

# WORKING P A P E R

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## Evaluating Workplace Education for New Hires

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# **EVALUATING WORKPLACE EDUCATION FOR NEW HIRES**

## **FINAL REPORT**

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### **Abstract**

This project examines how employer-provided financial education for newly hired workers affects participation in retirement savings plans. The investigators partnered with six large employers to explore what financial education is currently offered to new hires. Each employer provided individual data on workers hired in 2008 and 2009. This report assesses the impact of information and delivery methods on participation and contribution rates. Several findings emerge. There is strong evidence that employees respond to match incentives. Therefore, the date when the employer match begins should be an important “teachable moment” for employers to reach out to employees. The investigators found that auto-enroll programs do increase retirement savings plan participation. Moreover, there is little decay in the participation rates over time. However, workers who were automatically enrolled have contribution rates that are concentrated at the default level and therefore many workers who were automatically enrolled are not taking full advantage of the employer match. The researchers also found that opt-in plans have lower enrollment rates for lower-income, younger, and female workers. However, among the employers using an opt-out default there are no significant differences in plan participation between these groups. Finally, there is some suggestive evidence that for workers hired during the time period when the stock market was at its lowest point, plan participation was not only initially lower but is still lower today. The research thus far provides important insights into the role of defaults and information in workers’ decisions to participate in voluntary retirement savings plans.

## EVALUATING WORKPLACE EDUCATION FOR NEW HIRES

### Executive Summary

The primary object of this research project is to determine the effectiveness of employer-provided financial education on the retirement saving choices of newly hired workers. Many newly hired workers do not take advantage of employer-provided retirement saving programs, which is particularly surprising when there are substantial employer matches to employee contributions. This project examines the role financial literacy and financial education can play in the saving decisions of newly hired workers. Because the project utilizes data from several large employers, a key contribution is uncovering how the responsiveness to interventions varies across types of employees (including low wage workers, those just entering the labor force, and differences between men and women) and between institutional arrangements (such as automatic enrollment, employer matches, and the existence of other retirement plans).

At the beginning of the research period, the investigators reached agreement with six employers to participate in the project. The employer partners are BB&T, Progress Energy, Pepsi Bottling Ventures, Martin Marietta Materials, North Carolina State University, and the Williams Companies. The first months of the grant were spent in developing a close working relationship with the employer partners. During that time the investigators collected data on each employer's benefit plans and on the type of information given to new employees during orientation and in the months following their employment.

Each of the employers in this study offers their employees the opportunity to contribute to a voluntary defined contribution plan, typically a 401(k) plan; however, the characteristics of these plans vary substantially across the employers. Two of the employers have adopted opt-out

plans that automatically enroll individuals in the retirement saving plan while new workers in the other employers must actively choose to enroll in the plan. All of the employers except one provide an employer match to employee contributions; however, the extent of the match varies from 50 percent to 100 percent. Some employers immediately start matching, while in other firms workers must wait for a year before the match is provided.

The investigators carefully selected their employer partners so that there would be considerable variation in the terms of the retirement saving programs. The diversity in the plan characteristics provides the investigators the opportunity to assess the impact of various forms of interventions by the employers. In addition to the characteristics of the plans, the investigators have also gathered information on the type of information provided to new employees, when the information is given, the method of delivery, and the extent of follow concerning the opportunity to participate in the retirement saving plan.

As a first step in this research, each of the employers agreed to provide administrative data on all employees hired in 2008 and 2009. These data included information on starting salary, date of employment, gender, and age. In addition, information on contributions to retirement saving plan as of May/June/July (depending on the timing of delivery) 2010 were submitted to the investigators. Thus, the investigators were able to calculate participation and contributions rates by date of hire for each person hired during those two years. This allowed for the determination how participation rates change due to length of service, automatic enrollment, becoming eligible for employer matches, and information provided to workers in the first months of employment. The report presents data on the number of workers hired by each employer in 2008 and 2009 along with participation and contribution rates by length of employment, age, salary level, and gender.

These data show the role of defaults and information in workers' decisions to participate in voluntary retirement savings plans and provide guidance for future work that will shape the interventions and controlled experiments that are proposed in our application for year 2 funding. The research thus far provides important insights into the determinants retirement saving rates in companies that offer voluntary defined contribution pension plans. Among our employers, participation rates are much higher among workers in the opt-out plans. Participation rates increase around the time that employer matches are provided or increased. There is little or no drop out among workers who were automatically enrolled in the retirement plan. However, among employers using an "opt-out" enrollment procedure, workers predominately remain at the default contribution level and therefore do not take full advantage of the employer match initially. The data suggest that there may be teachable moments when the provision of financial education and information can have its most pronounced effect. The researchers also found that the standard opt-in plans have lower enrollment rates for lower-income, younger, and female workers, while the employers using the auto-enrollment procedure had no statistically significant differences in plan participation between these groups. Finally, the researchers found evidence that for workers hired during the time period when the stock market was at its lowest point, plan participation was not only initially lower, but is still lower today.

Our employer partners are very enthusiastic about this research project and its findings. They remain interested in participating in the research and learning more about the interaction between their retirement programs and the extent and quality of information they are providing to their employees. They have provided input into the research methodology and regularly ask interesting questions that stimulate our thinking on the topic. We regularly provide our partners with updates on the research. Each of the employers has agreed to work with the investigators in

the coming year to develop and conduct controlled experiments around the teachable moments identified in the research. These experiments will vary the information provided to new hires over time and across groups. These interventions are described in more detail in the Year 2 proposal submitted by the investigators. The results from analysis thus far indicate opportunities to explore the impact of specific types of information provided at key moments during the first few years of employment.

# EVALUATING WORKPLACE EDUCATION FOR NEW HIRES

## FINAL REPORT

### I. Overview of Research Project

The primary object of this research project is to determine the effectiveness of employer-provided financial education on the retirement saving choices of newly hired workers. Many newly hired workers do not take advantage of employer provided retirement saving programs, which is particularly surprising when there are substantial employer matches to employee contributions. This project examines the role financial literacy and financial education can play in the saving decisions of newly hired workers. Because the project utilizes data from several large employers, a key contribution is uncovering how the responsiveness to interventions varies across types of employees (including low wage workers, those just entering the labor force, and differences between men and women) and between institutional arrangements (such as automatic enrollment, employer matches, and the existence of other retirement plans).

At the beginning of the research period, the investigators reached agreement with six employers to participate in the project. The employer partners are BB&T, Progress Energy (PGN), Pepsi Bottling Ventures (PBV), Martin Marietta Materials (MMM), North Carolina State University (NCSU), and the Williams Companies (WLM). The first months of the grant were spent in developing a close working relationship with the employer partners. During that time the investigators collected data on each employer's benefit plans and on the type of information given to new employees during orientation and in the months following their employment. Table 1 provides an overview the retirement plans of each of the employers. This project is especially concerned with the characteristics of the voluntary defined contribution plans.

Each of the employers in this study offers their employees the opportunity to contribute to a voluntary defined contribution plan, typically a 401(k) plan; however, the characteristics of these plans vary substantially across the employers. Two of the employers (PBV and MMM) have adopted opt-out plans that automatically enroll individuals in the retirement saving plan while new workers in the other employers must actively choose to enroll in the plan. PBV has a default of 3 percent of salary and MMM a default of 2 percent of salary. MMM has an automatic increase in the default contribution rate of 1 percent of salary each year until the contribution rate reaches 7 percent. PBV did not have an automatic increase during 2008, but 2009 new hires could select the auto increase option. All of the employers except NCSU provide an employer match to employee contributions; however, the extent of the match varies from 50 percent to 100 percent. Some employers immediately start matching, while in other firms workers must wait for a year before the match is provided.

The investigators carefully selected their employer partners so that there would be considerable variation in the terms of the retirement saving programs. The diversity in the plan characteristics provides the investigators the opportunity to assess the impact of various forms of interventions by the employers. In addition to the characteristics of the plans, the investigators have also gathered information on the type of information provided to new employees, when the information is given, the method of delivery, and the extent of follow concerning the opportunity to participate in the retirement saving plan. The next section of this report provides details of the plans and the financial information provided by each of the firms.

As a first step in this research, each of the employers agreed to provide administrative data on all employees hired in 2008 and 2009. These data included information on starting salary, date of employment, gender, and age. In addition, information on contributions to



retirement saving plan as of May/June/July (depending on the timing of delivery) 2010 were submitted to the investigators. Thus, the investigators were able to calculate participation and contributions rates by date of hire for each person hired during those two years. This allowed for the determination how participation rates change due to length of service, automatic enrollment, becoming eligible for employer matches, and information provided to workers in the first months of employment. The next section of this report presents data on the number of workers hired by each employer in 2008 and 2009 along with participation and contribution rates by length of employment, age, salary level, and gender. Findings to date provide important insights into the role of defaults and information in decisions to participate in voluntary retirement savings plans. These data also provide guidance for future work that will shape the interventions and controlled experiments that are proposed in our application for year 2 funding.

The research thus far provides important insights into the determinants retirement saving rates in companies that offer voluntary defined contribution pension plans. Among our employers, participation rates are much higher among workers in the opt-out plans. Participation rates increase around the time that employer matches are provided or increased. There is little or no drop out among workers who were automatically enrolled in the retirement plan. The data suggest that there may be teachable moments when the provision of financial education and information can have its most pronounced effect. The key findings from this research and important lessons learned based on the findings are described in more detail in Section III of the report.

Our employer partners are very enthusiastic about this research project and its findings. They remain interested in participating in the research and learning more about the interaction between their retirement programs and the extent and quality of information they are providing

to their employees. They have provided input into the research methodology and regularly ask interesting questions that stimulate our thinking on the topic. We regularly provide our partners with updates on the research. A sample of our employer partner's reaction to the findings:

Nancy VanMaren, Williams Companies. *So far, very interesting findings!*

Jennifer Ray, Progress Energy. *The results, tables and graphs are fantastic! I think this will provide us a great deal of comparison data that we may be able to use!*

Each of the employers has agreed to work with the investigators in the coming year to develop and conduct controlled experiments around the teachable moments identified in the research. These experiments will vary the information provided to new hires over time and across groups. These interventions are described in more detail in the Year 2 proposal submitted by the investigators. The results from analysis thus far indicate opportunities to explore the impact of specific types of information provided at key moments during the first few years of employment.

**Table I.1. Plan Characteristics**

	<b>BB&amp;T</b>	<b>Progress Energy</b>	<b>Pepsi Bottling Ventures, LLC</b>	<b>Martin Marietta Materials</b>	<b>NCSU</b>	<b>Williams</b>
Optional Defined Contribution Plan	Yes	Yes	Yes	Yes	Yes	Yes
Plan Type	401(k)	401(k)	401(k)	401(k)	401(k), 403(b), 457	401(k)
Participation Eligibility Date	1st day of employment	1st day of employment	60 days of employment	1st day of employment	1st day of employment	1st day of employment
Employer Match Eligibility	After completion of 1,000 hours & 1 year of service	1st day of employment	After completion of 1,000 hours & 1 year of service	6 months of employment	No match	1st day of employment
Employer Match Amount	100% on first 6%	100% on first 6%	100% on first 4%, 50% on next 2%	50% on first 7%	No match	100% on first 6%
Is This a Supplemental Savings plan?	Yes	Yes	No	Yes	Yes	Yes
Auto-Enroll	No	No	Yes, 60 days after hire	First pay cycle following the 45 days after hire <sup>2</sup>	No	No
Auto-Enroll default Contribution	No	No	3%	2%	No	No
Automatic contribution increase	No	No	Optional "Managed Savings" feature <sup>1</sup>	1% each year to 7% total	No	No
<b>Plan Administrator</b>	<b>BB&amp;T</b>	<b>Fidelity</b>	<b>New York Life Retirement</b>	<b>Wells Fargo</b>	<b>Fidelity, TIAA-CREF, or Prudential</b>	<b>Fidelity</b>

<sup>1</sup>During 2009 employees could elect the Managed Savings feature through Benefits Complete. Under this program, the rate of deferral would automatically increase each year by a preselected amount (1%, 2%, or 3%) up to 10%. 2010 new hires are automatically enrolled in this plan.

<sup>2</sup>New hires and rehires are immediately eligible to participate in the 401(k) plan. Automatic enrollment occurs approximately 45 days after the employee's administrative paperwork is processed.

## **II. Employer Partners and their Supplemental Retirement Plans: Description and Analysis of Information and Participation**

### **1. Branch, Banking, and Trust (BB&T)**

#### **BB&T Background Information**

##### Company Description

BB&T is a publically traded company and is the 10<sup>th</sup> largest financial service corporation in the United States. BB&T is a full service financial institution with business segments including banking, insurance and investments. The company was founded in 1872 and is headquartered in Winston-Salem, North Carolina. They have operations in 13 states and Washington D.C. BB&T has 30,000 employees, total assets of 165 billion and reported net income of 157 million for the third quarter ending September 30, 2009. BB&T saving's plan was ranked in the top 4% of the industry for its 100% match.

##### 401(k) Plan

BB&T offers employees the option of participating in their 401(k) plan. Employees are eligible to participate on the first day of employment, deferral contributions to the plan can be made the first day of the calendar month following employment. To be eligible for the matching contribution portion of the plan, the employee must be at least 21 years of age and must complete 1,000 hours of service within the 12 months following his hire date.

BB&T offers a 100% match on the first 6% of compensation contributed to the plan. The match on the first 4% is referred to as the basic match contribution while the remaining 2% is called the supplemental match. The supplemental match is subject to vesting requirements which state that it may be forfeited if the employee engages in misconduct including embezzlement, theft, or larceny or engages in direct competition with the firm, unless the employee has three years of continuous employment with the firm or has reached age 65.

Employees may enroll in the plan by using BB&T's PlanTrac website or may enroll over the phone. Changes can be made on a daily basis and contribution rates can be changed at any time. Participants may invest in the Plan's core funds or in a self-directed brokerage account (available through TD Ameritrade). The plan allows for both loans and hardship withdraws.

##### Defined Benefit Pension Plan

BB&T offers a traditional final average pay defined benefit plan.

##### Investment Education

BB&T provides employees with access to Pro Nvest, a company that has partnered with BB&T to provide retirement planning services. Services include access to retirement counselors,

planning tools and education. The 401(k) participant guide, reviewed during orientation, provides the employee with a wide array of investing education and specific examples. Information covered in the guide includes formulas for calculating how much is needed for retirement, explanations of the importance of considering inflation when planning for retirement, and illustrations of compounding power. Importantly, there is an extensive discussion of the tax advantages of the company sponsored retirement plan and examples demonstrating the advantage of pre-tax retirement savings.

### New Hire Orientation

Orientation occurs in the first two weeks following hire. It includes flexible benefit, 401(k) and pension plan information.

### Retiree Health Care

A health savings account (HSA) is available to early retirees. It is not marketed to them as a retirement savings tool. Current employees are eligible for retiree health care if they retire at age 55 or later with 10 years of service.

### Auto-enroll

BB&T does not have an auto enroll feature in their 401(k) plan.

### 401(k) Plan Management and Data Availability

BB&T's plan 401(k) plan is self-administered, so they have extensive data easily accessible.

### Employer Sponsored Financial Literacy Program(s)

BB&T does not directly offer financial literacy programs, however such information is available from the plan administrator. Managers are instructed to discuss retirement savings and plan participation with workers during annual reviews.

### **Summary of BB&T's 401(k) Plan:**

Joining the plan:

- Employees are eligible to participate on the first day of employment.
- Employees may enroll in the plan by using BB&T's PlanTrac website or may enroll over the phone.

Deferral Contributions:

- Timing: Deferral contributions to the plan can be made the first day of the calendar month following employment. There is approximately a 30 day delay for employees paid semi-monthly and a 45 day delay for employees paid monthly.

- Amount: BB&T allows employees to defer from 0-50% of pay.

Match:

- Eligibility: To be eligible for the matching contribution portion of the plan, the employee must be at least 21 years of age and must complete 1,000 hours of service within the 12 months following his hire date.
- Match Amount: BB&T offers a 100% match on the first 6% of compensation contributed to the plan.

Timing of Information Received:

- Orientation occurs in the first two weeks following hire. It includes flexible benefit, 401(k) and pension plan information.
- Managers discuss employee participation in the 401(k) during the employee's yearly review.
  - Annual reviews for officers occur in February, for non-officers, at their one year anniversary.

### **BB&T Data Analysis**

BB&T provided information on over 7,500 employees hired during 2008 and 2009. The information included: gender, date of birth, date of hire, date of participation, date of first contribution, date of termination, job grade, and compensation and contribution amounts for 2008 and 2009. In addition to the information provided when initially hired, BB&T asks managers to discuss retirement savings choices during employees' annual reviews. Other than these yearly meetings, BB&T does not yet have any other interventions in place to increase plan participation. Note that due to the timing of the annual review, we will not be able to separately identify the effects of the match at 12 months from the annual review where managers are instructed to encourage employees to participate in the supplemental retirement savings plans.

Table 1 provides summary statistics of the sample. We see that after 450 days about 30 percent of employees participate in the supplemental plan. Note that in addition to the supplemental plans described here, BB&T offers a traditional final average pay defined benefit

plan. Table 2 presents detail for the employees hired in 2008, for whom we have the most complete participation information. We see that as of May 15, 2010, nearly 40 percent of workers hired in 2008 had begun participating. Women, those with lower salaries, and those under age 25 are least likely to participate in the plan. The majority of low salary workers are part-time employees (such as bank tellers). We see that of those that do participate over our sample period, nearly half sign up within the first three months. The participation rate then increases steadily with only a small increase after the match begins at 12 months. Three quarters of all participants chose to contribute at least 6 percent of their salary so as to receive the maximum employer match.

In Table 4 we present results from a regression considering who has signed up to participate after 30 days from hire, 90 days from hire, and 450 days from hire. We first consider both 2008 and 2009, then each separately. There is a small and statistically significant difference in sign-up rates in the first 30 days between 2008 and 2009, but no statistical difference once we consider sign-up within 90 days. As was found in the means, women are significantly less likely to participate. The coefficient in the last column indicates that for those hired in 2008, women were 16.2 percentage points (53 percent) less likely to be participating after 450 days off of a mean of 30.7 percent. The patterns also indicate lower participation rates for younger workers relative to newly hired workers ages 35 to 44. Similarly, although not always statistically significant, the estimates suggest that within 90 days workers ages 45 to 54 are more likely to participate relative to the 35 to 44 age group. These differences may be attributable to the job categories of the workers. For workers with shorter expected duration at the firm and/or lower compensation levels and hours of work, such as bank tellers, we anticipate seeing lower

participation rates. In future work, we hope to include job classification which may explain, in part, the lower participation rates of younger workers and women.

The figures tell a similar story regarding the timing and level of contributions. Figures 1 and 2 demonstrate that overwhelmingly, workers who do decide to participate contribute at least enough to receive the full 6 percent employer match (note that the deferral percentages are rounded so we see spikes at both 6 and 7 percent). Figure 3 shows the elapsed months between date of hire and date of first contribution. Most workers who sign up do so within the first two or three months. Employees paid semi-monthly would have an effective date of first contribution no earlier than 30 days after enrollment and employees paid monthly would experience a 45 day delay. We do observe a rise in participation just after the twelfth month of hire. This is likely due to both the initiation of the employer match and to information provided in the annual review (annual reviews occur at the employee's anniversary date for all employees with the exception of company officers whose reviews are held each February). Figure 4 shows the sign-up rates of workers according to the number of days since hire. We see that initially the rate of sign-up grows sharply, so that most workers are signing up within the first three months of work. However, after 90 days the fraction of new sign-ups grows steadily, with a small bump up just after one year of work. Finally, Figure 5 shows the percent contributing by quarter hired. We note a significant decline among those hired in the second quarter of 2009. During this same period, the Dow Jones Industrial Average experienced drastic declines and reached its lowest levels in recent history. It appears these hires were strongly affected by the stock market performance at their time of hire and that difference permanently affected their participation rates.



**BB&T Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	5130	2411
Average Age	33.5	33.6
Number of Females Hired	3629	1683
Number of Males Hired	1501	728
Average Salary	39,960	37,370
Participation Rate within 30 Days	.2%	.8%
Participation Rate within 90 Days	17.6%	16.9%
Participation Rate within 450 Days	30.6%	.

**BB&T Table 2: Contribution Rates, Employees Hired in 2008 & 2009 as of May 15, 2010**

2008 New Hires	Total New Hires	Number Participating by 5/2010	Percent Participating	Average Deferral for Participants
Total	5130	2037	39.7%	8.5
Female	3629	1272	35.1%	8.1
Male	1501	765	50.0%	9.1
Salary -- Low <sup>1</sup>	3004	929	30.9%	6.4
Salary -- High <sup>1</sup>	2126	1108	52.1%	10.2
Age: <25	1516	460	30.3%	7.7
25-34	1680	706	42.0%	7.8
35-44	976	415	42.5%	8.6
45-54	695	341	49.1%	9.6 <sup>3</sup>
55-64	242	107	44.2%	11.7 <sup>3</sup>
65+	21	8	38.1%	12.3 <sup>3</sup>
2009 New Hires	Total New Hires	Number Participating by 5/2010	Percent Participating	Average Deferral for Participants
Total	2411	648	14.4%	9.4
Female	1683	354	20.0%	8.6
Male	728	294	40.4%	10.2
Salary -- Low <sup>2</sup>	1761	307	17.4%	8.4
Salary -- High <sup>2</sup>	650	341	52.5%	10.1
Age: <25	723	144	19.9%	7.3
25-34	777	208	26.8%	8.2
35-44	446	119	26.7%	10.7
45-54	323	129	39.9%	11.2 <sup>3</sup>

<sup>1</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$39,960.

<sup>2</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$37,370.

<sup>3</sup> Employees age 50 and older are eligible for catch-up contributions which may cause the deferral percentage to be inflated.

55-64	134	48	35.8%	11.4 <sup>3</sup>
65+	8	0	0.0%	N/A

**BB&T Table 3: Contribution Lags and Percent Deferral**

Length of Time Between Date of Hire and 1<sup>st</sup> Contribution (in months)—  
Includes 2008 hires only.

	New Contributors	Percent of Total Contributors
0-3	1007	49.4
4-11	356	17.5
12-15	282	13.8
16 and greater	392	19.2

Percent Deferral	2008 Active New Hires	Average Salary	2009 Active New Hires	Average Salary
1%	70	42,360	25	53,264
2%	103	41,160	16	69,801
3%	153	44,344	23	39,350
4%	107	55,946	15	56,514
5%	105	58,676	18	46,869
6%	258	53,021	46	61,461
7%	256	46,746	47	50,561
8%	105	52,503	17	51,422
9%	76	65,614	25	63,288
10%	67	73,671	19	57,740
> 10%	408	74,211	118	65,747
Deferral not available	329*	-	279*	-
Total	2037		648	

\*These observations have a valid date of participation but the deferral amount was not available.

Note: The high number of deferrals at the 7 percent level is likely a result of the process used to calculate the deferral. The deferral percentage was imputed from compensation data and then rounded. As salaries had to be adjusted to agree to the period for which the deferral was effective, there is some slight imprecision with the calculated deferral percentage.

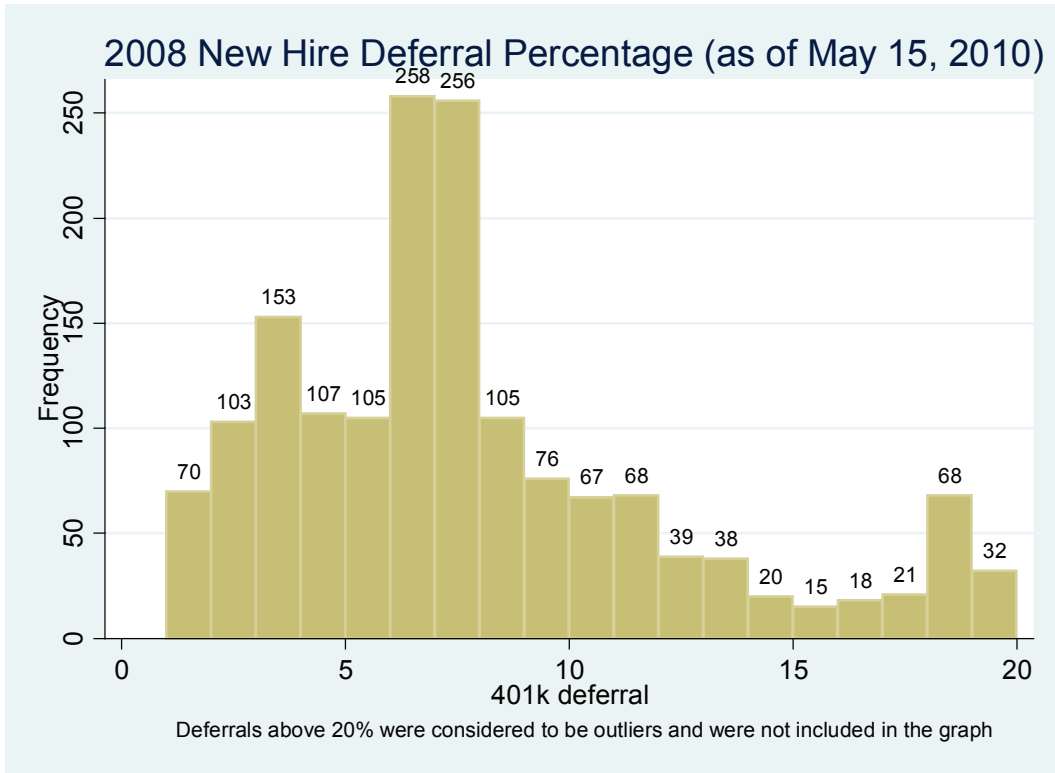
**BB&T Table 4: Regression Analysis of Participation Choice**

	Participate within 30 Days			Participate within 90 Days			Participate within 450 Days
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009	Hired in 2008 or 2009	Hired in 2008	Hired in 2009	Hired in 2008
Hired in 2008	-0.006 [0.002]*			0.008 [0.009]			
Female	-0.003 [0.002]	0.001 [0.002]	-0.010 [0.004]**	-0.134 [0.009]*	-0.118 [0.012]*	-0.167 [0.016]*	-0.162 [0.014]*
Age when Hired:							
Age 18-24	-0.005 [0.002]**	-0.004 [0.002]**	-0.007 [0.005]	-0.085 [0.013]*	-0.100 [0.015]*	-0.049 [0.022]**	-0.126 [0.018]*
Age 25-34	-0.001 [0.002]	-0.002 [0.002]	-0.001 [0.005]	-0.034 [0.012]*	-0.039 [0.015]*	-0.020 [0.022]	-0.029 [0.018]
Age 45-54	-0.000 [0.003]	0.000 [0.002]	-0.002 [0.006]	0.044 [0.015]*	0.024 [0.019]	0.087 [0.027]*	0.030 [0.022]
Age 55-65	-0.001 [0.004]	0.000 [0.004]	-0.003 [0.009]	0.017 [0.022]	-0.006 [0.027]	0.067 [0.036]	0.004 [0.032]
Constant	0.012 [0.003]*	0.004 [0.002]	0.018 [0.005]*	0.292 [0.013]*	0.299 [0.014]*	0.292 [0.020]*	0.463 [0.017]*
Observations	7538	5127	2411	7538	5127	2411	5127
Mean Participation Rate	0.004 (0.001)	0.002 (0.001)	0.008 (0.002)	0.174 (0.004)	0.176 (0.005)	0.169 (0.008)	0.307 (0.006)

Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

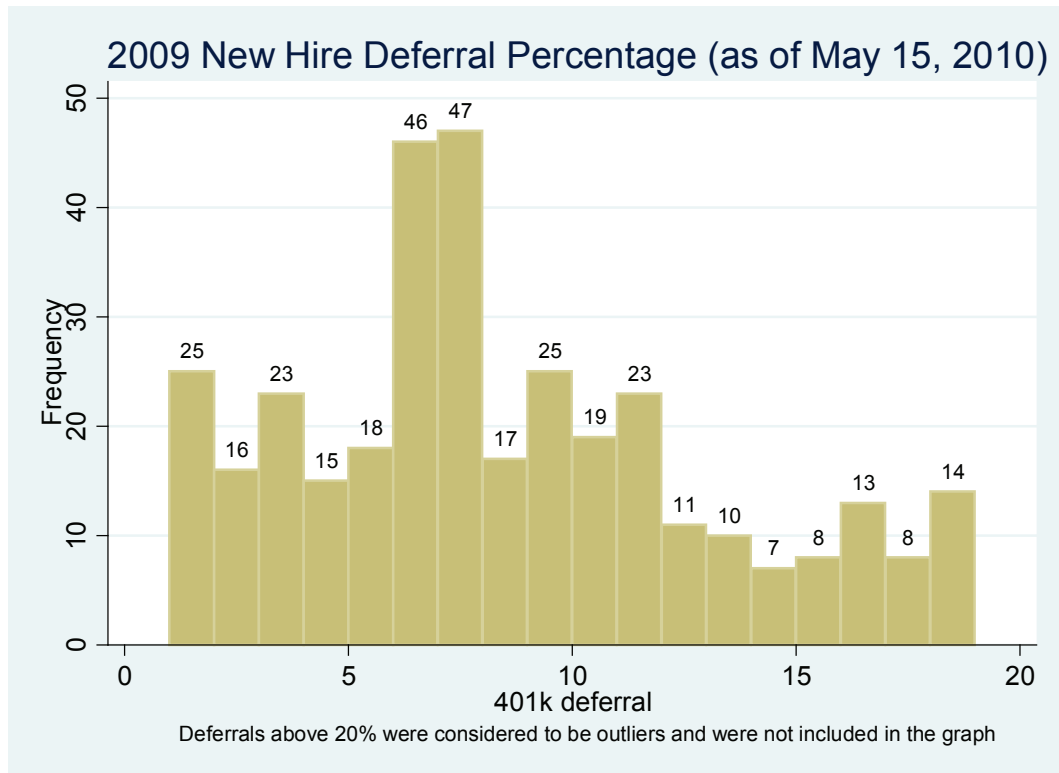
\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

**BB&T Figure 1: Deferral Percentages for Individuals Hired in 2008**



Note: The high number of deferrals at the 7 percent level is likely a result of the process used to calculate the deferral. The deferral percentage was imputed from compensation data and then rounded. As salaries had to be adjusted to agree to the period for which the deferral was effective, there is some slight imprecision with the calculated deferral percentage.

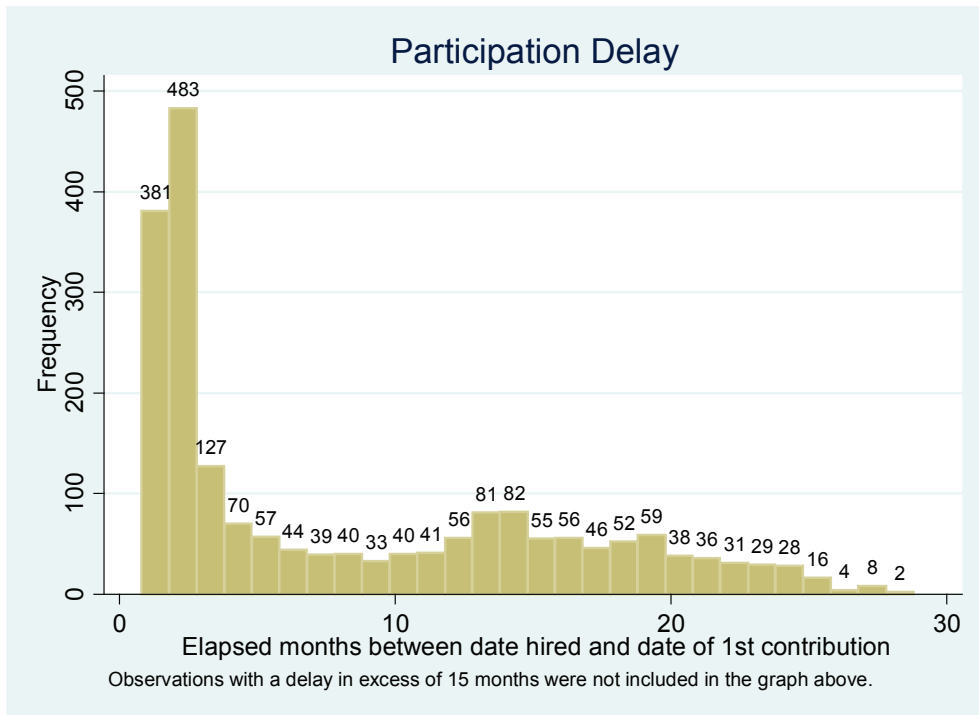
**BB&T Figure 2: Deferral Percentages for Individuals Hired in**



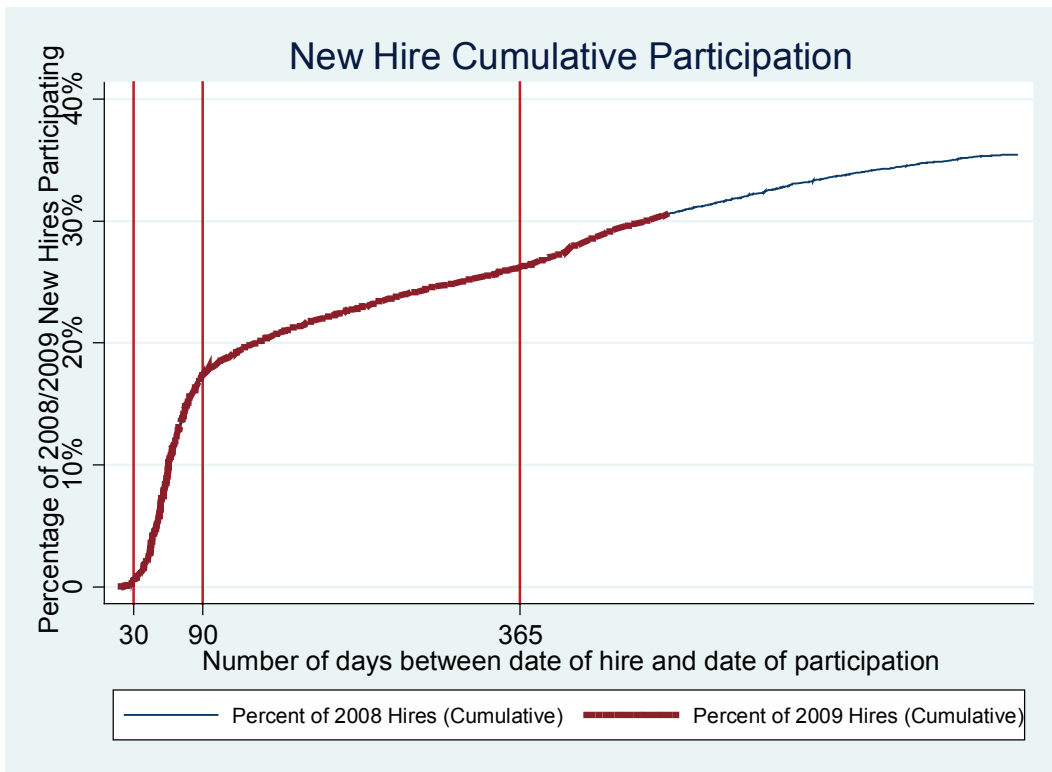
**2009**

Note: The high number of deferrals at the 7 percent level is likely a result of the process used to calculate the deferral. The deferral percentage was imputed from compensation data and then rounded. As salaries had to be adjusted to agree to the period for which the deferral was effective, there is some slight imprecision with the calculated deferral percentage.

**BB&T Figure 3: Months until Starting Contributions for Individuals Hired in 2008 that participated within 15 months.**

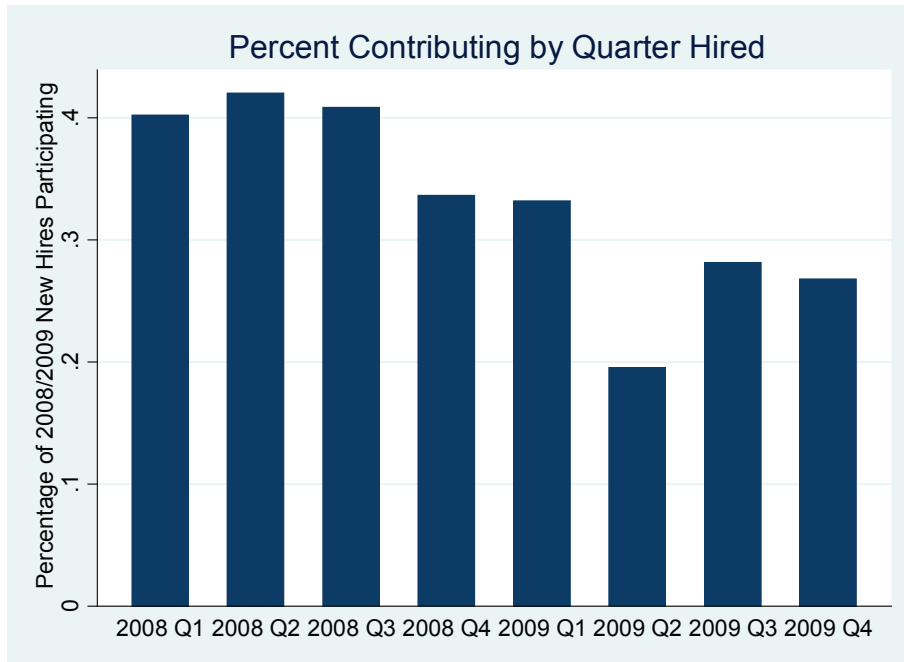


**BB&T Figure 4: Time until Sign-up for Individuals Hired in 2008 versus**



2009.

**BB&T Figure 5: Percent Participating by Quarter of Hire as of May 15, 2010 for Employees Hired in 2008 & 2009.**



## **2. Martin Marietta Materials (MMM)**

### **Martin Marietta Materials Background Information**

#### Company Description

Martin Marietta Materials is a publically traded company that produces construction aggregates used for infrastructure projects as well as both residential and commercial construction. The company has two business segments: Aggregates which mines and processes sand, gravel, limestone and granite, and Specialty Products which manufactures chemical products for industrial and agricultural applications. The company was founded in 1993 and is based in Raleigh, North Carolina. Martin Marietta Materials operates in 28 states as well as in Canada, the Bahamas and the Caribbean Islands. The company has approximately 4,000 employees, over 3 billion in total assets and reported a net income of 55 million for the third quarter ending September 30, 2009.

#### 401(k) Plan

The 401(k) plan at Martin Marietta is an “opt-out” plan where employees are automatically enrolled in the saving plan and can opt not to participate at any point subsequent to hire. The default contribution is 2% of pay and will increase by 1% each year until a contribution amount of 7% is reached. After six months of employment, the company will match fifty cents of each dollar invested up to 7% of pay. Unless a different fund is selected, the 401(k) savings account will invest in the LifePath Portfolio, a fund that becomes more conservative as the employee approaches retirement. Contributions can be managed online or over the phone. Contribution rates of up to 25% of pay are permitted.

The plan is administered by Wells Fargo. The plan allows both hardship withdraws and loans. Employees are immediately 100% vested in their contributions as well as the company match.

#### Defined Benefit Pension Plan

Employees with at least five years of vested service are eligible for pension benefits. For salaried employees, the benefit amount is based on years of service and compensation. For most hourly employees, the benefit amount is based on years of service and a multiplier.

#### Investment Education

Investment education materials provided to the employee includes a Wells Fargo retirement savings guide. The guide provides recommendations on how much to save and information about available investment options, in addition to an explanation of how the automatic enrollment program works. The guide directs readers to online resources including a 401(k)



contribution calculator, an asset allocation calculation, a time value calculator, a 401(k) planner and a risk tolerance quiz.

### New Hires

New hires and rehires are immediately eligible to participate in the 401(k) plan. Automatic enrollment occurs approximately 30 days after the employee's administrative paperwork is processed (generally, the first contribution occurs during the first pay cycle following 45 days of employment). Wells Fargo, the plan administrator sends out a 401(k) information package at approximately three weeks of employment. The plan administrator sends out a second letter notifying the employee once he has been automatically enrolled in the 401(k) plan.

### New Hire Orientation

All new employees participate in a new hire orientation within the first three days of employment. During the orientation, benefits are discussed and required paperwork is completed. All new hires must sign a letter saying that they are aware of the company's 401(k) auto enrollment policy.

### Retiree Health Care

MMM does not offer a Health Savings Account. Employees hired before December 31, 2001 are eligible for retiree medical provided they retire from the company. Retiree medical is available as early as age 55.

### Auto-enroll

During 2007, MMM implemented an auto enrollment program for all employees (auto enrollment applied to both new and existing workers). Prior to the program roll out, approximately 60% of hourly employees and 80% of salaried employees participated in the 401(k) plan. Subsequent to the implementation of the auto enroll program, participation has increased to 80% for all hourly employees and 90% of all salaried employees. Currently, only 3-5% of newly hired employees chose to opt-out. As described above, employees are defaulted into a plan with a deferral percentage of 2 percent which is increased every year by 1 percent of salary until a maximum of 7 percent of salary is reached. Once an employee selects a contribution rate, she is no longer subject to any automatic increases.

MMM has received no negative feedback related to auto enrollment or the automatic increase part of the plan. According to the HR representative, this may be due in part to the fact that many of their workers are hourly and have varying paychecks, so the employee may not realize that the contribution level has changed.

### 401(k) Plan Management and Data Availability

Wells Fargo is the plan administrator. MMM has been able to provide all information requested.

## Employer Sponsored Financial Literacy Program(s)

None

## Goals

2010 retirement related goal: Educating the employees about the importance of asset allocation and a balanced portfolio. 2011 retirement goal: Increase contribution rates among employees.

Summary of MMM's 401(k) Plan:

Joining the plan:

- Employees are eligible to participate on the first day of employment.
- The 401(k) plan at Martin Marietta is an "opt-out" plan. Automatic enrollment occurs approximately 30 days after the employee's administrative paperwork is processed.

Deferral Contributions:

- Timing: The first automatic contribution occurs during the first pay cycle following 45 days after hire.
- Amount: The default contribution is 2% of pay and unless changed, and will increase by 1% each year (at the employee's anniversary date) until a contribution amount of 7% is reached. Contribution rates of up to 25% of pay are permitted.

Match:

- Eligibility: MMM will provide a company match once the employee obtains six months of service.
- Match Amount: The company will match fifty cents of each dollar invested, up to 7% of pay.

Timing of Information Received:

- Wells Fargo, the plan administrator sends out a 401(k) information package at approximately three weeks of employment. The plan administrator sends out a second letter notifying the employee once he has been automatically enrolled in the 401(k) plan.
- All new employees participate in a new hire orientation within the first three days of employment. During the orientation, benefits are discussed and required paperwork is completed. All new hires must sign a letter saying that they are aware of the company's 401(k) auto enrollment policy.
- MMM sends out plan oriented communications periodically, approximately once a year.

## **Martin Marietta Materials Data Analysis**

MMM provided information on over 300 employees hired during 2008 and 2009. The information included: gender, date of birth, date of hire, date of first contribution, date stopped contributing (if applicable), pay frequency (hourly or salary), compensation, annual contribution, and contribution percentage. MMM's 401(k) plan is designed as an opt-out plan. All employees are automatically enrolled in the savings plan and must manually elect non-participation. In addition to the supplemental plan, MMM offers a traditional final average pay defined benefit plan.

Table 1 provides summary statistics of the sample. In our analysis we consider those employees participating as of July 3, 2010, the date the data were compiled. Since workers may opt-out at any time, we anticipate that participation rates will be higher for those workers hired in 2009 because they will have had less opportunity to choose not to participate. It is also important to note that the company match begins after six months, so we might see higher participation rates after workers reach that milestone. Interestingly, we see that 94.1% of 2008 new hires and 91.9% of 2009 new hires are active participants as of July 3, 2010. Table 2 presents detail for the employees hired in 2008 and 2009. One hundred percent of 2008 female new hires were participating in the plan compared to only 93.3% of males. This pattern remains consistent among the 2009 data with 95% of females participating compared 91.4% of males. This is a reversal from what is typically seen in retirement savings participation rates. Another deviation from anticipated patterns is that the young are not underrepresented; they participate at or above the company-wide average. However, in the regression analysis presented below, we see that these differences are not statistically significant. Still, this indicates that the opt-out plan is an important way to keep traditionally underrepresented groups at high participation rates.

In Table 2, we see that the total plan enrollment for 2009 is less than that of 2008, although this difference is not statistically significant in the regressions reported in Table 4. The seven percent company match begins after six months of employment. Note that for our data set, all employees have obtained six months of employment. However, some employees may plan to opt back in once the match takes effect and there may be some lag due to processing and other such delays.

MMM has an auto-increase component to their plan. The default deferral is 2% and will continue to increase by 1% per year up to 7%, unless changed. The Table 3 and the figures show the effect of the auto increase. The average deferral is approximately 1% higher for 2008 new hires than for 2009 new hires – those that have been with the company for a year longer and have been subjected to the automatic increase. Workers hired in 2008 with a high salary (above the mean) have an average deferral of 6.8% which maximizes the company match while those with a low salary have an average deferral of 3.5%. Table 3 and Figures 1 and 2 show a substantial bunching of contribution rates at the default levels; 2% for 2009 hires and 3% for 2008 new hires. The tendency of employees to accept the default contribution level as the optimal contribution rate instead of simply being a minimum rate is a concern for opt-out plans and indicates a need for further financial education concerning the importance of contributions to supplemental savings plans. Only 21 percent of 2008 hires and 11 percent of 2009 new hires contribute the 7 percent of salary needed to get the full employer match.

In Table 4 we present regression results predicting participation as of July 3, 2010 for individuals hired in 2008 and 2009 (separately and pooled). Table 5 presents similar results considering the choice of deferral percentage for those that are participating as of the cut-off date. We consider both 2008 and 2009 new hires together, then separately. We do not see any

statistically significant differences in participation rates between employees hired in 2008 versus 2009. We do see that the deferral percentage is 0.9 percentage points higher, consistent with the auto-increase that is in place after one year of hire. The results indicate that gender and age are not significant predictors of participation. Nor is employment type (salary vs. hourly) considered to be significant. However, earnings are an important predictor of deferral amount. For the combined sample, those in the 40-59 and 60 and above salary categories show a statistically significant increase over the deferral rate of those in the 30-39 thousand dollar salary bracket.

Figures 1 and 2 demonstrate the influence of the auto enroll default amount and automatic increase feature of the plan. Deferral percentage peaks at 2% (the default) for 2009 hires while we see a peak at 3% for 2008 hires who would all have been subject to the 1% increase after their first year. It is interesting to note that the second highest deferral percentage among 2008 hires occurs at 7%, the amount of the company match. However, the company match has a smaller impact than does the automatic increase. A greater number of employees appear to be willing to remain in the plan and accept auto increases than to manage their enrollment and maximize the company match. There appear to be fewer employees taking advantage of the full company match among the 2009 new hires, but that may be due to timing of eligibility. Some 2009 new hires are newly eligible at the time the data was compiled and may not have adjusted the deferral percentage even though they may plan to. Figure 3 shows percent participating by quarter hired. We see a peak in the 3<sup>rd</sup> quarter of 2008 followed by a moderate decline. We do not see evidence that employees' participation was adversely affected by the stock market decline in early 2008.

Future analysis will explore the long term impact of the auto increase component. In the current data it appears that employees are willing to accept increases to the deferral rate, but it is

not clear whether this holds true over time and at increased rates of contribution. Are there certain types of employees (hourly vs. salaried, for example) that are more likely to opt-out over time? Is there a threshold contribution level?

**MMM Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	187	136
Average Age	35.6	36.1
Number of Females Hired	23	20
Number of Males Hired	164	116
Average Salary	39,760	36,182
Participating as of July 3, 2010	176	125

**MMM Table 2: Contribution Rates for Employees Hired in 2008 & 2009 as of July 3, 2010**

2008 New Hires	Total New Hires	Number Participating by 7/2010	Percent Participating	Average Deferral for Participants
Total	187	176	94.1%	4.4
Female	23	23	100%	5.0
Male	164	153	93.3%	4.3
Salary – Low <sup>4</sup>	140	131	93.6%	3.5
Salary – High <sup>4</sup>	47	45	95.7%	6.8
Age: <25	41	40	97.6%	3.6
25-34	51	49	96.1%	4.1
35-44	54	48	88.9%	4.8
45-54	31	29	93.6%	5.1
55-64	10	10	100%	4.1
65+	0	0	0.0%	-
2009 New Hires	Total New Hires	Number Participating by 7/2010	Percent Participating	Average Deferral for Participants
Total	136	125	91.9%	3.3
Female	20	19	95.0%	4.3
Male	116	106	91.4%	3.1
Salary – Low <sup>5</sup>	93	86	92.5%	2.9
Salary – High <sup>5</sup>	43	39	90.7%	4.2
Age: <25	30	28	93.3%	3.1
25-34	33	32	97.0%	2.9
35-44	40	36	90.0%	4.0
45-54	28	24	85.7%	3.0
55-64	4	4	100.0%	3.5

<sup>4</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$39,760.

<sup>5</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$36,182.

65+	1	1	100.0%	3.0
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**MMM Table 3: Contribution Rates for Employees Hired in 2008 & 2009 as of July 3, 2010**

Percent Deferral	2008 Active New Hires	Average Salary	2009 Active New Hires	Average Salary
1%	2	36,610	0	N/A
2%	13	32,246	58	35,265
3%	108	33,269	40	31,936
4%	2	36,087	3	35,817
5%	9	47,292	7	42,221
6%	5	40,953	3	55,977
7%	24	54,909	9	36,573
8%	1	31,886	0	N/A
9%	0	N/A	0	N/A
10%	6	59,387	5	66,643
> 10%	6	83,205	0	N/A
Total	176		125	

Note: The 401(k) plan at Martin Marietta is an “opt-out” plan where employees are automatically enrolled in the saving plan. The default contribution is 2% of pay and unless changed, and will increase by 1% each year until a contribution amount of 7% is reached (average contribution rates are 5% for employees and 7.6% for salaried employees). After six months of employment, the company will match fifty cents of each dollar invested, up to 7% of pay. Contribution rates of up to 25% of pay are permitted. The tax free deferral is limited by law to 16,500 for 2009 and 15,500 for 2008.



**MMM Table 4: Regression Analysis of Participation Choice**

	<b>Participating as of July 3, 2010</b>		
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009
Female	0.062 [0.049]	0.077 [0.061]	0.048 [0.088]
Hired in 2008	0.012 [0.028]		
Age when Hired:			
Age 18-24	0.071 [0.040]	0.093 [0.051]	0.044 [0.069]
Age 25-34	0.071 [0.037]	0.076 [0.047]	0.074 [0.065]
Age 45-54	-0.002 [0.042]	0.049 [0.055]	-0.064 [0.070]
Age 55-65	0.101 [0.070]	0.125 [0.083]	0.126 [0.147]
Salary (in thousands):			
20-24	-0.049 [0.041]	-0.010 [0.055]	-0.091 [0.065]
25-29	0.011 [0.043]	-0.025 [0.054]	0.088 [0.080]
40-59	0.010 [0.051]	0.049 [0.061]	-0.044 [0.097]
60+	0.015 [0.081]	-0.029 [0.096]	0.085 [0.161]
Hourly Employee	0.001 [0.068]	-0.012 [0.084]	-0.036 [0.127]
Constant	0.883* [0.072]	0.888* [0.086]	0.932* [0.134]
Observations	332	187	136
Mean Participation Rate	0.934	0.941	0.919

Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

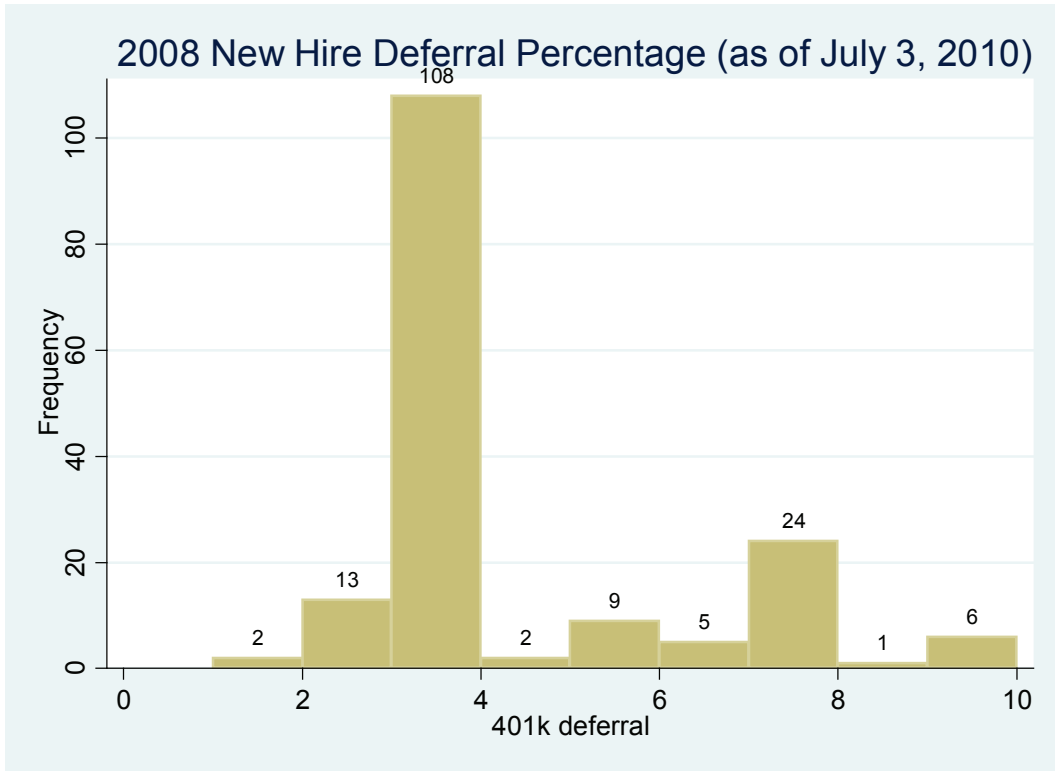
**MMM Table 5: Regression Analysis of Deferral Percentage**

	Deferral Percentage		
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009
Female	0.118 [0.466]	0.131 [0.674]	-0.118 [0.591]
Hired in 2008	0.902* [0.270]		
Age when Hired:			
Age 18-24	-0.447 [0.387]	-0.511 [0.579]	-0.449 [0.482]
Age 25-34	-0.443 [0.361]	-0.284 [0.540]	-0.828 [0.444]
Age 45-54	-0.510 [0.414]	0.069 [0.624]	-1.055** [0.494]
Age 55-65	-0.381 [0.660]	-0.385 [0.924]	0.122 [0.982]
Salary (in thousands):			
20-24	-0.376 [0.402]	-0.635 [0.621]	-0.177 [0.474]
25-29	-0.619 [0.412]	-0.468 [0.609]	-0.560 [0.542]
40-59	1.064** [0.485]	1.764* [0.668]	-0.648 [0.680]
60+	2.494* [0.771]	3.842* [1.068]	-1.426 [1.087]
Hourly Employee	-1.122 [0.639]	-0.588 [0.926]	2.958* [0.863]
Constant	4.372* [0.683]	4.481* [0.953]	6.572* [0.914]
Observations	310	176	125

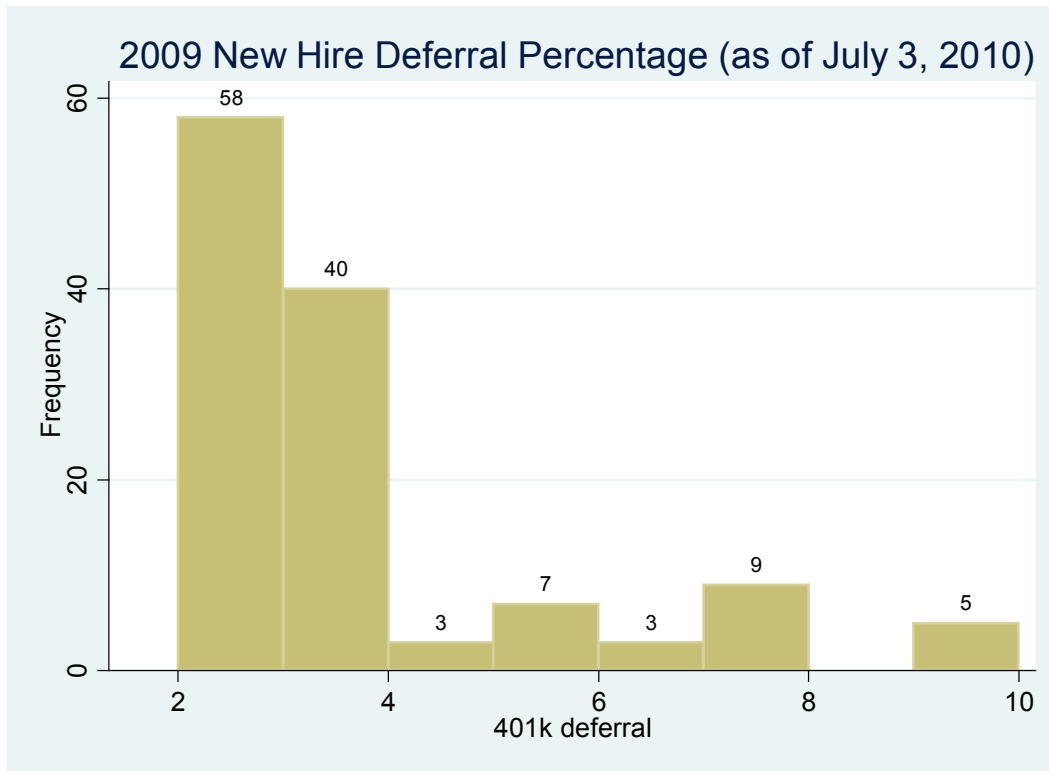
Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

**MMM Figure 1: Deferral Percentages for Individuals Hired in 2008**

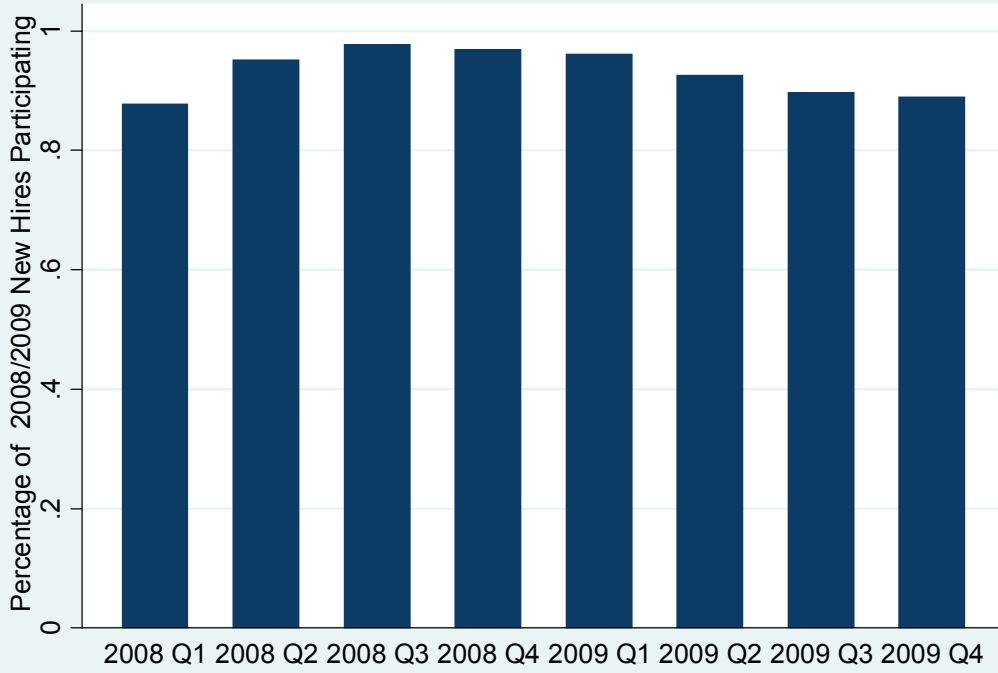


**MMM Figure 2: Deferral Percentages for Individuals Hired in 2009**



**MMM Figure 3: Percent Participating by Quarter of Hire as of July 3, 2010 for Employees Hired in 2008 & 2009.**

Percent Participating by Quarter Hired



### **3. North Carolina State University (NCSU)**

#### **NCSU Background Information**

##### Institution Description

North Carolina State University was founded in 1887 and is located in Raleigh, North Carolina. The university is the largest in the state with an enrollment of nearly 34,000 students and over 8,200 faculty and staff. North Carolina State is a major research university with research expenditures in the amount of 325 million annually and federal research funding of 140 million.

##### Mandatory Retirement Savings Plan

Permanent NCSU employees who work at least 30 hours a week are required by law to participate in a mandatory retirement program. State statute requires that all qualified employees contribute 6% of gross pay each period, regardless of which plan they select.

The default plan is The Teachers' and State Employee' Retirement System (TSERS), a defined benefit plan. Retirement benefits are based on age, salary, and years of service. Vesting occurs after five years. The employee may request a refund of contributions if he leaves prior to the completion of five years of service.

An alternative plan available only to faculty, research non-faculty, and senior academic and administrative officer positions is the Optional Retirement Program (ORP), a defined contribution plan. The employees eligible to participate in this plan must indicate their desire to do so within 60 days of the date of hire. The university contributes funds to the ORP; currently the contribution rate is 6.82% (the rate is set in an amount to make the two plans competitive). The employee is able to choose one of four available plan vendors (current options are VALIC, Fidelity, Lincoln, or TIAA-CREF). The actual benefit received during retirement is dependent upon investment performance. Employees are immediately vested in their own contributions and the company contributions become vested after five years.

##### Supplemental Retirement Plans

NCSU offers employees the option of participating in voluntary supplemental retirement programs. Employees may participate in the NC Deferred Compensation Plan (457), the UNC system 403(b) program, or the NC 401(k) plan. There is no employer match. Currently, 20-22% of eligible employees participate in any of the three supplemental retirement plans.

NC 401(k) plan is administered by Prudential. Both pre-tax and after-tax contributions are permitted. The plan requires no minimum contribution and allows a maximum contribution of 80% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.

The UNC System 403(b) plan is administered by Fidelity or TIAA-CREF (the employee may choose the plan administrator). Both pre-tax and after-tax contributions are permitted. The plan requires a minimum contribution of \$200 per year and allows a maximum contribution of \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.

The NC Deferred Compensation Plan (457) is administered by Prudential. Only pre-tax contributions are permitted. The plan requires no minimum contribution and a maximum contribution of 100% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year. Alternatively, employees over 50 may defer up to twice the standard allowable amount for the three years prior to normal retirement.

Investments can be managed online or over the phone. All plans allow both hardship withdrawals and loans. Employees are 100% vested from the date of their first contribution.

### Investment Education

The NCSU voluntary supplemental retirement guide provides a comparison of the different programs available. The guide directs the reader to the online plan website where the he can find information to help with determining and meeting savings goals.

### New Hires

Employees are eligible to participate in the on the first day of employment. Employees may enroll in the plan via website.

Employees not enrolled in 403(b) plan within 60 days of hire receive an email encouraging them to sign up.

### New Hire Orientation

New hires complete an orientation within thirty days of hire. A three hour retirement session is a standard part of the orientation program. Employees receive booklets and handouts to assist in retirement planning and inform them about the retirement savings plans offered by NCSU. Employees are also directed to an online benefits guide as an additional resource.

### Retiree Health Care

NCSU offers retiree health benefits. Prior to 2006, an employee with five years of service was eligible to participate in the retiree health care program. Currently, employees must have 20 years of service in order to be eligible for retiree health benefits.

### Auto-enroll

NCSU does not have an auto enroll feature for their supplemental retirement plans.

## Employer Sponsored Financial Literacy Program(s)

Investment representatives provide information sessions and visit the campus for one-on-one meetings periodically. HR representatives provide investment education seminars to interested employees. However, the participation rate is low. Employees are able to take two free courses a year and may sign up for classes which will increase their financial literacy.

## Goals

NCSU would like to increase participation in the voluntary supplemental plans. They are also interested in exploring new media and are currently using both Facebook and Twitter to reach and stay in touch with employees.

## Summary of NCSU's Supplemental Retirement Savings Plans (403b, 401k, and 457)

Joining the plan:

- Employees are eligible to participate on the first day of employment.
- Employees may enroll in the plan via website.

Deferral Contributions:

- Timing: Deferral contributions to the plan can be made the first day of the calendar month following employment.
- Amount:
  - NC 401(k): No minimum contribution and allows a maximum contribution of 80% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.
  - The UNC System 403(b) plan requires a minimum contribution of \$200 per year and allows a maximum contribution of \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.
  - The NC Deferred Compensation Plan (457) requires no minimum contribution and a maximum contribution of 100% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year. Alternatively, employees over 50 may defer up to twice the standard allowable amount for the three years prior to normal retirement.

Match:

- Eligibility: N/A
- Match Amount: NCSU does not offer an employer match for these supplemental plans.



#### Timing of Information Received:

- New hires complete an orientation within thirty days of hire. A three hour retirement session is a standard part of the orientation program.
- Employees not enrolled in 403(b) plan within 60 days receive a personalized email.

#### **NCSU Data Analysis**

North Carolina State University provided information on over 650 employees hired during 2008 and 2009. The information included date of birth, date of hire, gender, employee classification, job type, compensation, and monthly contribution amounts. Permanent NCSU employees who work at least 30 hours a week are required by law to participate in a mandatory retirement program. State statute requires that all qualified employees contribute 6% of gross pay each period, regardless of which plan they select. However, employees also have the option of participating in one of three supplemental savings plans. Our investigation is based on the savings behavior in these supplemental plans. Employees are fully eligible to participate on the first day of employment, but are not at any time eligible for a match (note that one group is permitted a match, but they comprise a very small percentage of the workforce). Employees must elect to participate, there is no auto-enroll feature.

Table 1 provides summary statistics of the sample. We see that after 450 days about 12% percent of 2008 new hires participate in a supplemental plan. Table 2 presents detail for the employees hired in 2008 and 2009. We see that as of July 1, 2010, approximately 14% of 2008 new hires and roughly 7% of 2009 new hires had begun participating. The overall participation rates are low. The young are underrepresented among plan participants, but interestingly, the result is not statistically significant. The average deferral percentage for female 2008 hires exceeds that of males, but the reverse is true the following year. As expected, those with a high

salary (above the median), have a higher participation rate. We see that the majority of those that do contribute to a supplemental plan make their first contribution within the first 90 days. NCSU had previously focused on 403b enrollment, but is in the process of designing and implementing procedures to encourage general plan participation. During the period under review, employees not enrolled in 403(b) plan within 60 days of hire received an email encouraging them to sign up. However, due to the small number of 403(b) participants, we were unable to identify the effectiveness of that communication.

Table 4 presents the results from a regression considering who has signed up to participate after 30 days from hire, 90 days from hire, and 450 days from hire. We first consider both 2008 and 2009, then each separately. We do not see large differences in sign-up rates between employees hired in 2008 versus 2009. In fact, neither age, salary, nor gender was found to be statistically significant indicators of participation. This is likely due to low power, given the small sample size.

Figures 1 and 2 are histograms of the deferral percentage for 2008 and 2009 new hires. Both figures illustrate the effect of a fixed dollar amount deferral option. We see a number of employees contributing at the one percent level (note that percentages have been rounded), an indication that they are selecting a low set dollar amount instead of a deferral percentage. It is possible that employees select a number they feel comfortable with but they may not be aware of what a small fraction of their income it is. Figure 3 shows the elapsed months between date of hire and date of first contribution. Most workers that sign up do so within the first two or three months. There is no other period of time for which we witness a significant increase in participation. Figure 4 shows new hire cumulative participation. We see a sharp increase within the first 90 days followed by a more gradual increase over the next 90 to 365 days. The increase

thereafter is slight. Figure 5 shows the percent participating by quarter hired. We see the highest participation percentages among those new hires which have the longest tenure. There is a fair amount of variability among quarters, but this is likely due to the small sample size of those participating.

NCSU has the lowest participation rates in the supplemental retirement plans of any of our employer partners. The likely reason for the lower participation rates is that there is a relatively generous defined benefit plan covering most of the newly hired employees with a 6 percent employee contribution rate that is required for the primary retirement plan. In addition there is no employer match to employee contributions in the supplemental plans.

**NCSU Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	435	217
Average Age	37.6	37.0
Number of Females Hired	220	124
Number of Males Hired	215	93
Average Salary	50,122	50,809
Participation Rate within 30 Days	3.0%	2.3%
Participation Rate within 90 Days	7.1%	4.1%
Participation Rate within 450 Days	12.2%	-

**NCSU Table 2: Contribution Rates for Employees Hired in 2008 & 2009 as of July 1, 2010**

2008 New Hires	Total New Hires	Number Participating by 7/2010	Percent Participating	Average Deferral for Participants
Total	435	62	14.3%	5.5
Female	220	32	14.5%	6.8
Male	215	30	14.0%	4.1
Salary – Low <sup>6</sup>	265	32	12.1%	4.8
Salary – High <sup>6</sup>	170	30	17.7%	6.3
Age: <25	38	3	7.9%	5.2
25-34	164	19	11.6%	5.4
35-44	132	25	18.9%	4.3
45-54	76	14	18.4%	6.7
55-64	24	1	4.2%	20.0
65+	1	0	0.0%	N/A
2009 New Hires	Total New Hires	Number Participating by 5/2010	Percent Participating	Average Deferral for Participants
Total	217	15	6.9%	5.7
Female	124	5	4.0%	3.5
Male	93	10	10.6%	6.8
Salary – Low <sup>7</sup>	140	8	5.7%	4.8
Salary – High <sup>7</sup>	77	7	9.1%	6.7
Age: <25	25	1	4.0%	3.8
25-34	84	5	6.0%	5.2
35-44	59	5	8.5%	5.2
45-54	32	3	9.4%	7.1
55-64	15	1	6.7%	8.3

<sup>6</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$50,122.

<sup>7</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$50,809.

65+	2	0	0.0%	N/A
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**NCSU Table 3: Contribution Lags and Percent Deferral**

Length of Time Between Date of Hire and 1 <sup>st</sup> Contribution (in months)— Includes 2008 hires only.	New Contributors	Percent of Total Contributors
0-3	34	54.8
4-11	17	27.4
12-15	2	3.2
16 and greater	9	14.5

Percent Deferral	2008 Active New Hires	Average Salary	2009 Active New Hires	Average Salary
1%	10	44,854	4	52,005
2%	6	59,185	1	86,695
3%	9	68,816	1	31,327
4%	5	44,119	1	38,000
5%	6	56,268	1	43,677
6%	3	36,152	2	69,500
7%	3	61,482	2	60,450
8%	1	29,250	1	94,000
9%	2	45,550	0	N/A
10%	3	48,050	0	N/A
> 10%	6	57,188	2	88,500
Total	54*		15*	

\*Deferrals of less than 1% were not included in the table above. Employees may select a fixed amount such as \$50 per month, which may be less than 1% of their salary.

Notes: NCSU offers employees the option of participating in voluntary supplemental retirement programs. Employees may participate in the NC Deferred Compensation Plan (457), the UNC system 403(b) program or the NC 401(k) plan. There is no employer match.

NC 401(k) plan permits both pre-tax and after-tax contributions. The plan requires no minimum contribution and allows a maximum contribution of 80% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.

The UNC System 403(b) plan permits both pre-tax and after-tax contributions. The plan requires a minimum contribution of \$200 per year and allows a maximum contribution of \$16,500. Participants over age 50 may contribute an additional \$5,500 per year.

The NC Deferred Compensation Plan (457) allows only pre-tax contributions. The plan requires no minimum contribution and a maximum contribution of 100% of taxable pay, not to exceed \$16,500. Participants over age 50 may contribute an additional \$5,500 per year. Alternatively, employees over 50 may defer up to twice the standard allowable amount for the three years prior to normal retirement.

The tax free deferral is limited by law to 16,500 for 2009 and 15,500 for 2008.

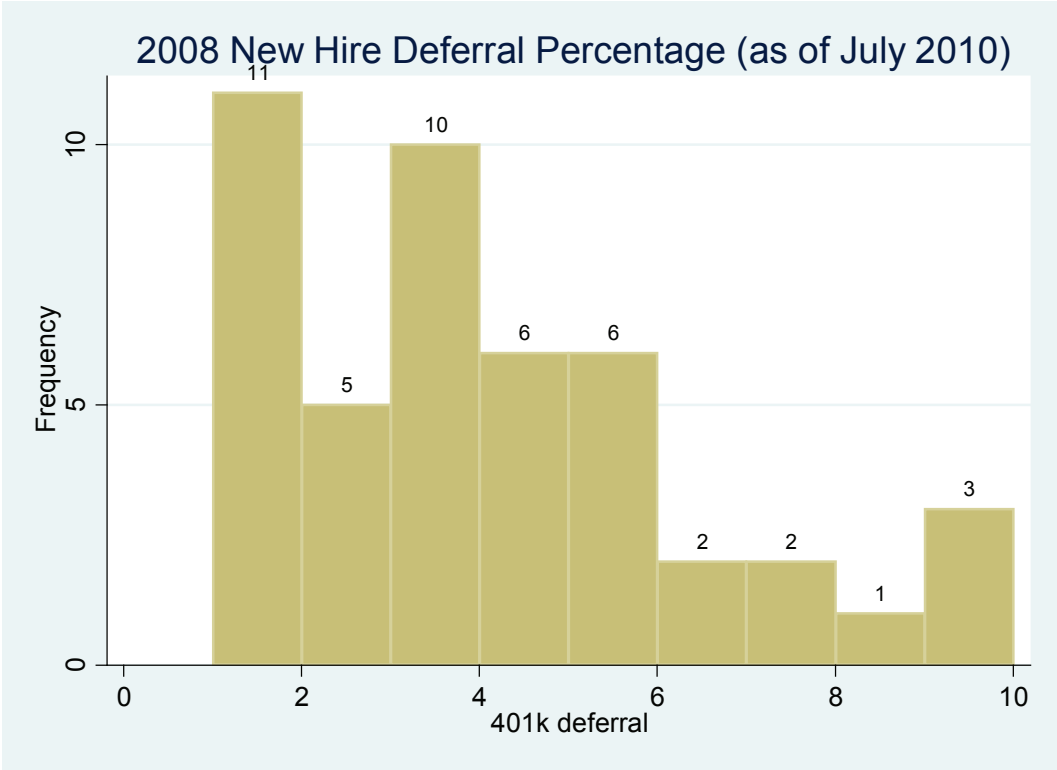
**NCSU Table 4: Regression Analysis of Participation Choice**

	<b>Participate within 30 Days</b>			<b>Participate within 90 Days</b>			<b>Participate within 450 Days</b>
	Hired 2008-2009	Hired 2008	Hired 2009	Hired 2008-2009	Hired 2008	Hired 2009	Hired 2008
Female	-0.023 [0.013]	-0.026 [0.017]	-0.010 [0.022]	-0.008 [0.019]	0.002 [0.025]	-0.023 [0.030]	0.022 [0.032]
Hired in 2008	0.006 [0.014]			0.028 [0.020]			
Age when Hired:							
Age 18-24	-0.015 [0.024]	-0.005 [0.031]	-0.026 [0.036]	0.001 [0.035]	-0.012 [0.047]	0.023 [0.047]	-0.009 [0.060]
Age 35-44	0.008 [0.016]	0.012 [0.020]	-0.004 [0.026]	0.009 [0.023]	0.015 [0.030]	-0.007 [0.034]	0.061 [0.039]
Age 45-54	-0.026 [0.019]	-0.023 [0.024]	-0.034 [0.032]	-0.030 [0.028]	-0.057 [0.036]	0.026 [0.042]	0.025 [0.046]
Age 55-65	-0.034 [0.028]	-0.035 [0.037]	-0.042 [0.044]	-0.019 [0.042]	-0.041 [0.057]	0.010 [0.057]	-0.062 [0.072]
Salary (in thousands)							
Less than 30	0.009 [0.020]	0.026 [0.026]	-0.020 [0.032]	-0.021 [0.029]	-0.012 [0.040]	-0.033 [0.042]	-0.027 [0.050]
30-40	-0.016 [0.018]	-0.021 [0.022]	-0.009 [0.029]	-0.023 [0.026]	-0.039 [0.034]	0.006 [0.039]	-0.043 [0.043]
60+	-0.017 [0.017]	-0.028 [0.022]	0.009 [0.029]	0.030 [0.025]	0.016 [0.033]	0.054 [0.038]	0.017 [0.042]
Constant	0.049* [0.018]	0.055* [0.020]	0.045 [0.025]	0.052 [0.027]	0.086* [0.031]	0.041 [0.033]	0.103* [0.039]
Observations	652	435	217	652	435	217	435
Mean Participation Rate	0.118	0.143	0.069	0.118	0.143	0.069	0.143

Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

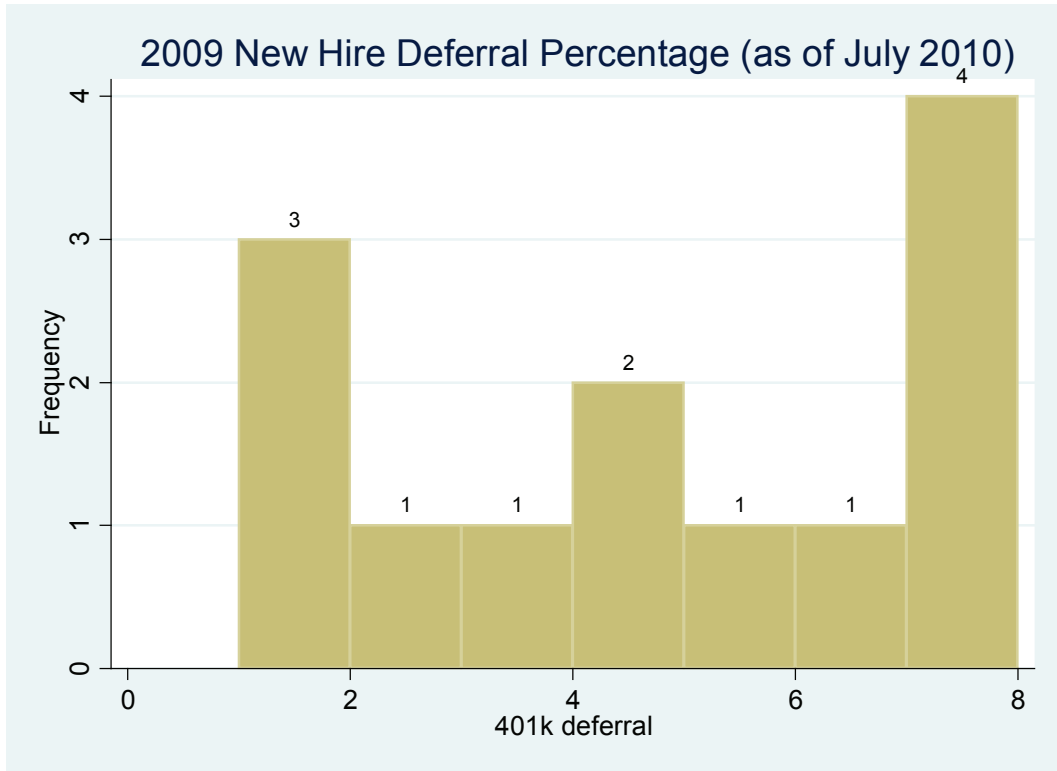
\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

**NCSU Figure 1: Deferral Percentages for Individuals Hired in 2008**



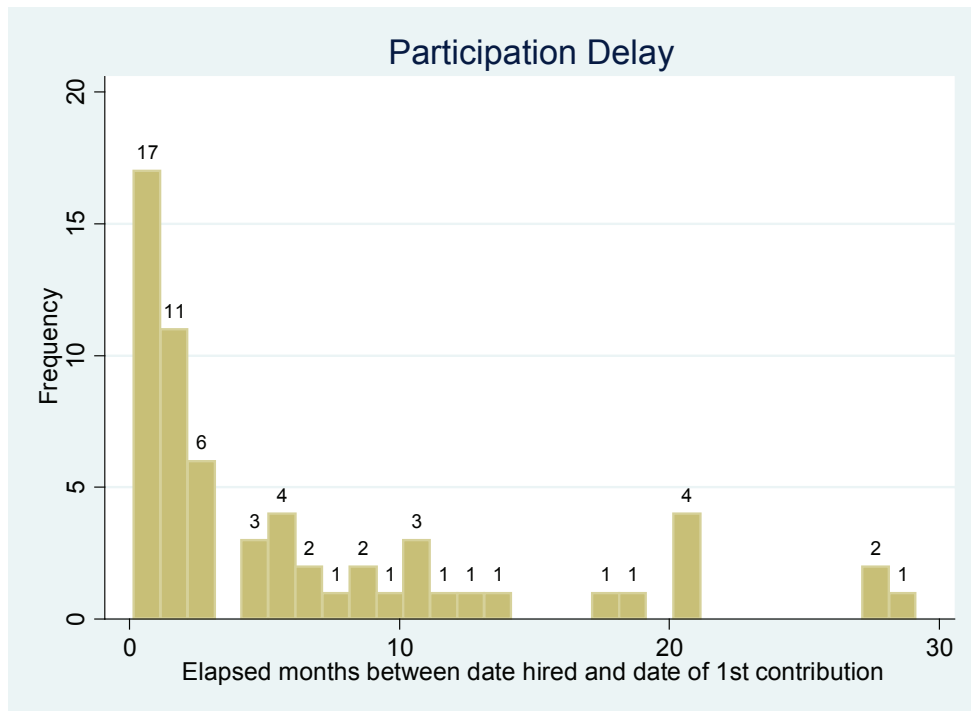


**NCSU Figure 2: Deferral Percentages for Individuals Hired in**

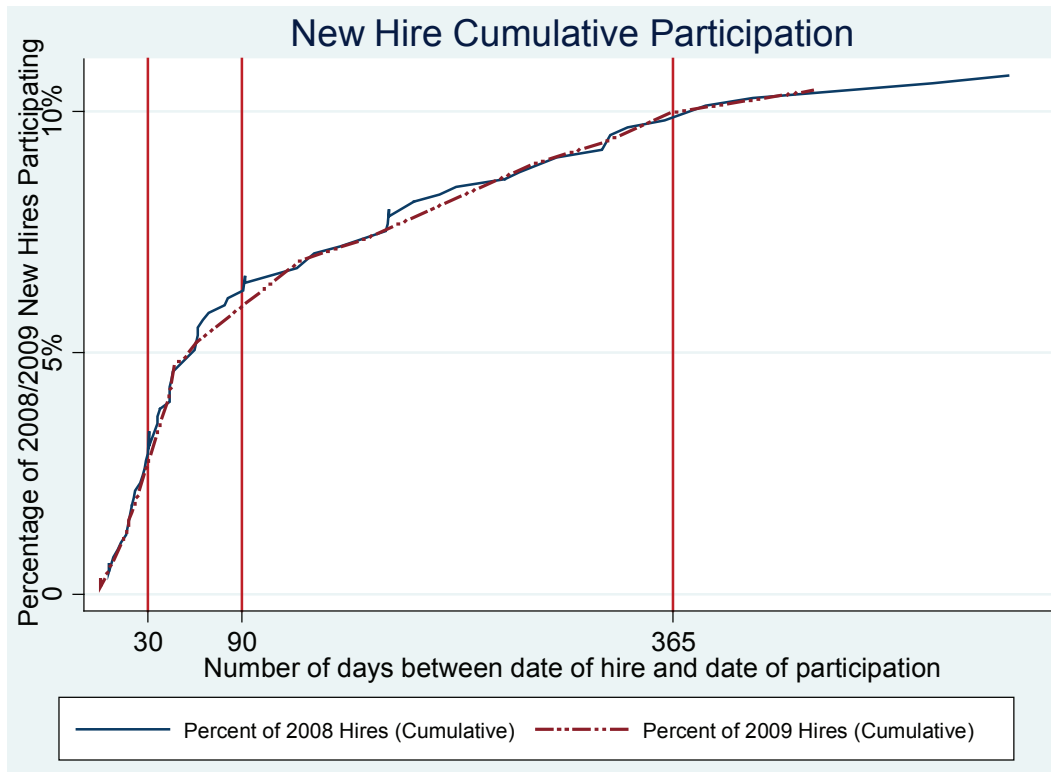


2009

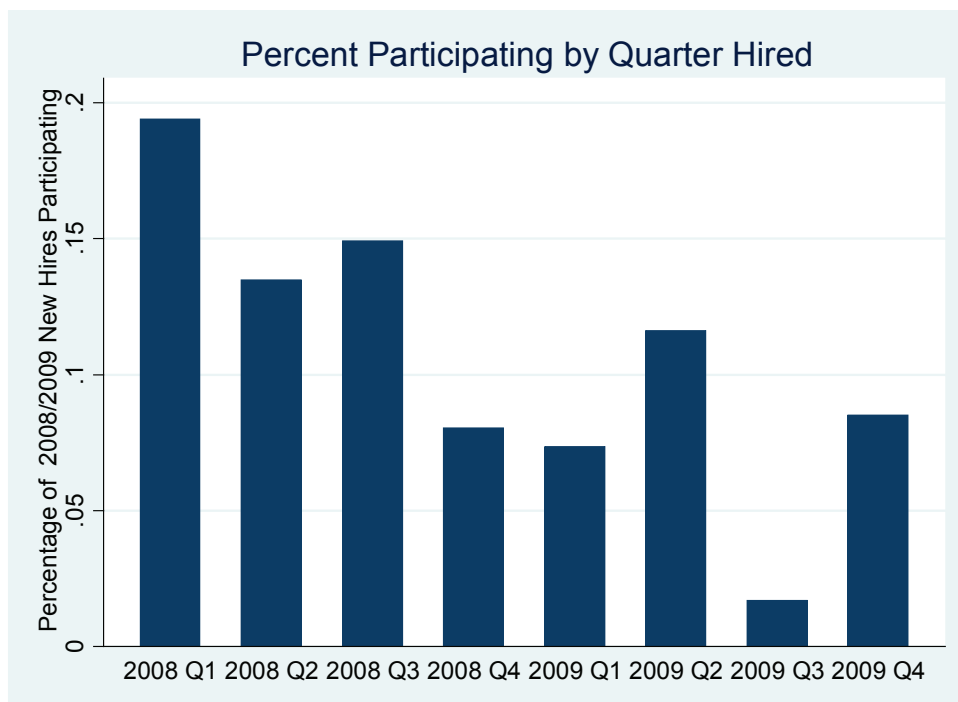
**NCSU Figure 3: Months until Starting Contributions for Individuals Hired in 2008 that participated by July 1, 2010**



**NCSU Figure 4: Cumulative Participation for Individuals Hired in 2008 & 2009.**



**NCSU Figure 5: Percent Participating by Quarter of Hire as of July 1, 2010 for Employees Hired in 2008 & 2009.**





## **4. Pepsi Bottling Ventures (PBV)**

### **Pepsi Bottling Ventures Background Information**

#### Company Description

Pepsi Bottling Ventures, LLC is the largest privately held PepsiCo bottler in North America. The company is headquartered in Raleigh, North Carolina and operates in seven states. They manufacture more than 500 beverages and have more than 2,500 employees. The company was founded in 1943 as a small family bottler, but through a series of mergers and acquisitions has grown over the years to its present state. As it is a privately held corporation, assets and earnings information is kept confidential.

#### 401(k) Plan

PBV offers their employees the option of participating in the Pepsi Bottling Ventures 401(k) plan. As of 2009, new employees are automatically enrolled in the 401(k) plan at a 3% contribution rate. Employees are eligible for the company match once they have completed 1,000 hours and one year of service. Non-hourly employees are credited with 45 hours of service for each week worked. If an employee works less than 1,000 hours in a year, he is credited with a year of service as of the last day of the following plan year (12 consecutive month periods beginning January 1 and ending December 31<sup>st</sup>).

Once eligible, employees receive a 100% company match on the first 4% and a 50% match on the next 2% they contribute to the plan. Employees are immediately vested in their own contributions. Employer match contributions are 100% vested after three or more years of service (0 vesting with less than three years).

The plan administrator is New York Life Retirement Services Planning. Employees can make administrative changes to the plan by phone or through the Benefits Complete web site (operated by New York Life).

Employees hired prior to January 1, 2010 could sign up for the Managed Savings feature through Benefits Complete. Under this program, the rate of deferral will automatically increase each year by a preselected amount (1%, 2%, or 3%) up to 10%. All employees hired as of January 1, 2010 are automatically enrolled in the managed savings plan feature.

#### Defined Benefit Pension Plan

Pepsi Bottling Ventures does not offer a defined benefit pension plan.

## Investment Education

The Pepsi Bottling Ventures 401(k) enrollment guide provides the employee with a wide array of investing education and specific examples. Information covered in the guide includes: examples to show the importance of investing early by comparing investment growth at different start dates, information on determining an investment approach and a brief discussion on different types of investments. The guide includes a retirement benefit calculator as well as a questionnaire to help the employee determine which investment strategy is right for him. In addition, the guide directs the reader to the online plan website, a comprehensive plan information resource.

## New Hires

All employees (with the exception of leased employees) are eligible to participate in the company's 401(k) plan. They are eligible to contribute the first of the month after sixty days of employment. New employees are automatically enrolled in the 401(k) plan at a 3% contribution rate. If an employee wants to opt-out of the 401(k) plan, he must access Benefits Complete prior to the eligibility date to avoid the automatic deduction. He may elect to opt-out any other time but does not have the option of having a processed deduction refunded. All new hires receive a plan enrollment kit from New York life.

At the end of 2009, PBV switched from an extensive retirement guidebook to a tri-fold brochure. The home HR office has not noticed an increase in employee questions regarding the plan since the switch to the less detailed handout. However, it is possible employees may be contacting the plan administrator directly with questions.

## New Hire Orientation

PBV does not have HR personnel at every location. The lead administrative person on site will meet with the new employee on the first day on the job and provide him with a benefit handbook. The regional HR director (who manages multiple sites) performs new hire orientations periodically with most new hires completing orientation within the first 2-3 months of employment.

## Retiree Health Care

PBV does not offer retiree health insurance. The company does offer employees the option of participating in a long term care program. The program is not subsidized by the company and has a very low participation rate.

Employees enrolled in the high deductible health care plan have a health savings account (HSA) which can be used as a retirement savings vehicle. If an employee selects the high deductible plan, the company contributes \$500 to the employee's account (\$1,000 if it is a family plan). Approximately 15% of company employees are enrolled in this health care plan. It does not appear that it utilized for its retirement savings feature.

### Auto-enroll

During 2009, PBV implemented an auto enrollment program for new employees. Prior to the program roll out, approximately 70% of all employees participated in the 401(k) plan. Subsequent to the implementation of the auto enroll program, participation has significantly increased among new hires. Currently, less than 4% of new hires chose to opt-out.

While the auto enrollment increased employee contributions, passing the 401(k) plan non-discrimination testing remains a concern. As such, PBV plans to convert to a Safe Harbor Plan in 2011.

### 401(k) Plan Management and Data Availability

New York Life is the plan administrator. Cross-sectional data were easily obtained, but they were not able to produce an accurate measure of the date of opting out for those no longer participating or the history of deferral percentages. In the future, New York Life may be able to provide information on who has accessed the benefits site and this information may be linkable to contribution rates.

### Employer Sponsored Financial Literacy Program(s)

PBV offers a financial literacy course conducted by Financial Peace University. Course cost (approximately \$125) is paid by the employee, but PBV provides a meeting location and offers payroll deductions. There is a high demand among employees for this course.

### Goals

PBV retirement related goals include: elimination of the Pepsi stock option, convert to a Safe Harbor plan and increase the average deferral percentage.

### **Summary of PBV's 401(k) Plan:**

Joining the plan:

- Employees are eligible to contribute the first of the month after sixty days of employment.
- The 401(k) plan at PBV is an "opt-out" plan. New employees are automatically enrolled in the 401(k) plan.

Deferral Contributions:

- Timing: The first automatic contribution occurs approximately 90 days after hire.
- Amount: The default contribution is at a 3%. Contribution rates of up to 100% of pay are permitted.

- Employees hired prior to January 1, 2010 could sign up for the Managed Savings feature through Benefits Complete. Under this program, the rate of deferral will automatically increase each year by a preselected amount (1%, 2%, or 3%) up to 10%. All employees hired as of January 1, 2010 will be automatically enrolled in the managed savings plan feature.

Match:

- Eligibility: Employees are eligible for the company match once they have completed 1,000 hours and one year of service. Non-hourly employees are credited with 45 hours of service for each week worked
- Match Amount: Employees receive a 100% company match on the first 4% and a 50% match on the next 2% they contribute to the plan.

Timing of Information Received:

- The employee receives a benefit handbook on the first day of employment. The regional HR director (performs new hire orientations periodically with most new hires completing orientation within the first 2-3 months of employment. Benefits are discussed during the orientation. During 2010, PBV has begun discussing the 401(k) plan during their annual benefits meetings.

### **Pepsi Bottling Ventures Data Analysis**

PBV provided information on over 630 employees hired during 2008 and 2009. The information included: gender, date of birth, date of hire, status, date of termination (if applicable), compensation, and contribution percentage. PBV's 401(k) plan adopted a major policy change effective 2009. Prior to the change, PBV offered a traditional 401(k) plan where enrollment was achieved by employee action. However, in 2009 PBV adopted an opt-out policy whereby all 2009 new hires were automatically enrolled. The 401(k) plan is the primary employee retirement savings vehicle offered by the company; they do not have a traditional defined benefit plan.

Table 1 provides summary statistics of the sample. We look at those employees participating as of June 2, 2010, the date the data were compiled. Since 2009 new hires were

automatically enrolled, we anticipate seeing higher participation rates for those most recently hired. Indeed, we see that 96.1% of 2009 new hires and 91.7% of 2008 new hires are active participants as of June 2, 2010. Although we expect to see high enrollment with an opt-out plan, PBV obtained very high participation rates in 2008, prior to the policy change. The relatively high rate of participation compared to our other employer-partners is due to the lack of a traditional defined benefits plan at PBV. This forces employees to utilize the 401(k) plan as it is their only means of company sponsored retirement savings. Therefore the “supplemental” plan is the only retirement benefit, so participation rates should be very high.

Table 2 presents detail for the employees hired in 2008 and 2009. The means presented here indicate some small differences in participation however, in a full regression model we find that year hired is the only statistically significant difference across the groups. Interestingly, there was no difference between male and female participation rates in 2008, likely because participation rates were so high. Participation rates are equal among both high and low earning 2009 hires subject to auto-enroll, but low earning 2008 new hires had a participation rate below high earners. The young do not lag behind in regards to participation which is counter to what is typically seen in retirement savings participation rates.

The total plan enrollment for 2009 is higher than that of 2008 which shows the auto-enroll is effective in increasing participation even when participation rates are already at high levels. The effect of the company match cannot be evaluated in this limited sample. All 2008 new hires will have been eligible for the match as of the effective date of the data, but this is not true for the 2009 new hires. This combined with the policy change leave us unable to determine the exact effect of the match on participation rates. The average deferral remains roughly consistent between 2008 and 2009. Female new hires in both years average a higher deferral



percentage compared to males. As expected, low earners defer less than high earners and the young have the lowest average deferral among those in the sample. The default contribution rate was set at 3%, the most commonly selected amount for 2008 hires. The high degree of concentration at this level is difficult to explain. PBV has completed acquisitions during the period under review, so it is possible that these acquired “new hires” may have selected the 3% deferral because that was the maximum match provided by their previous employer (note that a dollar for dollar match, up to 3% of pay is fairly common in the industry).

Whether 2009 hires will increase their contribution rate once they obtain an extra year of tenure remains to be seen. If contribution levels do not change, it raises the concern that workers will limit their contributions to the default rate. Because of the substantial bunching at the 3% rate, less than 15 percent of persons hired in 2008 contribute enough to receive the full employer match. More communication may be needed to inform employees of the match amounts offered at PBV. Those 2009 new hires contributing at the default level average a far lower salary (\$17,542) than those contributing at every other level. This is evidence that the auto enroll is effective in attracting those employees who are generally least likely to participate in retirement savings.

In Table 4 we present regression results for deferral percentage as well as for participation as of the cut-off date. We consider both 2008 and 2009 new hires together, then separately. In the first column of Table 4, we see that as noted in the means described above, workers hired in 2008 are slightly less likely to be participating as of June 2, 2010 once controlling for other characteristics. The coefficient implies that workers hired in 2008 are 5 percentage points (approximately 5 percent) less likely to be participating relative to workers hired in 2009, which is likely due to the opt-out. The results indicate that gender, age, and salary

are not significant predictors of participation. However, earnings are an important predictor of deferral amount. For the combined sample, those in the \$30,000 and above salary categories show a statistically significant increase over the deferral percentage than those earning less than \$20,000.

Figures 1 and 2 show deferral percentage by year hired. Both 2008 and 2009 deferral percentages peak at 3%. All 2008 new hires would have been fully eligible for the company match as of date of data collection, but the vast majority remains at the 3% default rate, even though PBV provides a 100% match on the first 4%. There is another spike at 6% which indicates that some employees are trying to capture the entire company match. Figure 3 is a histogram of the percent of employees participating by quarter hired. We do not see evidence that employee participation was adversely affected by the stock market decline of 2009.

**PBV Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	300	337
Average Age	31.0	31.2
Number of Females Hired	24	20
Number of Males Hired	276	317
Average Salary	22,034	22,058
Participating as of June 2, 2010	275	324

**PBV Table 2: Contribution Rates for Employees Hired in 2008 & 2009 as of June 2, 2010**

2008 New Hires	Total New Hires	Number Participating by 5/2010	Percent Participating	Average Deferral for Participants
Total	300	275	91.7%	3.8
Female	24	22	91.7%	4.0
Male	276	253	91.7%	3.8
Salary – Low <sup>8</sup>	118	105	89.0%	2.8
Salary – High <sup>8</sup>	182	170	93.4%	4.0
Age: <25	111	102	91.9%	3.5
25-34	98	89	90.8%	3.8
35-44	56	51	91.1%	4.1
45-54	26	25	96.2%	4.4
55-64	9	8	88.9%	6.25
2009 New Hires	Total New Hires	Number Participating by 5/2010	Percent Participating	Average Deferral for Participants
Total	337	324	96.1%	3.7
Female	20	20	100.0%	5.2
Male	317	304	95.9%	3.6
Salary – Low <sup>9</sup>	129	124	96.1%	3.2
Salary – High <sup>9</sup>	208	200	96.1%	3.7
Age: <25	100	94	94.0%	3.3
25-34	131	126	96.2%	3.6
35-44	74	74	100.0%	3.8
45-54	28	26	92.9%	4.8

<sup>8</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$22,034.

<sup>9</sup> Low/High represents the number of employees who have a salary that is above/below the total sample average salary of \$22,058.

55-64	4	4	100.0%	3.5
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**PBV Table 3: Contribution Lags and Percent Deferral**

Percent Deferral	2008 Active New Hires	Average Salary	2009 Active New Hires	Average Salary
1%	3	27,883	3	24,135
2%	3	17,652	3	52,491
3%	194	16,820	248	17,542
4%	28	33,583	22	31,598
5%	6	33,062	8	34,650
6%	23	38,227	28	34,016
7%	3	22,233	0	N/A
8%	3	44,597	4	32,127
9%	0	N/A	0	N/A
10%	9	61,890	5	45,319
> 10%	3	20,855	3	110,536
Total	275		324	

Note: In 2009, the 401(k) plan at PBV became an “opt-out” plan where employees are automatically enrolled in the saving plan. New employees are automatically enrolled in the 401(k) plan at a 3% contribution rate. Employees are eligible for the company match once they have completed 1,000 hours and one year of service. Employees receive a 100% company match on the first 4% and a 50% match on the next 2% they contribute to the plan. Contribution rates of up to 100% of pay are permitted. The tax free deferral is limited by law to 16,500 for 2009 and 15,500 for 2008.

**PBV Table 4: Regression Analysis of Participation Choice**

	<b>Active participant as of June 2, 2010</b>		
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009
Female	-0.022 [0.031]	0.011 [0.060]	0.019 [0.048]
Hired in 2008	-0.050* [0.017]		
Age when Hired:			
Age 18-24	-0.006 [0.020]	0.016 [0.040]	-0.012 [0.026]
Age 35-44	-0.004 [0.023]	-0.003 [0.047]	0.039 [0.028]
Age 45-54	-0.014 [0.031]	0.045 [0.064]	-0.035 [0.041]
Age 55-65	-0.015 [0.061]	-0.028 [0.098]	0.027 [0.100]
Salary (in thousands):			
20-24	-0.011 [0.020]	0.041 [0.042]	-0.029 [0.026]
25-29	-0.006 [0.033]	0.059 [0.056]	0.035 [0.047]
30-39	-0.004 [0.025]	0.034 [0.050]	0.016 [0.032]
40-59	0.042 [0.039]	0.081 [0.067]	0.030 [0.055]
60+	0.071 [0.046]	0.113 [0.076]	0.023 [0.065]
Constant	0.970* [0.018]	0.872* [0.037]	0.962* [0.024]
Observations	783	300	337
Mean Participation Rate	0.945	0.917	0.961

Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

\* indicates significance at the 1% level, \*\* indicates significance at the 5% level.

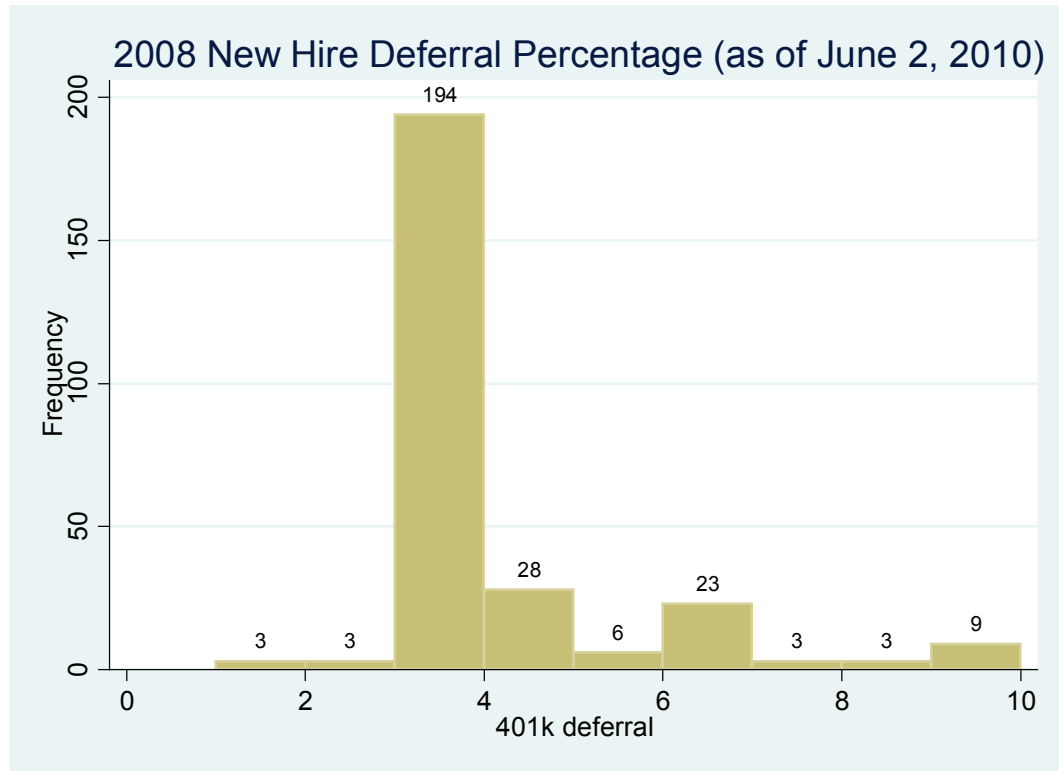
**PBV Table 5: Regression Analysis of Deferral Percentage**

	<b>Deferral Percentage</b>		
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009
Female	0.280 [0.247]	0.137 [0.456]	0.620 [0.417]
Hired in 2008	0.146 [0.136]		
Age when Hired:			
Age 18-24	-0.061 [0.158]	0.072 [0.299]	-0.101 [0.232]
Age 35-44	0.061 [0.180]	0.165 [0.352]	0.015 [0.244]
Age 45-54	0.485** [0.240]	0.223 [0.468]	0.665 [0.368]
Age 55-65	0.767 [0.486]	2.073* [0.748]	-1.290 [0.858]
Salary (in thousands):			
20-24	0.294 [0.156]	0.401 [0.316]	0.177 [0.232]
25-29	0.292 [0.261]	0.173 [0.421]	0.525 [0.405]
30-39	0.963* [0.201]	1.619* [0.382]	0.563** [0.281]
40-59	1.370* [0.301]	1.204** [0.495]	1.128** [0.472]
60+	3.226* [0.353]	2.683* [0.552]	4.528* [0.562]
Constant	3.046* [0.145]	3.052* [0.285]	3.177* [0.213]
Observations	740	275	324

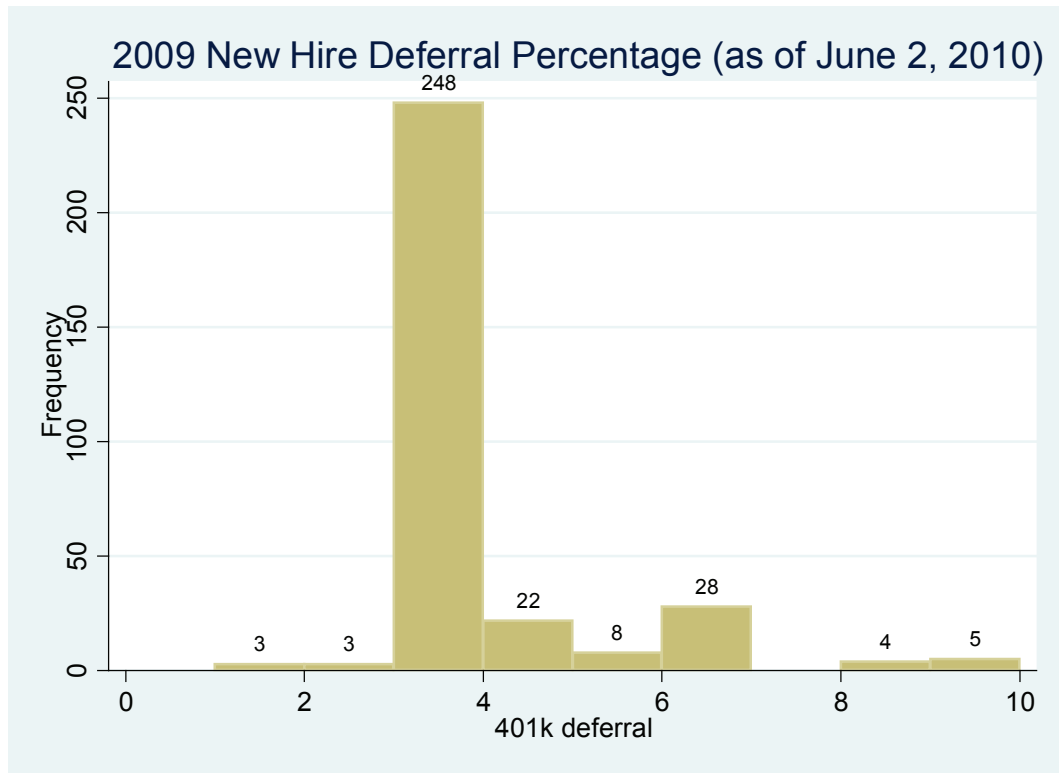
Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

**PBV Figure 1: Deferral Percentages for Individuals Hired in 2008**



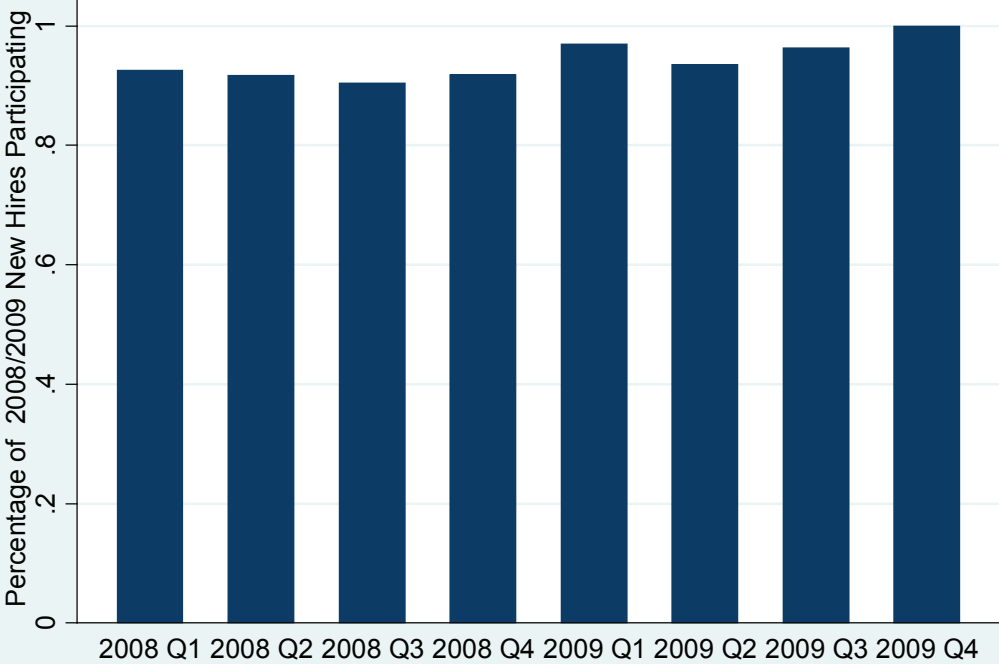
**PBV Figure 2: Deferral Percentages for Individuals Hired in**



**PBV Figure 3: Percent Participating by Quarter of Hire as of July 1, 2010 for Employees Hired in 2008 & 2009**



Percent Contributing by Quarter Hired



## **5. Progress Energy (PGN)**

### **Progress Energy Background Information**

#### Company Description

Progress Energy is a publically traded Fortune 500 company. It is an electric utilities company that has 21,000 megawatts of electric generation capacity and supplies electric utilities to approximately 3.1 million customers in North and South Carolina and Florida. Progress Energy was founded in 1925 and is headquartered in Raleigh, North Carolina. The company has approximately 10,000 employees, holds over 30 billion in total assets and reported net earnings of 247 million for the third quarter ending September 30, 2009.

#### 401(k) Plan

Progress Energy offers employees the option of participating in the Progress Energy 401(k) Savings & Stock Ownership Plan (a safe harbor plan). Employees are eligible to participate in the plan on the first day of employment. Approximately 80% of all employees participate in the savings plan.

Employees may contribute up to 25% of their pay to the 401(k) plan. Progress Energy offers a 100% match on the first 6% of employee compensation contributed to the plan. Match allocations are invested in the Progress Energy Stock Fund. However, the employee may immediately reallocate this investment into an alternate fund once the shares are credited to his account.

Fidelity is the administrator for the 401(k) plan. Plan participation can be managed by the employee through the web. Participants may invest in a wide array of funds offered through Fidelity or in a self-directed brokerage account. The plan allows for both loans and hardship withdraws.

#### Defined Benefit Pension Plan

In addition to the 401(k) plan, Progress Energy also offers a pension plan. Full time employees are eligible to participate after one year of service, part time employees are eligible if they complete 1,000 hours of service in a 12 month period. Once eligible, employees are automatically enrolled in the pension plan. The pension plan is a cash balance account entirely funded by Progress Energy. Vesting occurs after three years of service. The annual company contribution is based on age and is a percentage of the employee's total eligible pay (rates range from 3% to 7%). An interest credit (not to decrease below 4%) is added to each account on December 31 of each year. Employees are eligible to receive pension benefits following termination or retirement. The balance in the account and the employee's age determine

payment options. Employees may take a lump sum distribution of their pension benefits at any age and are eligible to receive their benefits as an annuity once they reach age 55.

### Investment Education

Employees receive the Progress Energy Easy Guide to NetBenefits at orientation. This guide provides the employee with an overview of the wide array of investing education available through the Fidelity website. The online NetBenefits website has tools designed to help with determining and meeting savings goals, access to financial calculators and complete e-learning workshops to learn more about investing.

### New Hires

Employees are eligible to fully participate in the plan on the first day of employment. However, the employee cannot sign up for the program until the payroll feed is sent to the plan administrator (Fidelity), so there may be a few days delay between when the employee is eligible and when the system is able to process the enrollment. Employees may enroll in the plan via website (401k.com through Fidelity) or over the phone. In addition, Fidelity mails out a Progress Energy 40(k) Enrollment kit to the employee within a week of the employee's start date.

### New Hire Orientation

Progress energy rolled out a new on-boarding process April 19, 2010. The plan substantially changed the way new hire related processes and procedures are completed. The new system relies on electronic copies and is no longer paper based. A third party provider (KMS) acts as an intermediary, gathering information from new hires and uploading the information directly to Progress Energy's system. The system is interactive in that employee actions (accepting the job offer online, completing new hire paper work) prompts the system to move onto the next stage of the on-boarding process.

Progress Energy will continue to offer orientation for new hires, either in person for employees located near the Raleigh office or via teleconferencing for those located elsewhere. At orientation, employees will receive a small print package which includes a flyer for the 401(k) plan. The orientation program includes an hour plus discussion of benefits where the employee is reminded that there is a website for enrollment that also contains web modules for investment education.

### Retiree Health Care

Progress energy offers retiree health benefits. Prior to 2001, the premiums were subsidized by the company, but are now the full responsibility of the retiree. The cost of the premium is based on the pool of retirees. The components of the plan change at age 65 and acts as a supplement to social security. Monthly premiums payable by the retiree range between \$40 and \$175.

The company also offers five different health care plans to current workers, one of which is the high deductible plan. Employees enrolled in the high deductible health care plan have a health savings account (HSA) which can be used as a retirement savings vehicle. If an employee selects the high deductible plan, the company contributes \$500 to the employee's account. It is marketed as a way to save for retirement.

#### Auto-enroll

Progress energy does not have an auto enroll feature in their 401(k) plan.

#### 401(k) Plan Management and Data Availability

Fidelity is the plan administrator. So far, Progress Energy was not able to provide information on the date at which an individual enrolled in the supplemental retirement savings plan. The data are therefore just a cross-section of plan participation as of a certain date in the summer of 2010.

Given the importance of the new website and orientation process that Progress Energy implemented in the spring of 2010, Progress Energy is able to provide information on who has accessed the benefits site moving forward.

#### Employer Sponsored Financial Literacy Program(s)

None

#### **Summary of Progress Energy's 401(k) Plan:**

Joining the plan:

- Employees are eligible to participate on the first day of employment.
  - The employee cannot sign up for the program until the payroll feed is sent to the plan administrator (Fidelity), so there may be a few days delay between when the employee is eligible and when the system is able to process the enrollment.
- Employees may enroll in the plan via website or over the phone.

Deferral Contributions:

- Amount: Employees may contribute up to 25% of their pay to the 401(k) plan.

Match:

- Eligibility: Employees are eligible to receive the match on the first day of employment.
- Match Amount: Progress Energy offers a 100% match on the first 6% of employee compensation contributed to the plan.

Timing of Information Received:

- Employees receive benefits guide at orientation.

- Fidelity mails out a Progress Energy 40(k) Enrollment kit to the employee within a week of the employee's start date.

### **Progress Energy Data Analysis**

Progress Energy provided information on over 1,160 employees hired during 2008 and 2009. The information included date of birth, date of hire, status, deferral percentage, and 2009 contribution amount. Employees are fully eligible to participate in the 401(k) saving plan on the first day of employment. Employees elect to participate, there is no auto-enroll feature. The 401(k) plan is a supplemental savings plan; Progress also has a traditional defined benefit plan.

Table 1 provides summary statistics of the sample. Note that we do not explore the effects of timing since that information was not available. We see that 70.1% of 2008 new hires and 52.6% of 2009 new hires are actively participating in the 401(k) plan. Table 2 presents detail for the employees hired in 2008 and 2009. Relatively young employees are underrepresented among plan participants, but interestingly, their average deferral percentage is similar to the company-wide average. Approximately 90 percent of new hires who decided to enroll in the plan contributed at least enough to receive the full employer match. Far fewer employees were hired in 2009 than in 2008, and these 2009 hires participate at a lower rate than do the 2008 hires. Limited demographic information was available, but it could be that this latter group of new hires is different from the earlier hires in some way which would account for the difference in participation rates. Due to the data available, a regression analysis was not performed.

Figures 1 and 2 are histograms of the deferral percentage for 2008 and 2009 new hires. We see a peak at 6% in both years, evidence that many employees are taking advantage of the full company match. Note that all employees are immediately eligible for the match, so 2008

and 2009 deferral percentages resemble each other, as expected. There is also a peak at 10%, but the reason for this is unclear. Figure 3 is a histogram of percent participating by quarter hired. We note a substantially lower participation rate among those hired in the second quarter of 2009. During this same period under review, the Dow Jones Industrial Average experienced drastic decline and it appears these employees were strongly affected by the stock market performance at their time of hire.

**PGN Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	836	325
Average Age	34.6	33.3
Participating	586	171

**PGN Table 2: Contribution Rates for Employees Hired in 2008 & 2009**

2008 New Hires	Total New Hires	Number Participating	Percent Participating	Average Deferral for Participants
Total	836	586	70.1%	8.2%
Age: <25	186	90	48.4%	8.2%
25-34	285	209	73.3%	8.1%
35-44	211	168	79.6%	7.8%
45-54	125	101	80.8%	8.5%
55-64	28	17	60.7%	10.5%
65+	1	1	100%	6.0%
2009 New Hires	Total New Hires	Number Participating	Percent Participating	Average Deferral for Participants
Total	325	171	52.6%	7.7%
Age: <25	111	30	27.0%	6.8%
25-34	82	54	65.9%	7.1%
35-44	72	45	62.5%	7.1%
45-54	42	28	66.7%	8.8%
55-64	18	14	77.8%	7.5%
65+	0	0	0.0%	N/A

**PGN Table 3: Contribution Rates for Employees Hired in 2008 & 2009**

Percent Deferral	2008 Active New Hires	2009 Active New Hires
1%	11	3
2%	5	1
3%	15	8
4%	8	4
5%	14	7
6%	281	87
7%	30	8
8%	43	7
9%	5	2
10%	77	19
> 10%	97	25
Total	586	171

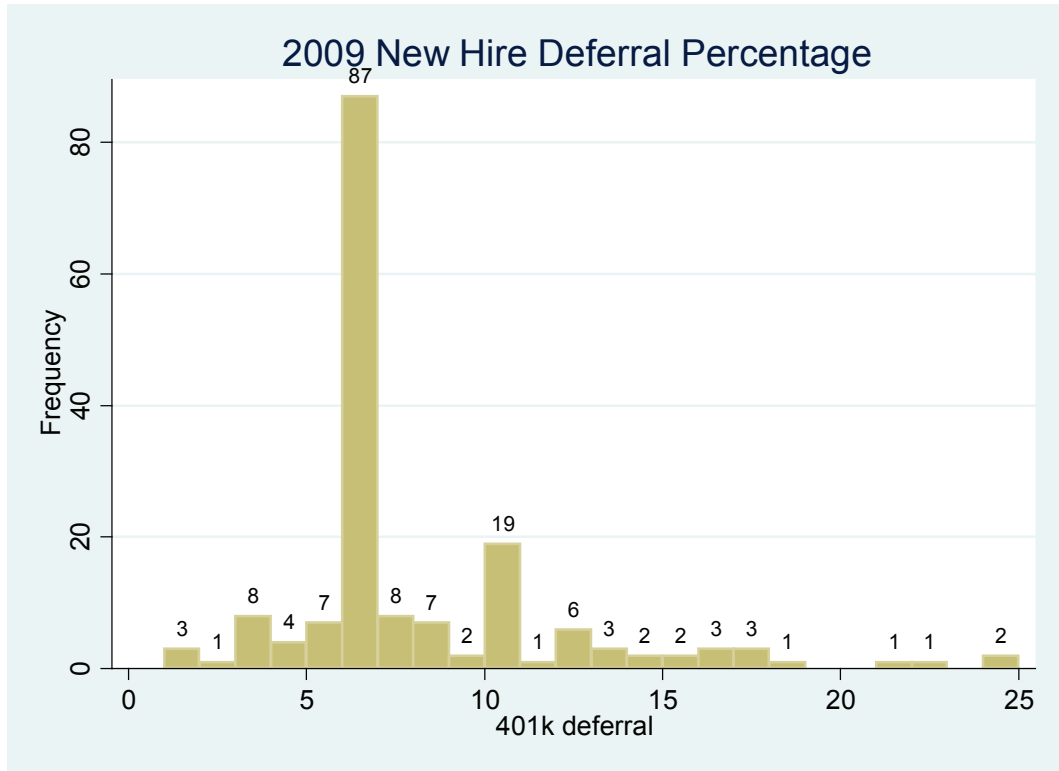
Note: Progress energy allows employees earning under \$105,000 in 2008 to contribute from 1%-25% of eligible earnings as a pre-tax contribution to the plan. Employees earning \$105,000 or more may contribute from 1%-18%. However, federal tax laws limit the amount an employee can contribute; maximum deferral in 2008: \$15,500, maximum deferral in 2009: \$16,500.



**PGN Figure 1: Deferral Percentages for Individuals Hired in 2008.**



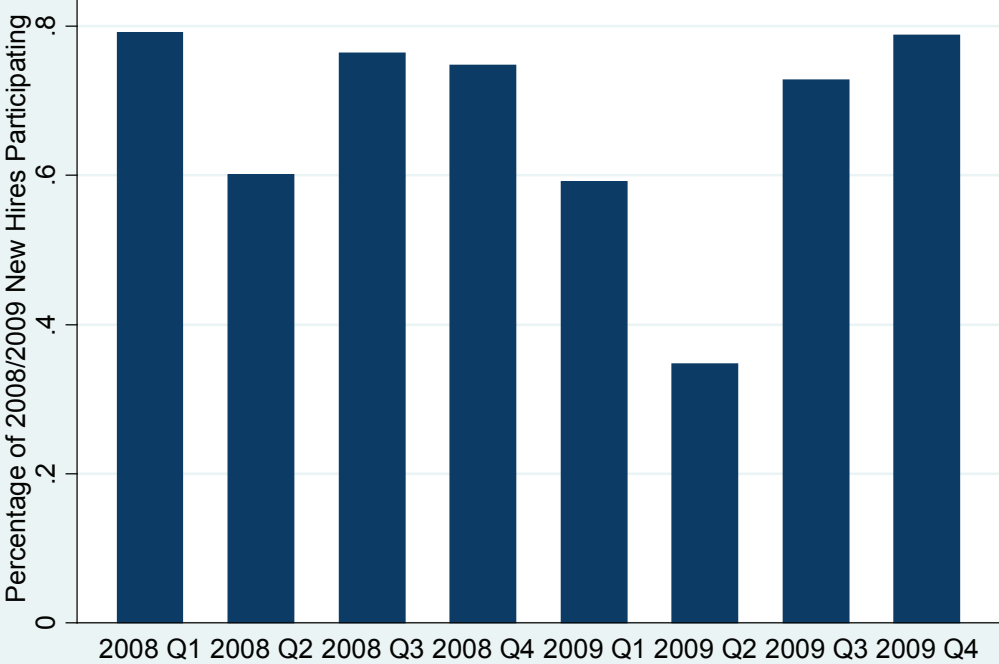
**PGN Figure 1: Deferral Percentages for Individuals Hired in**



2009.

**PGN Figure 3: Percent Participating by Quarter of Hire for Employees Hired in 2008 & 2009**

Percent Contributing by Quarter Hired



## **6. The Williams Companies (WLM)**

### **The Williams Companies Background Information**

#### Company Description

Williams is a publically traded fortune 500 company. They are an integrated natural gas company whose main business segments include exploration and production, gas pipeline and midstream natural gas gathering and processing. The company was founded in 1908 and is based in Tulsa, Oklahoma. Williams operates in 22 states as well as in Canada and Venezuela. They have approximately 4,400 employees, over 24 billion in total assets and reported a net income of 143 million for the third quarter ending September 30, 2009.

#### 401(k) Plan

Williams offers their employees the option of participating in the Williams Investment Plus Plan, a 401(k) savings plan. Employees are eligible to fully participate in the plan (including company match) on the first day of employment. Williams offers a 100% match on the first 6% of employee compensation contributed to the plan. Vesting of the company match occurs as follows: 20% vested after one year of employment, 40% after two, 60% after three, 80% after four and fully vested after five years of employment.

Fidelity is the plan administrator. Plan participation can be managed by the employee either by phone or online. Participants may invest in a wide array of funds offered through Fidelity or in a self-directed brokerage account. The plan allows for both loans and hardship withdraws.

The participation rate for all employees as of February 2010 was approximately 88%. To encourage enrollment, every February, May and October Fidelity sends a 401(k) enrollment message targeting those employees that have not yet enrolled. In addition, Williams sends out Total Rewards letters in March of each year. The purpose of these letters is to encourage company managers to have a discussion about the salary and benefits employees receive. At that time, managers have an opportunity to encourage the employees to contribute at least 6% to get the full company match.

#### Defined Benefit Pension Plan

In addition to the 401(k) plan, Williams also offers a pension plan. Employees are eligible to participate after one year of service. The pension plan is a cash balance account entirely funded by Williams. Vesting occurs after three years of service or when the employee reaches 65 while being employed by Williams. The annual company contribution is based on age and is a percentage of the employee's total eligible pay (rates range from 4.5% to 10%, plus an additional amount ranging from 1% to 5% of the employees eligible earnings that exceed the social security

taxable wage base). Employees are eligible to receive pension benefits once they terminate employment with the company and are at least 55 years old.

### Investment Education

The Williams 401(k) enrollment guide provides the employee with a wide array of investing education and specific examples. Information covered in the guide includes: examples to show the importance of investing early by comparing investment growth at different start dates, information on determining an investment approach and a brief discussion on different types of investments. In addition, the guide directs the reader to the online plan website where the he can find information to help with determining and meeting savings goals, access financial calculators, and complete e-learning workshops to learn more about investing.

### New Hires

Employees are eligible to participate in the 401(k) plan on the first day of employment. However, the employee cannot sign up for the program until the payroll feed is sent to the administrator (Fidelity), so there may be a few days delay between when the employee is eligible and when the system is able to process the enrollment. Employees may enroll in the plan via website (NetBenefits.com through Fidelity) or may enroll over the phone.

Employees receive the Guide to the Williams Way prior to starting work at Williams. This guide provides information regarding the 401(k) plan and the enrollment process. Two to three weeks after the hire date, Fidelity mails out a Williams 40(k) Enrollment kit to the employee. Fidelity sends several email messages to targeted groups depending on the action they have taken. They send up to three different emails during the first month.

At the end of each month (within 30 days), Williams sends an email reminder to the prior month's new hires who have not enrolled. This message is intended to encouraging the employee to enroll in the 401(k) plan.

### New Hire Orientation

Williams Way Guide is handed to the employee at the office during a pre-first day meeting. The new hire orientation process may vary by location.

### Retiree Health Care Plans

Williams offers health savings accounts. However, HR notes that the data would come from another provider and system and it might be challenging to access.

### Auto-enroll

Williams does not have an auto enroll feature for its 401(k) retirement plan.

### 401(k) Plan Management and Data Availability

Fidelity is the plan administrator. Williams has expressed enthusiasm for extensive quantitative analysis of the data. Reports can include the following detail: date of birth, date of hire, participation date, savings contribution percentage. Information on the savings contribution dollar amount, gender, salary/pay grade information would come from another system, which would make it difficult to provide. The history of contributions is not available, only current contribution information is available.

Williams has expressed interest in working with the NC State research team to develop a survey of new employees and their attitudes to retirement saving.

### Employer Sponsored Financial Literacy Program(s)

Although not provided on a set schedule, informational workshops are available as requested by the group's Human Resource Business Partner or office manager. Williams tries to provide workshops to various office locations at least once every three years. However, they have 115 locations and only four have more than 200 employees. The remaining 111 locations have anywhere from 2 to 30 employees which would make frequent workshops infeasible.

Fidelity representatives are available to assist with investment related questions. Total Rewards letters sent each March includes information on all benefits: salary, bonus, company contributions to 401(k) and pension and the value of health and life insurance. Williams also has an Employee Assistance Program where employees can receive referrals to professional services, such as financial, tax advice, estate planning, etc.

### Goals

Reach 90% participation rate and to increase new hire.

Other issues/questions Williams would like to explore:

- What perception do younger employees have on different benefits and what benefits do they look for when choosing an employer?
- What do younger workers like or dislike about 401(k) plans, and what keeps them from participating?
- Do younger employees think about saving for retirement, if not, what messages do they need to hear or information do they want to know that would entice them to save for retirement?

### Additional Information provided by company HR

Williams Human Resources internal document states the following 2009 retirement goals: develop a broad communication plan for retirement plans, create various articles for electronic benefits library, increase the number of new hire enrollment (current new hire participation rate averages 60%), present retirement workshops, reach 20% of the workforce with face-to-face 401(k)/pension meetings and maintain an overall 90% participation plan rate.

## **Summary of Williams' 401(k) Plan:**

Joining the plan:

- Employees are eligible to participate on the first day of employment.
  - The employee cannot sign up for the program until the payroll feed is sent to the administrator, so there may be a few days delay between when the employee is eligible and when the system is able to process the enrollment.
- Employees may enroll in the plan via website or may enroll over the phone.

Deferral Contributions:

- Amount: Williams allows employees to contribute from 1% to 30% of pay as a pre-tax contribution to the plan.

Match:

- Eligibility: Employees are eligible to receive the match on the first day of employment.
- Match Amount: Williams offers a 100% match on the first 6% of employee compensation contributed to the plan.

Timing of Information Received:

- Williams tracked employee 401(k) participation during 2007 and sent out personalized employee correspondence in 2008 to those not yet enrolled or not currently participating in the plan. The letter the employee received provides specific information on what the employee would have earned from the company match had she been participating.
- Employees receive a guide containing 401(k) information (including the enrollment process) prior to starting work at Williams.
- Two to three weeks after the hire date, Fidelity mails out a Williams 401(k) Enrollment kit to the employee.
- At the end of each month (within 30 days), Williams sends an email reminder to the prior month's new hires who have not enrolled.
- Fidelity sends the enrollment communication in February, May and October.
- In March of each year, each employee receives a Total Rewards letter. At this time, the manager should have a discussion about the employee's salary and benefits. At that time, managers have an opportunity to encourage workers to contribute at least 6% of salary to get the full company match.

## **The Williams Companies Data Analysis**

Williams provided information on over 800 employees hired during 2008 and 2009. The information included: gender, date of birth, date of hire, date of participation, date of effective

deferral, date of termination, deferral percentage, and catch up contribution (if any). Williams' employees are eligible to receive the company match immediately, and Williams makes repeated efforts during the year to increase enrollment. In 2007 (before the time period studied here), every month Williams sent an email to those hired in the previous month that had not enrolled in the plan. The email reminded them of the benefits of the 401(k) plan and encouraged them to enroll. Currently, Williams' plan provider contacts employees not yet enrolled every February, May and October. On top of this, the employees receive a Total Rewards letter each February/March which includes a discussion of the company's 401(k) plan and the benefits of participating. We see that the vast majority of those that intend to sign-up do so within the first month of hire. However, we also note a reasonably large difference between participation rates in 2008 versus 2009, which may be at least partially attributable to the extra information sent throughout the year.

Table 1 presents summary statistics of the sample. We see that the participation rate at Williams is high with nearly 74 percent of workers hired in 2008 participating within 450 days of hire. Table 2 considers some detailed statistics for employees hired in 2008 as of May 28, 2010. We see that over 76 percent are currently participating, with little difference between male and female workers. As anticipated, participation rates are higher for older workers. Of those participating, 86 percent sign-up within the first three months of hire. Even though Williams provides extensive interventions after this initial period, the first three months seem to be the most important time for recruiting new participants. As with the other companies who do not use opt-out but have an employer match, an extremely high proportion of plan participants contribute at a level to receive the maximum employer match. At Williams, over 90% of those



hired in 2008 and 2009 were contributing more than the 6% necessary to receive the maximum match.

Table 4 presents results from a regression analysis. We consider the probability of participating within 30 days, 90 days, and 450 days for those hired in 2008 and/or 2009. Interestingly, we see a large difference in participation rates between those hired in 2008 and 2009. The difference may be due to the economy, specifically, the stock market activity during the early part of 2009. The coefficient in column 1 implies that workers hired in 2008 were 14 percentage points (nearly 30 percent) more likely to participate in supplemental retirement savings relative to workers in 2009. We again see that women are less likely to participate, at least of those hired in 2008, although this effect is not always statistically significant. As predicted, we see that younger workers are less likely to participate than workers aged 35 to 44.

These results suggest that Williams is effective in attracting participation from those groups generally considered “at risk.” Women hired in 2008 were 5.7 percentage points less likely to participate compared to men, but the result is not statistically significant. The young (those ages 18 to 25) do still account for the lowest participation rate among all age groups, but the differences are not always statistically significant. For workers hired in 2009, we see that the youngest age group is 27 percentage points (over 50 percent) less likely to participate within 90 days relative to the 35 to 44 year old age group.

Figures 1 and 2 show that the most common deferral percentage is at the 6 percent, the contribution needed to capture the full company match. Next, Figures 3 and 4 tell a similar story as the tables regarding the timing of enrollment. Here we again see that most workers sign up within the first 30 days. This rapid sign-up may be due to the fact that the match begins immediately, so there is more benefit to workers initially. Figure 5 shows the percent

contributing by quarter hired. We note a significant decline among those hired in the second quarter of 2009. During this same period, the Dow Jones Industrial Average experienced drastic declines and reached its lowest levels in recent history. It appears these hires were strongly affected by the stock market performance at their time of hire.

**WLM Table 1: Full Sample Descriptive Statistics**

Full Sample Summary Statistics	2008	2009
Number of New Hires:	515	325
Average Age	34.7	34.9
Number of Females Hired	176	79
Number of Males Hired	339	246
Participation Rate within 30 Days	53.4%	40.0%
Participation Rate within 90 Days	64.1%	51.7%
Participation Rate within 450 Days	43.8%	.

**WLM Table 2: Contribution Rates for Employees Hired in 2008 and 2009 as of May 28, 2010**

2008 New Hires	Total New Hires	Number Participating by 5/28/2010	Percent Participating	Average Deferral for Participants
Total	515	393	76.3%	6.5%
Female	176	130	73.9%	6.1%
Male	339	263	77.6%	6.8%
Age: <25	104	73	70.2%	6.2%
25-34	194	139	71.7%	6.3%
35-44	107	85	79.4%	5.7%
45-54	81	71	87.7%	7.5%
55-64	27	24	88.9%	8.9%
65+	2	1	50%	10.0%
2009 New Hires	Total New Hires	Number Participating by 5/28/2010	Percent Participating	Average Deferral for Participants
Total	325	199	61.2%	6.6%
Female	79	46	58.2%	7.2%
Male	246	153	62.2%	6.5%
Age: <25	88	40	45.5%	6.2%
25-34	103	71	68.9%	5.9%
35-44	58	40	70.0%	6.9%
45-54	54	34	63.0%	7.0%
55-64	22	14	63.6%	10.2%
65+	0	0	0.0%	N/A

**WLM Table 3: Contribution Rates for Employees Hired in 2008 & 2009 as of May 28, 2010**

Length of Time Between Date of Hire and 1 <sup>st</sup> Contribution (in months)—Includes 2008 hires only.	New Contributors	Percent of Total Contributors
0-3	338	86.0
4-11	32	8.1
12-15	11	2.8
16 and greater	12	3.1

Percent Deferral	2008 Active New Hires	2009 Active New Hires
1%	0	3
2%	12	0
3%	12	4
4%	6	7
5%	8	1
6%	169	96
7%	27	14
8%	31	9
9%	7	5
10%	51	18
> 10%	26	20
Deferral not available	<u>44*</u>	<u>22*</u>
Total	393	199

\*These observations have a valid date of participation but the deferral amount was not available.

Note: New hires are immediately eligible to receive the 6% company match. Williams allows employees to contribute from 1% to 30% of pay as a pre-tax and/or after-tax contribution to the plan. The tax free deferral is limited by law to \$16,500 in 2009 and \$15,500 for 2008.

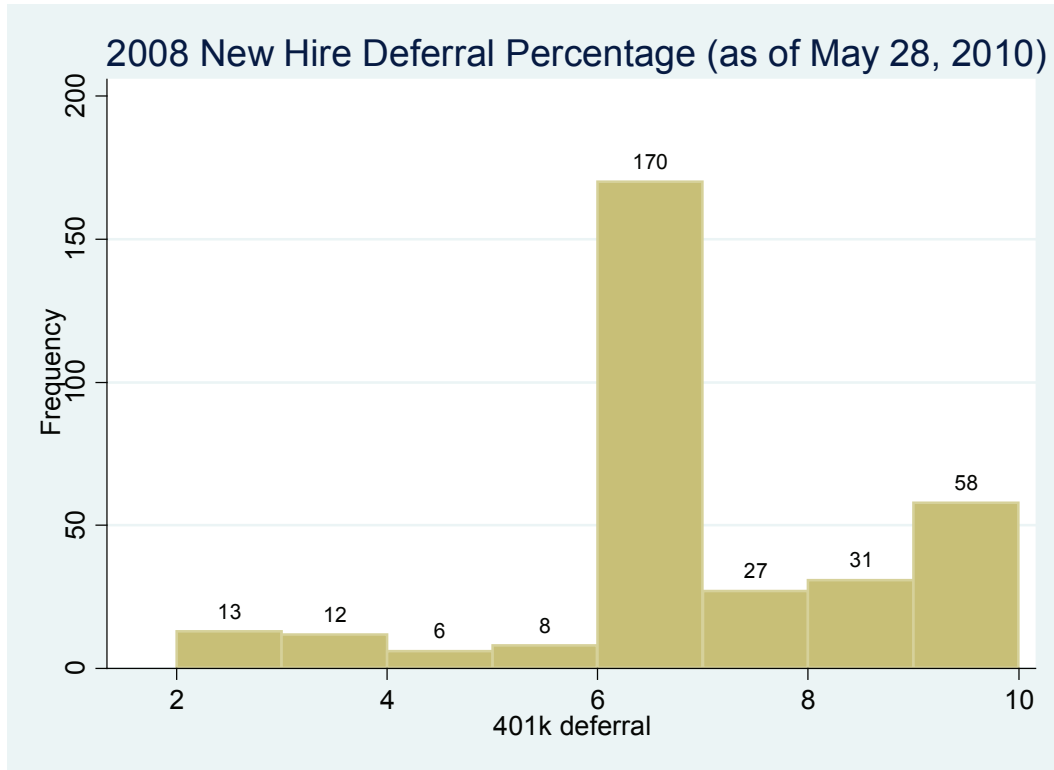
**WLM Table 4: Regression Analysis of Participation Choice**

	Participate within 30 Days			Participate within 90 Days			Participate within 450 Days
	Hired in 2008 or 2009	Hired in 2008	Hired in 2009	Hired in 2008 or 2009	Hired in 2008	Hired in 2009	Hired in 2008
Hired in 2008	0.140 [0.035]**			0.129 [0.035]**			
Female	-0.047 [0.038]	-0.073 [0.047]	-0.001 [0.065]	-0.090 [0.037]*	-0.111 [0.045]*	-0.055 [0.065]	-0.057 [0.041]
Age when Hired:							
Age 18-24	-0.073 [0.053]	0.012 [0.068]	-0.193 [0.084]*	-0.140 [0.052]**	-0.053 [0.066]	-0.265 [0.084]**	-0.087 [0.060]
Age 25-34	-0.094 [0.048]*	-0.119 [0.059]*	-0.053 [0.080]	-0.079 [0.047]	-0.091 [0.057]	-0.061 [0.081]	-0.073 [0.052]
Age 45-54	-0.006 [0.058]	0.069 [0.073]	-0.129 [0.093]	0.006 [0.056]	0.075 [0.070]	-0.111 [0.094]	0.111 [0.064]
Age 55-65	0.053 [0.081]	0.181 [0.106]	-0.136 [0.124]	0.081 [0.079]	0.182 [0.102]	-0.074 [0.125]	0.128 [0.093]
Constant	0.459 [0.045]**	0.581 [0.049]**	0.500 [0.065]**	0.596 [0.044]**	0.702 [0.047]**	0.645 [0.065]**	0.778 [0.043]**
Observations	840	515	325	840	515	325	515
Mean Participation Rate	0.482 (0.017)	0.534 (0.022)	0.400 (0.027)	0.593 (0.017)	0.641 (0.021)	0.517 (0.028)	0.738 (0.019)

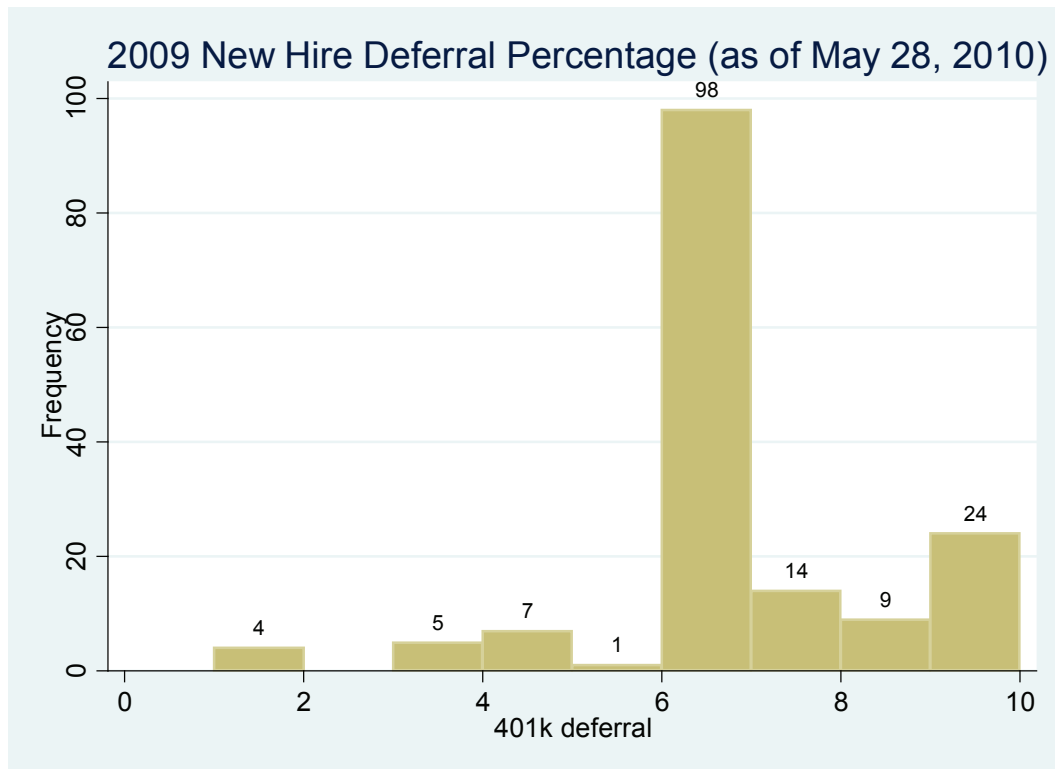
Notes: Coefficients are from a linear probability model, standard errors are in parentheses.

\* Indicates significance at the 1% level, \*\* indicates significance at the 5% level.

**WLM Figure 1: Deferral Percentages for Individuals Hired in 2008 as of May 28, 2010**

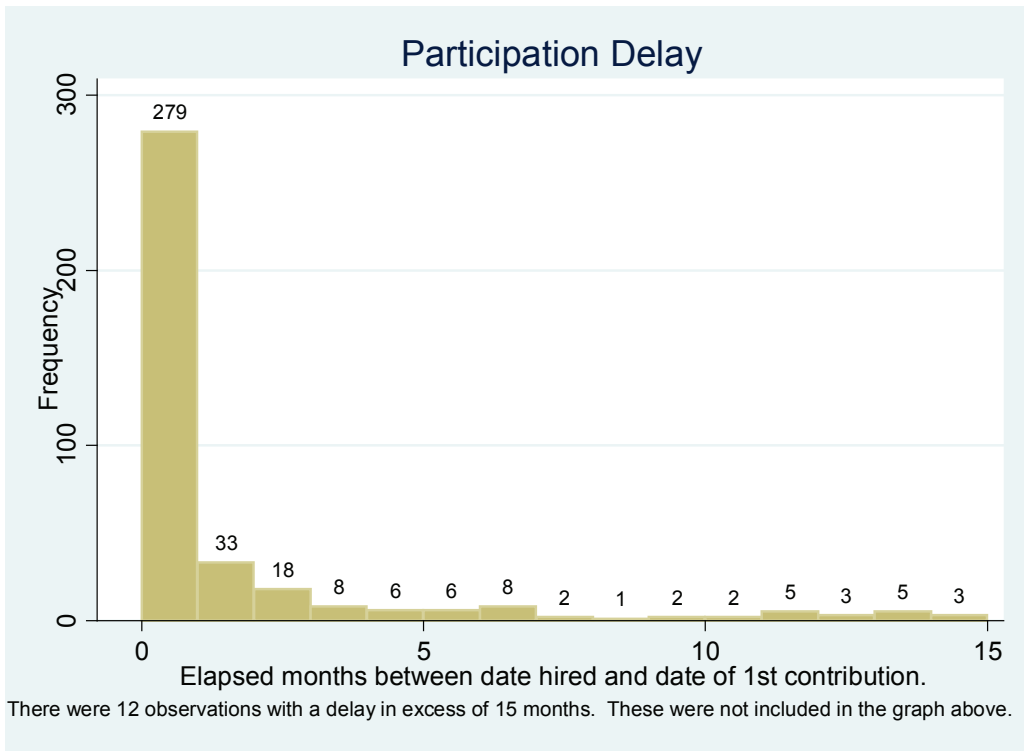


**WLM Figure 2: Deferral Percentages for Individuals Hired in 2009 as of May 28,**

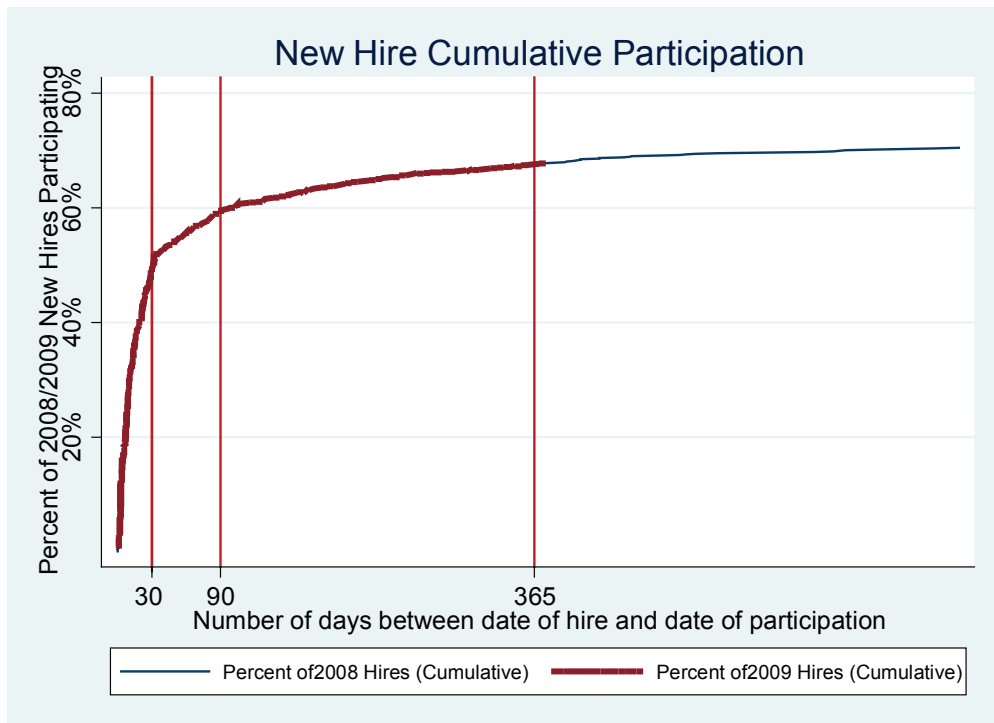


2010

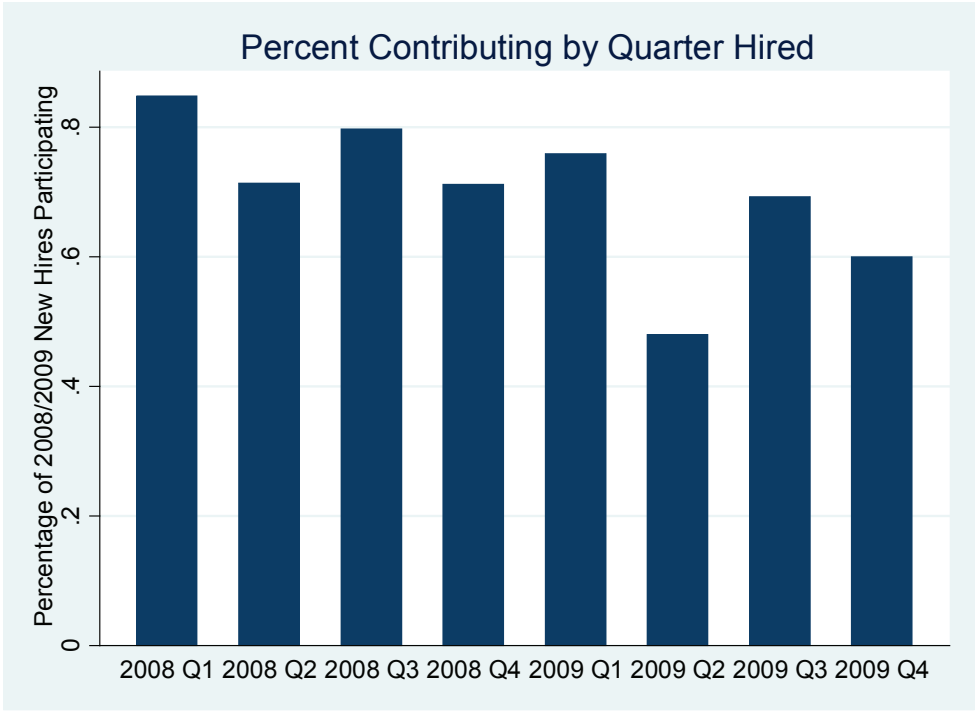
**WLM Figure 3: Months until Starting Contributions for Individuals Hired in 2008 that participated within 15 months.**



**WLM Figure 4: Cumulative Participation for Individuals Hired in 2008 & 2009.**



**WLM Figure 5: Percent Participating by Quarter of Hire as of May 28, 2010 for Employees Hired in 2008 & 2009.**





### **III. Summary of Main Research Findings**

This unique research is providing important insights into the impact of financial education and plan characteristics on employee contributions to supplemental retirement plans. The research is based on persons employed by six large employers in 2008 and 2009. In total, we have data on 11,154 individuals that are currently employed and were hired during the 2008 or 2009 calendar year. Of these, 67% were employed during 2008 with the decline in new workers reflecting the downturn in the national economy. This is likely an underestimate as some workers hired in 2008 (and 2009) will have separated prior to the data collection.

The employers operate in different sectors of the economy, all but one have defined benefit plans, and all offer their employees the opportunity to contribute to supplemental retirement plans. Two of the employers have opt-out provisions that immediately enroll new hires in the 401(k) plan at a default contribution rate. Of the employers that use auto-enrollment one of has an automatic increase feature as a default while the other had implemented this as an option that 2009 new hires could select and is making auto-increase a default for 2010 new hires. All of the employers except one provide employer matches to employee contributions.

The data set for each employer was described and analyzed in Section II of this report. The key findings are now summarized along with directions for future research.

#### **Research Finding 1: The employers provide extensive information at orientation, but further efforts to reach workers are mostly ad-hoc.**

When workers are first employed, the human resource staff of the employer provides new hires with considerable information about the firm or institution and its employee benefits. This

usually includes specific information on how to enroll in supplement retirement saving plans and the benefits of doing so. After the initial orientation process, most of the employers in this study rely on their 401(k) plan provider to disseminate reminders and information to employees encouraging them to enroll in the retirement plan and/or to increase their contribution rates. New employees by way of acquisition may benefit from additional information regarding their current company's retirement savings plan.

**Research Finding 2: Employees are responsive to match incentives.**

Data from the three firms that have opt-in plans and an employer match show that a very high percentage of newly hired workers who decide to enroll in the plan contribute at least enough to receive the full employer match. At least among the employees of these firms, the employer match is a strong incentive to contribute at a high level once the decision to enroll in the plan has been made. This suggests that among these types of firms the most important issue is to focus on the enrollment decision.

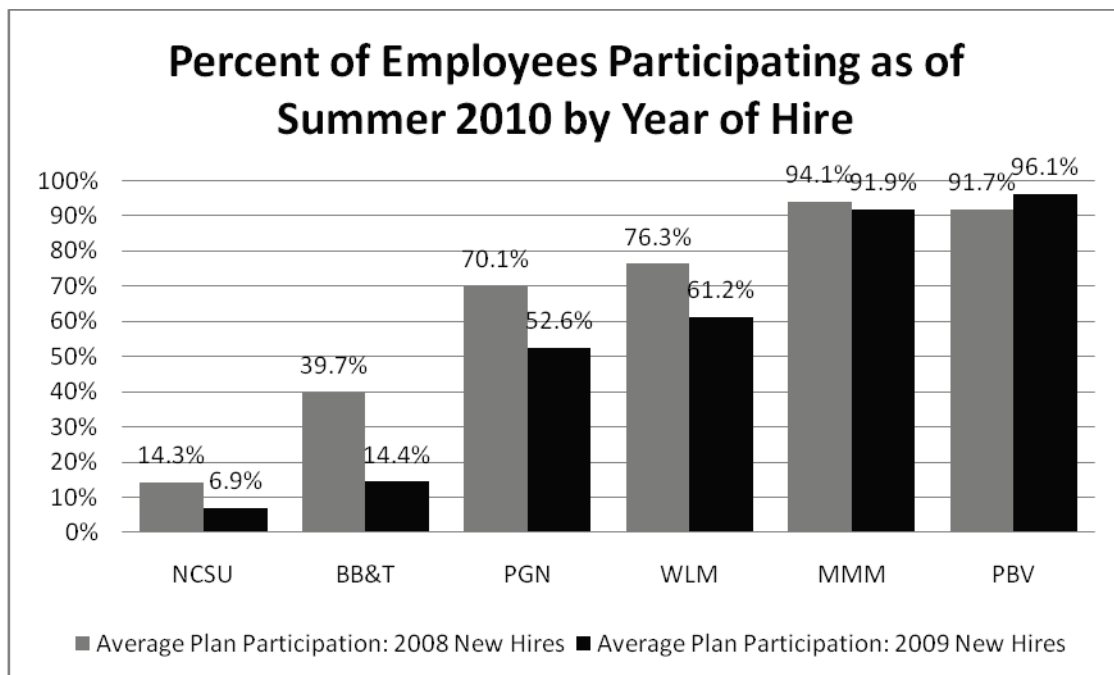
**Research Finding 3: The date when the employer match begins should be an important “teachable moment” for employers to reach out to employees.**

Enrollment and contribution data suggest that a more targeted information plan focused on specific teachable moments might be more effective in increasing retirement saving. The value to the employee of contributing to the 401(k) plan spikes sharply upward at the moment the employer match becomes available. Making sure that the employee realizes the terms of

enrollment have changed and the value of this change should be a point of emphasis. The employer partners have all expressed an interest in developing and conducting controlled experiments to test this tentative finding. We anticipate working with the employers to develop focused information materials concerning the value of contributions before and after the match becomes effective.

**Research Finding 4: Auto-enroll programs increase retirement savings plan participation considerably.**

A comparison of the participation rate across our employer partners shows that the two firms with opt-out plans have enrollment rates that are about 20 points higher than the next two employers who have employer matches but opt-in plans. The participation rates shown below illustrate the power of opt-out plans to increase initial enrollment in voluntary supplemental retirement saving plans.



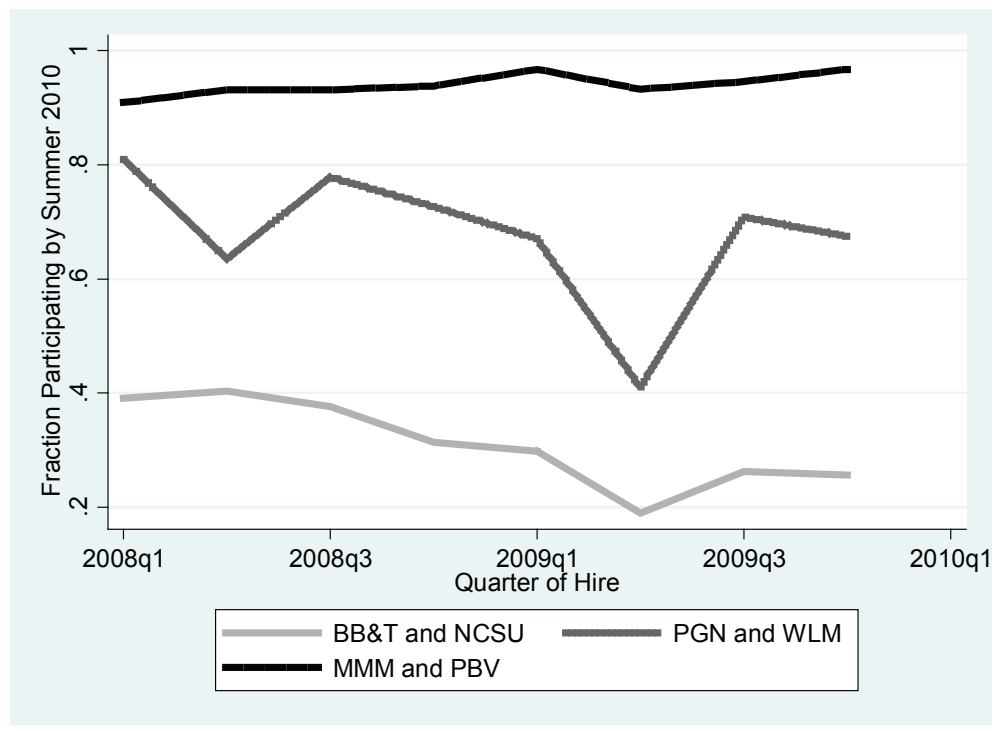
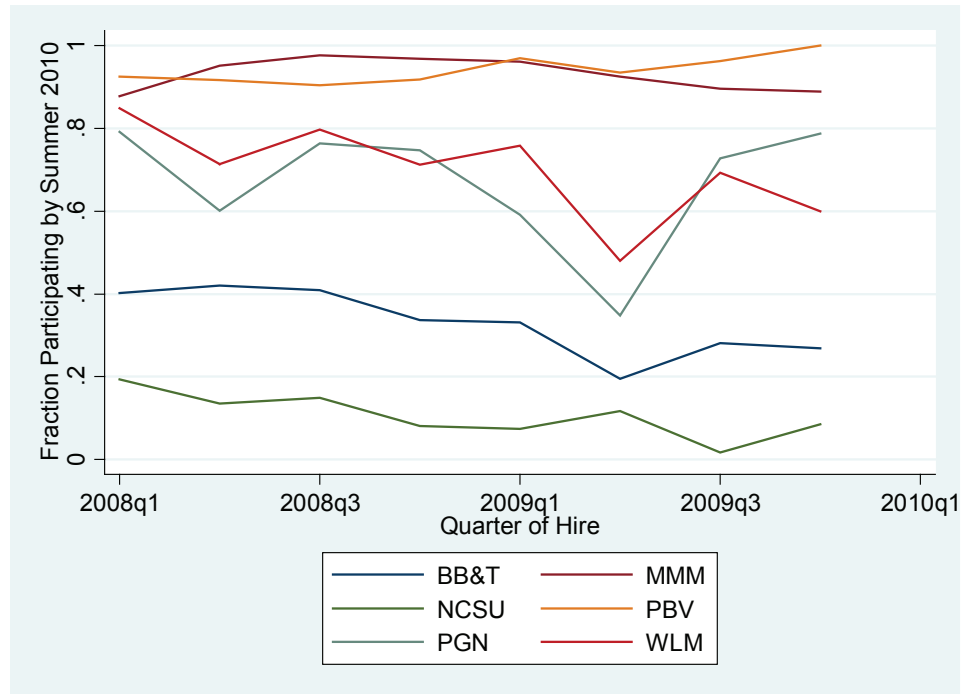
**Research Finding 5: There is little decay in participation rates over time for employers using auto-enrollment.**

One question that has received relatively little attention in the literature is whether persons who were initially automatically enrolled in 401(k) plans gradually opt-out over time. Longitudinal data, not a single snap shot at first employment, is needed to address this question. This study provides some evidence on this issue.

The figure below shows the proportion of workers hired by quarter (of the year hired) who are participating in the retirement saving plan as of July 2010. Workers were hired in the fourth quarter of 2009 were the most recently hired. At the time of the participation observation, workers hired in the fourth quarter of 2009 had been employed for only 6 months. In contrast, workers hired in the first quarter of 2008 would have been employed for two and one half years. If automatically enrolled individuals were dropping out of the plan over time, the trend line in the figure would be upward sloping showing that workers hired in the earlier periods would have lower participation rates than the more recently hired employees.

First consider the pattern of participation for the two companies with opt-out plans, MMM and PBV. Of the 332 individuals hired in 2008 and 2009 by Martin Marietta Materials, only 22 had elected to stop contributing as of the summer of 2010. Of those 22, 14 (64%) stopped contributing immediately. For Pepsi Bottling Ventures, of the 337 new hires in 2009 that were subject to the auto-enroll program, only 13 (4%) had opted to stop contributing as of the summer of 2010. To the extent that we observe the behaviors longitudinally, there is no substantial decline in the participation rates of employees in these plans over time. Next,

examine the participation rate in the opt-in plans. Participation rates in these 4 employers are lower at all hire dates and exhibit greater fluctuations over time. The key observation is that for these two opt-out plans there is no evidence of a tendency for employees to move out of the plan.



**Research Finding 6: There is evidence that persons automatically enrolled in supplemental plans have lower contribution rates that are concentrated at the default level.**

At MMM, about 50% of participants contribute at the default level in their first year of employment and over 60% are contributing at that level in the second year of employment when the default increases. Only about one in six participants contribute enough to receive the full employer match. This may imply that workers consider the default a recommendation rather than a minimum level. This observation provides another opportunity for developing an experiment to examine the effect of various types of information in opt-out plans. This observation along with the findings above suggests the need to coordinate defaults and financial education programs.

**Research Finding 7: For the standard opt-in plans, employers often have lower enrollment rates for lower-income, younger workers, and for women. Among the employers currently using an “opt-out” default, there are no significant differences in plan participation for groups with traditionally low participation rates.**

A major concern associated with voluntary retirement plans is that groups that might be most in need of additional retirement saving may not participate in these plans. Analysis of the employers in our sample indicates that there is substantially less variance in participation rates by economic and demographic characteristics in the opt-out plans compared to the opt-in plans.

**Research Finding 8: There may be lasting effects of the recession on retirement saving plan participation. For employees hired during the time period when the stock market was lowest (and the economy in general was teetering), plan participation was not only initially lower but is still lower today.**

This finding should be a wake-up call for employers, employees and policy makers and illustrates the need additional policies and financial education programs to offset the lingering negative effects of the economic decline of the past two years.