

## **Military Pay Postpay Review FY2013 Sampling Plan**

### Background

The Defense Finance & Accounting Service (DFAS), Enterprise Solutions & Standards (ESS), Postpay Review & Analysis (PR&A) directorate located in Indianapolis, IN, serves as the DFAS office of primary responsibility for agency reporting and compliance with the Improper Payments Elimination and Recovery Act of 2010, IPERA, (Pub. L. 111-204).

The PR&A team perform monthly postpay reviews from statistical random samples of military pay accounts paid by the Defense Joint Military Pay System (DJMS) for active duty (AC) and reserve/guard components (RC) and the Marine Corps Total Force System (MCTFS). The purpose of the sampling plan is to provide population estimates and applicable confidence intervals, within specified sampling probability (95%) and precision levels (+/-2.5%), of the percentage of military pay accounts in error at the service component level. In addition, the sampling plan serves as a means to collect data on sampled accounts regarding the accuracy of gross pay and dollar value of overpayments and underpayments as a percentage of gross pay to satisfy improper payments reporting requirements per the IPERA. Root causes of errors by type and category (system or reporting) are recorded and used for preparing reports and balanced scorecard metrics for applicable military payroll activities and the Office of the Under Secretary of Defense (Comptroller).

The PR&A Standard Operating Procedures (SOP) contains guidelines for the performance of the military postpay reviews. Additional guidelines for random reviews in support of the improper payments reporting can be found in OMB guidance to the IPERA.

### Population and Sample Frame

The population of military pay accounts is divided by service component and by the supporting pay systems and operational sites (DJMS-AC, RC and MCTFS). The databases reflect customer base (service component) as well as servicing DFAS site. The following table represents the total annual and average monthly accounts maintained for FY12.

| <b>Military Pay</b>                         |                                   |  |
|---|-----------------------------------|--|
| <b>Service Component</b>                    | <b>Annual Accounts Maintained</b> | <b>Average Monthly Accounts Maintained</b> |
| <b>Army</b>                                 | 7,201,977                         | 600,165                                    |
| <b>Air Force</b>                            | 4,115,591                         | 342,966                                    |
| <b>Navy</b>                                 | 4,013,013                         | 334,418                                    |
| <b>Marine Corps</b>                         | 2,500,269                         | 208,356                                    |
| <b>Total Active Duty (DJMS-AC, MCTFS)</b>   | 17,830,850                        | 1,485,904                                  |
|   |                                   |  |
| <b>Army Reserve</b>                         | 1,098,517                         | 91,543                                     |
| <b>Army National Guard</b>                  | 2,144,791                         | 178,733                                    |
| <b>Air Force Reserve</b>                    | 455,045                           | 37,920                                     |
| <b>Air Guard</b>                            | 695,935                           | 57,995                                     |
| <b>Navy Reserve</b>                         | 371,216                           | 30,935                                     |
| <b>Marine Corps Reserve</b>                 | 245,754                           | 20,480                                     |
| <b>Total Reserve/Guard (DJMS-RC, MCTFS)</b> | 5,011,258                         | 417,605                                    |
|   |                                   |  |
| <b>Total Military Pay</b>                   | <b>22,842,108</b>                 | <b>1,903,509</b>                           |

### Sample Design

The sample design is a simple random sample (attribute) with the purpose of estimating the percentage of military pay accounts in error. The sample also provides sample statistics on the dollar value of improper over and under payments and root cause of error for use in annual IPERA reporting.

The sampling unit is defined as a pay account from the service databases paid through DJMS-AC, RC and MCTFS.

### Sample Size Calculation

The sample size is calculated for 95% confidence and +/-2.5% precision. Per guidance contained in the OMB Circular A-123, Appendix C, the required sample size for each population is based on a higher projected error rate than actual results from prior fiscal years. The FY13 sample size is calculated based on the conservative rate of 15% for Marine Corps Active and Reserve and 25% for all other components. The actual FY12 and historical error rates were four percent or less (three percent for overall active duty and two percent overall for reserve/guard components). The selection of the higher rate is due to the risk of the large dollar amount of annual outlays expended by the Department for military pay.

The DJMS and MCTFS accounts maintained for FY12 are used to calculate the annual sample sizes for FY13. Although the sample size is calculated for an annual plan, the PR&A team conduct the postpay reviews on a monthly basis. The simple random sample size for each component is approximately 800 to 1,200 (65 to 100 per month per component) to satisfy annual estimates for IPERA reporting.

| <b>Military Pay</b>                         |                |               |
|---|----------------|---------------|
| <b>Service Component</b>                    | <b>Monthly</b> | <b>Annual</b> |
| <b>Army</b>                                 | 100            | 1,200         |
| <b>Air Force</b>                            | 100            | 1,200         |
| <b>Navy</b>                                 | 100            | 1,200         |
| <b>Marine Corps</b>                         | 65             | 800           |
| <b>Total Active Duty (DJMS-AC, MCTFS)</b>   | 365            | 4,400         |
|   |                |               |
| <b>Army Reserve</b>                         | 100            | 1,200         |
| <b>Army National Guard</b>                  | 100            | 1,200         |
| <b>Air Force Reserve</b>                    | 100            | 1,200         |
| <b>Air Guard</b>                            | 100            | 1,200         |
| <b>Navy Reserve</b>                         | 100            | 1,200         |
| <b>Marine Corps Reserve</b>                 | 65             | 800           |
| <b>Total Reserve/Guard (DJMS-RC, MCTFS)</b> | 565            | 6,800         |
|   |                |               |
| <b>Total Military Pay</b>                   | <b>930</b>     | <b>11,200</b> |

### Sample Selection

The Defense Manpower Data Center (DMDC) West, Monterey, CA, selects the monthly sample of pay accounts for random review via the Random Number Generator (RNG) from service component databases serviced by the DJMS-AC, RC and MCTFS pay systems. The population of reserve accounts only includes members with pay activity during the past year. Each month, the PR&A provides the DMDC-West with random seed numbers to use with the RNG to ensure randomness of selection and minimize repetition of sampled accounts from one month to the next.

### Treatment of Missing Records

It is unlikely that a sampled pay account would not be available for review (i.e, missing or non-existent pay account). However, if this were to occur, the appropriate DFAS military pay servicing activity would be notified and research initiated to determine the nature of the missing or non-existent record.

The impact of missing records (no data) influences the precision of the sample statistic as an estimator of the population proportion of records in error, dollar value of over and under payments and settlement dollar value of the overall sample. As such, bias can become a factor in the sample statistic as a population estimator. There are a number of methods available to

address missing records, but the most appropriate will depend upon the circumstances surrounding number and type of missing records. PR&A will determine the best approach to address any missing records.

### Completing the Target Sample

It is imperative examiners complete the target (minimum) monthly sample for each component, as assigned, even if this means allotting additional, yet reasonable, time for completion of a component's monthly sample. For reporting purposes, any given component monthly sample that is not complete by the given report cutoff date will be carried forward to the next audit month's report. The military pay postpay review results support several monthly metrics, and therefore, the cutoff dates for reporting are tied to balanced scorecard deadlines.

### Military Pay Accounts with Errors

The applicable servicing DFAS military pay office or designated service component point-of-contact is notified of any randomly reviewed record with a monetary error with an explanation of the reason for the error. Errors are classified into two general categories: Systems or Reporting. Systems errors arise when the gross pay is inaccurate due to miscalculation of an entitlement or deduction by the automated pay system (DJMS-AC, RC or MCTFS). Reporting errors occur when an incorrect entitlement, deduction rate, or amount was provided by the service component and are often attributed to untimely or inaccurate pay entitlement information reported into the pay system by the service component administrative offices. The PR&A requests confirmation and validation of system errors with 5 days of notification and 45 days of notification for reporting errors. Failure of a reply on either type of notice results in the account considered in error as initially discovered and forwarded to the activity. The PR&A annually reconciles accounts in error to determine if the original gross pay error was in fact corrected and the member's pay is accurate.

### Summary Reports

Monthly reports are prepared for the service component POCs and interested senior officials on results of the random reviews. The volume, dollar value of over and under payments, and root cause of errors identified in the samples are provided along with estimated improper payment total amounts and improper payment rates (combined estimates of overpayment and underpayment dollars divided by the gross outlays).

Statistics in support of the IPERA are collected and analyzed on a monthly basis, to include interim population estimates, and reported via an OSD metric. Statistics from these reviews are also used for internal DFAS Balance Scorecard, productivity reports, and periodic updates to OSD and OMB. Annual reports in support of the IPERA requirements are provided to OSD for use in the Department's annual Agency Financial Report (AFR) and IPERA Survey. The annual AFR improper payment appendix consists of the annual population gross pay, the estimated dollar value of overpayments, the estimated dollar value of underpayments, the total estimated improper payments (sum of over and underpayment total estimated dollars), and the improper payment percentage (total estimated improper payments to total gross pay). The report also

includes the root causes of improper payments identified, actions planned or taken to correct the causes, completion date of the actions, amount of improper payments recovered, internal controls and infrastructure in place to reduce improper payments, and steps the agency took to ensure management accountability.

References for Statistical Sampling Methodology and IPERA Implementation Guidance

Cochran, William G, *Sampling Techniques* (3<sup>rd</sup> Ed.), New York: John Wiley & Sons, 1977.

Levy, Paul S and Lemeshow, Stanley, *Sampling of Populations Methods and Applications* (3<sup>rd</sup> Ed.), New York: John Wiley & Sons, 1999.

Office of Management and Budget (OMB) Memo M-11-16, "Issuance of Revised Parts I and II to Appendix C of OMB Circular A-123, of April 14, 2011.