u>
   e) I don't know (159, 7.1%)

10) The difference between an <u>actively managed stock fund</u> and a <u>stock index fund</u> is:

   a) Actively managed stock funds try to beat the market return while stock index funds try to equal the market return (381, 16.9%)
   b) Stock index funds typically charge lower fees than actively managed stock funds (37, 1.6%)
   c) There is no difference (8, 0.4%)
   <u>d) Both a) and b) are correct (1004, 44.6%)</u>
   e) I don't know (820, 36.4%)

11) Which of the following portfolios is the most diversified?

    a)   <u>A portfolio invested in one balanced fund (652, 29%)</u>
    b)   A portfolio invested in one stock index fund (79, 3.5%)
    c)   A portfolio invested in two value stock funds and one stock index fund (864, 38.4%)
    d)   All of the above are equally well diversified portfolios (221, 9.8%)
    e)   I don't know (434, 19.3%)

12) If the stock market were to fall by 10% in one day, what would you expect to happen the next day?

    a)   The market would fall again (46, 2%)
    b)   The market would bounce back (128, 5.7%)
    c)   The market would remain stable (13, 0.6%)
    d)   It is impossible to predict (1936, 86%)
    e)   I don't know (127, 5.6%)

13) In general, what do you believe is the most appropriate retirement portfolio for a 60 year-old person who is three to five years away from retirement?

    a)   75% stock, 25% bonds (134, 6%)
    b)   50% stock, 50% bonds (528, 23.5%)
    c)   <u>25% stock, 75% bonds (1321, 58.7%)</u>
    d)   Age should not affect the choice of retirement portfolio (61, 2.7%)
    e)   I don't know (206, 9.2%)

14) In general, what do you believe is the most appropriate retirement portfolio for a 30 year-old person who is 30 to 35 years away from retirement?

    a)   <u>75% stock, 25% bonds (1937, 86.1%)</u>
    b)   50% stock, 50% bonds (110, 4.9%)
    c)   25% stock, 75% bonds (28, 1.2%)
    d)   Age should not affect the choice of retirement portfolio (40, 1.8%)
    e)   I don't know (135, 6%)

15) Which of the following is the most important benefit of having a well-diversified retirement portfolio?

    a)   Investment expenses will be reduced (14, 0.6%)
    b)   <u>The expected volatility of your portfolio return will be reduced (1999, 88.8%)</u>
    c)   You will receive a larger pension (101, 4.5%)
    d)   You will be able to retire sooner (39, 1.7%)
    e)   I don't know (97, 4.3%)

16) The best way to determine if your stock fund is performing well is to compare its returns to…

    a)   The fund's returns in the previous year (316, 14%)
    b)   The returns of an international stock market index (10, 0.4%)
    c)   <u>The returns of a similar stock market index such as the Russel 2000 or S&P 500 market indices (1529, 68%)</u>
    d)   The returns advertised in the newspaper by stock mutual funds (34, 1.5%)
    e)   I don't know (361, 16%)

17) How often should you review the performance of your retirement portfolio?

    a)   Daily (62, 2.8%)
    b)   Monthly (331, 14.7%)
    c)   Quarterly (1215, 54%)
    d)   Annually (471, 20.9%)
    e)   I don't know (171, 7.6%)

18) The Russel 2000 and S&P 500 refer to:

    a)   Indices that represent the broad US bond market (25, 1.1%)
    b)   <u>Indices that represent the broad US stock market (1413, 62.8%)</u>
    c)   Indices that represent only the relatively small corporations in the US stock market (183, 8.1%)
    d)   Indices that represent the broad international stock market (43, 1.9%)
    e)   I don't know (586, 26%)

19) How much would your stock fund have to fall in value in one day before you would sell all or part of it?

    a)   0% - 5% (17, 0.8%)
    b)   6% - 10% (69, 3.1%)
    c)   11% - 20% (179, 8%)
    d)   More than 20% (408, 18.1%)
    e)   I wouldn't sell regardless of how much it falls in value (1577, 70.1%)

PART 2. PLAN DESIGN

20) Your total retirement income will be based on:

    a)   Benefits from the Wisconsin Retirement System and the Wisconsin Deferred Compensation Plan (WDC) (89, 4%)
    b)   Government benefits (i.e. Social Security) (1, 0%)
    c)   Personal savings (3, 0.1%)
    d)   <u>All of the above (2144, 95.3%)</u>
    e)   I don't know (13, 0.6%)

21) By participating in the WDC you are able to defer current income. In terms of paying taxes, this means that …

    a)   You will not have to pay income taxes on your contributions or investment earnings (30, 1.3%)
    b)   You will not have to pay income taxes on your contributions, but will still need to pay income taxes on your investment earnings (58, 2.6%)
    c)   <u>You will not have to pay any income taxes on your contributions or investment earnings until you withdraw funds from your account (1974, 87.7%)</u>
    d)   You will still have to pay income taxes on your contributions and investment earnings but at a lower rate (157, 7%)
    e)   I don't know (31, 1.4%)

22) WDC investment choices are divided into three separate tiers of investments. Which statement best describes these three tiers?

    a)   <u>1st tier – 5 passively managed index options; 2nd tier - 12 actively managed funds; 3rd tier - self-directed brokerage option through Charles Schwab (443, 19.7%)</u>
    b)   1st tier - low risk investment options; 2nd tier – moderate risk investment options; 3rd tier - high risk investment options (979, 43.5%)
    c)   1st tier - options best suited for participants age 50 and up; 2nd tier – options for participants age 30 to 50; 3rd tier - options for participants under age 30 (14, 0.6%)
    d)   There is no investment distinction between the three tiers of options (65, 2.9%)
    e)   I don't know (749, 33.3%)

23) The investment options available to participants of the WDC are selected by…

    a) Internal Revenue Service (3, 0.1%)
    b) Your employer's Human Resources Department (4, 0.2%)
    c) <u>Members of the Wisconsin Deferred Compensation Board (1725, 76.7%)</u>
    d) The plan administrator (Nationwide Retirement Solutions / NRS) (210, 9.3%)
    e) I don't know (308, 13.7%)

24) Which one of the following do you find MOST helpful when making your WDC investment choices?

    a) The WDC informational brochures and newsletters (971, 43.2%)
    b) The structure of the WDC's investment spectrum that identifies three separate tiers of options (430, 19.1%)
    c) The WDC's asset allocation service (130, 5.8%)
    d) WDC participant service representatives (248, 11%)
    e) Other, such as an independent financial consultant (471, 20.9%)

25) Which one of the following do you find LEAST helpful when making your WDC investment choices?

    a) The WDC informational brochures and newsletters (182, 8.1%)
    b) The structure of the WDC's investment spectrum that identifies three separate tiers of options (267, 11.9%)
    c) The WDC's asset allocation service (498, 22.1%)
    d) WDC participant service representatives (605, 26.9%)
    e) Other sources of help such as an independent financial consultant (698, 31%)

26) Who is responsible for deciding how your deferred earnings are allocated among the investment funds available in the WDC?

    a) <u>You, the plan member (2169, 96.4%)</u>
    b) Your employer (0, 0%)
    c) The plan administrator (Nationwide Retirement Solutions / NRS) (32, 1.4%)
    d) Internal Revenue Service (1, 0%)
    e) I don't know (48, 2.1%)

27) There are specific times when you can withdraw funds from your account. Which statement is FALSE?

    a) You may be eligible to withdraw funds if you experience a severe financial hardship that is beyond your control and the WDC account is your only resource (164, 7.3%)
    b) <u>You may withdraw funds if the purpose is to purchase a home or to pay for college education of you or a dependent (799, 35.5%)</u>
    c) You may receive your account balance if it is under $5,000 and you have not made any deferrals to the plan for two or more years (560, 24.9%)
    d) You may withdraw funds when you leave employment or when you reach age 70 ½ (260, 11.6%)
    e) I don't know (467, 20.8%)

28) Which of the following statements is <u>FALSE</u>? When you terminate employment or retire …

    a) You may defer receiving a distribution from your account up to age 70 ½ (82, 3.6%)
    b) You may leave your funds with the WDC but will no longer be able to make contributions to your account (159, 7.1%)
    c) You may receive a single lump sum payment of your full or partial account balance at any age without a tax penalty (880, 39.1%)
    d) <u>You must begin a distribution from your account within 60 days from termination (734, 32.6%)</u>
    e) I don't know (395, 17.6%)

29) If you notify the plan (Nationwide Retirement Solutions / NRS) to make a change to your deferral allocation…

    a) <u>Only future contributions will be affected by your request (1684, 74.8%)</u>
    b) Both future and past contributions will be affected by your request (283, 12.6%)
    c) Members may not make changes to the destination of future contributions (10, 0.4%)
    d) A service charge will be deducted from your account (18, 0.8%)
    e) I don't know (255, 11.3%)

30) How often may you notify the plan administrator (Nationwide Retirement Solutions / NRS) to change the destination of future contributions, or move past contributions into different funds?

    a) No more than once a week (35, 1.6%)
    b) No more than twice a month (63, 2.8%)
    c) No more than ten times a year (53, 2.4%)
    d) <u>As often as you wish (1429, 63.5%)</u>
    e) I don't know (670, 29.8%)

31) If you notify the plan administrator (Nationwide Retirement Solutions / NRS) prior to 3:00 pm CST to execute an exchange, which is to change the destination of past contributions into different investment funds, when will it take effect …

    a) Immediately (108, 4.8%)
    b) <u>At the end of the business day (950, 42.2%)</u>
    c) By the end of the next business day (573, 25.5%)
    d) At the end of the week (17, 0.8%)
    e) I don't know (602, 26.8%)

32) Members of WDC also have access to a Self-Directed Option (SDO) through Charles Schwab. With regards to participating in the SDO, which statement is <u>FALSE</u>?

    a) You are eligible to participate in the SDO once you have at least $1,000 in your Core Investment account (66, 2.9%)
    b) In order to make investments within the SDO, you must first establish a separate account by completing two forms, a limited power of attorney form and a memorandum of understanding, and submit these to the plan administrator (139, 6.2%)
    c) Investments into the SDO can only be made by transferring assets from the Core Investment account (73, 3.2%)
    d) <u>All transfers from the Core Investment account to the SDO, including the initial transfer to start the SDO account, must be $500 or greater (92, 4.1%)</u>
    e) I don't know (1880, 83.6%)

33) In terms of participant fees and funding for the WDC, which statement is FALSE?

    a) State funds are not used to help pay for the administration of the WDC (167, 7.4%)
    b) Participant fees and reimbursements from investment companies provide funding for the administration of the WDC (216, 9.6%)
    c) <u>Participating in the SDO requires members to pay an additional fee based on the total amount of assets held in their Schwab Personal Choice Retirement (341, 15.2%)</u>
    d) Annual participant fees are based upon the total amount of assets held in both the Core Investment Account and the Personal Choice Retirement Account (206, 9.2%)
    e) I don't know (1320, 58.7%)

34) Please indicate when you have last used the following tools/services available through the WDC :

Tool/Service Available:	I USED THIS TOOL/SERVICE WITHIN THE LAST …				
	Week	Month	6 Months	Year	Never Used
	1	**2**	**3**	**4**	**5**
a) Toll Free (1-800#) service	69, 3.1%	142, 6.3%	367, 16.3%	858, 38.1%	814, 36.2%
b) Web site (www.wdc457.org)	399, 17.7%	449, 20%	474, 21.1%	436, 19.4%	492, 21.9%
c) E-mail (WDoffice@nationwide.com)	11, 0.5%	28, 1.2%	96, 4.3%	269, 12%	1846, 82%
d) Fax service	1, 0%	1, 0%	8, 0.4%	21, 0.9%	2219, 98.6%
e) Asset Allocation Service and rebalancing tool	26, 1.2%	65, 2.9%	186, 8.3%	360, 16%	1613, 71.7%
f) Seminars and employee meetings	13, 0.6%	32, 1.4%	198, 8.8%	716, 31.8%	1291, 57.4%

35) Please indicate whether you agree with the following statements:

	LEVEL OF AGREEMENT				
	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
	1	**2**	**3**	**4**	**5**
a) My quarterly account statements provide me with valuable information	29, 1.3%	59, 2.6%	68, 3%	1276, 56.7%	818, 36.4%
b) I use my quarterly account statements to help make important investment decisions	75, 3.3%	348, 15.5%	173, 7.7%	1208, 53.7%	446, 19.8%
c) My quarterly account statements are easy to use and understand	69, 3.1%	201, 8.9%	109, 4.8%	1393, 61.9%	478, 21.2%

36) **Comments**:
If you wish to make any comments, you may do so in the space provided.

_____
_____
_____
_____
_____
_____

GLOSSARY

Calculations involving Mean, Median, Mode, Standard Deviation, Variance and Confidence in Errors

The **mean** (avg(x)) is one of several indices of central tendency that statisticians use to indicate the point on the scale of measures where the population is centred. The mean is the average of the scores in the population. Numerically, it equals the sum of the scores divided by the number of scores.

$$avg(x) = (\Sigma\,_{i=1}^{n}\,x_i) / n$$

The **median** is one of several indices of central tendency that statisticians use to indicate the point on the scale of measures where the population is centred. The median of a population is the point that divides the distribution of scores in half. Numerically, half of the scores in a population will have values that are equal to or greater than the median and half will have values that are equal to or less than the median. Numerically, if there are 2n+1 scores, arranged in order of increasing magnitude, the median score corresponds to the n+1 score. Similarly, if there are 2n scores, arranged in order of magnitude, the median score corresponds to ½((n score) + (n+1 score)).

The **mode** is one of several measures of central tendency that statisticians use to indicate the point (or points) on the scale of measures where the population is centred. It is the score in the population that occurs most frequently. Please notice that the mode is not the frequency of the most numerous score. It is the value of that score itself.

Also, if there are two (or more) different scores that occur with equal frequency and that frequency is higher than the frequency of any of the other scores, the population is described as multi-modal.

The **standard deviation** is a statistic that tells you how tightly all the various examples are clustered around the mean in a set of data. When the examples are pretty tightly bunched together and the bell-shaped curve is steep, the standard deviation is small. When the examples are spread apart and the bell curve is relatively flat, that tells you that you have a relatively large standard deviation.

Computing the value of a standard deviation is complicated. Graphically a standard deviation represents the following:
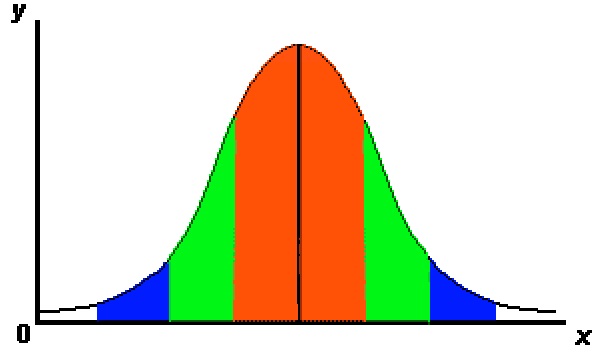
One standard deviation away from the mean in either direction on the horizontal axis (the red area on the above graph) accounts for somewhere around 68 percent of the people in this group. Two standard deviations away from the mean, (the red and green areas), account for roughly 95 percent of the people. And three standard deviations (the red, green and blue areas) account for about 99 percent of the people.

One **formula** for computing the standard deviation is as follows:

$$\sigma = [(\Sigma\,(x - avg(x))^2) * (n - 1)^{-1}]^{1/2}$$

Terms you'll need to know
x = one value in your set of data
avg (x) = the mean (average) of all values x in your set of data
n = the number of values x in your set of data

For each value x, subtract avg (x) from x, then multiply that value by itself (otherwise known as determining the square of that value). Sum up all those squared values. Then multiply that value by this value... 1/(n-1). Take the square root of the resulting value. That's the standard deviation of your set of data.

The **variance** is just the square of the Standard Deviation, i.e., σ^2

If avg(x) is the mean of a random sample of size n taken from a *normal* population with known variance

σ^2, then a central **95% confidence** interval for μ, the population mean, is given by

Avg(x) $\pm$ 1.96 ($\sigma/\sqrt{(n)}$), where 1.96 ($\sigma/\sqrt{(n)}$) is the associated **standard error** for μ at 95% confidence.

If the population is not normal, then we require n to be large (n $\geq$ 30, say) for the result to be used.

Similarly, a central **99% confidence** interval for μ is given by

$$\text{Avg(x)} \pm 2.575 \ (\sigma/\sqrt{(n)})$$

$\sigma/\sqrt{(n)}$ is known as the standard error of the mean.

Testing Differences between means (Significance)

The following may be used to test whether there is a significant difference between means:

If σ_1^2, σ_2^2 are **known** we use the test statistic

$Z = [X_1 - X_2 - (\mu_1 - \mu_2)] / [(\sigma_1^2 / n_1) + (\sigma_2^2 / n_2)]^{1/2}$
which is distributed as N(0, 1)

If there is a **known common population variance such that** $\sigma_1^2 = \sigma_2^2 = \sigma^2$, then

$Z = [X_1 - X_2 - (\mu_1 - \mu_2)] / \sigma \ (n_1^{-1} + n_2^{-1})^{1/2}$ where Z $\sim$ N(0, 1)

In the event that there is an unknown common population variance σ^2 then we use an estimate $(\sigma')^2$ for it, where

$(\sigma')^2 = (n_1 s_1^2 + n_2 s_2^2) / (n_1 + n_2 - 2)$, where s_1^2, s_2^2 are the sample variances.

For **small** samples we use the test statistic

$T = [X_1 - X_2 - (\mu_1 - \mu_2)] / \sigma' \ (n_1^{-1} + n_2^{-1})^{1/2}$ where T $\sim$ $t(n_1 + n_2 - 2)$

For **large** samples we use the test statistic

$Z = [X_1 - X_2 - (\mu_1 - \mu_2)] / \sigma' \ (n_1^{-1} + n_2^{-1})^{1/2}$ where Z $\sim$ N(0, 1)

Skewness: Skewness is the degree of asymmetry of a distribution of values. Positive skewness indicates that the distribution has a longer tail to the right of the central maximum value. Negative skewness indicates that the distribution has a longer tail to the left of the central maximum value.
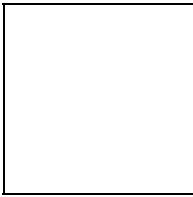
E.g.   **Normal Distribution**

Mean = Median = Mode

Positive Skewness

Mean > Median > Mode

Negative Skewness
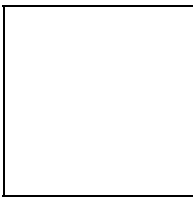
Mean < Median < Mode

Chi-Square test, χ^2: Chi-square tests provide the basis for judging whether more than two population proportions may be considered to be equal.
The first χ^2 test to consider is the "test of goodness of fit." Tests of goodness of fit provide a means for deciding whether a particular theoretical probability distribution is a close enough approximation to a sample frequency distribution for the population from which the sample was drawn to be described by the theoretical distribution.
The second χ^2 test to consider is the "test of independence". Tests of independence constitute a method for deciding whether the hypothesis for independence between different variables is tenable. This procedure provides a test for the equality of more than two population proportions. Both types of χ^2 tests furnish a conclusion on whether a set of observed frequencies differs so greatly from a set of theoretical frequencies that the hypothesis under which the theoretical frequencies were derived should be rejected.

The computed value of χ^2 is:

$$\chi^2 = \Sigma \left[(f_0 - f_t)^2 / f_t \right]$$

where f_0 = an observed frequency and f_t = a theoretical (or expected frequency)

t Distribution: In hypothesis testing, as in confidence interval estimation, the distinction between large and small sample tests becomes important when the population standard deviation is unknown and therefore must be estimated from the sample observations.
The following statistic, the *t* statistic is computed as follows:

$$t = (avg(x) - \mu)/s_{avg(x)}$$

where $s_{avg(x)}$ denotes an estimated standard error. The statistic above is not approximately normally distributed for all sample sizes. $s_{avg(x)}$ is computed by the formula $s_{avg(x)} = s/\sqrt{n}$, where s represents an estimate of the true population standard deviation. The t distribution is approximately normally distributed for small ($n \geq 30$) sample sizes.