### **DEPARTMENT OF DEFENSE**

OFFICE OF THE ACTUARY



September 22, 2020

REPLY TO DOD OFFICE OF THE ACTUARY

o 4800 Mark Center Dr. Suite 03E25 Alexandria, VA 22350-4000

#### MEMORANDUM FOR DIRECTOR, DEFENSE FINANCE AND ACCOUNTING SERVICE

SUBJECT: Table for Determining Past SBP Premiums With Interest

Attached is the table that is used to determine how much a retiree owes for past SBP premiums when accrued interest is an additional cost. The table attached should replace Volume 7B, Appendix F, "SBP/RSFPP Compound Interest Table," of the DoD FMR effective October 1, 2020. According to the *DoD Financial Management Regulation, Volume 7B: Military Pay Policy – Retired Pay*, Chapter 43, Section 430601.A.3;

Interest is compounded monthly using a factor equal to the 12th root of one plus the current annual interest rate approved by the DoD Board of Actuaries to calculate the retirement accrual costs.

The formula for determining how much a retiree owes for past premiums is to multiply the current premium that covers the portion of premiums in debt times the factor in the table for the number of premiums that need to be paid. That product is then multiplied by the Months Since End of Premium Period (MSEPP) located at the bottom of the table raised to the power denoted by the number of months since the end of the last premium period. Finally, divide that resulting amount by the Premium Adjustment Factor (PAF) located right below the MSEPP.

In the event that a retiree had non-consecutive periods of premiums due, then separate calculations for each must be performed and added together.

At the June 26, 2020 DoD Board of Actuaries public meeting, the Board annual assumptions of 4.25% (nominal interest rate) and 2.5% (cost of living adjustment), creating a geometric real interest rate of 1.71% (1.0425/1.025-1).

Note that this table does not represent an exact calculation that takes into account actual cost of living adjustments (COLAs) during periods of missed premiums. Rather, it is a computationally less burdensome approximation being provided upon request.

If you have further questions, please contact me at 571-372-1992 or at Richard.S.Allen40.civ@Mail.Mil.

Sincerely,

Richard Allen

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#### MEMORANDUM FOR DIRECTOR, DEFENSE FINANCE AND ACCOUNTING SERVICE

SUBJECT: Interest Rate to Charge for Delinquent Premiums

When a retiree has unpaid SBP premiums, the Department of Defense shall charge that retiree or their survivor interest on the delinquent premiums. According to the *DoD Financial Management Regulation*, *Volume 7B: Military Pay Policy – Retired Pay*, Chapter 45, Section 4508;

Interest is owed for any delinquent SBP premiums. The interest rate is a percentage that is compounded annually and based on assumptions approved by the DoD Board of Actuaries for the Valuation of the Military Retirement Fund. Any delinquent Retired Serviceman's Family Protection Plan premiums existing on date of conversion to SBP continue with interest, until paid. Upon the death of a retiree, any delinquency, plus interest, is collected from the annuitant's benefits before payment of any annuity will commence.

At the June 26, 2020 DoD Board of Actuaries public meeting, the Board announced the annual nominal interest rate assumption of 4.25% for the actuarial valuation of the Military Retirement Fund. Although not explicitly set for purposes of charging interest on delinquent SBP premiums, per the FMR this rate is used for that purpose as well. Interest is compounded monthly using a factor equal to the 12th root of one plus the current annual interest rate leading to a monthly rate of 0.3474%. DFAS shall assess interest of 0.3474% each month, effective October 1, 2020, to any retiree or survivor's unpaid SBP debt. The interest rate will be reviewed and may change at each year's public DoD Board of Actuaries meeting or whenever the Board determines it necessary. If and when the interest rate changes, the retiree or survivor's debt at that time will not change.

Note that this does not apply to retirees who increase their coverage upon acquiring a later spouse. Those additional charges are outlined in a separate memo.

If you have further questions, please contact me at 571-372-1992 or at <u>Richard.S.Allen40.civ@Mail.Mil.</u>

Sincerely,

Richard Allen

## APPENDIX F

# SBP/RSFPP COMPOUND INTEREST RATE TABLE (Effective October 1, 2020)

| Total                            | Compound   | Total                            | Compound   | Total                                  | Compound   |
|----------------------------------|--|----------------------------------|--|--|--|
| Payments                         | Interest   | Payments                         | Interest   | Payments                               | Interest   |
| Due                              | Factor   | Due                              | Factor   | Due                                    | Factor   |
| 1                                | 1.00000  | 41                               | 42.17917   | 81                                     | 85.74890   |
| 2                                | 2.00141  | 42                               | 43.23872   | 82                                     | 86.86996   |
| 3                                | 3.00424  | 43                               | 44.29976   | 83                                     | 87.99260   |
| 4                                | 4.00848  | 44                               | 45.36230   | 84                                     | 89.11682   |
| 5                                | 5.01414  | 45                               | 46.42634   | 85                                     | 90.24263   |
| 6<br>7<br>8<br>9                 | 6.02122<br>7.02972<br>8.03964<br>9.05099<br>10.06377                 | 46<br>47<br>48<br>49<br>50       | 47.49188<br>48.55893<br>49.62748<br>50.69754<br>51.76911             | 86<br>87<br>88<br>89<br>90             | 91.37003<br>92.49902<br>93.62961<br>94.76179<br>95.89557                   |
| 11                               | 11.07798   | 51                               | 52.84220   | 91                                     | 97.03095   |
| 12                               | 12.09362   | 52                               | 53.91680   | 92                                     | 98.16794   |
| 13                               | 13.11069   | 53                               | 54.99292   | 93                                     | 99.30652   |
| 14                               | 14.12920   | 54                               | 56.07055   | 94                                     | 100.44672  |
| 15                               | 15.14914   | 55                               | 57.14971   | 95                                     | 101.58853  |
| 16                               | 16.17053   | 56                               | 58.23039   | 96                                     | 102.73194  |
| 17                               | 17.19336   | 57                               | 59.31260   | 97                                     | 103.87698  |
| 18                               | 18.21763   | 58                               | 60.39633   | 98                                     | 105.02362  |
| 19                               | 19.24335   | 59                               | 61.48160   | 99                                     | 106.17189  |
| 20<br>21<br>22<br>23<br>24<br>25 | 20.27052<br>21.29914<br>22.32920<br>23.36073<br>24.39371             | 60<br>61<br>62<br>63<br>64<br>65 | 62.56839<br>63.65673<br>64.74659<br>65.83800<br>66.93095<br>68.02544 | 100<br>101<br>102<br>103<br>104<br>105 | 107.32178<br>108.47329<br>109.62643<br>110.78119<br>111.93759              |
| 26<br>27<br>28<br>29<br>30       | 25.42815<br>26.46404<br>27.50140<br>28.54023<br>29.58052<br>30.62228 | 63<br>66<br>67<br>68<br>69<br>70 | 68.02544<br>69.12147<br>70.21905<br>71.31818<br>72.41887<br>73.52111 | 103<br>106<br>107<br>108<br>109<br>110 | 113.09562<br>114.25528<br>115.41658<br>116.57952<br>117.74410<br>118.91033 |
| 31                               | 31.66551   | 71                               | 74.62490   | 111                                    | 120.07820  |
| 32                               | 32.71022   | 72                               | 75.73025   | 112                                    | 121.24772  |
| 33                               | 33.75639   | 73                               | 76.83716   | 113                                    | 122.41889  |
| 34                               | 34.80405   | 74                               | 77.94564   | 114                                    | 123.59171  |
| 35                               | 35.85318   | 75                               | 79.05568   | 115                                    | 124.76620  |
| 36                               | 36.90380   | 76                               | 80.16728   | 116                                    | 125.94233  |
| 37                               | 37.95590   | 77                               | 81.28046   | 117                                    | 127.12013  |
| 38                               | 39.00948   | 78                               | 82.39521   | 118                                    | 128.29960  |
| 39                               | 40.06456   | 79                               | 83.51153   | 119                                    | 129.48072  |
| 40                               | 41.12112   | 80                               | 84.62943   | 120                                    | 130.66352  |

Months Since End of Premium Period (MSEPP) 1.00141 Premium Adjustment Factor (PAF) 1.00071

Multiply Current Premium by Factor in Table by
MSEPP Raised to the Number of Months Since Last Premium Divided by PAF

Based on 4.25% Interest Rate, 2.5% COLA yielding 1.71% Geometric Real Interest Rate = 1.0425/1.025 - 1

## APPENDIX F

# SBP/RSFPP COMPOUND INTEREST RATE TABLE (Effective October 1, 2020)

| Total    | Compound  | Total    | Compound  | Total    | Compound  |
|----------|-----------|----------|-----------|----------|-----------|
| Payments | Interest  | Payments | Interest  | Payments | Interest  |
| Due      | Factor    | Due      | Factor    | Due      | Factor    |
| 121      | 131.84798 | 161      | 180.62324 | 201      | 232.23003 |
| 122      | 133.03412 | 162      | 181.87823 | 202      | 233.55788 |
| 123      | 134.22193 | 163      | 183.13500 | 203      | 234.88761 |
| 124      | 135.41142 | 164      | 184.39354 | 204      | 236.21921 |
| 125      | 136.60258 | 165      | 185.65386 | 205      | 237.55270 |
| 126      | 137.79543 | 166      | 186.91596 | 206      | 238.88806 |
| 127      | 138.98997 | 167      | 188.17983 | 207      | 240.22531 |
| 128      | 140.18618 | 168      | 189.44550 | 208      | 241.56445 |
| 129      | 141.38409 | 169      | 190.71295 | 209      | 242.90548 |
| 130      | 142.58369 | 170      | 191.98219 | 210      | 244.24840 |
| 131      | 143.78498 | 171      | 193.25322 | 211      | 245.59322 |
| 132      | 144.98797 | 172      | 194.52604 | 212      | 246.93993 |
| 133      | 146.19266 | 173      | 195.80066 | 213      | 248.28855 |
| 134      | 147.39905 | 174      | 197.07709 | 214      | 249.63907 |
| 135      | 148.60714 | 175      | 198.35531 | 215      | 250.99150 |
| 136      | 149.81693 | 176      | 199.63534 | 216      | 252.34584 |
| 137      | 151.02844 | 177      | 200.91717 | 217      | 253.70209 |
| 138      | 152.24165 | 178      | 202.20082 | 218      | 255.06025 |
| 139      | 153.45658 | 179      | 203.48628 | 219      | 256.42033 |
| 140      | 154.67322 | 180      | 204.77355 | 220      | 257.78234 |
| 141      | 155.89158 | 181      | 206.06264 | 221      | 259.14626 |
| 142      | 157.11166 | 182      | 207.35355 | 222      | 260.51211 |
| 143      | 158.33347 | 183      | 208.64628 | 223      | 261.87989 |
| 144      | 159.55699 | 184      | 209.94083 | 224      | 263.24960 |
| 145      | 160.78225 | 185      | 211.23722 | 225      | 264.62124 |
| 146      | 162.00923 | 186      | 212.53543 | 226      | 265.99482 |
| 147      | 163.23795 | 187      | 213.83548 | 227      | 267.37034 |
| 148      | 164.46840 | 188      | 215.13736 | 228      | 268.74780 |
| 149      | 165.70059 | 189      | 216.44108 | 229      | 270.12720 |
| 150      | 166.93452 | 190      | 217.74664 | 230      | 271.50856 |
| 151      | 168.17019 | 191      | 219.05405 | 231      | 272.89186 |
| 152      | 169.40760 | 192      | 220.36330 | 232      | 274.27711 |
| 153      | 170.64676 | 193      | 221.67440 | 233      | 275.66432 |
| 154      | 171.88767 | 194      | 222.98734 | 234      | 277.05349 |
| 155      | 173.13034 | 195      | 224.30215 | 235      | 278.44462 |
| 156      | 174.37475 | 196      | 225.61881 | 236      | 279.83772 |
| 157      | 175.62093 | 197      | 226.93732 | 237      | 281.23278 |
| 158      | 176.86886 | 198      | 228.25770 | 238      | 282.62981 |
| 159      | 178.11855 | 199      | 229.57994 | 239      | 284.02881 |
| 160      | 179.37001 | 200      | 230.90405 | 240      | 285.42979 |

Months Since End of Premium Period (MSEPP) 1.00141 Premium Adjustment Factor (PAF) 1.00071

Multiply Current Premium by Factor in Table by

MSEPP Raised to the Number of Months Since Last Premium Divided by PAF

Based on 4.25% Interest Rate, 2.5% COLA yielding 1.71% Geometric Real Interest Rate = 1.0425/1.025 - 1

## APPENDIX F

# SBP/RSFPP COMPOUND INTEREST RATE TABLE (Effective October 1, 2020)

| Total<br>Payments | Compound<br>Interest   | Total<br>Payments | Compound<br>Interest   | Total Payments | Compound<br>Interest   |
|-------------------|------------------------|-------------------|------------------------|----------------|------------------------|
| Due               | Factor                 | Due               | Factor                 | Due            | Factor                 |
| 241               | 286.83275              | 281               | 344.60530              | 321            | 405.73171              |
| 242               | 288.23768              | 282               | 346.09179              | 322            | 407.30450              |
| 243               | 289.64460              | 283               | 347.58039              | 323            | 408.87951              |
| 244               | 291.05351              | 284               | 349.07109              | 324            | 410.45675              |
| 245               | 292.46440              | 285               | 350.56389              | 325            | 412.03621              |
| 246               | 293.87729              | 286               | 352.05880              | 326            | 413.61790              |
| 247               | 295.29217              | 287               | 353.55582              | 327            | 415.20183              |
| 248               | 296.70905              | 288               | 355.05495              | 328            | 416.78799              |
| 249<br>250        | 298.12793              | 289<br>290        | 356.55620              | 329<br>330     | 418.37639              |
|                   | 299.54881              |                   | 358.05957              |                | 419.96703              |
| 251               | 300.97170              | 291               | 359.56506              | 331            | 421.55992              |
| 252               | 302.39660              | 292               | 361.07267              | 332            | 423.15506              |
| 253<br>254        | 303.82351<br>305.25243 | 293<br>294        | 362.58242<br>364.09429 | 333<br>334     | 424.75245              |
| 254<br>255        | 306.68337              | 294<br>295        | 365.60830              | 334            | 426.35209<br>427.95400 |
|                   |                        |                   |                        |                |                        |
| 256               | 308.11633              | 296               | 367.12445              | 336            | 429.55816              |
| 257               | 309.55131              | 297               | 368.64274              | 337            | 431.16459              |
| 258<br>259        | 310.98832<br>312.42736 | 298<br>299        | 370.16317<br>371.68575 | 338<br>339     | 432.77329<br>434.38425 |
| 260               | 313.86843              | 300               | 373.21048              | 340            | 435.99750              |
|                   |                        |                   |                        |                |                        |
| 261<br>262        | 315.31153<br>316.75668 | 301<br>302        | 374.73736<br>376.26639 | 341<br>342     | 437.61302              |
| 263               | 318.20386              | 303               | 377.79759              | 342            | 439.23082<br>440.85090 |
| 264               | 319.65308              | 304               | 379.33094              | 343            | 442.47327              |
| 265               | 321.10435              | 305               | 380.86647              | 345            | 444.09793              |
|                   |                        | 306               |                        |                |                        |
| 266<br>267        | 322.55767<br>324.01304 | 306<br>307        | 382.40415<br>383.94401 | 346<br>347     | 445.72489<br>447.35414 |
| 268               | 325.47047              | 308               | 385.48605              | 348            | 448.98569              |
| 269               | 326.92995              | 309               | 387.03026              | 349            | 450.61955              |
| 270               | 328.39149              | 310               | 388.57665              | 350            | 452.25571              |
| 271               | 329.85510              | 311               | 390.12522              | 351            | 453.89419              |
| 271               | 331.32078              | 312               | 391.67598              | 352            | 455.53497              |
| 273               | 332.78852              | 313               | 393.22893              | 353            | 457.17807              |
| 274               | 334.25833              | 314               | 394.78407              | 354            | 458.82349              |
| 275               | 335.73022              | 315               | 396.34141              | 355            | 460.47124              |
| 276               | 337.20419              | 316               | 397.90094              | 356            | 462.12131              |
| 277               | 338.68024              | 317               | 399.46268              | 357            | 463.77371              |
| 278               | 340.15837              | 318               | 401.02662              | 358            | 465.42844              |
| 279               | 341.63859              | 319               | 402.59277              | 359            | 467.08551              |
| 280               | 343.12090              | 320               | 404.16113              | 360            | 468.74492              |
|                   |                        |                   |                        |                |                        |

Months Since End of Premium Period (MSEPP) 1.00141 Premium Adjustment Factor (PAF) 1.00071

Multiply Current Premium by Factor in Table by

MSEPP Raised to the Number of Months Since Last Premium Divided by PAF

Based on 4.25% Interest Rate, 2.5% COLA yielding 1.71% Geometric Real Interest Rate = 1.0425/1.025 - 1