

The Shares Laboratory

Report for the First Quarter, January-March 2023: Historical Trends in Equity Compensation, 2002-2018.

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Introduction

This is the first quarterly report of the newly established Shares Laboratory (“The Shares Lab”) of the Rutgers University Institute for the Study of Employee Ownership and Profit Sharing. *The Executive Summary following, presents brief one-sentence statements of the most important findings for quick attribution and citation.*

The Shares Lab will completely transform the scientific analysis of equity compensation in the United States. The laboratory will conduct ongoing statistical analysis of publicly-available and private databases that measure equity compensation in the United States. The mission of the Shares Laboratory is to introduce objective statistical analysis and the presentation of clear facts into the equity compensation field. The Shares Lab will be making a report available each quarter starting January of 2023. This is the first report for the quarter ending March 31, 2023. This first quarterly report will be longer than successive reports because it is setting the stage of the historical trends in equity compensation in which context successive reports can be viewed and understood.

These data can serve several purposes: 1) to understand general economic trends in equity compensation over the most recent decades for which solid data is available; 2) to inform a broader public discussion about the role of equity shares in public policy analysis; 3) to provide benchmarking statistics for the individual financial service firms who manage the accounts of most of the 26.3 million employees in the economy with equity compensation plans. (Most of those firms are only able to study their client data which may not be representative of national random sample data.); 4) to focus the discussion on specific social and economic questions, such as the role of age, tenure, gender, race, the size of the employee’s company, and industry group in the equity compensation sphere, and its impact of equity compensation on different income and wealth groupings in the society and the economy at large; 5) to provide journalists with objective measures of equity compensation that have been based on national random samples more likely to be representative of the nation as a whole, and 6) to stimulate further university, corporate, and government research of equity compensation data and questions.

This goal of this first quarterly report is to introduce the detailed scientific study of equity compensation in the United States. *The focus will be on historical trends in equity compensation from 2002-2018, a period over which massive changes were thought to have happened in the equity compensation market.* This first

report answers one core question: What were these changes and what impact did they have on the equity compensation market? This report represents the first intensive scientific analysis of this question. It provides the overall state of affairs for further reports and a broad high-level picture of the U.S. equity compensation market trends.

The second quarterly report will be made available on June 30, 2023. The focus of that report will be the distribution of equity compensation according to gender. The second quarterly report will use new data from the General Social Survey for 2022 which will report these data at the end of April 2023 for analysis. Successive reports are expected to be 3-5 pages in length and focus on specific issues going forward.

The quarterly reports will emphasize the presentation of data and trends with a brief commentary about the findings and trends. It is expected that extensive commentary and opinion about the results will happen over an extended period of analysis by different actors in the equity compensation market and by other experts and journalists.

Please note that it is a requirement of access to these data and reports that all citations mention the Shares Laboratory of Rutgers University's Institute for the Study of Employee Ownership and Profit Sharing. Failure to comply with this requirement will result in loss of access to further reports.

Executive Summary of Findings

Following is a summary of all of the statistical findings of this first quarterly report:

The number of unique employees holding only company stock, or only stock options, or both together is 26,269,913 or 23.18% of private sector working adults, excluding the self-employed.

The number of unique employees holding only company stock is 15,153,808 or 13.38% of private sector working adults, excluding the self-employed.

The number of unique employees holding only employee stock options is 1,226,536 or 1.08% of private sector working adults, excluding the self-employed.

The number of unique employees holding both company stock and employee stock options together is 9,889,569 or 8.72% of private sector working adults, excluding the self-employed.

The market size for any employee holding any shares of company stock is 25,034,377 employees.

The market size for any employee holding any employee stock options is 11,107,106.

Taken together the total equity compensation market counting all company stock and employee stock option accounts for any employee equals 36,141,483 accounts. This is 31.9% of private sector working adults excluding the self-employed. This estimate, however includes double-counting of employees who hold both company stock and employee stock options. It expresses the total number of industry equity grantees.

Employee stock options continue to play a large role in equity compensation in the country contrary to a range of predictions and plans to reduce their role in the economy. Put another way, 42.32% of all unique persons who are equity compensation holders in the U.S. still hold employee stock options as part of their equity compensation either separately or in combination with holding company stock.

The perception that employee stock options are held mainly by top executives is false. There were only less than 7,000 companies on the NYSE and the NASDAQ in recent years. Their top five named executive officers would comprise only 35,000 people. With 1.2 million employees holding only employee stock options and 9,889,569 employees holding both employee stock options and company stock, it is clear that stock options are more broadly-held than may be assumed by some observers.

For company stock, the overall trend shows that the percent of private sector employees holding company stock averaged 21.45% over the last two decades. From 2002-2018, that percent declined by -0.23%, meaning that the equity compensation market had flat market growth *as a percent of private sector employees*. The number of private sector employees holding company stock grew by 3,086,325 between 2002 and 2018 signifying a 14% growth rate in the *number of individuals* holding company stock over the period.

For employee stock options, the overall trend shows that the percent of private sector employees holding company stock options averaged 10.39% over the last two decades. From 2002-2018, that percent declined by -3.88%, meaning that the equity compensation market for stock options shrank *as a percent of the total private sector employees*. The number of private sector employees holding company stock options also declined 2.3 million between 2002 and 2018 signifying a negative growth rate of -17.38% in the *number of individuals* holding company stock options over the period.

Perhaps the most important statistic is the overall trend in market share for all unique persons holding any form of equity compensation at their company, meaning those holding company stock only, employee stock options only, or both of these together. As noted, this number rose from 2002 when it was 23.2 million employees to 26.3 million employees in 2018. The overall trend in terms of the number of unique employees who have either form of equity compensation or both together – shares of stock and employee stock options – is positive, shown by an increase in +3.0 million employees or a +13.09% increase *in unique individuals* in the equity compensation market. As a percent of private sector employees, however, this market shrank by -0.44% *in terms of percentage points* over the 2002-2018 period *as a percent of the total private sector employees*.

Looking at the initial impact of information about FASB's expected regulatory activity, from 2002-2006 alone, the number of private sector employees holding company stock went down significantly. This resulted in a -2.3 million employee or a -10.56% reduction in employees holding shares of company stock between 2002 and 2006. Between 2002 and 2006, the number of private sector employees holding employee stock options also went down -22.6%. This resulted in a -3 million employee reduction in employees holding employee stock options between 2002 and 2006.

Looking at one dimension of the long-run impact of FASB's regulatory regime, from 2002-2018, the percent of private sector employees holding company stock went down -0.23% *in terms of percentage points* over the 2002-2018 period *as a percent of the total private sector employees*. However, in terms of employees holding company stock, this resulted in a 3.1 million employee increase or a 14% increase in employees holding shares of company stock between 2002 and 2018.

Looking at one dimension of the long-run impact of FASB's regulatory regime, from 2002 to 2018, the percent of private sector employees holding employee stock options went down -3.88% *in terms of percentage points* over the 2002-2018 period *as a percent of the total private sector employees*. This resulted in a reduction of 2.4 million employees with stock options or a -17.38% reduction in employees holding company stock options between 2002 and 2018.

Regarding unique persons who held company stock, held stock options, or held both together, between 2002 and 2018, the total number went up 13.5% or by 3.0 million employees, with a modest drop as a percent of private sector employees of -0.44% in terms of percentage points.

It is a fact that FASB's discussions, FASB's regulations, and corporate re-evaluations essentially led to a "wash" if not a small increase in employees with equity compensation when company stock was compared to stock options. Moreover, with regard to unique persons with any form of equity compensation, there was an expansion of the equity compensation market by +3 million persons or a +13.5% increase.

The larger corporations with more than 2,000 employees reduced their employee participation in employee stock options plans by -14.28% alongside firms in the 50-99 employee category of -10.18%. In the 100-499 employee category, stock options were reduced by -7.47% and the 500-999 employee category there was a reduction of -6.52%. However, the data show that smaller size firms, where entrepreneurial start-ups are concentrated in the 1-9 employee category and the 10-49 employee category, only reduced employee participation in employee stock options by -0.19% and -0.47% respectively.

The often-predicted large reduction in equity compensation did not, in the end, take place after the discussions, press reports, company reactions, and regulatory moves by FASB. However, it is not possible to predict what the equity compensation market would have looked like in 2018, if these events had not taken place.

Clearly, the predictions in the press that the discussions leading up to the FASB regulations, the company restructuring of their plans, and the FASB regulation itself, would result in a *massive* reduction in the role of employee stock options in the economy did not come to pass.

However, there was a restructuring of national equity compensation from 2002 to 2018 in terms of a change in the mix of who held company stock and who held employee stock options.

The \$15-30K, \$30-50k, and \$50-75k employees saw reductions in holding company stock to the tune of -8.99%, -7.12%, and -12.62% respectively as a percent of that income group receiving equity from 2002-2018.

Based on the income analysis, it is clear that the 2002-2018 change involved pushing the working middle class out of equity compensation plans and increasing those with an income above \$75,000 from 2002-2018 by 11% as a proportion of their income group holding equity.

From 2002-2018, generally, employees with a lower education and tenure did not see their role expanded in equity compensation, again consistent with pushing the working middle class out of the plans.

There was a rethinking and a restructuring of the equity compensation market between 2002 and 2018. This restructuring did not accomplish a restructuring of equity compensation for high income employees in terms of their reduction in these plans, rather, it accomplished pushing the working middle class out of holding stock in equity compensation plans from 2002-2018.

From 2002-2018, the most reductions in employees holding stock options were in the \$50-75k, \$30-50K, and \$15-30k income categories -14.05%, -8.30%, -6.63% respectively as a percent of that income group holding employee stock options from 2002-2018.

It is clear that the 2002-2018 change in employees holding stock options involved pushing the working middle class out of stock option plans with smaller reductions in the above \$75k category from 2002-2018.

Regarding the 2002-2018 change in employee holding stock options, according to education, those with a junior college, bachelor, and high school education were pushed out of the plans at the rate of -8.37%, -6.32%, and 5.62% respectively, while there was a much smaller reduction for those with graduate degrees of -1.68%.

Regarding the 2002-2018 change in employee holding stock options, employees with tenure of 5-9 years, 3-4 years, and 0-2 years were pushed out of the plans at a rate of -8.09%, -7.22%, and -2.9% while those with more than ten years of tenure had their role expanded by 0.33%. Generally, employees with lower education and tenure did not see their role expanded in employee stock option plans.

The working middle class was pushed out of holding employee stock options in equity compensation plans from 2002-2018 while equity compensation as a whole was expanded.

Based on employees just owning company stock, the average (mean) dollar value went up from \$66,061 in 2002 to \$79,318 in 2018 over the period with an average of \$60,423 across all employees who held equity. The median went up slightly from \$12,607 in 2002 to \$14,008 in 2018.

The average dollar value of the equity compensation stake as a percent of yearly income over the two-decade period for employees just owning company stock has generally hovered between 83% and 93% of

annual salary, meaning that on average employees did not yet have total equity dollar value equal to one year of their salary.

The average of all the employees for which data is available over the twenty-year period for dollar value of company stock as a percent of annual salary is about 84%, meaning over the twenty-year period the average employee reported wealth equal to 84% of annual salary in 2018 dollars.

The median dollar value of the equity compensation stake as a percent of yearly income is between 21% and 30% meaning that half of employees have less than that as a percent of yearly earnings and half have more than that percent of salary earnings. This is a relatively low number suggesting that the accumulated total career equity compensation dollar value was less than 20-30% of annual earnings for half of all employees with equity compensation, and more than 20-30% for the other half.

On average, the dollar value of the equity compensation stake as a percent of net household wealth over the two-decade period has generally hovered between 18% and 30%, meaning that on average employees had total equity dollar value equal to about a fifth to a third of their total household wealth. The average of all the employees for which data is available over the twenty-year period is about 25%, meaning all the available information suggests average equity dollar value equals a quarter of net family wealth.

The median dollar value of the equity compensation stake as a percent of net household wealth is between 7% and 8.5% meaning that half of employees have less than that as a percent of net household wealth and half have more than that. This is a relatively low number suggesting that the accumulated total career equity compensation dollar value was less than 7-9% of net household wealth for half of all employees with equity compensation, and more than 7-9% for the other half.

The dollar value of equity compensation as a percent of annual earnings is remarkably similar in its impact on the lower third, middle third, and upper third of employees in terms of annual earnings ranging from 70-96% at the mean, while at the median it is 16%-31%.

When employees are included in equity compensation plans, the level at which they are able to supplement their wealth accumulation as a percent of their annual earnings is remarkably similar across income groups. In effect, when equity compensation plans are made available and employees are included at different income levels, the impact in the U.S. is not heavily skewed.

The dollar value of equity compensation as a percent of net household wealth is also remarkably similar in its impact on the lower third, middle third, and upper third of employees ranging from 18%-29% at the mean, while at the median it is 5%-9%.

When employees are included in equity compensation plans, the level at which they are able to supplement their wealth accumulation as a percent of their net household wealth is remarkably similar. In effect, when equity compensation plans are made available and employees are included at different income levels, the impact in the U.S. is not heavily skewed.

In the lowest third group by yearly earnings those employees in equity compensation plans were

able over the entire period (including all employees for which data is available) to accumulate a dollar value of equity compensation equal to 96% on average of one year's salary, whereas this was 84% for the upper third of earners.

The working middle class (as it were, the middle third of earners) had an equity compensation stake equal to 70% of their yearly income.

In the lowest third group by yearly income, those employees in equity compensation plans were able over the entire period (including all employees for which data is available) to accumulate a dollar value of equity compensation equal to 27% on average of household wealth, whereas this was 18% for the upper third of earners. The middle third of earners had an equity compensation stake equal to 28% of their family household wealth.

Participation in equity compensation plans have relatively similar impacts on individuals and family household wealth at different levels of earnings.

Now the report moves to a more detailed analysis of the data and issues.

The Size of the Equity Compensation Market

The equity compensation market size establishes the extent to which adult workers have compensation in the form of equity in the companies where they are employed in addition to salary and wages. Market size statistics will also allow the players in the market to assess relative market share and growth since 2002. These data are according to the end of 2018, the last year for which full data are available.

As of the end of 2018, the total size of the equity compensation market in the U.S. is 26.3 million combined unique employee holders. This means individual employees who hold *either* company shares of stock *or* company stock options *or* both.

Let's initially look at the number of employees who have different forms of equity compensation taken separately. (This estimate double-counts employees who have both shares of stock and stock options but it is a useful measure of the number of employee equity accounts.) Taken separately, the size of the equity compensation market includes 25 million employees who hold shares of stock in the company where they are employed. Specifically, the market size for employees holding shares of stock is 25,034,377 employees. In addition, there are 11.1 million employees holding company stock options. Specifically, the market size for employee stock options is 11,107,106. To be clear, these statistics reflect the number of individual employees who would have individual company stock accounts *or* individual company stock option accounts, as noted, it is open to double-counting. Taken together the total equity compensation market counting all stock and stock option accounts equals 36,141,483 accounts. This is a good estimate of how deep into the corporate economy equity compensation has reached. It is 31.9% of private sector working adults excluding the self-employed.

*Let's now consider the number of unique employees who have equity compensation, either holding company shares alone *or* employee stock options alone *or* both, that is, adjusting for any double-counting.*

This is the best estimate of the number of unique equity compensation customers that financial service firms have or could potentially have if they covered the entire market. The total number of all unique individuals holding company stock. The data are shown in Table 1 although the detailed data tables are not included in this report:

Table 1. The Size of the Equity Compensation Market in Unique Persons, End of 2018.

	# of Unique Persons	% of Private Sector Adult Employees
Holding Only Company Stock	15,153,808	13.38%
Holding Only Stock Options	1,226,536	1.08%
Holding Both Stock/Options	9,889,569	8.72%
Total	26,269,913	23.18%

Source: Analysis of the 2018 General Social Survey by The Shares Laboratory of Rutgers University Institute for the Study of Employee Ownership and Profit Sharing, 2023.

Several high-level conclusions emerge from this analysis:

-The number of unique employees holding only company stock, or only stock options, or both is 26,260,913 or 23.18% of private sector working adults, excluding the self-employed.

-Employee stock options continue play a large role in equity compensation in the country contrary to a range of predictions and plans to reduce their role in the economy, namely, 9.8% of all unique employees with equity compensation have stock options either alone or in combination with company shares of stock. Put another way, 42.32% of all equity compensation holders in the U.S. still hold stock options.

-The number of employees who hold only employee stock options is a very small part of the equity compensation market, just over a million out of 26 million unique persons and just over 1% of adult private sector employees.

-The perception that employee stock options are held mainly by top executives is false. There were only less than 7,000 companies on the NYSE and the NASDAQ. Their top five named executive officers would comprise only 45,000 people. With 1.2 million employees holding stock options, it is clear that stock options are more broadly-held than that and more widely held than assumed by some corporate observers.

How did the total equity compensation market evolve over the almost two decades for which data is available? Table 2 breaks this down according to the number of employees holding shares, the number of employees holding employee stock options, and the unique number of employees holding either or both forms of equity compensation.

Table 2. Evolution of the Equity Compensation Market.

	Shares # of Employees	% of Private Sector	Stock Options # of Employees	% of Private Sector	UNIQUE PERSONS	
					# Any Employee Equity	% of Private Sector
2002	21,948,051	22.33%	13,444,542	13.68%	23,220,700	23.62%
2006	19,629,433	18.97%	10,394,060	10.05%	21,133,335	20.42%
2010	19,261,211	22.02%	9,921,925	10.32%	19,261,211*	20.04%
2014	22,810,990	21.84%	8,503,553	8.12%	22,880,990*	21.84%
2018	25,034,376	22.10%	11,107,104	9.80%	26,260,913	23.18%
Average 2002 to 2018	21,736,812	21.45%	10,674,236	10.39%	NA	21.81%
Change from 2002 to 2018	+3,086,325	-0.23%	-2,337,438	-3.88%	+3,040,213	-0.44%
<i>Growth Rate 2002 to 2018</i>	<i>+14.06%</i>		<i>-17.38%</i>		<i>+13.09%</i>	

Note: These data do not include self-employed individuals and those that answered “Don’t know.” Only for-profit firms are included. * The sample size for “holding only stock options” is too small for a precise estimate of that number in these years.

For company stock, the overall 2002-2018 trend shows that the percent of private sector employees holding company stock averaged 21.45% over the last two decades. From 2002-2018, that percent declined by -0.23%, meaning that the equity compensation market had flat market growth. The number of private sector employees holding company stock grew by 3,086,325 between 2002 and 2018 signifying a 14% growth rate in the number of individuals holding company stock over the period.

For employee stock options, the overall 2002-2018 trend shows that the percent of private sector employees holding company stock options averaged 10.39% over the last two decades. From 2002-2018, that percent declined by -3.88% in terms of percentage points, meaning that the equity compensation market for stock options shrunk as a percent of total private sector employees. The number of private sector employees holding company stock options also declined 2.3 million between 2002 and 2018 signifying a negative growth rate of -17.38% in the number of individuals holding company stock options over the period.

Perhaps the most important statistic is the overall trend in market share for all unique persons holding any form of equity compensation at their company, meaning those holding company stock only, employee stock options only, or both of these together. As noted, this number rose from 2002 when it was 23.2 million employees to 26.3 million employees in 2018. The overall trend in terms of the number of unique employees who have either form of equity compensation or both together – shares of stock or employee stock options – is positive, shown by an increase in +3.0 million employees or a +13.09% increase in unique individuals. As a percent of private sector employees, however, this market shrunk by -0.44% over the 2002-2018 period.

The Impact of the Financial Account Standards Board Regulation on the Equity Compensation Market

Throughout the 1980's, 1990's, and early 2000's, the issue of how employee stock-based compensation should be treated for accounting purposes was the subject of much debate and discussion and reaction and prediction. In the end, FASB mandated the expensing of employee stock options. These historical data allow for a precise assessment of some dimensions of the impact of these various events because these measurements were taken *before the corporate response to this expected regulation gathered steam in 2002 and after FASB's initial announcement of the new rule in 2004*. Subsequent changes allowed many companies to be required to comply with FASB's regulations only much later. It was widely reported in the business press that many companies began preemptively expensing their stock options during these early discussions. It was also widely reported that the overall discussion and debate about stock-based compensation led some companies to carry out a re-evaluation of all of their equity compensation plans. Predictions of no impact or a massive decline in equity compensation were both made. What is true and what is false? The data are in Table 2 above.

Let's focus very narrowly only on the 2002-2006 period and initially examine the impact of the employee stock-based compensation debate *from 2002 which can safely be considered the BEFORE FASB regulation period and 2006 AFTER THE INITIAL CORPORATE RESPONSE was underway*. From 2002-2006, the percent of private sector employees holding company stock went down -3.36 percentage points. This resulted in a 2.3 million fewer employees or a -10.56% reduction in employees holding shares of company stock between 2002 and 2006. Between 2002 and 2006, the percent of private sector employees holding employee stock options went down -3.63 percentage points. This resulted in a 3.0 million employee reduction or a -22.6% reduction in employees holding employee stock options between 2002 and 2006. These reductions can be seen in Table 2. The overall conclusion for this period is that, viewing all forms of equity compensation together, the prospect of the expensing regulation and the resultant re-evaluations of equity compensation plans had an immediate effect of reducing about 2.3 million employees stock plans and 3 million employees in employee stock option plans. A close reading of Table 2 indicates that these deductions continued to take place for holders of company stock in 2010 but then the reductions reversed themselves. A close reading of Table 2 indicates that these deductions continued to take place for holders of employee stock options in 2010, 2014, and 2018. But that does not represent the entire story.

Let's now examine some dimensions of the 2002-2018 *overall* impact of the FASB regulation and the surrounding corporate re-evaluation of equity compensation plans over the entire period in order to

understand the long-term impact these phenomena may have had on employees and the equity compensation industry in general. From 2002-2018, the percent of private sector employees holding company stock went down -0.23% in terms of percentage points. However, in terms of actual employees holding company stock, this resulted in a 3.1 million employee increase or a 14% increase in employees holding shares of company stock between 2002 and 2018. Between 2002 and 2018, the percent of private sector employees holding employee stock options went down -3.88% in terms of percentage points. This resulted in a reduction of 2.4 employees with stock options or a -17.38% reduction in actual employees holding company stock options between 2002 and 2018. These reductions can be seen in Table 2. These statistics look at persons who held company stock and persons who held company stock options separately, so there is double-counting since some employees hold both.

Now, let's examine the changes from 2002 to 2018 regarding unique persons who held company stock, held stock options or held both forms of equity compensation. These data are in the last two columns of Table 2 labeled "Unique Persons." Thus, between 2002 and 2018, the total number of unique persons with either company stock OR stock options OR holding both forms of equity compensation went up 13.5% or by 3.0 million employees, with a modest drop as a percent of private sector employees of -0.44% in terms of percentage points.

The overall conclusion for this period is that both the prospect and the actual expensing regulation and the resultant re-evaluations of equity compensation plans led to a 3 million employee increase in equity compensation and a net 2.3 million decrease in employees holding stock options, meaning that the net number of employees with equity compensation increased between 2002 and 2018. Moreover, when looking at unique persons with any form of equity compensation, from 2002-2018 there was a 13.5% or 3 million person increase. Obviously, one cannot know what would have happened absent the guidance that FASB was about to act, and absent FASB's actual regulatory regime. However, it is a fact that FASB's discussions, FASB's regulations, and corporate re-evaluations essentially led to a "wash" if not a small increase in employees with equity compensation when company stock was compared to stock options. Moreover, with regard to unique persons with any form of equity compensation, there was an expansion of the equity compensation market by +3 million persons or +13.5%.

The authors' retrospective review of the Dow Jones News Service (now called Factiva) discussion in news and opinion articles around the time of the expensing of stock options from the late nineties to 2010 has established that a clear expectation, by both the FASB regulators and some observers of corporate behavior, was that the use of employee stock options would drastically be reduced after a FASB expensing regulation. While it depends what the definition of "drastic" might be, in fact, at the end of the story, from 2002-2018 there was only a -17.38% reduction in employees holding stock options in the economy while there was an overall rise in unique persons holding equity compensation. Observers will have to debate whether individual predictions were matched by the facts.

In what size of company were employee stock options reduced? These data are contained in Appendix Table 1, column CT, rows 23-29. Briefly, the larger corporations with more than 2,000 employees reduced their employee participation in employee stock options plans by -14.28% alongside firms in the 50-99 employee category of -10.18%. In the 100-499 employee category, stock options were reduced by -7.47% and in the 500-999 employee category there was a reduction of -6.52%. However, the data show that

smaller size firms, where entrepreneurial start-ups are concentrated in the 1-9 employee category and the 10-49 employee category, only reduced employee participation in employee stock options by -0.19% and -0.47% respectively. Unexpected and unexplained is why firms in the 1000-1999 category actually expanded the use of employee stock options by +10.78%. Note that there is a high correlation between company size and having shares traded on a public stock market.

In summary, the often-predicted large reduction in equity compensation did not, in the end, take place after the discussions, press reports, company reactions, and regulatory moves by FASB when the entire 2002-2018 period is examined. However, it is not possible to predict what the equity compensation market would have looked like in 2018, if some or many of these events had not taken place. This, however, does not resolve all the questions surrounding historical trends from 2002-2018. What was the structure of the changes that took place over the period? The overall general changes can mask or hide the specific mechanisms at work in the structural alternations in equity compensation between 2002 and 2018. Were there ups or downs or winners and losers or different demographic explanations in the changes in equity compensation that took place in this period? A detailed answer to this question is in order. This is now considered next.

Which Demographic Groups Had Equity Compensation Expanded or Reduced, 2002-2018?

The analysis now turns to a tighter and a much closer micro-analysis of the changes in the equity compensation market from 2002-2018 in order to evaluate if meaningful changes within the equity compensation market itself took place that are not evident by simply examining (as was done above) the evolution of the overall size of the market itself and the impact of the discussions and regulations surrounding the Financial Accounting Standards Board. Clearly, the predictions in the press that the discussions leading up to the FASB regulations, the company restructuring of their plans, and the FASB regulation itself, would result in a massive reduction in the role of employee stock options in the economy did not come to pass. However, this modest decrease in employee stock options in the population camouflages the fact that some groups had their participation increased while other groups had their participation reduced. The analysis now breaks down who are those groups and what are the overall patterns.

Changes According to Occupation, Income, Education, and Tenure among Holders of Company Stock

What changes happened in the total U.S. equity compensation market according to occupation and related demographic areas from 2002-2018 *for employees who held company stock*? This analysis initially considers only employees who own company stock. Regarding employees holding company stock, the detailed results are contained in the Excel spreadsheet in Appendix Table 1. This analysis is contained in rows 4 through 10 in column AW. For reference, during this period from 2002 to 2018, the U.S. private sector population (excluding self-employed) rose by 13.32%. This is an extensive analysis and here is a summary of the top-line findings from different cuts at the data:

-Looking at *the change in the percent of each occupational group in total from 2002 to 2018 who are in a particular occupation (change from column AU to column AV shown in column AW)*, employees who are

management, management-related, professional-technical, clerical went down, while employees who are sales, service, and blue-collar went up slightly.

-In none of the occupations was the 2002-2018 change in the proportion of employees holding company stock of all employees in that occupation (*column AW*) higher than the rise in the private sector employment population from 2002-2018 of 13%, indicating that the equity compensation was a stagnant market in terms of occupation. The largest cutbacks in the holding of company stock among occupations were in management-related, management, and clerical employees, while there were very modest increases among blue-collar, sales, and service employees.

-The puzzle is solved when examining the changes according to yearly work earnings (Rows 14-20 in column AW) where it is clear that the \$15-30K, \$30-50k, and \$50-75k employees saw reductions in holding company stock to the tune of -8.99%, -7.12%, and -12.62% respectively as a percent of that income group receiving equity from 2002-2018. While there was a slight increase among employees in the under \$15k range that probably reflects part-time employees allowed to be included in such programs. Based on the income analysis, it is clear that the 2002-2018 change involved pushing the working middle class out of equity compensation plans and increasing those with an income above \$75,000 from 2002-2018 by 11% as a proportion of their income group holding equity.

-The puzzle can be further understood by looking at education and tenure. Column AW, row 74-78 shows that those with a high school education and a BA were pushed out of the plans, while those with junior college and graduate degrees found their role expanded. Column AW rows 67-70 shows that employees with tenure of less than 10 years were pushed out of the plans while those with more than ten years of tenure had their role expanded. Generally, employees with a lower education and tenure did not see their role expanded in equity compensation, again consistent with pushing the working middle class out of the plans.

In brief, there was a rethinking and a restructuring of the equity compensation market between 2002 and 2018. This restructuring did not accomplish what the Financial Accounting Standards Board intended, namely, the reduction of top executives receiving equity; rather, it accomplished pushing the working middle class out of holding stock in equity compensation plans from 2002-2018.

Changes According to Occupation, Income, Education, and Tenure among Holders of Employee Stock Options

What changes happened in the total U.S. equity compensation market according to occupation and related demographic areas from 2002-2018 for employees who hold company stock options? This analysis considers only employees who hold company stock options. Regarding employees holding company stock options, the detailed results are contained in the Excel spreadsheet in Appendix Table 1. This occupational analysis is contained in rows 4 through 10 in column CT. For reference, during this period from 2002 to 2018, the U.S. private sector population (excluding self-employed) rose by 13.32%. This is an extensive analysis and here is a summary of the top-line findings from different cuts of the data:

-Looking at *the change in the percent of each occupational group in total from 2002 to 2018 who are in a particular occupation (change from column CR to column CS shown in column CT)*, employees, in every group saw a reduction in holding stock options, who are management, management-related, professional-technical, sales, clerical, service, and blue collar.

-In none of the occupations was the 2002-2018 change in the proportion of employees holding company stock options of all employees in that occupation (*column CT*) higher than the rise in the private sector employment population from 2002-2018 of 13%, indicating that the equity compensation stock option market was a declining market in terms of occupation. The largest cutbacks in the holding of company stock among occupations were in management-related (-14.53%), management (-8.69%), professional-technical (-8.46%), clerical (-5.56%), service (-3.05%), sales (-1.63%), and blue-collar employees (-0.33%) in that order, while there were no increases among any occupational group.

-Further insight is gained when examining the changes according to yearly work earnings (Rows 14-20 in column CT) where it's clear that the most reductions were in the \$50-75k, \$30-50K, and \$15-30k income categories -14.05%, -8.30%, -6.63% respectively as a percent of that income group holding employee stock options from 2002-2018. There was a slight increase among employees in the under \$15k range that reflects part-time employees being allowed into such plans. The income group that showed the lowest decrease was the \$75k+ income group. *Based on the income analysis, it is clear that the 2002-2018 change involved pushing the working middle class out of stock option plans with smaller reductions in the above \$75k category from 2002-2018.*

-Even more insight can be gained by looking at education and tenure. Column CT, row 74-78 shows that those with a junior college, bachelor, and high school education were pushed out of the plans at the rate of -8.37%, -6.32%, and 5.62% respectively, while there was a much smaller reduction for those with graduate degrees of -1.68%. Column CT rows 67-70 shows that employees with tenure of 5-9 years, 3-4 years, and 0-2 years were pushed out of the plans at a rate of -8.09%, -7.22%, and -2.9% respectively while those with more than ten years of tenure had their role expanded by 0.33%. *Generally, employees with lower education and tenure did not see their role expanded in stock option plans.*

In brief, the working middle class was pushed out of holding employee stock options in equity compensation plans from 2002-2018 while equity compensation as a whole was expanded.

How Is the Wealth in Equity Compensation Plans Distributed?

A key question in analyzing the two-decade trend in equity compensation is who receives the wealth and how the wealth is distributed according to income level. *Understanding the benefits of equity compensation is a function of both participating and having access to meaningful wealth creation.* These are critical data since the average and median accounts of different financial service firms and different companies offering equity are not likely to be representative of the nation as a whole.

How has the dollar value of equity stakes -- based on the self-reports of employees who hold company stock -- evolved in the 2002-2018 period? Appendix Table 2 presents these data with all of the dollar values converted to 2018 constant dollars so they are adjusted for inflation. These data only account for the dollar value of owning company shares of stock. They do not include estimates for either actual wealth

derived from having exercised stock options or paper wealth from the difference between the exercise price and the stock price on the day of the employee survey for employee stock options. It is not possible to ask employees in national surveys to report such dollar estimates.

Here is the overall trend in the wealth distribution of equity compensation plans based on owning company stock. The average (mean) dollar value went up from \$66,061 in 2002 to \$79,318 in 2018 over the period with an average of \$60,423 across all employees who held equity. The median went up slightly from \$12,607 in 2002 to \$14,008 in 2018.

More insight into the substantive meaning of these actual dollar values comes from looking at the average and median percent of employer stock relative to each employee's yearly earnings and total household wealth. It is important to keep firmly in mind that this dollar value represents the total dollar value from all of the shares each employee has accumulated at the moment they filled out the survey. It is a snapshot in time and shows the wealth creation impact on the employee at that point in time. Employees were asked to report their yearly earnings and to estimate their total wealth based on subtracting all of their debts from all of their assets.

The dollar value of the equity compensation stake as a percent of yearly earnings communicates what proportion the total equity dollar value is of one year's salary or how many multiples of one year's salary it represents. The dollar value of the equity compensation stake as a percent of family wealth communicates what percent the total equity value is of total household wealth or how many multiples of one year's salary it represents.

Now, for the results. The dollar value of the equity compensation stake as a percent of yearly income over the two-decade period has generally hovered between 83% and 93% of annual salary, meaning that on average employees did not yet have total equity dollar value equal to one year of their salary. The average of all the employees for which data is available over the twenty-year period is about 84%, meaning over the twenty-year period the average employee reported their company stock-related equity wealth equal to 84% of annual salary in 2018 dollars. The median is between 21% and 30% meaning that half of employees have less than that as a percent of yearly earnings and half have more than that percent of salary earnings. This is a relatively low number suggesting that the accumulated total career equity compensation dollar value was less than 20-30% of annual earnings.

The dollar value of the equity compensation stake as a percent of net family wealth (assets minus liabilities) communicates what proportion the total equity dollar value as a percent of family wealth represents or how many multiples of net family wealth that it represents. On average, the dollar value of the equity compensation stake as a percent of net household wealth over the two-decade period has generally hovered between 18% and 30%, meaning that on average employees had total equity dollar value equal to about a fifth to a third of their total household wealth. The average of all the employees for which data is available over the twenty-year period is about 25%, meaning all the available information suggests average equity dollar value equals a quarter of net family wealth. The median is between 7% and 8.5% meaning that half of employees have less than that as a percent of net household wealth and half have more than that. This is a relatively low number suggesting that the accumulated total career equity

compensation dollar value was less than 7-9% of net household wealth for half of all employees with equity compensation, and more than 7-9% for the other half.

Table 3. Dollar Value of Equity Compensation Stake, 2002-2018 (in 2018 dollars)

		2002	2006	2014	2018	Across All Years
Mean		\$66,061	\$41,123	\$54,050	\$76,318	\$60,423
Median		\$12,607	\$18,630	\$12,690	\$20,000	\$14,008
As a % Of Yearly Earnings	Mean	89.5%	56.8%	93.9%	88.2%	83.7%
	Median	21.2%	24.9%	23.1%	30.7%	24.9%
As a % Of Family Wealth*	Mean	NA	18.4%	30.7%	24.6%	25%
	Median	NA	7%	8.5%	7.6%	8.1%

Note: 2010 dollar value data was not collected. Based on employees who report a dollar value for Equity compensation plans. These data do not include self-employed individuals and those that answered “Don’t know.” Only for-profit firms are included. Only dollar values of equity compensation of \$1 million or lower were included in order to limit the impact of outliers on the results. The median statistic would modulate the impact of outliers. Extreme outliers were excluded from the estimates as noted in the Excel charts.

*Wealth is total assets minus total liabilities estimated by the employee respondent.

These findings suggest that there is wide variation in the impact of the dollar value of equity compensation on individual employees wealth accumulation as a percent or multiple of each individual employee’s annual earnings or net household wealth, which obviously indicates more about the impact on their family’s economic situation. Appendix Table 2, Dollar Value of Equity Compensation as a % of Annual Earnings and Net Wealth presents the detailed data. In order to investigate the distribution of the dollar value of equity compensation between different groups in the population, the population was divided into three income groups, the lower third, the middle third, and the upper third.

Here is a more finely-grained summary of the results:

-The dollar value of equity compensation as a percent of annual earnings is remarkably similar in its impact on the lower third, middle third, and upper third of employees ranging from 70-96% at the mean (column I, rows 34-36), while at the median it is 16%-31% (column I, rows 38%-40%).

-This suggests that when employees are included in equity compensation plans, the level at

which they are able to supplement their wealth accumulation as a percent of their annual earnings is remarkably similar. In effect, when equity compensation plans are made available and employees are included at different income levels, the impact in the U.S. is not heavily skewed.

-The dollar value of equity compensation as a percent of net household wealth is also remarkably similar in its impact on the lower third, middle third, and upper third of employees ranging from 18%-29% at the mean (column I, rows 47-49), while at the median it is 5%-9% (column I, rows 51-53).

-This suggests that when employees are included in equity compensation plans, the level at which they are able to supplement their wealth accumulation as a percent of their net household wealth is remarkably similar. In effect, when equity compensation plans are made available and employees are included at different income levels, the impact in the U.S. is not heavily skewed.

Let's focus on the lower third group by income to explore this a bit further. In the lowest third group by yearly earnings those employees in equity compensation plans were able over the entire period (including all employees for which data is available) to accumulate a dollar value of equity compensation equal to 96% on average of one year's salary, whereas this was 84% for the upper third of earners. The working middle class (as it were, the middle third of earners) had an equity compensation stake equal to 70% of their yearly income. In the lowest third group by yearly income, those employees in equity compensation plans were able over the entire period (including all employees for which data is available) to accumulate a dollar value of equity compensation equal to 27% on average of household wealth, whereas this was 18% for the upper third of earners. The middle third of earners had an equity compensation stake equal to 28% of their family household wealth. These findings suggests that participation in equity compensation plans have relatively similar impacts on individuals and family household wealth at different levels of earnings.

Sources and Support for these data:

The analysis in this report is based on data from the 2002, 2006, 2010, 2014, 2018 General Social Survey (GSS). The GSS is sponsored by the National Science Foundation and the data was collected by the National Opinion Research Center at the University of Chicago, which does a lot of contract work for the NSF and the U.S. Census. Questions dealing with equity compensation have been organized over the 2002-2022 period by the Rutgers University Institute for the Study of Employee Ownership and Profit Sharing by applying with a research proposal every four years to the General Social Survey at National Opinion Research Center. Between 2002-2018, various institutions provided direct or in-kind support for the General Social Survey including the Employee Ownership Foundation, the Institute for the Study of Employee Ownership and Profit Sharing at Rutgers University, the Rockefeller Foundation, the Russell Sage Foundation. Other groups who also contributed funds to support the data collection were the Beyster Institute at UCSD, the Foundation for Enterprise Development, the National Center for Employee Ownership, and the Profit Sharing Research Foundation. From 2002-2018, staff of the School of Management and Labor Relations employee share ownership research team and the School's Institute for the Study of Employee Ownership and Profit Sharing offered their time to write research proposals, design research questions, analyze data, and write reports as part of their academic appointments. One Institute Fellow received support to assist with the analysis of this first quarter support.

Appendix Table A1: Company stock and stock option holding by year						
Any company stock						
	2002			2006		
Occupation	# of people holding any company stock	% of people holding any company stock	Total # of private sector working adults	# of people holding any company stock	% of people holding any company stock	Total # of private sector working adults
	(1)	(2)	(3)	(4)	(5)	(6)
Management	2,671,948	2.72%	6,775,264	2,314,886	2.24%	7,995,860
Mgt.-related	1,765,356	1.80%	4,294,147	1,372,096	1.33%	5,635,153
Professional/technical	3,435,348	3.50%	12,453,131	4,814,940	4.65%	16,687,186
Sales	2,767,381	2.82%	13,836,817	2,118,635	2.05%	12,368,828
Clerical	4,341,889	4.42%	16,365,582	3,301,078	3.19%	17,005,650
Service	1,049,698	1.07%	15,363,600	730,385	0.71%	15,900,597
Blue-collar	5,821,007	5.92%	28,770,935	4,814,306	4.65%	27,298,023
etc.	95,424	0.10%	429,412	163,107	0.16%	566,385
Total	21,948,051	22.33%	98,288,888	19,629,433	18.97%	103,457,682
Yearly work earnings						
<\$15,000	954,274	0.97%	21,232,263	870,250	0.84%	18,306,895
\$15-30,000	5,009,856	5.10%	24,906,192	1,730,609	1.67%	21,393,792
\$30-50,000	7,300,091	7.43%	22,472,826	6,230,379	6.02%	23,940,588
\$50-75,000	4,055,660	4.13%	11,308,044	4,164,039	4.02%	11,853,912
\$75,000+	4,628,169	4.71%	18,369,562	6,634,157	6.41%	27,962,496
Total	21,948,050	22.33%	98,288,888	19,629,434	18.97%	103,457,682
Size of company						
1-9 employees	2,099,387	2.14%	20,516,587	1,875,794	1.81%	23,121,278
10-49 employees	3,626,187	3.69%	25,383,390	3,042,496	2.94%	25,674,146
50-99 employees	3,196,784	3.25%	13,884,507	2,786,238	2.69%	13,966,390
100-499 employees	5,343,914	5.44%	20,325,775	5,464,478	5.28%	22,149,042
500-999 employees	2,385,616	2.43%	6,536,622	2,200,174	2.13%	5,944,435
1000-1999 employees	1,908,531	1.94%	4,771,336	1,156,060	1.12%	3,840,120
2000+ employees	3,387,632	3.45%	5,582,434	3,104,193	3.00%	7,972,282
Don't know			1,288,236	0	0.00%	542,624
Not Available				0	0.00%	247,364
Total	21,948,051	22.33%	98,288,888	19,629,433	18.97%	103,457,682
Age						
18 to 29	4,103,316	4.17%	27,625,779	2,055,037	1.99%	28,591,462
30 to 39	6,250,437	6.36%	26,099,083	5,400,831	5.22%	24,614,559
40 to 49	6,393,577	6.50%	23,665,690	6,438,088	6.22%	27,041,910
50 to 59	3,864,760	3.93%	14,123,071	4,308,783	4.16%	16,632,759
60 to 69	1,192,821	1.21%	5,200,687	1,386,367	1.34%	5,449,188
70+	143,140	0.15%	1,574,577	40,328	0.04%	1,127,805
Total	21,948,051	22.33%	98,288,888	19,629,434	18.97%	103,457,682
Tenure						
0-2 years	5,820,999	5.92%	42,607,823	4,292,686	4.15%	49,082,348
3-4 years	4,103,342	4.17%	17,033,532	1,711,679	1.65%	10,714,361
5-9 years	5,868,732	5.97%	18,464,977	5,310,821	5.13%	22,107,609
10+ years	6,154,978	6.26%	20,182,556	8,314,247	8.04%	21,553,364
Total	21,948,051	22.33%	98,288,888	19,629,433	18.97%	103,457,682
Education						
Less than high school	763,417	0.78%	11,212,576	648,837	0.63%	8,947,036
High school	12,834,809	13.06%	59,784,347	9,041,252	8.74%	57,281,287
Junior college	2,337,951	2.38%	9,494,911	1,614,936	1.56%	12,075,661
Bachelor	4,437,330	4.51%	13,121,151	5,681,589	5.49%	18,785,470
Graduate	1,574,543	1.60%	4,675,903	2,642,820	2.55%	6,368,228
Total	21,948,050	22.33%	98,288,888	19,629,434	18.97%	103,457,682

Appendix Table A1: Company stock and stock option holding by year (continued)						
	2010			2014		
Occupation	# of people holding any company stock	% of people holding any company stock	Total # of private sector working adults	# of people holding any company stock	% of people holding any company stock	Total # of private sector working adults
	(7)	(8)	(9)	(10)	(11)	(12)
Management	3,022,422	3.14%	10,194,197	3,983,806	3.80%	11,389,055
Mgt.-related	1,610,813	1.67%	3,961,530	2,152,175	2.05%	4,538,744
Professional/technical	3,881,805	4.04%	15,322,480	3,895,369	3.72%	15,845,760
Sales	3,067,927	3.19%	12,510,734	2,109,878	2.01%	12,539,801
Clerical	2,168,589	2.25%	12,510,774	3,740,431	3.57%	14,443,670
Service	1,758,815	1.83%	19,578,243	1,740,962	1.66%	17,924,517
Blue-collar	3,500,408	3.64%	20,925,062	5,058,667	4.83%	27,310,156
etc.	250,432	0.26%	1,183,936	199,702	0.19%	774,381
Total	19,261,211	20.02%	96,186,956	22,880,990	21.84%	104,766,084
Yearly work earnings						
<\$15,000	1,058,707	1.10%	22,048,439	1,093,044	1.04%	17,153,510
\$15-30,000	2,282,399	2.37%	18,401,946	2,274,719	2.17%	22,517,044
\$30-50,000	4,086,812	4.25%	15,737,964	4,719,095	4.50%	19,917,289
\$50-75,000	4,234,734	4.40%	12,709,793	4,999,783	4.77%	13,981,619
\$75,000+	7,598,559	7.90%	27,288,814	9,794,348	9.35%	31,196,622
Total	19,261,211	20.02%	96,186,956	22,880,989	21.84%	104,766,084
Size of company						
1-9 employees	2,379,212	2.47%	22,699,341	1,905,933	1.82%	20,371,034
10-49 employees	3,392,334	3.53%	27,093,364	4,758,744	4.54%	29,505,251
50-99 employees	1,730,293	1.80%	12,140,585	3,286,790	3.14%	13,337,401
100-499 employees	5,953,687	6.19%	18,845,740	6,686,235	6.38%	24,481,913
500-999 employees	2,236,880	2.33%	5,663,406	2,313,967	2.21%	5,963,678
1000-1999 employees	1,104,239	1.15%	3,090,674	860,091	0.82%	2,847,412
2000+ employees	2,111,664	2.20%	5,202,377	3,069,230	2.93%	7,061,783
Don't know	227,686	0.24%	870,869	0	0.00%	923,077
Not Available	125,216	0.13%	580,601	0	0.00%	274,536
Total	19,261,211	20.02%	96,186,956	22,880,990	21.84%	104,766,084
Age						
18 to 29	1,644,925	1.71%	20,559,181	3,950,204	3.77%	24,583,548
30 to 39	5,054,415	5.25%	23,496,090	6,513,087	6.22%	27,186,392
40 to 49	6,152,851	6.40%	24,731,109	6,512,269	6.22%	21,296,524
50 to 59	4,576,257	4.76%	18,475,801	3,720,457	3.55%	19,469,839
60 to 69	1,354,644	1.41%	6,676,501	2,064,570	1.97%	10,017,373
70+	478,118	0.50%	2,248,273	120,402	0.11%	2,212,409
Total	19,261,210	20.02%	96,186,956	22,880,989	21.84%	104,766,084
Tenure						
0-2 years	3,654,199	3.80%	35,911,981	1,960,352	1.87%	16,789,045
3-4 years	3,289,851	3.42%	17,813,626	1,602,039	1.53%	6,061,822
5-9 years	4,735,612	4.92%	20,655,915	872,304	0.83%	6,984,638
10+ years	7,581,549	7.88%	21,805,434	18,446,295	17.61%	74,930,579
Total	19,261,211	20.02%	96,186,956	22,880,990	21.84%	104,766,084
Education						
Less than high school	751,350	0.78%	12,163,609	400,299	0.38%	8,652,232
High school	9,710,276	10.10%	52,052,277	11,058,204	10.56%	60,677,538
Junior college	1,007,465	1.05%	7,234,370	1,694,836	1.62%	6,788,376
Bachelor	5,566,619	5.79%	18,464,316	7,911,037	7.55%	23,635,773
Graduate	2,225,500	2.31%	6,272,384	1,816,614	1.73%	5,012,165
Total	19,261,210	20.02%	96,186,956	22,880,990	21.84%	104,766,084

Appendix Table A1: Company stock and stock option holding by year (continued)						
2018						
Occupation	# of people holding any company stock	% of people holding any company stock	Total # of private sector working adults	As a percent of the entire demographic group for 2002	As a percent of the entire demographic group for 2018	percent of the entire demographic group 2002-2018
	(13)	(14)	(15)	(16)	(17)	(18)
Management	3,528,625	3.11%	11,184,805	39.44	31.55	-7.89
Mgt.-related	1,764,102	1.56%	6,224,419	41.11	28.34	-12.77
Professional/technical	4,428,755	3.91%	18,575,648	27.59	23.84	-3.74
Sales	2,763,717	2.44%	11,783,607	20.00	23.45	3.45
Clerical	3,295,999	2.91%	15,046,920	26.53	21.90	-4.63
Service	1,731,136	1.53%	19,456,212	6.83	8.90	2.07
Blue-collar	7,522,043	6.64%	30,889,085	20.23	24.35	4.12
etc.	0	0.00%	133,128	22.22	0.00	-22.22
Total	25,034,377	22.10%	113,293,824	22.33	22.10	-0.23
Yearly work earnings						
<\$15,000	1,298,109	1.15%	17,358,083	4.49	7.48	2.98
\$15-30,000	2,163,460	1.91%	19,439,479	20.11	11.13	-8.99
\$30-50,000	5,226,374	4.61%	20,603,811	32.48	25.37	-7.12
\$50-75,000	3,860,941	3.41%	16,610,392	35.87	23.24	-12.62
\$75,000+	12,485,493	11.02%	39,282,058	25.19	31.78	6.59
Total	25,034,377	22.10%	113,293,824	22.33	22.10	-0.23
Size of company						
1-9 employees	3,728,770	3.29%	23,518,421	10.23	15.85	5.62
10-49 employees	4,794,100	4.23%	32,123,215	14.29	14.92	0.64
50-99 employees	1,996,971	1.76%	13,380,313	23.02	14.92	-8.10
100-499 employees	8,222,245	7.26%	26,962,583	26.29	30.50	4.20
500-999 employees	1,797,438	1.59%	4,926,220	36.50	36.49	-0.01
1000-1999 employees	1,997,200	1.76%	3,594,736	40.00	55.56	15.56
2000+ employees	2,497,652	2.20%	8,522,092	60.68	29.31	-31.38
Don't know	0	0.00%	266,243	0.00	0.00	0.00
Not Available	0	0.00%	0			
Total	25,034,376	22.10%	113,293,824	22.33	22.10	-0.23
Age						
18 to 29	2,829,381	2.50%	27,593,661	14.85	10.25	-4.60
30 to 39	6,923,880	6.11%	29,292,137	23.95	23.64	-0.31
40 to 49	7,125,212	6.29%	23,004,428	27.02	30.97	3.96
50 to 59	5,792,541	5.11%	20,637,708	27.36	28.07	0.70
60 to 69	1,963,979	1.73%	9,770,350	22.94	20.10	-2.83
70+	399,384	0.35%	2,995,539	9.09	13.33	4.24
Total	25,034,377	22.10%	113,293,824	22.33	22.10	-0.23
Tenure						
0-2 years	6,957,369	6.14%	52,692,732	13.66	13.20	-0.46
3-4 years	3,495,238	3.09%	16,228,200	24.09	21.54	-2.55
5-9 years	5,226,808	4.61%	18,041,809	31.78	28.97	-2.81
10+ years	9,354,962	8.26%	26,331,083	30.50	35.53	5.03
Total	25,034,377	22.10%	113,293,824	22.33	22.10	-0.23
Education						
Less than high school	931,909	0.82%	11,001,954	6.81	8.47	1.66
High school	11,617,768	10.25%	61,879,750	21.47	18.77	-2.69
Junior college	2,929,326	2.59%	9,519,563	24.62	30.77	6.15
Bachelor	6,956,987	6.14%	23,700,750	33.82	29.35	-4.46
Graduate	2,598,389	2.29%	7,191,808	33.67	36.13	2.46
Total	25,034,379	22.10%	113,293,824	22.33	22.10	-0.23

Appendix Table A1: Company stock and stock option holding by year (continued)

	2002		2006			
	Stock options					
Occupation	# of people holding stock options	% of people holding stock options	Total # of private sector working adults	# of people holding stock options	% of people holding stock options	Total # of private sector working adults
	(19)	(20)	(21)	(22)	(23)	(24)
Management	1,584,533	1.61%	6,722,262	736,965	0.71%	8,037,984
Mgt.-related	1,296,417	1.32%	4,321,417	405,402	0.39%	5,484,663
Professional/technical	2,736,919	2.78%	12,532,218	2,626,938	2.54%	16,653,477
Sales	1,632,561	1.66%	13,828,652	1,463,504	1.41%	12,524,078
Clerical	2,736,928	2.78%	16,469,516	1,927,906	1.86%	16,933,078
Service	576,206	0.59%	15,413,160	481,984	0.47%	16,065,446
Blue-collar	2,880,977	2.93%	28,569,524	2,751,359	2.66%	27,230,127
etc.	0	0.00%	432,139	0	0.00%	528,828
Total	13,444,541	13.68%	98,288,888	10,394,058	10.05%	103,457,682
Yearly work earnings						
<\$15,000	672,236	0.68%	21,271,074	422,057	0.41%	18,322,260
\$15-30,000	2,448,820	2.49%	25,016,346	1,118,955	1.08%	21,506,499
\$30-50,000	3,745,246	3.81%	22,279,436	3,561,314	3.44%	23,985,632
\$50-75,000	2,784,965	2.83%	11,283,829	2,102,754	2.03%	11,916,361
\$75,000+	3,793,274	3.86%	18,438,203	3,188,979	3.08%	27,726,930
Total	13,444,541	13.68%	98,288,888	10,394,059	10.05%	103,457,682
Size of company						
1-9 employees	1,056,364	1.07%	20,598,864	714,885	0.69%	23,040,385
10-49 employees	1,680,555	1.71%	25,400,554	2,250,365	2.18%	25,980,572
50-99 employees	2,256,752	2.30%	13,924,665	1,872,923	1.81%	13,859,792
100-499 employees	3,985,387	4.05%	20,310,809	2,407,274	2.33%	22,225,188
500-999 employees	1,584,507	1.61%	6,578,134	896,423	0.87%	5,975,752
1000-1999 employees	816,276	0.83%	4,657,587	504,499	0.49%	3,738,730
2000+ employees	2,064,701	2.10%	5,521,858	1,747,691	1.69%	7,843,113
Don't know	0	0.00%	1,296,417	0	0.00%	545,483
Not Available	0	0.00%	0	0	0.00%	248,667
Total	13,444,542	13.68%	98,288,888	10,394,060	10.05%	103,457,682
Age						
18 to 29	2,304,771	2.34%	27,801,223	1,739,214	1.68%	28,751,095
30 to 39	4,321,461	4.40%	26,072,763	2,784,726	2.69%	24,663,154
40 to 49	3,937,333	4.01%	23,719,956	3,899,954	3.77%	27,094,284
50 to 59	1,920,651	1.95%	14,068,714	1,489,118	1.44%	16,418,587
60 to 69	864,287	0.88%	5,041,655	481,047	0.46%	5,437,355
70+	96,039	0.10%	1,584,577	0	0.00%	1,093,206
Total	13,444,542	13.68%	98,288,888	10,394,059	10.05%	103,457,682
Tenure						
0-2 years	3,505,176	3.57%	42,734,365	1,731,519	1.67%	49,250,836
3-4 years	2,448,838	2.49%	17,141,707	1,130,579	1.09%	10,649,185
5-9 years	4,081,399	4.15%	18,438,194	2,791,436	2.70%	21,971,828
10+ years	3,409,128	3.47%	19,974,621	4,740,525	4.58%	21,585,832
Total	13,444,541	13.68%	98,288,888	10,394,059	10.05%	103,457,682
Education						
Less than high school	240,088	0.24%	11,283,785	230,565	0.22%	8,994,171
High school	7,202,438	7.33%	59,587,833	5,665,400	5.48%	57,551,525
Junior college	1,680,563	1.71%	9,555,211	672,086	0.65%	12,058,199
Bachelor	3,073,028	3.13%	13,204,480	2,768,342	2.68%	18,884,436
Graduate	1,248,424	1.27%	4,657,579	1,057,667	1.02%	5,969,351
Total	13,444,541	13.68%	98,288,888	10,394,060	10.05%	103,457,682

Appendix Table A1: Company stock and stock option holding by year (continued)

	2010			2014		
Occupation	# of people holding stock options	% of people holding stock options	Total # of private sector working adults	# of people holding stock options	% of people holding stock options	Total # of private sector working adults
	(25)	(26)	(27)	(28)	(29)	(30)
Management	2,223,674	2.31%	10,210,555	1,561,219	1.49%	11,241,814
Mgt.-related	886,656	0.92%	4,165,811	1,576,987	1.51%	4,583,779
Professional/technical	1,942,153	2.02%	14,629,636	1,265,569	1.21%	15,947,309
Sales	1,210,335	1.26%	12,377,890	638,447	0.61%	12,509,127
Clerical	1,702,903	1.77%	12,560,848	1,357,649	1.30%	14,153,932
Service	809,237	0.84%	19,771,352	463,333	0.44%	18,232,488
Blue-collar	1,146,968	1.19%	21,570,154	1,438,665	1.37%	27,315,570
etc.	0	0.00%	900,709	201,683	0.19%	782,064
Total	9,921,926	10.32%	96,186,956	8,503,552	8.12%	104,766,084
Yearly work earnings						
<\$15,000	154,805	0.16%	20,678,989	392,107	0.37%	17,078,003
\$15-30,000	1,351,071	1.40%	19,738,591	533,680	0.51%	22,887,795
\$30-50,000	1,878,852	1.95%	15,403,661	1,674,336	1.60%	19,650,116
\$50-75,000	2,765,492	2.88%	13,369,906	1,584,721	1.51%	13,854,783
\$75,000+	3,771,707	3.92%	26,995,810	4,318,709	4.12%	31,295,388
Total	9,921,927	10.32%	96,186,956	8,503,553	8.12%	104,766,084
Size of company						
1-9 employees	450,346	0.47%	22,644,802	667,912	0.64%	20,498,726
10-49 employees	1,801,449	1.87%	28,520,444	1,358,540	1.30%	29,671,948
50-99 employees	851,443	0.89%	12,455,112	1,382,592	1.32%	13,119,459
100-499 employees	3,370,659	3.50%	18,345,069	2,222,919	2.12%	24,301,150
500-999 employees	1,351,054	1.40%	5,221,357	1,282,622	1.22%	5,957,786
1000-1999 employees	464,431	0.48%	3,279,188	0	0.00%	2,875,666
2000+ employees	1,477,738	1.54%	4,566,924	1,588,968	1.52%	7,131,854
Don't know	0	0.00%	999,255	0	0.00%	932,236
Not Available	154,805	0.16%	154,805	0	0.00%	277,260
Total	9,921,925	10.32%	96,186,956	8,503,553	8.12%	104,766,084
Age						
18 to 29	1,041,445	1.08%	17,718,954	1,183,714	1.13%	24,491,718
30 to 39	2,420,685	2.52%	24,502,460	2,702,387	2.58%	27,316,645
40 to 49	3,497,326	3.64%	25,761,929	2,418,573	2.31%	21,507,837
50 to 59	2,111,027	2.19%	18,380,249	1,023,214	0.98%	19,293,936
60 to 69	696,638	0.72%	7,508,267	1,175,666	1.12%	9,921,587
70+	154,805	0.16%	2,315,097	0	0.00%	2,234,362
Total	9,921,926	10.32%	96,186,956	8,503,554	8.12%	104,766,084
Tenure						
0-2 years	1,519,977	1.58%	35,320,471	331,800	0.32%	16,709,909
3-4 years	1,583,262	1.65%	16,914,242	596,189	0.57%	6,121,969
5-9 years	3,743,619	3.89%	20,779,954	455,416	0.43%	7,184,060
10+ years	3,075,069	3.20%	23,172,289	7,120,148	6.80%	74,750,146
Total	9,921,927	10.32%	96,186,956	8,503,553	8.12%	104,766,084
Education						
Less than high school	232,224	0.24%	12,202,006	0	0.00%	8,738,083
High school	4,313,557	4.48%	50,968,121	3,552,623	3.39%	60,655,407
Junior college	964,042	1.00%	7,423,904	289,607	0.28%	6,855,733
Bachelor	3,293,256	3.42%	18,816,476	3,769,720	3.60%	23,454,964
Graduate	1,118,847	1.16%	6,776,449	891,603	0.85%	5,061,897
Total	9,921,926	10.32%	96,186,956	8,503,553	8.12%	104,766,084

Appendix Table A1: Company stock and stock option holding by year (continued)

Appendix Table A1: Company stock and stock option holding by year (continued)						
2018						
Occupation	# of people holding stock options	% of people holding stock options	Total # of private sector working adults	As a percent of the entire demographic group for 2002	As a percent of the entire demographic group for 2002	percent of the entire demographic group 2002-2018
	(31)	(32)	(33)	(34)	(35)	(36)
Management	1,703,648	1.50%	11,447,325	23.57	14.88	-8.69
Mgt.-related	953,782	0.84%	6,166,141	30.00	15.47	-14.53
Professional/technical	2,521,151	2.23%	18,839,765	21.84	13.38	-8.46
Sales	1,192,821	1.05%	11,719,294	11.81	10.18	-1.63
Clerical	1,601,592	1.41%	14,480,007	16.62	11.06	-5.56
Service	136,253	0.12%	19,776,617	3.74	0.69	-3.05
Blue-collar	2,997,858	2.65%	30,728,423	10.08	9.76	-0.33
etc.	0	0.00%	136,253	0.00	0.00	0.00
Total	11,107,105	9.80%	113,293,824	13.68	9.80	-3.87
Yearly work earnings						
<\$15,000	306,689	0.27%	17,356,712	3.16	1.77	-1.39
\$15-30,000	613,156	0.54%	19,418,867	9.79	3.16	-6.63
\$30-50,000	1,771,297	1.56%	20,814,898	16.81	8.51	-8.30
\$50-75,000	1,771,493	1.56%	16,659,631	24.68	10.63	-14.05
\$75,000+	6,644,468	5.86%	39,043,715	20.57	17.02	-3.55
Total	11,107,103	9.80%	113,293,824	13.68	9.80	-3.87
Size of company						
1-9 employees	1,158,363	1.02%	23,457,032	5.13	4.94	-0.19
10-49 employees	1,942,465	1.71%	31,616,450	6.62	6.14	-0.47
50-99 employees	817,503	0.72%	13,558,111	16.21	6.03	-10.18
100-499 employees	3,304,783	2.92%	27,186,666	19.62	12.16	-7.47
500-999 employees	885,910	0.78%	5,041,844	24.09	17.57	-6.52
1000-1999 employees	1,022,149	0.90%	3,610,988	17.53	28.31	10.78
2000+ employees	1,975,931	1.74%	8,550,241	37.39	23.11	-14.28
Don't know	0	0.00%	272,492	0.00	0.00	0.00
Not Available						
Total	11,107,104	9.80%	113,293,824	13.68	9.80	-3.87
Age						
18 to 29	1,090,295	0.96%	27,321,207	8.29	3.99	-4.30
30 to 39	4,327,193	3.82%	29,434,644	16.57	14.70	-1.87
40 to 49	3,338,915	2.95%	22,554,729	16.60	14.80	-1.80
50 to 59	1,703,387	1.50%	20,917,725	13.65	8.14	-5.51
60 to 69	511,062	0.45%	9,999,671	17.14	5.11	-12.03
70+	136,253	0.12%	3,065,848	6.06	4.44	-1.62
Total	11,107,105	9.80%	113,293,824	13.68	9.80	-3.87
Tenure						
0-2 years	2,759,524	2.44%	52,055,364	8.20	5.30	-2.90
3-4 years	1,158,389	1.02%	16,404,720	14.29	7.06	-7.22
5-9 years	2,555,609	2.26%	18,192,764	22.14	14.05	-8.09
10+ years	4,633,582	4.09%	26,640,975	17.07	17.39	0.33
Total	11,107,104	9.80%	113,293,824	13.68	9.80	-3.87
Education						
Less than high school	408,758	0.36%	11,123,929	2.13	3.67	1.55
High school	3,986,294	3.52%	61,662,643	12.09	6.46	-5.62
Junior college	885,636	0.78%	9,606,745	17.59	9.22	-8.37
Bachelor	4,020,191	3.55%	23,711,773	23.27	16.95	-6.32
Graduate	1,806,226	1.59%	7,188,734	26.80	25.13	-1.68
Total	11,107,105	9.80%	113,293,824	13.68	9.80	-3.87

Appendix Table 2: EO as % of earnings and wealth, by earnings groups									
All figures pertain to those owning employer stock as reported in GSS									
			2002	2006	2014	2018	Average across 2002-2018		
Across all employee owners									
Dollar value of EO stake (2018 \$, capped at \$1 million)									
	Mean		\$66,061	\$41,123	\$54,050	\$76,318	\$60,423		
	Median		\$12,607	\$18,630	\$12,690	\$20,000	\$14,008		
	n		175	129	115	116	535		
EO stake as percent of yearly earnings (upper 1% capped)									
	Mean		89.5%	56.8%	93.9%	88.2%	83.7%		
	Median		21.2%	24.9%	23.1%	30.7%	24.9%		
	n		175	129	115	116	535		
EO stake as percent of family wealth (upper 1% capped)									
	Mean		na	18.4%	30.7%	24.6%	25.0%		
	Median		na	7.0%	8.5%	7.6%	8.1%		
Separately by low, middle, and high earners									
Dollar value of EO stake (2018 \$, capped at \$1 million)									
	Mean	Lower third of earners	\$24,859	\$20,908	\$28,398	\$14,631	\$22,308		
		Middle third of earners	\$35,064	\$43,709	\$57,289	\$56,471	\$48,402		
		Upper third of earners	\$143,409	\$60,355	\$82,635	\$156,303	\$117,338		
	Median	Lower third of earners	\$5,603	\$12,420	\$3,701	\$2,000	\$4,230		
		Middle third of earners	\$14,008	\$12,420	\$23,265	\$19,000	\$15,862		
		Upper third of earners	\$42,023	\$31,050	\$31,725	\$74,000	\$37,260		
EO stake as percent of yearly earnings (upper 1% capped)									
	Mean	Lower third of earners	86.2%	54.3%	140.4%	86.5%	96.4%		
		Middle third of earners	54.7%	66.3%	75.8%	84.6%	70.4%		
		Upper third of earners	127.5%	43.8%	56.6%	92.9%	84.0%		
	Median	Lower third of earners	15.9%	31.9%	11.3%	8.2%	15.9%		
		Middle third of earners	24.7%	18.9%	31.1%	30.7%	26.1%		
		Upper third of earners	33.8%	24.9%	25.5%	54.9%	30.7%		
EO stake as percent of family wealth (upper 1% capped)									
	Mean	Lower third of earners	na	31.7%	29.2%	22.9%	27.5%		
		Middle third of earners	na	15.2%	42.0%	28.8%	28.5%		
		Upper third of earners	na	8.5%	19.6%	22.9%	18.4%		
	Median	Lower third of earners	na	11.5%	3.9%	3.5%	5.1%		
		Middle third of earners	na	5.6%	11.3%	10.1%	8.8%		
		Upper third of earners	na	4.9%	10.6%	12.3%	8.6%		