
MEMORANDUM

TO: Kara Davis (National Capitol Contracting)
Dan Huck (Military Compensation and Retirement
Modernization Commission)

FROM: Amang Sukasih

SUBJECT: Sampling Plan for the Military Modernization Commission

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As a deliverable of subcontract agreement no. 2014-MCRMC0053-001, this memo presents the proposed sampling plan for the MCRMC survey, Collecting Compensation Preferences from Active and Guard/Reserve Service Members and Military Retirees.

A. Background

The Military Compensation and Retirement Modernization Commission (MCRMC or “Commission”) was established in 2013 as an independent establishment of the federal government charged with developing recommendations to modernize military compensation.¹ To support and objectively formulate its recommendations, MCRMC is conducting a survey of members of and retirees from the military services to collect data on their preferences for different levels and mixes of compensation components (pay and benefits). Using data from this survey, along with other sources, MCRMC will quantify the relative value key military groups attach to alternative levels and components of compensation, and gauge the potential impact on any changes in compensation the Commissioners may be considering.

The target population of this survey consists of three subpopulation groups: (1) active force members, (2) reserve, and (3) retirees. The data collection will be conducted through a web survey, where the survey sample will receive an email invitation to participate in the survey that directs them to a website hosting the preference-based analytic tool. They will also receive reminder notices, if necessary.

This memo describes the detailed sampling plan for each of these subpopulation groups; independent samples will be selected for each subpopulation group.

¹ Section 671, et. seq., of the National Defense Authorization Act 2013, Pub.L.No. 112-239, (amended by National Defense Authorization Act, FY 2014, Pub. L. No. 113-66).

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B. Target population and sampling frame

1. Population and stratification

The target population for the study is the population of current U.S. military active duty members, guard/reserve members, and military retirees, where the sampling frame is pulled from the Defense Manpower Data Center (DMDC) database as of February 2014. Because the mode of data collection will be a web survey where the sample group will be notified through email to participate in the survey, the sampling frame, from which samples will be drawn, will be limited to only those population members with email addresses. Military email addresses are available for most active duty and reserve members in the system. For the retiree subpopulation, the survey must use nonmilitary email addresses that are available for only about a half of the retiree subpopulation. In this case, an evaluation of the sampling frame of retirees is needed to ensure there is no coverage bias issue resulting from using a subset of the population. This evaluation will be covered later on.

Before sampling, the population will be (explicitly) stratified by the variables considered important in the exploration and development of compensation options for MCRMC as shown on Table 1 (next page).

The stratification will serve to ensure the proportion of members sampled from each stratum aligns with the analytical objectives of the study. For this study, MCRMC plans to prepare separate estimates for each stratum and as will be discussed, the sampling plan sets an equal precision requirement of the sample across the strata to yield a consistent level of sampling precision for each stratum estimate.

2. Sampling frames

Active duty. As of February 2014, the universe of active duty forces was made up of about 1.39 million members. The count by sampling strata is given in Appendix Table A.1.

Reserve. As of February 2014, the universe of reserve/guard members was made up of about 834,621 members. The count by sampling strata is given in Appendix Table A.2.

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Table 1. List of stratification variables used by subpopulation group

Variable (categories in parentheses)	Value of variable	Variable use in subpopulation stratification		
		Active duty (96 strata)	Reserve (48 strata)	Retiree (48 strata)
Family status (4) (current)	Single with children Single without children Married with children Married without children	√	√	√
Pay group (6)	O1-03 04-06 W1-W5 E1-E4 E5-E6 E7-E9	√	√	
Deployment status (2)	Never deployed Deployed	√	√	
Region (duty location) (2)	U.S. and U.S. territories All other	√		
Age group (3) (current)	< 55 years 55–64 years > 65 years			√
Rank group (2) (before retirement)	Officer Enlisted			√
Duty status components (2) (before retirement)	Active Reserve or guard			√

Retiree. As of February 2014, the universe of military retirees was made up of about 2.1 million retirees, but only about 1 million retirees have nonmilitary email addresses that can be used as the sampling frame. We looked at the distribution of retirees (that is, the proportion of retirees in each sampling cell) in the sampling frame, and compared this distribution with that in the target population. When the distributions are nearly equivalent between the sampling frame versus the target population, we assume the sampling frame has adequate coverage of the target population for variables available. For example, for illustration purposes and simplicity, suppose the distribution in the target population is 40 and 60 percent officer and enlisted retirees, respectively, and similarly 40 and 60 percent officer and enlisted retirees, respectively, in the sampling frame, then the sampling frame does not have coverage issue and it can be viewed as a “balanced” representative sample from the target population. On the other hand, if the distribution in the target population is 40 and 60 percent officer and enlisted retirees, respectively, and the distribution in the sampling frame is 50 and 50 percent officer and enlisted retirees, then the sampling frame is “imbalanced.” To correct for such a problem, the sampling

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frame will be adjusted for the data analysis using a post-stratification technique, which will be explained later on. However, in the extreme case, if the distribution in the target population is 40 and 60 percent officer and enlisted retirees, respectively, all retirees in the sampling frame are enlisted. If this occurs, the sampling frame is known to have a serious coverage issue that must be addressed or acknowledged during the analysis because the data will not create unbiased inferences about the target population.

Appendix Tables A.4 and A.5 present the number of cases and their distribution/percentages of retirees broken down by sampling strata in the target population and in the sampling frame, which is limited to those with email addresses (about one-half of the target population). An examination based on these tables showed that there are small differences in some sampling strata, as shown in Appendix Tables A.4 for frequency and A.5 for percentage. When evaluated at the individual level of sampling cell, however, we can see that such difference is not large. The average percentage difference is only 1 percent across all sampling strata, whereas, the largest difference is 7 percent in stratum for retirees over the age of 55 and who are active enlisted married without children. In this case, any differences will be corrected later through the use of the post-stratification technique in the weighting steps.²

C. Analytical goals and sample size

It is well known that the precision of survey estimates depends, among other factors, on the sample size. Too small a sample size will result in unreliable estimates, whereas an excessive sample size wastes resources. Understanding the study's analytic objectives is critical to its design, including the sample-size calculation. The MCRMC survey is intended to provide analyses of military active duty and reserve as well as retiree populations about their preference in pay and benefits for each important analysis domain identified as sampling strata presented in previous sections. Thus, the sample size for the survey needs to be determined based on the sample size appropriate for each analytic domain, which is individual sampling stratum. This section will present information about the sample size needed to achieve the goals with required precision.

1. Calculating sample size based on precision requirement

Because the survey estimate is calculated based on the sample rather than on all members in the population, the statistic is subject to sampling variability, the level of which is referred to as the sampling precision for the estimate. The sampling precision of the (point) estimate is usually represented by variance or standard error of the estimate (the standard error is the square root of

² To address possible coverage bias due to unavailability of email addresses from all retirees so that samples are drawn only from retirees with email addresses, we will perform post stratification. Post stratification is a ratio adjustment technique that forms a mutually exclusive set of post strata (or post-stratification cells) and adjusts the weights within each post stratum so that weighted counts equal control totals, where in this case the control totals used will be the number of retirees in the target population, including those without email addresses.

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the variance). So published tables of survey estimates are usually accompanied with tables of variances or standard errors.

Another way to present the estimate is through a confidence interval, which reflects the expected range around the true central value or mean, for which at the specified level of confidence or percentage (such as 95 percent)³ the estimates would fall with repeated random sampling. Hence, a 95 percent confidence interval indicates that with repeated sampling, 95 percent of the sample values will fall between the given lower limit and the given upper limit from the true mean. Let $\hat{\theta}$ be a survey estimate of a parameter of interest θ with a standard error of $se(\hat{\theta})$. If the sample size used to obtain the estimate is reasonably large,⁴ then an approximate $(1 - \alpha)100$ percent confidence interval for θ is $[\hat{\theta} - z_{\alpha/2}se(\hat{\theta}), \hat{\theta} + z_{\alpha/2}se(\hat{\theta})]$, where $z_{\alpha/2}$ is the upper $\alpha/2$ percentage point of the standard normal distribution. For the 90, 95, and 99 percent confidence intervals—which often are used in practice—the values of α are 0.10, 0.05, and 0.01, respectively, and the values of $z_{\alpha/2}$ are approximately 1.645, 1.96, and 2.575, respectively.

The component of confidence interval $z_{\alpha/2}se(\hat{\theta})$ is called half-length (HL) of the $(1 - \alpha)100$ percent confidence interval. This quantity is often used as a measure of “sampling error” or margin of error at $(1 - \alpha)100$ percent confidence. When the sample design as for the MCRMC is stratified, the standard error for the overall estimates can be expressed in formula (1):

$$se(\bar{x}_{STR}) = \sqrt{\sum_{h=1}^L \left(\frac{N_h}{N}\right)^2 \frac{S_{x,h}^2}{n_h} \left(1 - \frac{n_h}{N_h}\right)} \quad (1)$$

where the sampling frame is divided into $h=1, \dots, L$ strata of size N_h from which a sample of n_h is selected from each and where $S_{x,h}$ is the estimate of standard deviation of variable X in stratum h .

The sample size required for each stratum based on a specified precision requirement or margin of error M_h for each stratum is given by formula (2):

³ Understanding the concept of a confidence interval can be difficult. A more intuitive interpretation of a 95 percent confidence interval (that is, for $\alpha = 0.05$) is as follows: Suppose that the process of selecting a random sample from the finite population with a fixed sample design was repeated numerous times and an estimate, its standard error, and a 95 percent confidence interval were calculated for each sample. Approximately 95 percent of the confidence intervals calculated will include the true population value being estimated.

⁴ The requirement of a large sample size is necessary to make use of the central limit theorem, a fundamental theorem in statistics for establishing properties of confidence intervals. Consult Casella and Berger (2002) or other texts on statistical inference for more details on the central limit theorem.

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$$n_h = \frac{1}{(1/N_h) + \left(\frac{M_h}{z_{\alpha/2} S_{x,h}}\right)^2} \quad (2)$$

2. MCRMC precision requirement

The reporting domain for estimation and data analysis will be individual sampling stratum/cell. So, the stratum-level sample size can be calculated using the formula above and is determined based on precision requirement M_h , estimated standard deviation $S_{x,h}$, and population size N_h . For constructing the 95 percent confidence intervals for mean estimates, the value of $z_{\alpha/2}$ is 1.96.

In most cases, the MCRMC survey asks the respondents to indicate the extent to which they agree with a statement based on a sliding scale scored from 0 to 100. In the analyses based on this survey data, the key statistics of interest are means/average scores. As a result, the sample size for each sampling stratum is determined based on a consistent precision requirement across each of the sampling cells equal to a margin of error of five score points ($M_h = 5$) in the 95 percent two-sided confidence interval.

In calculating the sample size for each sampling stratum, we need information of standard deviation $S_{x,h}$. We utilized information on the estimates of population standard deviation for a subset of key survey items from a past survey collecting similar information. We identified a survey from the Center for Strategic and Budgetary Assessment (CSBA)⁵ and identified five common survey items that are similar to those asked in the MCRMC survey as listed in Table 2. Some of these items are exactly the same in terms of both the question text and category options, whereas some others are not exactly the same. Though some of the other questions are not parallel, the standard deviations from these CSBA survey items can still be used as the best input available for sample-size calculation.⁶

Note that the formula in (2) for calculating sample size only deals with one variable, whereas in reality, a survey deals with multiple variables. For each stratum, the sample size may be calculated using standard deviation from any of the five variables above. So, there are competing sample-size requirements across these variables; a sample size that meets precision requirement based on one variable does not necessarily produce an acceptable margin of error for other variables. In our design, instead of using any single standard deviation from those five variables, we can calculate the average standard deviation from those five variables as the standard deviation for calculating the sample size.

⁵ <http://www.csbaonline.org/publications/2012/07/rebalancing-military-compensation-an-evidence-based-approach/>.

⁶ The standard deviation from the past survey can be used to get the idea of variability in the respondent answers given similar type of questions are being asked to the same type of population.

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Another factor to consider when using the standard deviation from CSBA is that the CSBA survey was based on a relatively small sample, where in some MCRMC sampling strata, the CSBA sample size is very small (less than 10). In such cases, the standard deviation can be unreliable and tends to be overestimated. For this reason, whenever the CSBA sample size in a stratum is smaller than 10, instead of using the average standard deviations from the five variables within the strata, we used the average of the population standard deviations across the strata overall to compute the stratum sample-size requirements.

3. Target completes

The sample-size calculation laid out above will produce a sample size required for data analyses to meet the pre-specified precision requirement. In the data collection, however, nonresponse exists so that the final total number of cases available for data analyses will be less than what we have at the beginning of data collection. So, the sample size laid out above is actually the target number of completes or respondents to the survey. Using the formula above, the completed interview sample-size requirements for each stratum to obtain the required precision from the MCRMC survey are given in Appendix Tables A.1 for active duty, A.2 for reserve, and A.3 for retiree. The total number of completes for active duty, reserve, and retiree populations are given below:

- Active duty: 13,242
- Reserve: 9,541
- Retiree: 7,472

4. Response rates and initial sample size

To account for potential survey nonresponse, the effective sample size above must be increased to obtain the sample size to be drawn from the sampling frame; that is, by dividing the effective sample size with the estimated response rate for each sampling stratum. The response rates from past surveys for similar populations and with similar modes of data collection can be used for this sample-size calculation.

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Table 2. Survey items in common between CSBA and MCRMC surveys

CSBA survey	MCRMC survey
One-time increase basic pay: <ul style="list-style-type: none"> • 0% • 5% • 10% • 15% 	One-time base pay increase: <ul style="list-style-type: none"> • 0% • 5% • 10% • 15% • 20%
Retirement collection age: <ul style="list-style-type: none"> • No age limit • Age 50 • Age 55 • Age 60 • Age 65 	Retirement eligibility age: <ul style="list-style-type: none"> • 40 • 45 • 50 • 55 • 60 • 65
Time in service requirement for pension benefits: <ul style="list-style-type: none"> • 15 • 20 • 25 • 30 	Retirement pay service qualification: <ul style="list-style-type: none"> • 15 • 20 • 25 • 30
Percentage of contribution to retirement plan: <ul style="list-style-type: none"> • 10% of basic pay • 15% of basic pay • 20% of basic pay • 25% of basic pay 	Mandatory contribution to plan (TSP): <ul style="list-style-type: none"> • 0% • 2.50% • 5% • 7.50% • 10%
Active duty dependent health care fees: <ul style="list-style-type: none"> • \$0/month • \$40/month • \$80/month • \$120/month • \$160/month 	Monthly health care premiums: <ul style="list-style-type: none"> • \$0 • \$100 • \$200 • \$300 • \$400

Experience has shown that the population of military personnel, including reserve personnel and retirees, is a difficult one to survey. The response rates for surveying this population vary depending on the survey topics and the modes of data collection. The response rates from the most recent (2013) Status of Forces (SOF) survey conducted by DMDC can be used to calculate initial sample size drawn from the sampling frames. In this case, the estimate of response rates only are available for the active duty and reserve populations, but not for the retiree population. The response rates for these two populations are given in Appendix Tables A.1 and A.2.

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For the retiree population, response rates are not available from the SOF survey.⁷ MCRMC expects an estimated response rate of 25 percent of the retiree sample contacted based on last year's customer satisfaction survey; however, this data was not sufficient to provide estimates of the response rates at the stratum level.⁸

In addition, we increased the sample size by a half due to the fact that in the MCRMC survey, there will be no nonrespondent follow-up either through mail or telephone survey. The final numbers of cases will be pulled from the sampling frames that are given in Appendix Tables A.1, A.2, and A.3; that is, a total of 68,271 active duty members, 59,621 reserve/guard members, and 42,772 retirees.

D. Sample selection method

1. Probability sampling

Sample selection within each sampling stratum will implement Chromy's method of sequential random sampling (Chromy 1979). A sample will be selected with equal probability and without replacement. This procedure offers the advantages of the systematic sampling approach, but eliminates the risk of systematic, list-order bias. In Chromy's sequential selection, the procedure uses hierarchic serpentine ordering for sorting units within stratum by default. Serpentine sorting is a technique in which the sort order is reversed as each boundary for higher-levels of sort variables is crossed to preserve the similarity of adjacent cases in the sorted list. For instance, using serpentine sorting based on three variables, each with three categories (low, medium, and high), cases will be ordered as follows:

⁷ In a pilot survey on civilian health insurance conducted by RAND (Mariano et al. 2007), 59.7 percent of the sampled military retirees responded to the telephone survey (advance-notification letters followed by CATI). Similarly, in a study on the views of the American public and U.S. foreign affairs experts on China policies conducted by the Pew Research Center (2012), only 25 percent of sampled military retirees responded; this survey relied on a combination of web and telephone surveys (mailed advance letters, emails, and phone follow-ups). The quarterly Health Care Survey of DoD Beneficiaries, sponsored by TRICARE Management Activity, has response rates of around 13.5 percent to its web surveys (mailed advance letters with the URL and password for the surveys).

⁸ DMDC maintains extensive data on survey response rates by subgroups for the active and selected reserves, but has no experience surveying military retirees. DFAS does conduct customer satisfaction surveys to include military retirees, but does not retain any data on response rates for subgroups. For last year's customer satisfaction survey, DFAS estimated a 22.6 percent response rate for those military retirees contacted by email. Because of the nature of the content in its survey, MCRMC increased the average response rate slightly to 25 percent for military retirees.

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Variable 1	Variable 2	Variable 3
Low	Low	Low Medium High
	Medium	High Medium Low
	High	Low Medium High
Medium	High	High Medium Low
	Medium	Low Medium High
	Low	High Medium Low
High	Low	Low Medium High
	Medium	High Medium Low
	High	Low Medium High

Within each sampling stratum, we will sort cases by other key variables not used for explicit stratification as follows:

- **Active duty population:**
 - Service:
 - Air Force
 - Army
 - Coast Guard
 - Marine Corps
 - Navy

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- GENDER:
 - Male/unknown
- **Reserve population:**
 - RESERVE COMPONENT:
 - Air Force (Guard and Reserve)
 - Army (Guard and Reserve)
 - Marine Corps (Reserve)
 - Navy (Reserve)
 - GENDER:
 - Female
 - Male/unknown
- **Retiree population:**
 - SERVICE:
 - Air Force
 - Army
 - Coast Guard
 - Marine Corps
 - Navy
 - GENDER:
 - Female
 - Male/unknown
 -
 - RETIREMENT TYPE (currently):
 - Disability retired
 - Nondisability retired

Sequential random sampling controls the distribution of the sample by spreading it across these demographic variables. In the SAS PROC SURVEYSELECT, SAS procedure for sample selection, these variables are called CONTROL variables.

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2. SAS codes

Sample selection will use SAS PROC SURVEYSELECT available in SAS version 8 or higher. The code requires a seed to generate a pseudo-random number for sequential sample selection.⁹ Prior to executing sample selection using PROC SURVEYSELECT, the sampling frame data set needs to be sorted by the sampling stratification variables (required by SAS PROC SURVEYSELECT). Example of SAS codes are given below for selection of retiree samples.

```
proc sort data=FRAME;  
by REGION FAMILY_STATUS PAY_GROUP DEPLOYMENT;  
run;  
  
data SSIZE (keep= REGION FAMILY_STATUS PAY_GROUP DEPLOYMENT  
_NSIZE_);  
set SSIZE;  
rename SAMPLESIZE = _NSIZE_;  
run;  
  
proc surveyselect  
data= FRAME method= SEQ sampsize= SSIZE seed= 12345  
out= SAMPLE_FILE noprint;  
strata REGION FAMILY_STATUS PAY_GROUP DEPLOYMENT;  
control SERVICE GENDER;  
id UNIQUEID REGION FAMILY_STATUS PAY_GROUP DEPLOYMENT  
SERVICE GENDER;  
run;
```

The SAS codes require two input data files:

1. Sampling frame data set, prepared by DMDC (FRAME in the example above)
2. Sample-size allocation data set, prepared by Mathematica (SSIZE in the example above)

⁹ It is recommended that a fixed seed be used when running a sample selection. The reason for doing so ensures that if a sample selection needs to be rerun (for example, the need to include more identification variables), the selected samples will not be changed. A fixed number is one other than 0 (for example, SEED=12345) instead of SEED=0, which is the computer time.

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The SAS codes will perform the following functions:

- Sort the sampling frame by the sampling stratification variables
- Read sample-size allocation file and rename the variable for sample size into a SAS generic variable name **_NSIZE_**
- Perform sample selection:
 - Sort input data by CONTROL variables (carried out internally by PROC SURVEYSELECT)
 - Draw sample
 - Calculate basic sampling weights (carried out internally by PROC SURVEYSELECT)
 - Output the sample file (SAMPLE_FILE in the example above)

PROC SURVEYSELECT will produce the basic sampling weight. The generic variable name for sampling weight is called “samplingweight.” Please keep this variable because it will be used for weighting and data analysis later. The ID statement in PROC SURVEYSELECT will include variables from the DATA= input data set to be included in the OUT= data set of the sample. If there is no ID statement, PROC SURVEYSELECT includes all variables from the DATA= data set in the OUT= data set.

3. Sample checks

When the samples are drawn from the sampling frame, the cases on each subpopulation of active duty, reserve, and retiree samples should have approximately the same distribution on key variables (the sampling stratification variables) as do the cases on the sampling frame. Weighted frequency tables and percentage distributions must be produced based on each subpopulation sample. (The numbers should be weighted by their respective sampling weights.) The sample weighted count/distribution should be compared with the frame count/distribution by sampling the variables as well as the sorting the variables used in sample selection.

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APPENDICES

Table A.1. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for active-duty population by sampling strata

Table A.2. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for reserve/guard population by sampling strata

Table A.3. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for retiree population by sampling strata

Table A.4. Total count in the target population (overall retirees) and in the sampling frame (retirees with email addresses) by sampling strata

Table A.5. Distribution/proportion in the target population (overall retirees) and in the sampling frame (retirees with email address) by sampling strata

Table A.1. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for active-duty population by sampling strata

Sampling strata				Response rate from status of forces active duty 2013 survey								
Region	Family status	Pay group	Deployment	Total population	Average standard deviations	Target number of completes	Sample size	Respondents	Survey response rate	Response rate for	Sample size	Sampling rate
					from CSBA survey	sample size calculation ¹						
US	Married With Children	1: O1-O3	Deployed	27,506	27.34	156	2,463	985	39.99%	26.66%	585	2.1%
US	Married With Children	1: O1-O3	Never Deployed	11,639	27.34	155	845	329	38.94%	25.96%	597	5.1%
US	Married With Children	2: O4-O6	Deployed	48,176	27.34	157	4,485	2,295	51.17%	34.11%	460	1.0%
US	Married With Children	2: O4-O6	Never Deployed	9,507	27.34	155	651	330	50.71%	33.81%	458	4.8%
US	Married With Children	3: W1-W5	Deployed	11,763	27.34	155	1,461	603	41.28%	27.52%	563	4.8%
US	Married With Children	3: W1-W5	Never Deployed	1,510	27.34	142	65	25	38.69%	25.79%	551	36.5%
US	Married With Children	4: E1-E4	Deployed	37,641	34.53	157	2,283	253	11.07%	7.38%	2,128	5.7%
US	Married With Children	4: E1-E4	Never Deployed	44,024	34.53	157	1,990	263	13.22%	8.81%	1,781	4.0%
US	Married With Children	5: E5-E6	Deployed	157,776	22.98	157	3,935	1,054	26.78%	17.85%	879	0.6%
US	Married With Children	5: E5-E6	Never Deployed	32,138	35.89	156	551	144	26.09%	17.39%	897	2.8%
US	Married With Children	6: E7-E9	Deployed	75,392	33.11	157	1,977	865	43.77%	29.18%	538	0.7%
US	Married With Children	6: E7-E9	Never Deployed	11,510	33.11	155	200	82	41.15%	27.43%	565	4.9%
US	Married Without Children	1: O1-O3	Deployed	15,935	33.63	172	1,476	575	38.98%	25.99%	662	4.2%
US	Married Without Children	1: O1-O3	Never Deployed	13,138	35.43	191	912	334	36.58%	24.39%	783	6.0%
US	Married Without Children	2: O4-O6	Deployed	8,677	14.47	154	836	441	52.72%	35.14%	438	5.0%
US	Married Without Children	2: O4-O6	Never Deployed	1,922	34.67	169	125	63	50.06%	33.37%	506	26.3%
US	Married Without Children	3: W1-W5	Deployed	1,887	39.91	145	241	116	48.26%	32.17%	451	23.9%
US	Married Without Children	3: W1-W5	Never Deployed	329	39.91	107	15	1	7.30%	4.87%	329	100.0%
US	Married Without Children	4: E1-E4	Deployed	32,782	31.33	151	1,977	241	12.19%	8.13%	1,857	5.7%
US	Married Without Children	4: E1-E4	Never Deployed	62,735	34.23	157	2,497	350	14.03%	9.35%	1,679	2.7%
US	Married Without Children	5: E5-E6	Deployed	51,979	33.96	177	1,311	355	27.10%	18.06%	980	1.9%
US	Married Without Children	5: E5-E6	Never Deployed	14,738	32.46	161	303	76	25.17%	16.78%	959	6.5%
US	Married Without Children	6: E7-E9	Deployed	11,108	23.67	155	293	143	48.89%	32.59%	476	4.3%
US	Married Without Children	6: E7-E9	Never Deployed	1,810	28.45	145	37	14	36.95%	24.63%	589	32.5%
US	Single With Children	1: O1-O3	Deployed	2,193	33.05	156	223	63	28.32%	18.88%	826	37.7%
US	Single With Children	1: O1-O3	Never Deployed	985	31.92	136	68	28	41.20%	27.47%	495	50.3%
US	Single With Children	2: O4-O6	Deployed	2,721	32.60	155	299	140	46.84%	31.23%	496	18.2%

Table A.1. (Continued)

Sampling strata				Response rate from status of forces active duty 2013 survey								
Region	Family status	Pay group	Deployment	Total population	Average standard deviations	Target number of completes	Sample size	Respondents	Survey response rate	Response rate for sample size calculation ¹	Sample size	Sampling rate
					from CSBA survey							
US	Single With Children	2: O4-O6	Never Deployed	569	32.57	127	42	16	37.23%	24.82%	512	90.0%
US	Single With Children	3: W1-W5	Deployed	1,262	39.61	140	188	65	34.32%	22.88%	612	48.5%
US	Single With Children	3: W1-W5	Never Deployed	119	31.89	68	7	3	47.40%	31.60%	119	100.0%
US	Single With Children	4: E1-E4	Deployed	6,098	27.83	117	475	50	10.46%	6.97%	1,677	27.5%
US	Single With Children	4: E1-E4	Never Deployed	7,971	30.21	154	405	44	10.92%	7.28%	2,115	26.5%
US	Single With Children	5: E5-E6	Deployed	22,779	32.65	163	790	180	22.76%	15.17%	1,074	4.7%
US	Single With Children	5: E5-E6	Never Deployed	4,525	32.50	157	113	29	25.75%	17.17%	915	20.2%
US	Single With Children	6: E7-E9	Deployed	9,895	31.07	147	384	140	36.57%	24.38%	603	6.1%
US	Single With Children	6: E7-E9	Never Deployed	1,458	32.24	144	45	17	37.23%	24.82%	580	39.8%
US	Single Without Children	1: O1-O3	Deployed	19,558	36.97	208	2,003	681	34.00%	22.67%	918	4.7%
US	Single Without Children	1: O1-O3	Never Deployed	29,064	33.08	168	2,297	656	28.55%	19.03%	883	3.0%
US	Single Without Children	2: O4-O6	Deployed	5,678	34.58	153	532	264	49.58%	33.05%	463	8.2%
US	Single Without Children	2: O4-O6	Never Deployed	1,011	34.40	155	65	36	56.15%	37.43%	414	40.9%
US	Single Without Children	3: W1-W5	Deployed	1,179	36.97	139	163	59	35.92%	23.95%	580	49.2%
US	Single Without Children	3: W1-W5	Never Deployed	223	33.08	93	24	3	13.79%	9.19%	223	100.0%
US	Single Without Children	4: E1-E4	Deployed	72,003	33.19	169	4,922	438	8.90%	5.93%	2,849	4.0%
US	Single Without Children	4: E1-E4	Never Deployed	259,544	33.94	177	11,693	1,155	9.88%	6.59%	2,687	1.0%
US	Single Without Children	5: E5-E6	Deployed	55,466	35.04	189	1,927	471	24.46%	16.31%	1,159	2.1%
US	Single Without Children	5: E5-E6	Never Deployed	18,923	31.99	156	493	100	20.23%	13.49%	1,157	6.1%
US	Single Without Children	6: E7-E9	Deployed	7,440	29.28	154	208	96	46.36%	30.91%	498	6.7%
US	Single Without Children	6: E7-E9	Never Deployed	1,010	32.02	137	31	8	26.38%	17.59%	779	77.1%
Others	Married With Children	1: O1-O3	Deployed	3,310	27.34	150	238	100	42.13%	28.09%	534	16.1%
Others	Married With Children	1: O1-O3	Never Deployed	1,280	27.34	140	109	39	36.04%	24.03%	583	45.5%
Others	Married With Children	2: O4-O6	Deployed	7,327	27.34	154	567	282	49.67%	33.11%	465	6.3%
Others	Married With Children	2: O4-O6	Never Deployed	1,027	27.34	136	93	49	53.12%	35.41%	384	37.4%
Others	Married With Children	3: W1-W5	Deployed	1,893	27.34	145	200	99	49.55%	33.03%	439	23.2%
Others	Married With Children	3: W1-W5	Never Deployed	123	27.34	69	5	1	23.95%	15.97%	123	100.0%
Others	Married With Children	4: E1-E4	Deployed	3,601	34.53	151	212	33	15.33%	10.22%	1,477	41.0%
Others	Married With Children	4: E1-E4	Never Deployed	3,917	34.53	151	204	45	21.98%	14.65%	1,030	26.3%
Others	Married With Children	5: E5-E6	Deployed	22,845	22.98	156	623	214	34.28%	22.85%	683	3.0%

Table A.1. (Continued)

Sampling strata				Response rate from status of forces active duty 2013 survey								
Region	Family status	Pay group	Deployment	Total population	Average standard deviations	Target number of completes	Sample size	Respondents	Survey response rate	Response rate for sample size calculation ¹	Sample size	Sampling rate
					from CSBA survey							
Others	Married With Children	5: E5-E6	Never Deployed	4,235	35.89	152	117	35	29.49%	19.66%	773	18.3%
Others	Married With Children	6: E7-E9	Deployed	11,982	33.11	155	247	115	46.40%	30.93%	501	4.2%
Others	Married With Children	6: E7-E9	Never Deployed	1,276	33.11	140	36	21	57.77%	38.51%	364	28.5%
Others	Married Without Children	1: O1-O3	Deployed	2,043	33.63	161	144	75	51.99%	34.66%	464	22.7%
Others	Married Without Children	1: O1-O3	Never Deployed	1,332	35.43	169	100	40	40.43%	26.95%	627	47.1%
Others	Married Without Children	2: O4-O6	Deployed	1,248	14.47	140	68	36	52.84%	35.23%	397	31.8%
Others	Married Without Children	2: O4-O6	Never Deployed	241	34.67	105	23	11	46.11%	30.74%	241	100.0%
Others	Married Without Children	3: W1-W5	Deployed	328	39.91	107	29	13	43.85%	29.24%	328	100.0%
Others	Married Without Children	3: W1-W5	Never Deployed	44	39.91	35	9	3	37.70%	25.13%	44	100.0%
Others	Married Without Children	4: E1-E4	Deployed	4,080	31.33	146	222	45	20.25%	13.50%	1,081	26.5%
Others	Married Without Children	4: E1-E4	Never Deployed	7,558	34.23	154	398	80	20.20%	13.47%	1,144	15.1%
Others	Married Without Children	5: E5-E6	Deployed	8,968	33.96	174	413	133	32.13%	21.42%	812	9.1%
Others	Married Without Children	5: E5-E6	Never Deployed	2,367	32.46	152	90	26	28.55%	19.03%	799	33.8%
Others	Married Without Children	6: E7-E9	Deployed	1,867	23.67	145	66	38	57.21%	38.14%	380	20.4%
Others	Married Without Children	6: E7-E9	Never Deployed	181	28.45	84	5	1	25.41%	16.94%	181	100.0%
Others	Single With Children	1: O1-O3	Deployed	227	33.05	97	13	2	13.77%	9.18%	227	100.0%
Others	Single With Children	1: O1-O3	Never Deployed	93	31.92	59	12	2	20.38%	13.59%	93	100.0%
Others	Single With Children	2: O4-O6	Deployed	308	32.60	107	34	16	47.17%	31.45%	308	100.0%
Others	Single With Children	2: O4-O6	Never Deployed	41	32.57	33	5	-	-	-	41	100.0%
Others	Single With Children	3: W1-W5	Deployed	148	39.61	77	18	10	54.56%	36.37%	148	100.0%
Others	Single With Children	3: W1-W5	Never Deployed	14	31.89	13	0	-	-	-	14	100.0%
Others	Single With Children	4: E1-E4	Deployed	521	27.83	97	55	9	17.18%	11.45%	521	100.0%
Others	Single With Children	4: E1-E4	Never Deployed	767	30.21	131	61	5	8.64%	5.76%	767	100.0%
Others	Single With Children	5: E5-E6	Deployed	2,759	32.65	155	149	42	28.42%	18.94%	818	29.6%
Others	Single With Children	5: E5-E6	Never Deployed	510	32.50	124	31	5	15.37%	10.25%	510	100.0%
Others	Single With Children	6: E7-E9	Deployed	1,291	31.07	134	56	26	46.79%	31.19%	430	33.3%
Others	Single With Children	6: E7-E9	Never Deployed	138	32.24	75	6	5	77.95%	51.97%	138	100.0%
Others	Single Without Children	1: O1-O3	Deployed	2,662	36.97	195	259	109	41.95%	27.97%	697	26.2%
Others	Single Without Children	1: O1-O3	Never Deployed	2,668	33.08	159	230	70	30.54%	20.36%	781	29.3%
Others	Single Without Children	2: O4-O6	Deployed	991	34.58	136	139	61	43.90%	29.27%	465	46.9%

Table A.1. (Continued)

Sampling strata				Response rate from status of forces active duty 2013 survey								
Region	Family status	Pay group	Deployment	Total population	Average standard deviations from CSBA survey	Target number of completes	Sample size	Respondents	Survey response rate	Response rate for sample size calculation ¹	Sample size	Sampling rate
Others	Single Without Children	2: O4-O6	Never Deployed	123	34.40	74	14	4	27.52%	18.35%	123	100.0%
Others	Single Without Children	3: W1-W5	Deployed	180	36.97	84	24	13	52.19%	34.79%	180	100.0%
Others	Single Without Children	3: W1-W5	Never Deployed	32	33.08	27	1	1	100.00%	66.67%	32	100.0%
Others	Single Without Children	4: E1-E4	Deployed	13,114	33.19	168	872	138	15.88%	10.58%	1,587	12.1%
Others	Single Without Children	4: E1-E4	Never Deployed	41,349	33.94	177	3,489	532	15.25%	10.17%	1,741	4.2%
Others	Single Without Children	5: E5-E6	Deployed	11,214	35.04	186	1,151	326	28.35%	18.90%	984	8.8%
Others	Single Without Children	5: E5-E6	Never Deployed	3,880	31.99	152	450	113	25.11%	16.74%	908	23.4%
Others	Single Without Children	6: E7-E9	Deployed	1,297	29.28	140	115	54	46.92%	31.28%	448	34.5%
Others	Single Without Children	6: E7-E9	Never Deployed	111	32.02	66	14	4	26.33%	17.55%	111	100.0%
Total				1,394,807		13,242	69,742	17,760			68,271	4.9%

¹Given that MCRMC will not be marketing this survey through direct mail in addition to email, as DMDC has for their SOF surveys, we increased the MCRMC sample size by 50 percent.

Table A.2. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for reserve/guard population by sampling strata

Sampling strata			Response rate from Status of Forces Active Duty 2013 Survey								
Family status	Pay group	Deployment	Total population	Average standard deviations from CSBA survey	Target number of completes	Sample size		Survey response rate	Response rate for sample size calculation ¹	Sample size	Sampling rate
						Sample size	Respondents				
Married With Children	1: O1-O3	Deployed	14,084	33.72	213	3,666	1,388	37.85%	25.24%	844	6.0%
Married With Children	1: O1-O3	Never Deployed	8,366	35.23	210	2,195	794	36.19%	24.13%	870	10.4%
Married With Children	2: O4-O6	Deployed	28,296	33.72	214	5,900	2,961	50.19%	33.46%	640	2.3%
Married With Children	2: O4-O6	Never Deployed	9,238	35.23	211	2,073	990	47.77%	31.85%	663	7.2%
Married With Children	3: W1-W5	Deployed	5,827	33.72	208	455	201	44.09%	29.39%	708	12.2%
Married With Children	3: W1-W5	Never Deployed	1,309	35.23	185	105	49	46.67%	31.11%	595	45.5%
Married With Children	4: E1-E4	Deployed	20,740	50.78	214	1,555	135	8.67%	5.78%	3,704	17.9%
Married With Children	4: E1-E4	Never Deployed	25,658	50.78	214	1,768	272	15.40%	10.27%	2,084	8.1%
Married With Children	5: E5-E6	Deployed	78,583	50.78	215	5,190	1,339	25.80%	17.20%	1,250	1.6%
Married With Children	5: E5-E6	Never Deployed	25,977	50.78	214	1,929	576	29.85%	19.90%	1,075	4.1%
Married With Children	6: E7-E9	Deployed	42,919	50.78	215	3,740	1,769	47.31%	31.54%	682	1.6%
Married With Children	6: E7-E9	Never Deployed	14,639	50.78	213	1,848	904	48.91%	32.61%	653	4.5%
Married Without Children	1: O1-O3	Deployed	5,844	33.72	208	1,718	598	34.80%	23.20%	897	15.3%
Married Without Children	1: O1-O3	Never Deployed	4,968	35.23	207	1,368	466	34.03%	22.69%	912	18.4%
Married Without Children	2: O4-O6	Deployed	6,162	37.59	209	1,310	653	49.83%	33.22%	629	10.2%
Married Without Children	2: O4-O6	Never Deployed	2,425	37.59	198	547	280	51.15%	34.10%	581	24.0%
Married Without Children	3: W1-W5	Deployed	1,744	33.72	192	148	71	47.88%	31.92%	601	34.5%
Married Without Children	3: W1-W5	Never Deployed	475	35.23	149	43	22	51.16%	34.11%	437	92.0%
Married Without Children	4: E1-E4	Deployed	11,007	30.78	212	1,004	98	9.74%	6.50%	3,264	29.7%
Married Without Children	4: E1-E4	Never Deployed	20,010	41.80	214	1,471	212	14.40%	9.60%	2,229	11.1%
Married Without Children	5: E5-E6	Deployed	25,598	34.24	214	1,880	455	24.23%	16.15%	1,325	5.2%
Married Without Children	5: E5-E6	Never Deployed	10,151	35.82	194	847	246	29.00%	19.33%	1,003	9.9%
Married Without Children	6: E7-E9	Deployed	11,954	28.09	212	955	476	49.88%	33.25%	638	5.3%
Married Without Children	6: E7-E9	Never Deployed	4,400	49.33	206	485	253	52.25%	34.83%	591	13.4%
Single With Children	1: O1-O3	Deployed	2,234	35.59	197	522	138	26.42%	17.61%	1,119	50.1%
Single With Children	1: O1-O3	Never Deployed	1,711	36.15	180	431	114	26.41%	17.61%	1,022	59.7%
Single With Children	2: O4-O6	Deployed	2,770	35.56	182	531	238	44.86%	29.91%	609	22.0%

Table A.2. (Continued)

Sampling strata			Response rate from Status of Forces Active Duty 2013 Survey								
Family status	Pay group	Deployment	Total population	Average standard deviations	Target number of completes	Sample size	Respondents	Survey response rate	Response rate for sample size calculation ¹	Sample size	Sampling rate
				from CSBA survey							
Single With Children	2: O4-O6	Never Deployed	1,021	34.26	154	213	92	43.13%	28.75%	536	52.5%
Single With Children	3: W1-W5	Deployed	838	33.43	172	75	32	42.44%	28.29%	608	72.6%
Single With Children	3: W1-W5	Never Deployed	256	33.43	117	19	10	52.63%	35.09%	256	100.0%
Single With Children	4: E1-E4	Deployed	9,002	36.96	211	676	60	8.89%	5.93%	3,561	39.6%
Single With Children	4: E1-E4	Never Deployed	16,754	36.96	213	1,069	111	10.35%	6.90%	3,087	18.4%
Single With Children	5: E5-E6	Deployed	22,438	31.01	214	1,412	337	23.87%	15.91%	1,345	6.0%
Single With Children	5: E5-E6	Never Deployed	8,779	33.80	173	608	156	25.72%	17.15%	1,009	11.5%
Single With Children	6: E7-E9	Deployed	8,115	33.32	210	679	290	42.76%	28.51%	737	9.1%
Single With Children	6: E7-E9	Never Deployed	3,367	33.12	161	408	176	43.20%	28.80%	559	16.6%
Single Without Children	1: O1-O3	Deployed	8,839	40.38	211	2,494	702	28.13%	18.75%	1,125	12.7%
Single Without Children	1: O1-O3	Never Deployed	12,611	37.59	212	2,641	666	25.22%	16.81%	1,261	10.0%
Single Without Children	2: O4-O6	Deployed	5,062	35.29	207	1,062	481	45.33%	30.22%	685	13.5%
Single Without Children	2: O4-O6	Never Deployed	1,664	35.29	191	354	158	44.60%	29.73%	642	38.6%
Single Without Children	3: W1-W5	Deployed	1,412	40.38	187	123	46	37.21%	24.81%	754	53.4%
Single Without Children	3: W1-W5	Never Deployed	373	37.59	137	30	11	37.93%	25.29%	373	100.0%
Single Without Children	4: E1-E4	Deployed	45,084	31.11	215	3,977	279	7.02%	4.68%	4,595	10.2%
Single Without Children	4: E1-E4	Never Deployed	214,994	31.11	216	14,389	1,111	7.72%	5.15%	4,197	2.0%
Single Without Children	5: E5-E6	Deployed	51,509	36.05	215	3,853	743	19.30%	12.86%	1,671	3.2%
Single Without Children	5: E5-E6	Never Deployed	24,005	36.05	214	1,578	329	20.88%	13.92%	1,537	6.4%
Single Without Children	6: E7-E9	Deployed	8,625	45.40	211	699	287	41.12%	27.41%	770	8.9%
Single Without Children	6: E7-E9	Never Deployed	2,784	32.55	200	314	137	43.58%	29.05%	688	24.7%
Total			834,621		9,541	80,357	21,913			59,621	7.1%

¹Given that MCRMC will not be marketing this survey through direct mail in addition to email, as DMDC has for their SOF surveys, we increased the MCRMC sample size by 50 percent.

Table A.3. Sampling frame counts, standard deviation, target number of complete interviews, estimated response rate, and sample size for retiree population by sampling strata

Sampling strata				Total population ¹	Average standard deviations from CSBA survey	Target number of completes	Estimated response rate from past survey	Response rate for sample size calculation ²	Sample size	Sampling rate
Component (at retirement)	Grade (at retirement)	Family status (current)	Age group (current)							
1: Active	1: Officer	1: Single With Children	1: < 55	4,660	36.48	169	25%	16.7%	1,014	21.8%
1: Active	1: Officer	1: Single With Children	2: 55-64	1,977	36.48	161	25%	16.7%	966	48.9%
1: Active	1: Officer	1: Single With Children	3: >= 65	457	36.48	127	25%	16.7%	457	100.0%
1: Active	1: Officer	2: Single Without Children	1: < 55	6,225	31.24	171	25%	16.7%	1,026	16.5%
1: Active	1: Officer	2: Single Without Children	2: 55-64	10,827	31.57	173	25%	16.7%	1,038	9.6%
1: Active	1: Officer	2: Single Without Children	3: >= 65	16,984	26.10	174	25%	16.7%	1,044	6.1%
1: Active	1: Officer	3: Married With Children	1: < 55	50,764	32.54	163	25%	16.7%	978	1.9%
1: Active	1: Officer	3: Married With Children	2: 55-64	24,517	34.34	180	25%	16.7%	1,080	4.4%
1: Active	1: Officer	3: Married With Children	3: >= 65	6,652	34.93	171	25%	16.7%	1,026	15.4%
1: Active	1: Officer	4: Married Without Children	1: < 55	18,317	30.81	145	25%	16.7%	870	4.7%
1: Active	1: Officer	4: Married Without Children	2: 55-64	72,405	33.29	170	25%	16.7%	1,020	1.4%
1: Active	1: Officer	4: Married Without Children	3: >= 65	181,244	31.62	154	25%	16.7%	924	0.5%
1: Active	2: Enlisted	1: Single With Children	1: < 55	28,394	36.48	174	25%	16.7%	1,044	3.7%
1: Active	2: Enlisted	1: Single With Children	2: 55-64	6,271	36.48	171	25%	16.7%	1,026	16.4%
1: Active	2: Enlisted	1: Single With Children	3: >= 65	1,399	36.48	156	25%	16.7%	936	66.9%
1: Active	2: Enlisted	2: Single Without Children	1: < 55	53,524	36.13	200	25%	16.7%	1,200	2.2%
1: Active	2: Enlisted	2: Single Without Children	2: 55-64	46,949	26.78	110	25%	16.7%	660	1.4%
1: Active	2: Enlisted	2: Single Without Children	3: >= 65	49,108	39.50	175	25%	16.7%	1,050	2.1%
1: Active	2: Enlisted	3: Married With Children	1: < 55	189,418	31.08	149	25%	16.7%	894	0.5%
1: Active	2: Enlisted	3: Married With Children	2: 55-64	54,010	29.70	136	25%	16.7%	816	1.5%
1: Active	2: Enlisted	3: Married With Children	3: >= 65	15,668	44.38	173	25%	16.7%	1,038	6.6%
1: Active	2: Enlisted	4: Married Without Children	1: < 55	126,672	32.56	163	25%	16.7%	978	0.8%
1: Active	2: Enlisted	4: Married Without Children	2: 55-64	240,275	32.95	167	25%	16.7%	1,002	0.4%
1: Active	2: Enlisted	4: Married Without Children	3: >= 65	418,378	31.15	150	25%	16.7%	900	0.2%
2: Reserve	1: Officer	1: Single With Children	1: < 55	197	36.48	93	25%	16.7%	197	100.0%
2: Reserve	1: Officer	1: Single With Children	2: 55-64	398	36.48	122	25%	16.7%	398	100.0%
2: Reserve	1: Officer	1: Single With Children	3: >= 65	365	36.48	119	25%	16.7%	365	100.0%
2: Reserve	1: Officer	2: Single Without Children	1: < 55	422	31.24	124	25%	16.7%	422	100.0%
2: Reserve	1: Officer	2: Single Without Children	2: 55-64	4,760	31.57	169	25%	16.7%	1,014	21.3%
2: Reserve	1: Officer	2: Single Without Children	3: >= 65	14,506	26.10	173	25%	16.7%	1,038	7.2%

Table A.3. (Continued)

Sampling strata				Total population ¹	Average standard deviations from CSBA survey	Target number of completes	Estimated response rate from past survey	Response rate for sample size calculation ²	Sample size	Sampling rate
Component (at retirement)	Grade (at retirement)	Family status (current)	Age group (current)							
2: Reserve	1: Officer	3: Married With Children	1: < 55	1,232	32.54	144	25%	16.7%	864	70.1%
2: Reserve	1: Officer	3: Married With Children	2: 55-64	3,605	34.34	173	25%	16.7%	1,038	28.8%
2: Reserve	1: Officer	3: Married With Children	3: >= 65	3,611	34.93	167	25%	16.7%	1,002	27.7%
2: Reserve	1: Officer	4: Married Without Children	1: < 55	505	30.81	114	25%	16.7%	505	100.0%
2: Reserve	1: Officer	4: Married Without Children	2: 55-64	22,601	33.29	170	25%	16.7%	1,020	4.5%
2: Reserve	1: Officer	4: Married Without Children	3: >= 65	108,931	31.62	154	25%	16.7%	924	0.8%
2: Reserve	2: Enlisted	1: Single With Children	1: < 55	8,204	36.48	172	25%	16.7%	1,032	12.6%
2: Reserve	2: Enlisted	1: Single With Children	2: 55-64	956	36.48	148	25%	16.7%	888	92.9%
2: Reserve	2: Enlisted	1: Single With Children	3: >= 65	606	36.48	136	25%	16.7%	606	100.0%
2: Reserve	2: Enlisted	2: Single Without Children	1: < 55	9,008	36.13	197	25%	16.7%	1,182	13.1%
2: Reserve	2: Enlisted	2: Single Without Children	2: 55-64	13,431	26.78	110	25%	16.7%	660	4.9%
2: Reserve	2: Enlisted	2: Single Without Children	3: >= 65	26,846	39.50	174	25%	16.7%	1,044	3.9%
2: Reserve	2: Enlisted	3: Married With Children	1: < 55	51,295	31.08	149	25%	16.7%	894	1.7%
2: Reserve	2: Enlisted	3: Married With Children	2: 55-64	7,007	29.70	133	25%	16.7%	798	11.4%
2: Reserve	2: Enlisted	3: Married With Children	3: >= 65	5,627	44.38	170	25%	16.7%	1,020	18.1%
2: Reserve	2: Enlisted	4: Married Without Children	1: < 55	15,328	32.56	162	25%	16.7%	972	6.3%
2: Reserve	2: Enlisted	4: Married Without Children	2: 55-64	57,052	32.95	167	25%	16.7%	1,002	1.8%
2: Reserve	2: Enlisted	4: Married Without Children	3: >= 65	160,600	31.15	150	25%	16.7%	900	0.6%
Total				2,142,188		7,472			42,772	2.0%

¹The database contained missing values in family status and grade. Missing values in family status were distributed to other categories proportionally, and missing values in grade were combined with enlisted grade.

²Given that MCRMC will not be marketing this survey through direct mail in addition to email, as DMDC has for their SOF surveys, we increased the MCRMC sample size by 50 percent.

Table A.4. Total count in the target population (overall retirees) and in the sampling frame (retirees with email addresses) by sampling strata

Component	Grade	Family status	Overall (target population)				With email (sampling frame)			
			< 55 years old	55 - 64 years old	≥ 55 years old	Total	< 55 years old	55 - 64 years old	≥ 55 years old	Total
Armed forces, active	Officer	1-Single With Children	4,660	1,977	457	7,094	3,503	1,350	281	5,134
		2-Single Without Children	6,226	10,829	16,990	34,045	4,640	6,916	7,315	18,871
		3-Married With Children	50,763	24,516	6,653	81,932	38,195	16,629	3,840	58,664
		4-Married Without Children	18,317	72,403	181,238	271,958	13,549	49,586	93,717	156,852
	Subtotal		79,966	109,725	205,338	395,029	59,887	74,481	105,153	239,521
	Enlisted	1-Single With Children	28,397	6,273	1,400	36,070	18,898	3,283	498	22,679
		2-Single Without Children	53,525	46,936	49,110	149,571	32,451	21,465	12,933	66,849
		3-Married With Children	189,432	54,017	15,680	259,129	124,976	29,508	6,035	160,519
		4-Married Without Children	126,655	240,279	418,364	785,298	79,390	122,371	129,186	330,947
	Subtotal		398,009	347,505	484,554	1,230,068	255,715	176,627	148,652	580,994
Armed forces, reserve	Officer	1-Single With Children	197	399	365	961	130	217	174	521
		2-Single Without Children	422	4,760	14,508	19,690	235	2,470	5,164	7,869
		3-Married With Children	1,232	3,605	3,610	8,447	777	1,984	1,778	4,539
		4-Married Without Children	505	22,601	108,928	132,034	286	12,284	40,914	53,484
	Subtotal		2,356	31,365	127,411	161,132	1,428	16,955	48,030	66,413
	Enlisted	1-Single With Children	8,206	956	606	9,768	6,613	455	198	7,266
		2-Single Without Children	9,014	13,429	26,840	49,283	6,614	4,947	6,618	18,179
		3-Married With Children	51,287	7,006	5,631	63,924	41,245	3,344	1,968	46,557
		4-Married Without Children	15,328	57,055	160,602	232,985	11,617	22,495	44,213	78,325
	Subtotal		83,835	78,446	193,679	355,960	66,089	31,241	52,997	150,327
Total Armed Forces			564,166	567,041	1,010,982	2,142,189	383,119	299,304	354,832	1,037,255

Note: The database contained missing values in family status and grade. Missing values in family status were distributed to other categories proportionally, and missing values in grade were combined with enlisted grade.

Table A.5. Distribution/proportion in the target population (overall retirees) and in the sampling frame (retirees with email address) by sampling strata

Component	Grade	Family status	Overall (target population)				With email (sampling frame)			
			< 55 years old	55 - 64 years old	≥ 55 years old	Total	< 55 years old	55 - 64 years old	≥ 55 years old	Total
Armed forces, active	Officer	1-Single With Children	0.22%	0.09%	0.02%	0.33%	0.34%	0.13%	0.03%	0.49%
		2-Single Without Children	0.29%	0.51%	0.79%	1.59%	0.45%	0.67%	0.71%	1.82%
		3-Married With Children	2.37%	1.14%	0.31%	3.82%	3.68%	1.60%	0.37%	5.66%
		4-Married Without Children	0.86%	3.38%	8.46%	12.70%	1.31%	4.78%	9.04%	15.12%
		Subtotal	3.73%	5.12%	9.59%	18.44%	5.77%	7.18%	10.14%	23.09%
	Enlisted	1-Single With Children	1.33%	0.29%	0.07%	1.68%	1.82%	0.32%	0.05%	2.19%
		2-Single Without Children	2.50%	2.19%	2.29%	6.98%	3.13%	2.07%	1.25%	6.44%
		3-Married With Children	8.84%	2.52%	0.73%	12.10%	12.05%	2.84%	0.58%	15.48%
		4-Married Without Children	5.91%	11.22%	19.53%	36.66%	7.65%	11.80%	12.45%	31.91%
		Subtotal	18.58%	16.22%	22.62%	57.42%	24.65%	17.03%	14.33%	56.01%
Armed forces, reserve	Officer	1-Single With Children	0.01%	0.02%	0.02%	0.04%	0.01%	0.02%	0.02%	0.05%
		2-Single Without Children	0.02%	0.22%	0.68%	0.92%	0.02%	0.24%	0.50%	0.76%
		3-Married With Children	0.06%	0.17%	0.17%	0.39%	0.07%	0.19%	0.17%	0.44%
		4-Married Without Children	0.02%	1.06%	5.08%	6.16%	0.03%	1.18%	3.94%	5.16%
		Subtotal	0.11%	1.46%	5.95%	7.52%	0.14%	1.63%	4.63%	6.40%
	Enlisted	1-Single With Children	0.38%	0.04%	0.03%	0.46%	0.64%	0.04%	0.02%	0.70%
		2-Single Without Children	0.42%	0.63%	1.25%	2.30%	0.64%	0.48%	0.64%	1.75%
		3-Married With Children	2.39%	0.33%	0.26%	2.98%	3.98%	0.32%	0.19%	4.49%
		4-Married Without Children	0.72%	2.66%	7.50%	10.88%	1.12%	2.17%	4.26%	7.55%
		Subtotal	3.91%	3.66%	9.04%	16.62%	6.37%	3.01%	5.11%	14.49%
Total Armed Forces			26.34%	26.47%	47.19%	100.00%	36.94%	28.86%	34.21%	100.00%

Note: The database contained missing values in family status and grade. Missing values in family status were distributed to other categories proportionally, and missing values in grade were combined with enlisted grade.