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2018 Military Retirement Options: An Expected Net Present Value Decision Analysis Model

Bret N. Witham

2018 MILITARY RETIREMENT OPTIONS:
AN EXPECTED NET PRESENT VALUE DECISION ANALYSIS MODEL

THESIS

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DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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THESIS

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Captain, USAF

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Abstract

The 2016 NDAA authorized changes to the military retirement system transitioning from the legacy High-3 defined benefit annuity to the new Blended Retirement System (BRS). In exchange for a reduced defined benefit annuity, the BRS incorporates automatic and matching contributions to the member's Thrift Savings Plan and a continuation payment offered at 12 years of service. In 2018, service members with less than 12 years of service will make an irrevocable decision between the two retirement systems. This research effort addresses the problem by developing a decision analysis model incorporating up to 27 different input variables. Service members can use the associated Microsoft Excel spreadsheet tool to calculate the expected net present value of each retirement alternative based on their own personal circumstances. We analyze 26 typical career demographic groups to understand how the recommended alternative is impacted by various factors including personal discount rate, expected continuation pay multiplier, and probability of reaching 20 years of service. Each member must make difficult assessments of these variables in order to determine their preferred alternative. We conduct two-variable sensitivity analysis and present the results in third-variable break-even policy charts, providing members with clarity of thought and action as they approach the 2018 opt-in window.

To my wonderful wife, for her tireless devotion, support, and love throughout my career.

Any success I can claim in life would not have been possible without you.

And to our amazing children, for keeping us young and bringing us more joy than we could have ever imagined. You make every challenge worthwhile.

I love you all.

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Bret N. Witham

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2018 MILITARY RETIREMENT OPTIONS:

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I. Introduction

Background

The 2013 National Defense Authorization Act (NDAA) established the Military Compensation and Retirement Modernization Commission (MCRMC). The goal of the MCRMC was to determine whether changes were necessary to military compensation and/or retirement benefits (United States Congress, 2012). In January 2015, the MCRMC published their report. The report recommended that Congress make several changes, particularly to the retirement system (MCRMC, 2015). The 2016 NDAA authorized changes to the military retirement system moving from the fixed-benefit cliff-vested annuity to a new retirement system that blends the current fixed-benefit plan with contributions to the 401(k) style Thrift Savings Plan and a continuation payment offered at 12 years of service. Starting 1 January, 2018 and continuing through 31 December, 2018, service members with less than 12 years of time-in-service will be able to opt-in to the new Blended Retirement System (BRS). Alternatively, they can decide to remain in the current High-3 Retirement System (United States Congress, 2015).

Problem

Service members need to be prepared to make a decision between the current DOD retirement system and the BRS. This should be an informed decision based on the service member's particular life circumstances and personal preferences. This research effort addresses the problem by developing an expected net present value decision analysis model incorporating up to 27 different input variables and then conducting analysis on the generated results. Using this framework, service members can gain personalized insight to make an informed decision.

The decision between the two retirement systems presents a dilemma for many service members and those supervisors, commanders, and base support personnel who would advise them. How do we guide these service members to a decision that is appropriate for their circumstances? There are many things to consider – the member's motivations for service, family considerations, the member's financial situation now and in the future, etc. Those circumstances are unique to every individual. This thesis focuses on the problem strictly from a financial point of view. The member can then weigh any unique family circumstances against the recommendation provided by this model and the accompanying analysis.

Once members document their election, the choice will be irrevocable. Meanwhile, the benefits received under each system could potentially be vastly different. This is a highly personal decision since each service member has different service history, expectations of career progression, time value of money, etc. As such, it is not prudent to provide service members with broad guidance based solely on current grade and service length.

Research Questions

Our research will attempt to answer the following questions:

1. *Given a service member's particular circumstances, how do we quantity the value of each retirement system in a way that most service members can follow?*

   It is important that we make a valid, yet understandable comparison between the two alternatives. A model that is too simplistic may provide inconsistent or inaccurate recommendations, while a model that is too complex and accounts for too many factors may add unnecessary confusion and lead to incorrect use.

2. *Under what general conditions are each of the alternatives preferred?*

   We would like to identify any general guidance that can be given to these service members.

3. *How does the decision differ among typical demographic groups?*

   Whereas the second question focused on how the decision is similar for all member, this question focuses on how it changes for specific demographic groups.

4. *At what point does the recommended alternative change as a member's circumstances change?*

   As we will see, there are a few variables which are difficult to put a value on. We would like our analysis to be flexible so that it shows members how their recommended alternative changes over the feasible range of these variables.

Definitions

It is important to ensure clarity on the many specialized terms that are used in this research. As a starting point, the following definitions are offered. Further definitions are provided as needed throughout this research.

1. Personal Discount Rate (PDR) - the interest rate used in discounted cash flow (DCF) analysis to determine the present value of future cash flows.
2. Continuation pay – a lump sum payment to service members in the Blended Retirement System at 12 years of service, equal to 2.5 to 13 months of basic pay (United States Congress, 2015).
3. Defined benefit annuity - an employer-sponsored retirement plan where employee benefits are determined based on a formula using factors such as salary history and duration of employment. The employer assumes the risks of any investments made in order to meet the annuity obligations.
4. Thrift Savings Plan (TSP) – A 401(k) style investment vehicle available to service members and other federal employees.
5. TSP matching contributions – monthly contributions to TSP accounts made by the federal government to match personal contributions in some ratio and up to some maximum percentage. Matching contributions are not offered by the current retirement system but will be offered in the Blended Retirement System starting in the member's third year of service.
6. TSP automatic contribution – a monthly contribution made by the federal government to the TSP account of those enrolled in the Blended Retirement System, equal to 1%

of basic pay and starting at 60 days of service. The service member does not have to make any contributions to TSP in order to receive the automatic contribution (United States Congress, 2015).

7. Expected Value - the weighted average of all possible outcomes under certain circumstances, with the weights being assigned by the probability that each particular outcome will occur.
8. Net Present Value (NPV) - the sum of the present value of cash inflows (positive) and the present value of cash outflows (negative). All future cash flows are multiplied by the personal discount rate raised to the number of years to determine the present value of each cash flow. The present values are then summed to determine NPV.

Preview

A historical context and thorough review of both retirement systems is presented in Chapter 2 and the methodology used to conduct the research is detailed in Chapter 3. To accomplish the goal of providing service members with personalized insight on this important decision, we develop an expected net present value model and build a representation of the model using Microsoft Excel 2016, Visual Basics for Applications (VBA), and Excel's Data Analysis Toolkit. The Excel tool will provide the service member with visual aids to illustrate how the interaction between variables affects the decision between the two retirement systems.

The expected NPVs under both retirement systems are calculated and compared in order to determine the preferred alternative. Once we have developed the methodology, the individual-based component of our study is nearly complete. The graphical output of the decision support tool will be different for all individuals, and a recommendation will be provided along with sensitivity and break-even analysis.

In Chapter 4, we make estimates and assumptions on several variables and then run the analysis tool for 26 typical demographic groups facing this decision. This serves two purposes. First, it allows us to demonstrate the sensitivity and break-even analysis charts that each member will receive. Second, it allows us to investigate how the decision is both similar and different across these demographic groups. Instances of the model are classified by the resulting recommendation, and policy charts are presented and discussed. Based on this analysis, our conclusions are presented in Chapter 5. The original model is updated along with the decision support tool, and the final versions are included as an attachment to this study.

Assumptions/Limitations

Several assumptions must be made in order to give this problem a feasible scope. First, although the goal is to create a robust tool that accurately incorporates as many variables as possible, no tool can account for every possible situation. The scope of this research will include those variables which are common in retirement planning tools (e.g. discount rate, inflation rate, return on investment, etc.) as well as additional variables which are specifically relevant for most service members making this decision (e.g. time in grade, time in service, expected grade at retirement, continuation pay, TSP contribution rate, yearly cost of living adjustments to retired pay, etc.).

Second, there is no way to precisely determine future values of several variables. In these cases, historical data may be analyzed to determine the expected value. Examples of these variables include the inflation rate, investment returns, cost of living increase, etc. Our methods for estimating these values are covered in Chapters 3 and 4. For other variables, although an expected value can be calculated, it is more prudent to present the service member with the historical distribution and allow the service member to estimate the value based on knowledge of their specific situation. Examples here include the year of promotion to each new grade and length of service. For input variables that are difficult to determine precisely, the tool should be able to provide insight on how the preferred alternative changes based on the value of those variables. In other words, it will provide a sensitivity analysis on these variables.

Finally, the fundamental assumption that must be accepted for any decision analysis research is that the analysis can only determine the "best" decision at the time that the analysis is performed. In hindsight, it may be discovered that the best decision, as determined by the analysis, may not have resulted in the best possible outcome. Yet, it was still the best decision given the state of information at the time the decision was made. For example, a service member may estimate a 95% probability that his/her service length will be greater than 20 years. Based on this probability, the model may recommend that the service member choose to stay with the current retirement system. However, there is still a 5% probability that service length will be less than 20 years. If that happens, there may be a mismatch between the best decision as determined at decision time and the best outcome in retirement. In this way, uncertainty and natural variability account for the possible difference between the best decision and the best outcome.

II. Literature Review

Chapter Overview

Service members need to be prepared to make an educated decision between the current DOD retirement system and the new Blended Retirement System. This research effort addresses the problem by developing a decision analysis tool through which service members can gain personalized insight into the decision at hand. This chapter will review the history of the military retirement system, focusing primarily on the chronological changes to the formula used to calculate retired pay for military members. The details of the current High-3 system and the BRS are also presented, along with the analysis work already accomplished in regards to the BRS.

Historical Context

The American non-disability military retirement system is nearly as old as the country itself. Disability pensions were provided by the pilgrims, and even these provisions are pre-dated by English pension law. However, non-disability pensions were first provided by Congress in 1780 to officers who served until the end of the Revolutionary War. These provisions were initially controversial and many claims were settled for much less than their full value. In the first half of the 1800s, Congress revisited the issue and extended full pay for life to these veterans and their widows (DoD Office of the Actuary, 2014).

In 1861, just months after the start of the Civil War, Congress passed an act providing for the voluntary retirement of military officers with 40 or more years of service at the discretion of the President. This act was followed by others which allowed for involuntary non-disability retirements.

The retired pay of Army and Marine Corps officers was computed as “pay proper” plus four rations. Pay proper was a set amount for each officer grade, while rations had a value of $9 per month. Therefore, retired pay depended solely on the retired grade. Service length was not directly rewarded in retirement. As an example, pay proper for a colonel was $95 per month and a colonel with 40 years of service was receiving 14 rations prior to retirement—6 for grade and 8 for longevity. Therefore, the colonel’s final pay prior to retirement was $221 per month. In retirement, he received the $95 pay proper along with four rations, which equated to $131 per month or roughly 60% of final pay. An additional 5 years of duty without a promotion would earn the colonel one more ration during his service, but would not increase his retired pay. In fact, as a percentage of his final pay, the colonel’s retired pay would decrease (Department of Defense, 2011).

In the early 1870s, active-duty officer pay was overhauled. This naturally required changes to retirement pay as well. The non-disability retirement service requirement was changed to 30 years for Army and Marine Corps officers, with retirement pay being set at 75% of base and longevity pay. Navy officers’ retired pay was also set at 75% of sea duty pay, but they were not permitted voluntary retirement at 30 years of service until 1908. Army and Marine Corps enlisted members first received non-disability retired pay beginning in 1885 under the same requirement of 30 years and a rate of 75% of final pay with an additional allowance for “quarters, fuel, and light”. Navy enlisted members obtained this benefit in 1899 (Department of Defense, 2011).

In 1916, the retired-pay formula for Naval officers was changed to 2.5% of final basic pay for each year of service, not to exceed 75%. Partial years were rounded to the nearest whole year. The Navy's minimum service length for enlisted retirement was also changed to 16 years for a one-third multiplier and 20 years for a one-half multiplier. The 16-year option was later eliminated in 1925 (Department of Defense, 2011).

The 1920s saw a couple temporary changes to the retired pay formula for Army officers to support ongoing force management efforts. In 1935 the Army adopted the Navy officer formula of 2.5% for each year of service up to a maximum of 75% but with a minimum service requirement of only 15 years. The Navy also modified its officer promotion and minimum service length requirements during this time period but never strayed from the 2.5% multiplier and 75% cap for officers. In 1938, the Navy settled on a minimum service length of 20 commissioned years for voluntary officer retirement. By 1948, enlisted and officer retired-pay for all services was calculated using the same standard formula: 2.5% multiplier, 75% maximum, and a minimum of 20 years of active service with at least 10 years of commissioned service for officers. Additionally, enlisted members could receive a 10% increase in their retired pay for "extraordinary heroism" during their service (Department of Defense, 2011).

Prior to 1981, retired pay was based on the member's final basic pay. In the wake of growing concern about expanding retirement liabilities, the Department of Defense Authorization Act of 1981 changed the law to compute retired pay based on the average of a retiree's highest three years of basic pay. This formula came to be known as "High-3". Of note, those who were members of the armed services prior to enactment of this law were "grandfathered," and their retired pay continued to be calculated based on their final pay. The Department of Defense Authorization Act of 1984 provided that monthly retired pay would be rounded down to the nearest dollar in order to extract a bit more savings from the retirement system. This act also ended the practice of rounding service length up or down to the nearest year when determining the retired pay multiplier. Going forward, service length was required to be rounded down to the nearest whole month (Department of Defense, 2011).

The next major change came with the Military Retirement Reform Act of 1986. This law reduced the retired pay multiplier by 1% for each year of service short of 30 years. In essence, this equated to a 2.0% multiplier for the first 20 years of service and a 3.5% multiplier for each year of service beyond 20 years, topping out at 30 years and 75%. Members serving 30 years or more saw no change to their multiplier. Those who did suffer the reduction were provided relief at age 62, when their multiplier reverted to 2.5% times their years of service. Also, the computation of the yearly cost of living adjustment (COLA) was changed from the benchmark Consumer Price Index (CPI) to CPI minus 1%, with a one-time correction to retired pay as calculated using CPI at age 62. These provisions are collectively known as the "Redux" system. Once again, the provisions were only applied to service members joining after the effective date of the law, 1 August, 1986 (Department of Defense, 2011).

The reduced incentives of the Redux system led to concerns over the military's ability to recruit and retain quality personnel. The National Defense Authorization Act for Fiscal Year 2000 gave all members under the Redux system the option to elect a retirement under the pre-1986 High-3 system, with no reduction in their retired pay multiplier or COLA calculation. Alternatively, these members could elect to receive a $30,000 Career Status Bonus (CSB) with an agreement to remain on the Redux retirement system and serve at least 20 years. This election was made at the 15-year service mark (Department of Defense, 2011).

Of the three retirement systems currently in effect, High-3 is the only system which applies to military members with the option to enroll into the BRS. The act that created the BRS also contained a sunset provision for the Redux system, thereby eliminating that option for service members attaining 15 years of service after 31 December, 2017 (United States Congress, 2015). On the other hand, the Final Pay system only applies to those members who joined prior to 8 September, 1980, none of whom would have less than 12 years of service today (Department of Defense, 2011). Therefore, our audience only has the options of the High-3 system or the Blended Retirement System.

High-3 Retirement System

The High-3 Retirement System currently in effect is a defined-benefit, cliff-vested annuity. A defined-benefit is one in which the beneficiary does not assume any market risk. In other words, the benefit is set by some formula and, given a set of retirement conditions, the benefit to the retiree can be calculated in advance. Cliff-vesting refers to the practice of vesting a beneficiary in full at a specific point in time, rather than allowing for incremental vesting at multiple points over time. In the case of the High-3 non-disability retirement system, military retirees become fully vested at 20 years of service

(YOS). The defined benefit can be calculated by multiplying the average of the highest three years of active-duty pay by a multiplier. The multiplier is equal to 2.5% times the years of service. YOS is the total length of service rounded down to the next full month or one-twelfth of a year. For example, a total service length of 23 years plus an additional 96 days would be rounded to 23 years and 3 months, or 23.25 years of service.

Blended Retirement System

The new Blended Retirement System offers an automatic contribution to the member's TSP account equal to 1% of monthly basic pay. Additionally, the DOD will match the member's contributions one-for-one up to 3% of monthly basic pay, with an additional half percent match for the member's 4th and 5th percent of basic pay. Therefore, the maximum DOD contribution is 5% of monthly basic pay. The automatic and matching contributions are available to the service member until reaching retirement or 26 years of service, whichever occurs first.

Additionally, the Blended Retirement System offers a continuation payment at 12 years of service in exchange for the member's commitment to serve a minimum of 4 additional years. This continuation payment is equal to the product of the member's monthly basic pay at 12 years and a continuation pay multiplier. Current law sets a minimum continuation pay multiplier of 2.5 and a maximum of 13.

Finally, the new Blended Retirement System preserves the defined benefit annuity feature of the High-3 Retirement System. However, the formula used to calculate the retirement pay multiplier is changed from 2.5% times the years of service to 2.0% times the years of service. This is notionally a 20% reduction of the defined benefit annuity.

Relevant Research

The main source of research in regard to the new retirement system is the Military Compensation and Retirement Modernization Commission's 2015 report to Congress. The goal of the MCRMC was to determine whether changes were necessary to military compensation and/or retirement benefits. The commission contracted RAND Corporation to conduct analysis in support of their review (MCRMC, 2015:206).

RAND based its analysis on the RAND Dynamic Retention Model, a proprietary dynamic programming model of individual choice regarding active-component retention that was estimated based on longitudinal data and with capability to simulate alternative compensation policies. An important criterion of that analysis was whether a reform could sustain the current force size and shape. RAND found that the proposed BRS could do so. In fact, it could do so while also achieving cost savings ranging from 2.3 billion to 7.7 billion (Asch, Mattock, & Hosek, 2015:43).

Based on RAND's analysis, the commission's report recommended that Congress transition the military retirement system to the blended system which we will see implemented in 2018 (MCRMC, 2015:37–38).

Not many retirement planning tools are currently available to help service members make this important decision. The tools that are available remain very basic in nature and do not provide any sort of sensitivity analysis on variables that are difficult to determine precisely. These informal tools may be acceptable for advising those service members who are at the extremes of the recommendation spectrum (i.e. definitely switch to the new system or definitely stay with the old system), but even then, there has been no effort to define the line where these sorts of generalities can be considered good guidance. The DOD has plans for a comparison calculator, but has not yet released it as of this writing (Department of Defense, 2016:3).

The only thing we can state for sure at this point is that the BRS will always be as good as or better than High-3 for any service member who is 100% sure they will separate before becoming retirement eligible. These members will receive no retirement benefits under High-3 but have the opportunity to at least receive automatic DOD TSP contributions under the BRS.

Until more rigorous analysis is conducted, everyone else is in the "gray" area. Our study seeks to define that area more precisely for each service member and provide them with tools to assist in making the best decision in the face of uncertainty.

III. Methodology

Chapter Overview

To accomplish the goal of providing service members with personalized insight on this important decision, we develop a model to calculate the expected Net Present Value (NPV) of the two alternatives given several inputs from the member. We start with the necessary expected value formula, then proceed to break down the NPV computation of each alternative into smaller elements. This methodology provides a framework for determining the preferred alternative given an individual's personal inputs. In Chapter 4, we make several estimates and assumptions and then execute the model for 26 different demographic groups. This allows us to demonstrate the analysis provided and investigate our research questions.

Expected Net Present Value

As an expected value, we multiply each possible outcome by the probability of obtaining that outcome. We expect the member's length of service to have the most significant impact on the comparative values of the two systems. The net present value of both retirement systems will experience a significant jump when the member passes 20 years of service and earns a retirement pension. Prior to that point, the legacy High-3 system will have a value of zero since the pension is the sole element of this retirement system. Of note, the member's own TSP contributions are not considered in this analysis. We make the assumption that member TSP contribution are the same under each system, therefore only DOD contributions are included, and only for the BRS. The BRS will slowly build value through those DOD TSP contributions prior to 20 years of service. The BRS will also see a significant increase at 20 years of service, but the jump will be smaller than that under High-3 due to the decreased pension multiplier. Because of the large change in value that occurs at 20 years of service, our model utilizes conditional expected values based upon whether or not the member reaches this milestone. This simplifies the process of eliciting the distribution of YOS from the member while accounting for the large difference in value on either side of the 20-year mark. Using this approach, we require three values from the member:

1) P(YOS≥20) - probability of attaining 20 or more years of service, designated p
2) E[YOS|YOS≥20] - expected YOS given a pension is earned, designated x
3) E[YOS|YOS<20] - expected YOS given a pension is not earned, designated y

We then compute the net present value of the alternative at the two point estimates, multiply each by the member's probability of meeting the associated conditions, and sum these values to determine the unconditional expected net present value of the retirement system.

$$E[NPV_{BRS}] = p * (NPV_{BRS}|YOS = x) + (1 - p)(NPV_{BRS}|YOS = y) \quad (1)$$

$$E\left[NPV_{High-3}\right] = p * \left(NPV_{High-3}\middle|YOS = x\right) + (1 - p)\left(NPV_{High-3}\middle|YOS = y\right) \quad (2)$$

Where:

$$\text{YOS} = \text{total years of service at separation or retirement}$$
$$\text{p} = \text{probability of attaining 20 or more years of service}$$
$$\text{NPV}_{\text{BRS}} = \text{net present value of the Blended Retirement System}$$
$$\text{NPV}_{\text{High}-3} = \text{net present value of the High} - 3 \text{ Retirement System}$$
$$\text{x} = \text{expected years of service given that a pension is earned}$$
$$\text{y} = \text{expected years of service given that a pension is not earned}$$

The rest of this chapter discusses our methodology for determining the net present value of each retirement system given the elicited value of x or y.

Net Present Value

To find the NPVs needed for Equations 1 and 2 above, we first note the components of each system. The High-3 system only has one component, a defined benefit annuity. The BRS has three components: a defined benefit annuity, a continuation payment, and DOD TSP contributions. An annuity is a stream of future income. The NPV of a stream of cashflows is equal to the sum of the discounted future payments in the stream. On the other hand, the continuation payment is a single payment made at 12 years of service under the BRS. Therefore, no further summing is required. Finally, the DOD TSP contributions would at first seem to be a stream of future income. However, these DOD TSP contributions are not readily accessible to the member until they reach age 59.5 due to IRS penalties for early withdrawal. The DOD TSP contributions continue to grow within the member's TSP account while the member is still in his/her working years. The rate of growth is discussed later in this chapter. However, members do not actually "receive" these TSP funds until they start taking TSP distributions. Therefore, we model the DOD TSP benefit as an accumulated value at age 59.5. If the member is still on active duty at age 59.5, we continue this accumulation until the member's military retirement date.

The individual components discussed above are summed to obtain the net present value of each retirement system.

$$NPV_{BRS} = NPV_{BRS\ annuity} + PV_{continuation\ pay} + PV_{DOD\ TSP\ accumulation} \quad (3)$$

$$NPV_{High-3} = NPV_{High-3\ annuity} \quad (4)$$

The net present value formula converts any cash flow into an equivalent amount received today, thereby accounting for the time value of money. Our model also allows the member to choose any base date in the future. The date chosen will not impact the recommended alternative; this flexibility is only provided so that the member can determine values at a future date if desired. For example, the member may wish to use the expected date of their military retirement or the expected date of their retirement from the workforce. The net present value also depends upon the member's discount rate, or the rate at which future cashflows are discounted. Our model allows the member to designate any personal discount rate based upon his/her own preferences for present versus future income and alternative investments. The personal discount rate is normally given in annual terms. Our model converts the annual rate into a monthly rate using Equation 5 below. For NPV calculations, all discount rates must be in terms of the compounding period. By converting all rates to an equivalent monthly rate, we simplify the computation of discounted monthly payments which are found throughout our model.

$$d_{monthly} = (1 + d_{annual})^{1/12} - 1 \quad (5)$$

Where:

$d_{monthly}$ = monthly rate

d_{annual} = annual rate

From this point forward, the personal discount rate will be a monthly rate designated simply as d.

The net present value of our defined benefit annuity is computed as follows:

$$NPV_{annuity} = \sum_{t=0}^{E} RP_t \, (1+d)^{-t} \tag{6}$$

Where:

RP_t = the nominal retired annuity payment at time t

t = number of months elapsed since the base date

d = the personal discount rate per month

E = total number of months between the base date and the member's death

Basic Pay

The next portion of this chapter describes how we determined the nominal values for the annuity payments, continuation pay, and TSP contributions. First, however, we must discuss the computation of basic monthly pay, which is integral to all elements of these retirement systems. Annuity payments are a function of the highest three years of basic pay. Continuation pay is some multiple of basic pay at 12 years of service. Finally, DOD TSP contributions are a percentage of basic pay each month. Therefore, a prerequisite to calculating any of these values is to project the monthly basic pay throughout the member's career.

Monthly basic pay is determined by a member's grade and years of service. Our model permits the member to designate his/her own rank progression. For example, the member may expect to progress faster than his/her peers and therefore set expected promotion dates to earlier values. The member may also designate the decision effective date, or the date in 2018 when the decision is made. Starting with the member's current rank and current years of service on the decision effective date, the model projects basic pay throughout the member's career. The projection ends upon reaching the expected years of service given that a retirement is earned, previously designated x. In each month, the model determines the member's years of service and rank based upon the Total Active Federal Military Service Date (TAFMSD) and rank progression provided by the member. The model then uses these values to obtain the basic pay from the 2017 basic pay table. This pay is increased by the member's specified wage growth rate (g) over the number of years elapsed since 2017. The monthly basic pay at time j, given grade and years of service at time j, is found using the following equation:

$$BP_j\left(Grade_j, YOS_j\right) = BP_{2017}\left(Grade_j, YOS_j\right) * \ (1+g)^{year_j - 2017} \qquad (7)$$

Where

$\mathrm{BP_j}\left(\mathrm{Grade_j}, \mathrm{YOS_j}\right)$ = basic pay at time j given grade and YOS at time j

$\mathrm{year_j}$ = the calendar year associated with time j

g = wage growth rate

Annuity Payments

Under both retirement systems, the defined benefit annuity payments are based upon the average of the final 3 years (36 months) of basic pay, given that the member completes 20 years of service. If the member separates before 20 years of service, no annuity is paid and $NPV_{annuity} = 0$. Assuming YOS ≥ 20, the DOD Financial Management Regulation (FMR) states that the retirement base pay is determined using the pay table in effect at the time of retirement (DoD, 2016:Table1-5). Therefore, the computation does not use nominal pay received. Our model uses the following equation to determine retirement base pay (RBP_k) given the months of service at retirement, k.

$$RBP_k = \frac{\sum_{j=k-36}^{k} BP_{2017}(Grade_j, YOS_j) * (1+g)^{year_k - 2017}}{36} \tag{8}$$

Where

$$RBP_k = \text{retired base pay given k months of service at retirement}$$
$$BP_j(Grade_j, YOS_j) = \text{basic pay at time j given grade and YOS at time j}$$
$$year_k = \text{the calendar year associated with time k}$$
$$g = \text{wage growth rate}$$

Next, we compute the annuity multiplier, $M_{annuity}$. Under the High-3 system, the annuity multiplier is equal to the product of 2.5% and the YOS at retirement. The BRS uses the same formula with a reduced 2.0% annuity factor.

$$M_{High-3\ annuity} = YOS_k * 2.5\% \tag{9}$$

$$M_{BRS\ annuity} = YOS_k * 2.0\% \tag{10}$$

Where

$$M_{High-3\ annuity} = \text{High} - 3 \text{ annuity multiplier}$$
$$M_{BRS\ annuity} = \text{BRS annuity multiplier}$$
$$YOS_k = \text{years of service at the time of retirement, k}$$

Finally, we simply multiply the RBP by the annuity multiplier to obtain the initial monthly retirement pay (RP_0) for the service member.

$$RP_0 = RBP_k * M_{annuity} \tag{11}$$

Where

RP_0 = initial monthly retired pay

RBP_k = retired base pay given k months of service at retirement

$M_{annuity}$ = applicable annuity multiplier

The initial monthly retirement pay applies during the first calendar year of retirement. Each December, the DOD applies a cost of living adjustment (COLA) based on the Consumer Price Index (CPI) growth over the previous year. This adjustment accounts for inflation in order to maintain the purchasing power of the annuity during retirement. Our model allows the member to specify their own annual inflation rate, i. The new monthly annuity payments begin in January. At the end of the first calendar year, a partial cost of living adjustment ($COLA_0$) is applied based upon the CPI growth experienced since the calendar quarter of the member's retirement date (q). We estimate the partial and full COLA factors as follows:

$$COLA_0 = (1+i)^{1-q/4} \tag{12}$$

$$COLA_{full} = 1+i \tag{13}$$

Where

$COLA_0$ = partial cost of living adjustment in first year of retirement

q = calendar quarter of retirement

$COLA_{full}$ = cost of living adjustment applied annually after first year

i = inflation rate

The monthly retired pay for each subsequent year (v) can be found by multiplying the previous year's retired pay by the applicable COLA factor.

$$RP_1 = RP_0 * COLA_0 \tag{14}$$

$$RP_{v>1} = RP_1 * COLA_{full}{}^{v-1} \tag{15}$$

Where

$$\mathrm{RP}_v = \text{monthly retired pay in full calendar year v of retirement}$$
$$\mathrm{COLA}_0 = \text{partial cost of living adjustment in first year of retirement}$$
$$\mathrm{COLA}_{\mathrm{full}} = \text{cost of living adjustment applied annually after first year}$$

We use these formulas to determine the retired pay in each month of retirement. The member can specify his/her own life expectancy to determine the date when annuity payments stop. We then substitute the generated stream of values into the net present value formula given by Equation 6, noting that t is the number of months elapsed since the base date. We arrive at values for $NPV_{High\text{-}3\ annuity}$ and $NPV_{BRS\ annuity}$ that can be used in Equations 3 and 4. This completes our computation of $NPV_{High\text{-}3}$. However, NPV_{BRS} still requires the computation of the present value of the continuation pay and DOD TSP accumulation.

Continuation Pay

Continuation Pay is contingent upon reaching 12 years of service, agreeing to serve an additional 4 years, and then completing that service commitment. At that point the member will have 16 years of service. We currently see very high retention rates beyond 16 years of service under the High-3 system. Although members under the BRS will have a reduced annuity incentive at 20 years of service, the marginal value of these last 4 years will still be very large. We make the assumption that service members attaining 16 years of service will serve the additional 4 years to earn the retirement annuity. Therefore, serving less than 20 years is equated with serving less than 16 years, and therefore receiving no continuation pay.

$$(PV_{continuation\ pay} |\ YOS = y) = (PV_{continuation\ pay}\ |\ YOS < 16) = 0 \quad (16)$$

Where:

$(\mathrm{PV}_{\mathrm{continuation\ pay}} | \mathrm{YOS} = \mathrm{y}) =$ present value of continuation pay at y years of service

Next, to calculate ($PV_{continuation\ pay}$| YOS=x), we first determine the basic pay at 12 years of service using Equation 7. This value is multiplied by the continuation pay multiplier (M_{CP}) to obtain the nominal value of the continuation pay.

$$(continuation\ pay|YOS = x) = BP_{12\ years} * M_{CP} \quad (17)$$

Where:

$\mathrm{BP}_{12\ \mathrm{years}} =$ basic pay at 12 years of service

$\mathrm{M}_{\mathrm{CP}} =$ continuation pay multiplier

We can then use a modified version of Equation 6 to convert the continuation pay into base date terms, noting once again that d is a monthly rate and t is in terms of months since the base date.

$$\left(PV_{continuation\ pay} | YOS = x\right) = \ continuation\ pay * \ (1 + d)^{-t} \qquad (18)$$

Where:

$\left(\mathrm{PV_{continuation\ pay}} | \mathrm{YOS} = \mathrm{x}\right) = \text{present value of continuation pay at x years of service}$

$\mathrm{t} = \text{number of months elapsed since the base date}$

$\mathrm{d} = \text{the personal discount rate per month}$

$PV_{continuation\ pay}$ fills another element of Equation 3, leaving only the present value of the DOD TSP accumulation in order to complete our computation of NPV_{BRS}.

TSP Accumulation

The accumulated value of the DOD TSP contributions at age 59.5 is dependent upon several factors. First, the member designates the percentage of monthly basic pay he/she intends to contribute to the TSP. Once a member has opted into the BRS, the DOD automatically contributes 1% of monthly basic pay to the member's TSP account. In addition, starting in the third year of service, the DOD matches the member's own TSP contributions in accordance with the TSP matching schedule shown in Table 1. These DOD contributions continue until the member retires or reaches 26 years of service.

Table 1. DOD Contribution Schedule

You Contribute	DoD Auto Contribution	DoD Matches	DoD Total
0%	1%	0%	1%
1%	1%	1%	3%
2%	1%	2%	5%
3%	1%	3%	7%
4%	1%	3.5%	8.5%
5%	1%	4%	10%

The maximum DOD contribution is 5% of basic pay (1% automatic and 4% match). After 2 years of service and up until 26 years of service, the defined contribution by the DOD in month j (DC_j) can be determined by the following equation:

$$DC_j = BP_j(Grade_j, YOS_j) * (1\% + match) \tag{19}$$

Where:

$$\mathrm{DC_j} = \text{DOD contribution at time j}$$

$$\mathrm{BP_j(Grade_j, YOS_j)} = \text{basic pay at time j given grade and YOS at time j}$$

$$\text{match} = \text{value from column 3 of Table 1, based on member contribution}$$

Next, the member supplies his/her expected age of workforce retirement. This date is used to determine the TSP Lifecycle Fund in which the member should invest. The recommended TSP Lifecycle Fund can be determined from Table 2.

Table 2. TSP Lifecycle Fund Recommendations

Choose	If your target date is:
L 2050	2045 or later
L 2040	2035 through 2044
L 2030	2025 through 2034
L 2020	2018 through 2024
L Income	If you are already withdrawing your account in monthly payments or expect to begin withdrawing before 2018

By default, DOD TSP contributions will be made to an appropriate Lifecycle Fund based upon the member's date of birth (Department of Defense, 2016:Q2.6). The member can change the allocation of contributions manually at the TSP website. We made the assumption of investment in the appropriate Lifecycle Fund because it is the default and because these funds are designed to maximize the expected return for the given amount of risk. Within our Excel model, the member can manually change the selected Lifecycle Fund to one with a later target date in order to pursue higher returns, or to one with an earlier target date in order to decrease risk. TSP Lifecycle Funds maintain an optimal asset allocation among five broad index funds. The details of the underlying index funds are omitted here but are discussed in length by the Federal Retirement Thrift Investment Board on the TSP website (2017). The optimal allocation among the underlying funds is that which minimizes risk for a given expected rate of return. When the member is far from his/her target retirement date, the asset allocation will target higher expected returns and accept the associated risks. This allocation is maintained on a daily basis. Each quarter, the allocation is adjusted to target a slightly lower level of risk, thereby accepting a slightly lower expected rate of return.

TSP projects the asset allocations for each Lifecycle Fund up until the target retirement date. TSP also publishes the historical annual returns for each of the 5 underlying index funds. Since DOD contributions will occur on a monthly basis and the allocation of the Lifecycle Fund will change on a quarterly basis, we convert the expected annual return of each underlying fund to an equivalent monthly return, $E[R_f]$, using Equation 5. We then calculate the expected return of the Lifecycle Fund as a weighted average of the returns of the underlying funds, with the weights being the proportion of the Lifecycle Fund allocated to each underlying fund.

$$E[R_{LF}]_t = \sum_{f=1}^{5} E[R_f] * (a_f)_t \qquad (20)$$

Where:

$E[R_{LF}]_t$ = expected monthly return of the Lifecycle Fund

$E[R_f]$ = expected monthly return of underlying fund f

$(a_f)_t$ = proportion of the Lifecycle Fund allocated to fund f at time t

We previously alluded to the formula we used to determine the single accumulation month (am) of the TSP funds. This point in time is defined as the greater of the month the member reaches age 59.5 or the month of retirement (k).

$$am = max\ (month_{age59.5}, k) \qquad (21)$$

Where:

am = accumulation month

$month_{age59.5}$ = month during which the member reaches age 59.5

k = member's month of retirement

The balance of the member's TSP fund at the end of the accumulation month can then be computed by determining each nominal DOD contribution amount, increasing it by the expected return in each subsequent month up until the accumulation month, and summing for all DOD contributions made during the member's career.

$$DOD\ TSP\ distribution = \sum_{l=0}^{min(k,26YOS)} \left[DC_l * \prod_{l}^{am} (1 + E[R_{LF}]_l) \right] \qquad (22)$$

Where:

$$\mathrm{DC}_l = \text{DOD contribution in month } l$$

$$\mathrm{E}[\mathrm{R}_{\mathrm{LF}}]_l = \text{expected monthly return of the Lifecycle Fund in month } l$$

$$l = \text{number of months elapsed since the opt} - \text{in date}$$

$$\mathrm{k} = \text{month of retirement}$$

$$\mathrm{am} = \text{accumulation month}$$

Finally, we use the PV formula from Equation 18 to convert the nominal DOD TSP accumulation amount into base date terms.

$$PV_{DOD\ TSP\ accumulation} = DOD\ TSP\ accumulation * (1+d)^{-t} \qquad (23)$$

Where:

$$\mathrm{PV}_{\mathrm{DOD}\ TSP\ accumulation} = \text{present value of DOD TSP accumulation}$$

$$\mathrm{t} = \text{number of months elapsed since the base date}$$

$$\mathrm{d} = \text{the personal discount rate per month}$$

Summary

We have now defined all values necessary to determine the NPV of choosing each retirement system. Per Equation 4, the NPV of choosing the High-3 system is simply equal to the NPV of the High-3 annuity. Per Equation 3, we sum the (net) present value of each BRS component to find the NPV of choosing the BRS. We compute the NPV of choosing each system under the conditions of YOS = x and YOS = y. We then use Equations 1 and 2 to determine the expected net present value of choosing each retirement system given the probability of reaching 20 years of service.

In the analysis phase of our study, we demonstrate how the model can be used to provide a recommendation and insight for individuals. To do so, we look at the results for 26 typical career demographic groups, analyzing empirical data to estimate several key parameters from this methodology. This allows us to also consider how this decision is similar and different among these demographic groups. Finally, we conduct sensitivity and/or break-even analysis on several variables to provide the necessary flexibility given the difficulty of determining a precise value for those variables. The results of our analysis are presented at the end of Chapter 4.

IV. Analysis and Results

Chapter Overview

The model developed requires up to 27 different input variables, depending on how far the member expects to progress in rank before retirement. When utilizing this model to assist in making a personal decision, an individual member can specify each of these variables based on his/her own circumstances. The model will provide personalized results based on the member's inputs. Many of these inputs are known by the member at the time the decision is being made (current rank, current YOS, gender, track, planned TSP contributions, etc.). Other variables can be empirically estimated (inflation rate, wage growth rate, etc.). Finally, a few variables are personal to the member, yet difficult to precisely estimate (personal discount rate, probability of attaining 20 years of service, expected CP Multiplier). This last set of variables is where we will focus our analysis later in this chapter, looking specifically at certain demographics. First, however, we will discuss the demographic groups we analyzed and the analysis and rationale supporting the values used for our estimated variables.

Demographic Variables

Although the model will produce valid results for any realistic situation, it is necessary to limit the scope of our analysis in order to focus on the most relevant and interesting results. Nonetheless, we do wish to examine how the results change depending on a member's track (officer/enlisted) and current years of service (0-12). We examine enlisted personnel who entered at age 19 and officers who entered at age 23. Similarly, we assume a typical rank progression based on years of service. In this way, age and rank are strictly a function of years of service and track. Dividing the possible YOS range into year-groups (0-12) and considering both officers and enlisted, we create 26 "typical" career demographics, as listed in Table 3. For each career demographic, we also examine whether different life expectancies for males and females produce any appreciable differences in the results. Of note, however, we do not make the distinction of branch of service among our demographic groups. Since each service varies in regards to promotion rates, retention rates, and service lengths, this distinction may yield interesting differences in the results. However, we leave that analysis as a recommendation for future research. Our analysis treats the DOD as a whole, making demographic distinctions only on the basis of track, current years of service, and gender.

Table 3. Demographic Groups Considered

Officer	Enlisted
O-1, 0 YOS	E-1, 0 YOS
O-1, 1 YOS	E-3, 1 YOS
O-2, 2 YOS	E-3, 2 YOS
O-2, 3 YOS	E-4, 3 YOS
O-3, 4 YOS	E-4, 4 YOS
O-3, 5 YOS	E-5, 5 YOS
O-3, 6 YOS	E-5, 6 YOS
O-3, 7 YOS	E-5, 7 YOS
O-3, 8 YOS	E-5, 8 YOS
O-3, 9 YOS	E-5, 9 YOS
O-4, 10 YOS	E-6, 10 YOS
O-4, 11 YOS	E-6, 11 YOS
O-4, 12 YOS	E-6, 12 YOS

Career Milestones

For each demographic starting point in Table 3, we assume a standard career progression as the model projects future base pay. For officers, we use the YOS targets established by the Defense Officer Personnel Management Act (DOPMA) to forecast the future promotion dates for each year group (*DOPMA*, 1980: § 402). These milestones are shown in Table 4. For enlisted personnel, there are no established target dates for each promotion. Enlisted personnel see more variation in their progression. The enlisted rank progression we based our analysis on is also shown in Table 4.

Table 4. Career Milestones Used

Enlisted		Officer	
Milestone	YOS	Milestone	YOS
E-1	0	O-1	0
E-2	0.5	O-2	2
E-3	1	O-3	4
E-4	2.5	O-4	10
E-5	4.5	O-5	16
E-6	9.5		
E-7	14		
E[YOS|YOS≥20]	21.6	E[YOS|YOS≥20]	22.8

We examined tables provided by the DOD Office of the Actuary and determined that the most common rank of officers currently in non-disability retirement is O-5. Among O-5 non-disability retirees, the average YOS at retirement is 22.8 years (DoD Office of the Actuary, 2016:141a). Therefore, for each officer year-group, our results are based on the DOPMA rank progression up to retirement as a O-5 with the value of

E[YOS|YOS≥20] equal to 22.8. The same retirement tables indicate that the most common enlisted rank at non-disability retirement is E-7. Among E-7 non-disability retirees, the average YOS at retirement is 21.6 (DoD Office of the Actuary, 2016:141b). Therefore, we project enlisted progression out to the retirement rank of E-7, using 21.6 as the value of E[YOS|YOS≥20].

Early Separation

Finally, we determine the value of E[YOS|YOS<20], or the expected years of service given that the member separates before retirement eligibility. We examine retention data provided by the Defense Manpower Data Center Reporting Service (DMCDRS) for the accession year-groups 1972-2013. The data shows the number of non-prior service accessions in each year-group cohort, separated by officer and enlisted personnel. The data then shows the number of each cohort remaining at each subsequent year of service mark.

We first normalize this data across each year group by converting the raw counts at each YOS to a percentage of the originally accessed cohort. We refer to the percentage of the original cohort remaining at year z as the cumulative retention rate (CRR) at year z, because this value represents the cumulative effects (product) of single-year retention rates up to year z. It is important to note why we chose to normalize the data from each cohort first. We did this primarily because the military has decreased in size over the past 40 years. If we did not normalize the data first, then earlier year groups would have a larger impact due to the larger size of each cohort. Due to unforeseen changes in policy, technology, and worldwide stability, there is no precise way for us to determine the specific relationship between future retention rates and those in the 1970s or those in the 2000s. However, common sense would tell us that future retention rates under the High-3 system are likely to be nearer in value to recent retention rates than they are to those from 40 years ago. Furthermore, we make the assumption that the DOD will be successful in maintaining the current force profile using the continuation pay as a retention incentive, as was predicted by the MCRMC study (MCRMC, 2015:3). Therefore, it would be counter-intuitive for the older retention rates to have a larger impact on our estimate of future retention.

However, we cannot simply rely on the most recent data either, as retention rates may also regress to the mean. Therefore, we normalize the retention data within each cohort to determine the cohort's CRR profile and then find the mean CRR at each year of service across all cohorts. We arrive at the estimated CRR profiles provided in Table 5.

From the estimated future CRR profile, we need to determine the expected YOS given that the member separates prior to the 20-year mark. We first partition out that expected value as the sum product of the expected value of YOS in each year and the probability of separation in that year, given that separation occurs by year 20.

$$E[YOS_S|YOS_N < YOS_S < 20] = \sum_{z=YOS_N}^{19} E[YOS_S|z < YOS_S < z+1] \quad (24)$$
$$* P(z < YOS_S < z+1|YOS_N < YOS_S < 20)$$

Where:

$$\text{YOS}_S = \text{years of service at separation}$$
$$\text{YOS}_N = \text{years of service now}$$

Table 5. Average Normalized CRR Profile (1972-2013)

Officer		Enlisted	
SURVIVAL TIME	CRR	SURVIVAL TIME	CRR
ACCESSION	1	ACCESSION	1
1 YR	0.9653	1 YR	0.8538
2 YRS	0.9325	2 YRS	0.7694
3 YRS	0.8783	3 YRS	0.6752
4 YRS	0.7814	4 YRS	0.5258
5 YRS	0.6915	5 YRS	0.3473
6 YRS	0.6277	6 YRS	0.2915
7 YRS	0.5690	7 YRS	0.2455
8 YRS	0.5159	8 YRS	0.2140
9 YRS	0.4685	9 YRS	0.1865
10 YRS	0.4244	10 YRS	0.1655
11 YRS	0.3867	11 YRS	0.1489
12 YRS	0.3499	12 YRS	0.1372
13 YRS	0.3223	13 YRS	0.1275
14 YRS	0.3008	14 YRS	0.1198
15 YRS	0.2822	15 YRS	0.1133
16 YRS	0.2646	16 YRS	0.1073
17 YRS	0.2469	17 YRS	0.1027
18 YRS	0.2298	18 YRS	0.0989
19 YRS	0.2138	19 YRS	0.0958
20 YRS	0.1880	20 YRS	0.0918
21 YRS	0.1416	21 YRS	0.0514
22 YRS	0.1160	22 YRS	0.0405
23 YRS	0.0963	23 YRS	0.0307
24 YRS	0.0817	24 YRS	0.0242
25 YRS	0.0691	25 YRS	0.0167
26 YRS	0.0567	26 YRS	0.0129
27 YRS	0.0438	27 YRS	0.0086
28 YRS	0.0331	28 YRS	0.0061
29 YRS	0.0233	29 YRS	0.0037
30 YRS	0.0169	30 YRS	0.0029

Assuming that member separations are uniformly distributed throughout any given year, the expected value of YOS_S given that separation occurs during year z is simply z+0.5.

$$E[YOS_S|z < YOS_S < z+1] = z + 0.5 \quad (25)$$

Where:

YOS_S = years of service at separation

Also, we observe that the probability of separating in year z given that separation occurs between now and year 20 is equal to the unconditional probability of separation in year z divided by the unconditional probability of separation between now and year 20.

$$P(z < YOS_S < z+1|YOS_N < YOS_S < 20) = \frac{P(z < YOS_S < z+1)}{P(YOS_N < YOS_S < 20)} \quad (26)$$

Where:

YOS_S = years of service at separation
YOS_N = years of service now

Using our CRR profiles, we can easily determine the value of the numerator and denominator in Equation 26. For the numerator, we subtract the CRR for year z + 1 from the CRR for year z.

$$P(z < YOS_S < z+1) = CRR_z - CRR_{z+1} \quad (27)$$

Where:

YOS_S = years of service at separation
CRR_z = cumulative retention rate at year z

For the denominator, we subtract the 20-year CRR from the current year CRR.

$$P(YOS_N < YOS_S < 20) = CRR_N - CRR_{20} \qquad (28)$$

Where:

YOS_S = years of service at separation

YOS_N = years of service now

CRR_z = cumulative retention rate at year z

We have now distilled Equation 24 down to the following:

$$E[YOS_S|YOS_N < YOS_S < 20] = \sum_{z=YOS_N}^{19} (z + 0.5) \frac{CRR_z - CRR_{z+1}}{CRR_N - CRR_{20}} \qquad (29)$$

Where:

YOS_S = years of service at separation

YOS_N = years of service now

CRR_z = cumulative retention rate at year z

For any current years of service N, we can now determine the expected years of service given that the member separates before reaching 20 years. Starting with the CRR values in Table 5, this procedure is used to determine the expected year of separation for officers and enlisted personnel separating before 20 years, given their current YOS. These values are presented in Table 6.

Table 6. Expected YOS_S given $YOS_S < 20$

Current YOS	Officer	Enlisted
0	7.74	4.44
1	8.06	5.20
2	8.35	5.66
3	8.81	6.17
4	9.68	7.09
5	10.61	8.90
6	11.35	9.85
7	12.09	10.86
8	12.84	11.72
9	13.57	12.66
10	14.33	13.55
11	15.06	14.44
12	15.86	15.20
13	16.55	15.93
14	17.14	16.61
15	17.66	17.25
16	18.15	17.92
17	18.65	18.52
18	19.12	19.06
19	19.50	19.50

Market Conditions

We previously addressed the method by which we projected the growth rate of the member's TSP account for each quarter. This methodology is built into the model and only requires the member to designate the age at which he/she plans to retire in order to determine the recommended TSP fund. For the purposes of this study, we set this value to age 62 for all demographic groups. Based on that value, Lifecycle 2050 is the fund recommended by TSP for all of our demographic groups.

The wage growth rate (g) is the rate at which the member expects military pay to increase over the length of his/her career. There is a statutory formula that determines the increase each year based on the Employment Cost Index. Congress has the ability to "override" this statutory formula, and they have done so on several occasions in the past. However, periods marked by increases falling short of ECI growth have inevitably been followed by periods marked by increases greater than ECI growth. It is a fair assumption that wage growth will, on average, keep up with ECI growth. Therefore, we seek to determine the long-term ECI growth rate. We obtained tables from the Bureau of Labor Statistics, the organization responsible for determining the ECI each month (2016b). Using the statutory formula for the default military pay increase, we calculated the ECI growth for each year starting in September 1980 until September 2016. We then took the arithmetic average of these yearly rates to determine the expected ECI growth rate. According to McCulloch (2004), the arithmetic average is a more accurate statistic for prospective financial modeling than the geometric average, or geometric return. With a distant time horizon, the geometric average underestimates the expected annual increase each year, which we observed in this case. The arithmetic average of the yearly ECI increases provides us with our expected annual wage growth rate of 3.67%.

The Bureau of Labor Statistics provides similar tables for the Consumer Price Index (CPI), a measure of inflation (2016a). We examined data from the years 1913 through 2015. Again, we computed the percentage increase for each individual year. Due to the longer time horizon, the geometric average underestimates the expected annual return by an even greater amount. The arithmetic average provides us with our expected annual rate of inflation, 3.24%.

Other Variables

For our analysis, we used the first day that members are able to opt in to the BRS, 1 January 2018, as the base date for discounting cashflows. This gives us the net present value at the time the decision is made. This date also serves as an appropriate base date for making comparisons since it is common to all members facing this decision. Once again, the choice of base date does not affect the results as long as it is consistently applied.

In order to estimate life expectancy for these demographic groups, we consulted tables provided by the DOD Office of the Actuary (2016:283–284). The applicable portions of these tables are adapted and shown in Table 7. Since life expectancy is only relevant to the NPV computation of earned annuities, we enter the table at the member's age upon reaching 20 years of service. We then find the life expectancy of the member from the appropriate column of the table.

Table 7. Life Expectancy of Retirees

Age at 20 YOS	Officer		Enlisted	
	Male	Female	Male	Female
38	84.5	85.5	79.6	82.6
39	84.5	85.6	79.7	82.7
40	84.5	85.6	79.8	82.7
41	84.6	85.7	79.9	82.7
42	84.6	85.7	80.0	82.8
43	84.6	85.7	80.0	82.8
44	84.7	85.8	80.1	82.9
45	84.7	85.8	80.2	82.9
46	84.7	85.9	80.2	83.0
47	84.8	85.9	80.3	83.0
48	84.8	86.0	80.3	83.1
49	84.8	86.0	80.4	83.2
50	84.9	86.1	80.5	83.2
51	84.9	86.1	80.6	83.3
52	85.0	86.2	80.6	83.4
53	85.0	86.2	80.7	83.5
54	85.1	86.3	80.8	83.5
55	85.1	86.3	81.0	83.6
56	85.2	86.4	81.1	83.7
57	85.3	86.5	81.2	83.9
58	85.3	86.5	81.4	84.0
59	85.4	86.6	81.5	84.1
60	85.5	86.7	81.7	84.2

Because this portion of the analysis attempts to identify the alternative that specific demographics "should" choose, we assumed the value of two variables based on sound financial advice. The first variable is the member's TSP contribution rate. We assume a member will choose to contribute at least 5% of his/her pay in order to get the full DOD match under the BRS. Empirically, we know that not all members will do this. However, it is widely agreed that individuals planning for retirement should take full advantage of matching contributions. The only exception may be the case of an extremely high personal discount rate. This portion of our analysis assumes that the member will contribute 5%.

The other assumption we made is that all of our demographic groups would make their decision on 1 January, 2018. Under the BRS, TSP contributions from the DOD do not start until the member opts in. Therefore, the BRS alternative will lose some value over the year 2018 if the member does not opt-in right away. If the BRS was not the member's preference at the beginning of the year, we do not expect the member to change his/her mind from a financial point of view during the year. The exception would be when the additional time allows for a more precise estimate of the probability of staying in 20 years, the expected CP multiplier, or the expected rank progression. In that case, the analysis would be run again with the new inputs. However, for this study we simply look at the initial decision faced at the beginning of 2018.

Variables for Further Analysis

Each of the variables addressed so far are either known to the member or can be estimated or assumed with reasonable accuracy. The final three variables that we discuss may be more difficult to estimate with any precision. First, personal discount rates can vary considerably from one person to another. When conducting net present value analysis with a very distant time horizon, such as in retirement planning, the chosen discount rate can have a very large effect on the results. Rather than asking the member to pinpoint a PDR, sensitivity analysis can be performed on this variable to determine the intervals over which each alternative is preferred. We start with a minimum annual PDR of 2% and then increase it in 1% increments until reaching a PDR of 20%.

Establishing a probability of reaching 20 years of service, $P(YOS \geq 20)$, requires a member to forecast his or her own future. Only 49% of officers and 17% of enlisted personnel ever reach retirement eligibility (DoD Office of the Actuary, 2014:23). However, most of our demographics already have several years of service. Therefore, not considering any further information, their probabilities of reaching 20 years will be higher. We could easily estimate this probability for any given member of a cohort by dividing the average CRR at year 20 (from Table 5) by the CRR for the current years of service. We could even enhance that estimate with current strength and retention numbers for the specific cohort. Yet we expect that members will have a much better idea of their own probability of reaching 20 years, which may vary greatly from the overall cohort. Therefore, we include $P(YOS \geq 20)$ as a second variable in our sensitivity analysis. We look at the entire range of possible values, from 0 to 1, with results recorded at each 0.05 interval.

Finally, the continuation pay multiplier (M_{CP}) represents the number of months of basic pay the member is offered at 12 years of service in return for staying an additional 4 years. The 2016 NDAA established a minimum M_{CP} of 2.5 and a maximum M_{CP} of 13 for all service members falling under the BRS. No further guidance has been given by the DOD or any of the services. In fact, the DoD made a request to Congress for more flexibility in determining M_{CP} rates. The DOD intends to use the continuation pay more as a retention tool, rather than as an automatic retirement benefit (Tilghman, 2016). The request for more flexibility has not been approved, but it suggests that service members in different services, career fields, and year groups may very well see significant variation in the M_{CP} offered by the DOD. In 2018, as some members opt into the BRS near their 12-year mark, we will get a better idea of the likely range of M_{CP} values and what demographics the DOD will target for retention. In anticipation of that information, we include the extremes of M_{CP} [2.5, 13] in our sensitivity analysis in order to determine the range of possibilities we might face. However, instead of varying this value incrementally over that range, we conduct break-even analysis for each of our demographic groups at each combination of PDR and P(YOS≥20).

Due to the complexity of our model, we are unable to formulate it into a problem that can be solved to find the breakeven M_{CP}. Microsoft Excel's Solver utility also failed to find a solution method. Therefore, we employ an algorithm which varies the value of M_{CP} incrementally until a solution is found. We first define the variable Diff as the difference between the expected net present value of the two retirement systems.

$$Diff = E\left[NPV_{High-3}\right] - E[NPV_{BRS}] \quad (30)$$

The breakeven algorithm starts at the lower bound of M_{CP} (zero) and increases incrementally until the absolute value of Diff is less than 1. A snapshot of all variables and results is taken before the code moves on to the next PDR and/or P(YOS≥20).

Sensitivity Analysis

The first thing that we discovered in this portion of our analysis is that the difference between males and females due to longer female life expectancy was very small. Every chart was filtered on gender and the change was rarely noticeable. This is due to the extremely high cumulative discount applied to retired pay received at the end of a lifetime, 50-60 years from now. The cases where it impacts the preferred alternative are shown in the final portion of our analysis.

Figure 1 comes from our sensitivity analysis and shows the extreme values of Diff for each of our 26 demographics. Positive values of Diff result when the $E[NPV_{High\text{-}3}]$ is greater than $E[NPV_{BRS}]$, while negative values of Diff identify circumstances where the BRS is preferred.

Figure 1 demonstrates that none of our 26 demographics have a straightforward decision. Our initial hope was that we could eliminate some demographics from the rest of our analysis due to one alternative dominating the other for all feasible values of PDR, P(YOS≥20), and M_{CP}, but there is no such case. For every year group of officers and enlisted personnel, there is at least one feasible combination of PDR, P(YOS≥20), and M_{CP} where each retirement alternative is preferred. We observe that the High-3 system has the potential to beat the BRS by over $500,000 in Expected Net Present Value, while the BRS never beats High-3 by more than about $80,000. However, this is simply due to the fact that we are looking at extremes here. The maximum Diff values shown on this chart are a product of an extremely low 2% PDR and an absolute certainty of staying in for 20 years, P(YOS≥20) = 1.

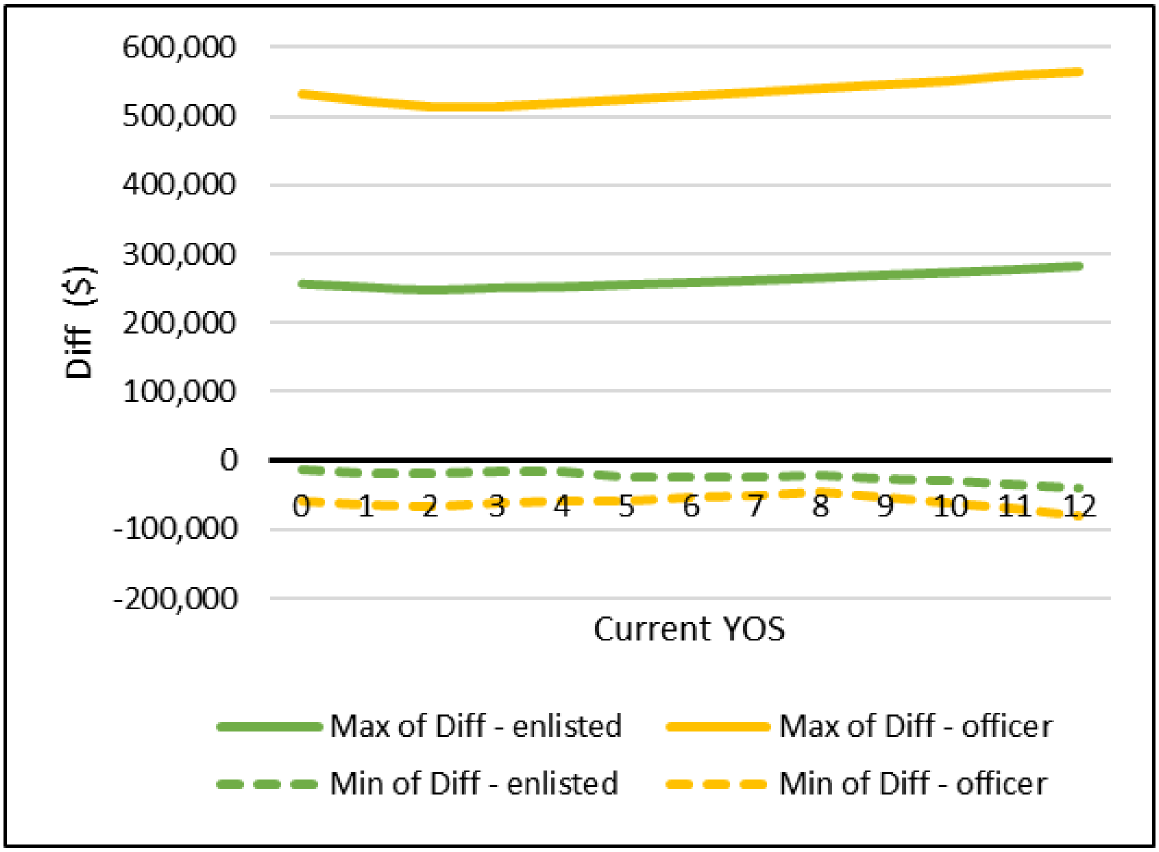

Figure 1. Range of Diff Values

In Figure 2, we have broken out the maximum Diff values of officers by PDR rate, so that each line represents the maximum at that PDR. We can now see how those maximum Diff values for the High-3 system drop extremely fast when the PDR is increased, tapering off in the middle of our PDR range. The maximum Diff values for a PDR of about 7-8% are in the same absolute range as the min Diff values from Figure 1.

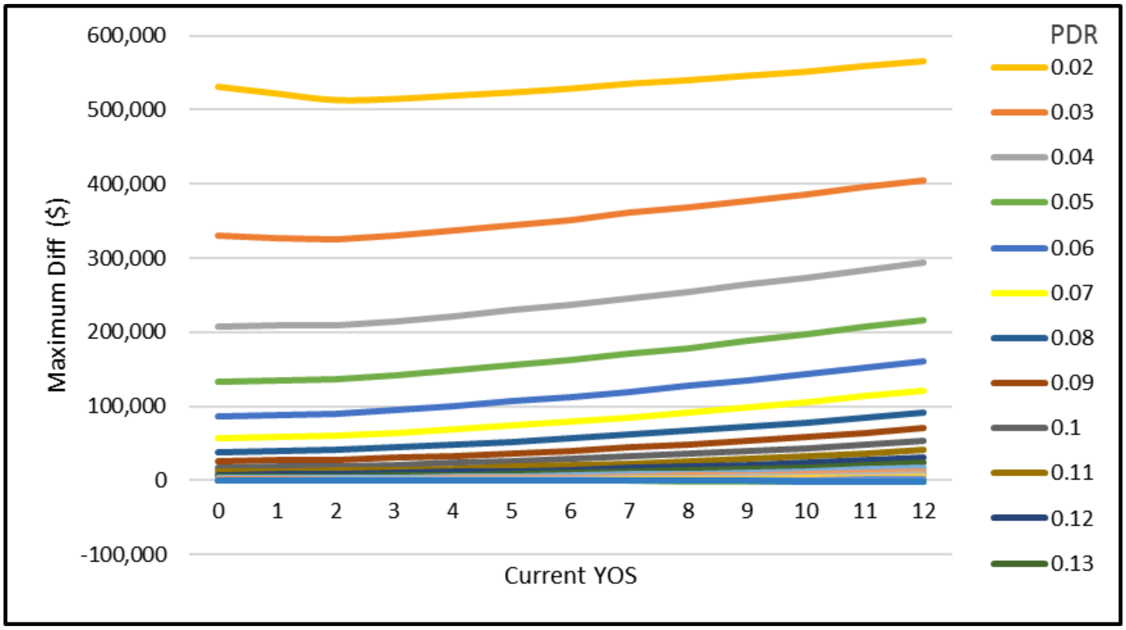

Figure 2. Sensitivity of Maximum Diff to PDR (officers only)

Figure 3 shows a final example of how the value of each alternative changes across different year groups facing this decision. This chart shows data for enlisted personnel with a PDR of 8% and a P(YOS≥20) of 0.20. The charts using other values of these variables show the same general trend.

The blue and red lines represent the expected net present value of the BRS given the minimum and maximum continuation pay multipliers, 2.5 and 13. The black line shows the value of the High-3 system. There is only one High-3 line because the High-3 system does not incorporate any continuation payment. Each successive year group has a higher expected value for both alternatives because they are a year closer to all future cashflows. Relative to the two BRS lines, the black High-3 line moves down with increases in the PDR and up with increases in the probability of staying until 20 years. This is intuitive since the High-3 system includes higher annual cashflow in retirement.

The current chart shows a condition where all year groups are uncertain which alternative to choose. This is because the value of the High-3 system is completely within the range of the possible values of the BRS. If the black High-3 line falls below the blue line for any given year group, then the BRS will be the preferred choice because it will no longer matter what continuation pay multiplier the member is offered. The BRS alternative will dominate for that year group even at the minimum M_{CP} of 2.5.

On the other hand, if the black High-3 line rises above the red line for any given year group, then the High-3 system will dominate the BRS even if the member is offered the maximum continuation pay multiplier of 13.

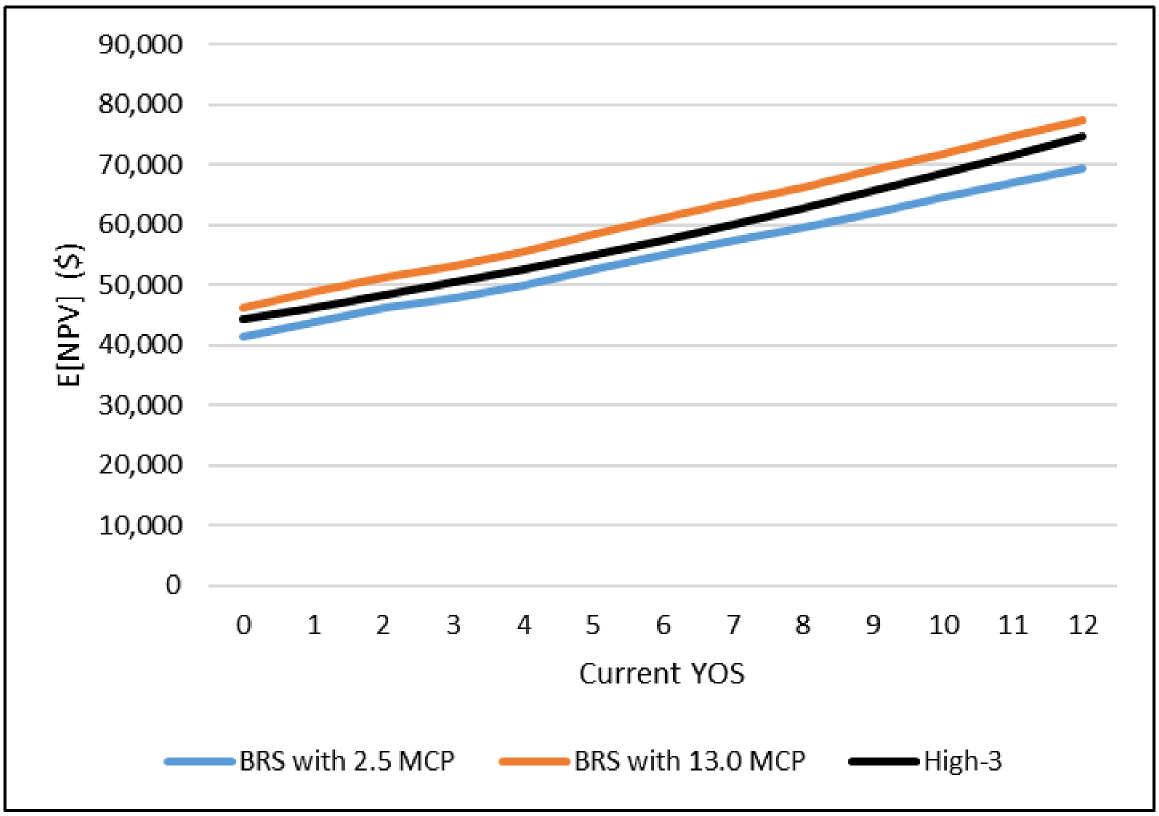

Figure 3. Sensitivity of E[NPV] to Current YOS (Enlisted, p=0.2, PDR=8%)

Break-even Analysis

This last portion of our analysis is probably the most useful for the decision maker. Figure 4 shows a policy chart which incorporates all three of the variables that service members are likely to have trouble putting a precise value on. This specific chart is for male officers just reaching O-3 at 4 years of service. The policy charts for every other demographic are provided in the appendices.

O-3 / 4 YOS / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) \ personal discount rate (annual)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	61.8	44.3	32.4	24.2	18.5	14.4	11.4	9.2	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.95	61.2	43.9	32.1	24.0	18.3	14.2	11.3	9.1	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.90	60.6	43.4	31.7	23.7	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.85	60.0	42.9	31.3	23.4	17.8	13.8	11.0	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.80	59.2	42.3	30.9	23.0	17.5	13.6	10.8	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.75	58.4	41.7	30.3	22.6	17.2	13.3	10.6	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.70	57.4	40.9	29.7	22.1	16.8	13.0	10.4	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.7
0.65	56.3	40.0	29.0	21.5	16.4	12.7	10.1	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.60	55.0	39.0	28.2	20.9	15.8	12.3	9.8	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.55	53.5	37.8	27.3	20.1	15.2	11.8	9.4	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.50	51.6	36.3	26.1	19.2	14.5	11.2	8.9	7.2	6.0	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.45	49.3	34.5	24.7	18.1	13.6	10.5	8.4	6.8	5.6	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.40	46.5	32.3	23.0	16.7	12.5	9.7	7.7	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	42.9	29.5	20.7	15.0	11.1	8.5	6.8	5.5	4.6	4.0	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.6	1.5
0.30	38.1	25.7	17.7	12.6	9.2	7.0	5.6	4.6	3.9	3.3	3.0	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.25	31.3	20.3	13.5	9.2	6.6	5.0	3.9	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3
0.20	21.1	12.3	7.2	4.3	2.6	1.8	1.4	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
0.15	4.2	--	--	--	--	--	--	--	--	--	--	--	0.2	0.4	0.5	0.6	0.7	0.7	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 4. Example Break-Even Policy Chart

For each PDR on the horizontal axis and P(YOS>=20) on the vertical axis, we identify the M_{CP} that results in parity between the two alternatives. Then, based upon the current maximum M_{CP} of 13, we identify all regions with a higher breakeven value as conditions under which the member should choose the High-3 system. These areas are shaded blue. The green shaded region represents the cases where the member should choose the BRS because the M_{CP} will always be higher than the breakeven value (under current law). The cells without any value are cases where a negative multiplier would be necessary in order for the High-3 system to be preferred.

Finally, the gray area is our current realm of uncertainty. As the DOD releases more information leading up to and during 2018, the member can use these charts to see whether the expected CP multiplier meets the break-even threshold. If the CP multiplier is expected to be greater than the breakeven value, then the member should opt into the BRS. If the expected CP multiplier falls short of the breakeven value, then the member should remain in the High-3 system and consider re-evaluating later in the year.

Additionally, if the member is more unsure of one of the variables on the axes, he/she can start with the other axis and then scan for the expected CP multiplier to determine the approximate break-even value of the unknown variable. For example, if the member is fairly sure that their personal discount rate is about 8%, and they expect a continuation pay multiplier of 7, then they can scan upward from 8% to find where their multiplier of 7 lies, and then scan left to find the breakeven probability of reaching retirement.

Using these charts, members can identify the range of uncertainty on each variable and then see if it makes any difference in the decision they should make.

Summary

The analysis in this chapter demonstrated that there are no dominant strategies for any of our demographics given the entire feasible range of personal discount rates, probabilities of staying until 20 years, and continuation pay multipliers. However, it is possible that certain members may find a dominant strategy after entering their own personal inputs.

We determined that the NPV of both alternatives will rise with the current YOS of the member since he/she will be closer to all future cashflows. Also, higher personal discount rates and lower probabilities of staying until 20 years generally tend to favor the BRS. On the other hand, lower personal discount rates and higher probabilities of staying until 20 years generally tend to favor the High-3 alternative. However, these generalities by themselves do not provide enough information for a member to make an informed decision. Each member is advised to personalize their results rather than relying solely on the demographic policy charts provided.

Since we are uncertain of the continuation pay multiplier within the range of 2.5-13, members will need to narrow down the likely range of this variable and/or one of the other uncertainty variables. If a member can do this, then he/she can use his own personally generated policy chart to find the breakeven points (or the breakeven range) of the variables. The member will need to continue narrowing this range until one of the alternatives dominates over the remaining range of each variable. In this way, members can come to a decision that is best for them without having to place an exact value on these three variables. Meanwhile, the member can also determine the robustness of their own decision by using the policy charts to identify the range of each variable over which their preferred alternative stands.

V. Conclusions and Recommendations

Conclusions of Research

The 2018 military retirement decision requires a very personal assessment of the alternatives from several different perspectives. This thesis has provided a framework for evaluating the decision from a strictly financial viewpoint. To conclude, we will address each of our original research questions.

1. *Given a service member's particular circumstances, how do we quantity the value of each retirement system in a way that the member can follow?*

   We found the best way to do so was an expected net present value model. We can compare the expected net present value of each option, and most service members should be able to understand everything we accounted for, even if they don't understand every aspect of our methodology. We considered more complex models that incorporated measures of risk and risk tolerance, but we determined that these measures would depart from the normative nature of our model while making it less transparent for the decision maker.

2. *Under what general conditions are each of the alternatives preferred?*

   We found that the BRS is generally preferred at higher personal discount rates whereas the High-3 system is generally preferred at low personal discount rates. The High-3 system is generally preferred at higher probabilities of staying in for 20 years, whereas the BRS is preferred for lower probabilities. From the policy charts, we can conclude that any member in our demographic groups with a PDR of 20% or higher should choose to opt into the BRS. The BRS is also the preferred option for all officer demographic groups with a probability of staying in until retirement at 0.10 or lower. Finally, we found no significant difference between males and females due to life expectancy since cashflows at the end of a lifetime are heavily discounted.

3. *How does the decision differ among various demographic groups?*

- and -

4. *At what point does the recommended alternative change as a member's circumstances change?*

Both of these questions are answered by our policy charts. We provide break-even policy charts for 26 typical career demographics that can be used to determine the best alternative as more information regarding likely CP multipliers becomes available. Members can also generate a personal policy chart using our Excel/VBA model and their own inputs. This will allow them to determine their personal breakeven points given their own inputs to the model.

Recommendations for Future Research

Finally, for anyone wishing to continue this research, we propose the following recommendations. First, there are a multitude of additional variables and potential dependencies between variables that could be investigated. One of the most interesting may be the member's service branch, since promotion rates and retention are different in each service.

Also, the model could be made more descriptive by incorporating a measure of risk and risk tolerance. We could establish distributions on our variables of uncertainty with further analysis of empirical data, for example, the distribution of investment outcomes. Distributions on personal variables could be elicited from the member. A certain equivalent for each alternative could then be determined and compared rather than using the expected value. Given empirical data on the military populations of interest, enhancing the model in this way may allow it to be used to predict behavior such as opt-in levels and retention.

Finally, one of our limitations in this research was that the member's probability of earning a retirement pension, expected service length, and TSP contributions did not change depending upon which alternative was selected. We made the assumption that the continuation payments would allow the DOD and services to maintain the current force profile. In reality, a member will face a different set of incentives under each system. Exploring and incorporating these elements can potentially provide more descriptive insight into how things may unfold.

Summary

When making this important decision in 2018, service members need to account for many things. The financial implications will likely be a large consideration. We have shown that an expected net present value model can provide service members with the insight necessary to make an informed financial decision between the High-3 Retirement System and the Blended Retirement System. Generally, members will find that higher personal discount rates will tend to favor the BRS while higher probabilities of staying in until 20 years will tend to favor the High-3 system. Unfortunately, the current uncertainty surrounding the continuation pay multiplier creates a large “gray area” for many individuals. However, members can use the model created by this research effort in order to generate personalized policy tables using their own inputs. This will allow the member to identify ranges over which each alternative should be preferred from a strictly financial point of view, and then revisit the decision as more information comes available. In this way, members can achieve clarity of thought and action as they approach the 2018 opt-in window.

Appendix A: Enlisted Policy Tables

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	51.5	38.2	29.0	22.6	17.9	14.6	12.0	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	3.0	2.6	2.3
0.95	51.2	38.0	28.9	22.5	17.9	14.5	12.0	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.90	50.9	37.8	28.7	22.3	17.8	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	50.6	37.5	28.5	22.2	17.7	14.3	11.9	9.9	8.4	7.2	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	50.3	37.3	28.3	22.0	17.5	14.2	11.8	9.9	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	49.9	37.0	28.1	21.9	17.4	14.1	11.7	9.8	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.70	49.4	36.6	27.8	21.7	17.3	14.0	11.6	9.8	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.65	48.9	36.2	27.5	21.4	17.1	13.9	11.5	9.7	8.2	7.1	6.1	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.60	48.3	35.7	27.2	21.2	16.9	13.7	11.4	9.6	8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.55	47.5	35.2	26.7	20.8	16.6	13.5	11.2	9.5	8.1	7.0	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.50	46.7	34.5	26.2	20.5	16.3	13.3	11.1	9.3	8.0	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.45	45.6	33.7	25.6	20.0	16.0	13.0	10.9	9.2	7.9	6.8	5.9	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	44.2	32.7	24.8	19.4	15.5	12.7	10.6	9.0	7.7	6.7	5.8	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.35	42.5	31.4	23.9	18.6	15.0	12.3	10.3	8.7	7.5	6.5	5.7	5.0	4.4	4.0	3.5	3.1	2.8	2.5	2.3
0.30	40.2	29.6	22.5	17.6	14.2	11.7	9.8	8.4	7.2	6.3	5.5	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.25	37.0	27.2	20.7	16.2	13.1	10.9	9.2	7.9	6.9	6.0	5.3	4.7	4.2	3.8	3.4	3.0	2.7	2.5	2.2
0.20	32.2	23.6	17.9	14.1	11.5	9.6	8.2	7.2	6.3	5.6	5.0	4.5	4.0	3.6	3.3	2.9	2.6	2.4	2.2
0.15	24.1	17.5	13.3	10.6	8.8	7.6	6.7	5.9	5.4	4.9	4.4	4.0	3.7	3.3	3.0	2.8	2.5	2.3	2.1
0.10	8.0	5.3	4.0	3.5	3.4	3.4	3.5	3.5	3.5	3.4	3.3	3.2	3.0	2.8	2.6	2.5	2.3	2.1	1.9
0.05	--	--	--	--	--	--	--	--	--	--	--	0.6	1.0	1.2	1.4	1.5	1.5	1.5	1.5

personal discount rate (annual)

Figure 5. Enlisted Policy Chart: 0 YOS / E-1 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	60.1	43.5	32.3	24.6	19.2	15.3	12.5	10.4	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.95	59.9	43.3	32.1	24.5	19.1	15.3	12.5	10.3	8.7	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.3
0.90	59.6	43.1	32.0	24.4	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	59.3	42.8	31.8	24.2	18.9	15.1	12.3	10.3	8.6	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	58.9	42.6	31.6	24.1	18.8	15.0	12.3	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	58.5	42.3	31.4	23.9	18.7	14.9	12.2	10.1	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.70	58.1	41.9	31.1	23.7	18.5	14.8	12.1	10.1	8.5	7.3	6.3	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.65	57.5	41.5	30.8	23.5	18.3	14.7	12.0	10.0	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.60	56.9	41.0	30.4	23.2	18.1	14.5	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.55	56.2	40.5	30.0	22.9	17.9	14.3	11.7	9.8	8.3	7.1	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.50	55.3	39.8	29.5	22.5	17.6	14.1	11.6	9.7	8.2	7.0	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.45	54.2	39.0	28.9	22.0	17.2	13.8	11.4	9.5	8.1	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	52.9	38.0	28.1	21.4	16.8	13.5	11.1	9.3	7.9	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.8	2.5	2.3
0.35	51.2	36.7	27.1	20.7	16.2	13.1	10.8	9.0	7.7	6.6	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.30	48.9	35.0	25.8	19.7	15.4	12.5	10.3	8.7	7.4	6.4	5.6	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.25	45.6	32.5	23.9	18.3	14.4	11.6	9.7	8.2	7.1	6.1	5.4	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2
0.20	40.8	28.9	21.2	16.1	12.8	10.4	8.7	7.5	6.5	5.7	5.1	4.5	4.0	3.6	3.3	2.9	2.7	2.4	2.2
0.15	32.8	22.8	16.5	12.6	10.1	8.3	7.1	6.3	5.6	5.0	4.5	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.10	16.7	10.6	7.3	5.6	4.7	4.2	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.8	2.7	2.5	2.3	2.1	1.9
0.05	--	--	--	--	--	--	--	--	--	--	0.0	0.6	1.0	1.3	1.4	1.5	1.5	1.5	1.5

personal discount rate (annual)

Figure 6. Enlisted Policy Chart: 0 YOS / E-1 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	51.1	37.9	28.8	22.4	17.8	14.5	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.95	50.8	37.6	28.6	22.3	17.7	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.90	50.4	37.4	28.4	22.1	17.6	14.3	11.8	9.9	8.4	7.2	6.3	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	50.0	37.1	28.2	21.9	17.5	14.2	11.7	9.8	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	49.6	36.7	27.9	21.7	17.3	14.1	11.6	9.8	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.75	49.1	36.3	27.6	21.5	17.1	13.9	11.5	9.7	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.70	48.5	35.9	27.3	21.2	16.9	13.8	11.4	9.6	8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.65	47.8	35.4	26.9	21.0	16.7	13.6	11.3	9.5	8.1	7.0	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.60	47.0	34.8	26.4	20.6	16.4	13.4	11.1	9.4	8.0	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.55	46.1	34.1	25.9	20.2	16.1	13.2	11.0	9.2	7.9	6.8	5.9	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.50	45.0	33.2	25.3	19.7	15.8	12.9	10.7	9.1	7.8	6.7	5.9	5.2	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.45	43.6	32.2	24.5	19.1	15.3	12.5	10.5	8.9	7.6	6.6	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.40	41.9	30.9	23.5	18.4	14.7	12.1	10.1	8.6	7.4	6.5	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.35	39.7	29.3	22.2	17.4	14.0	11.5	9.7	8.3	7.2	6.3	5.5	4.9	4.3	3.9	3.4	3.1	2.8	2.5	2.2
0.30	36.8	27.1	20.6	16.1	13.0	10.8	9.1	7.8	6.8	6.0	5.3	4.7	4.2	3.8	3.4	3.0	2.7	2.4	2.2
0.25	32.7	24.0	18.2	14.3	11.7	9.8	8.3	7.2	6.4	5.6	5.0	4.5	4.0	3.6	3.3	2.9	2.7	2.4	2.2
0.20	26.6	19.3	14.7	11.7	9.6	8.2	7.1	6.3	5.6	5.1	4.6	4.2	3.8	3.4	3.1	2.8	2.6	2.3	2.1
0.15	16.4	11.6	8.8	7.2	6.2	5.6	5.1	4.8	4.5	4.2	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	0.3	1.1	1.7	2.1	2.3	2.5	2.5	2.5	2.4	2.3	2.2	2.1	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.8	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 7. Enlisted Policy Chart: 1 YOS / E-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	59.8	43.2	32.1	24.4	19.1	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.95	59.4	43.0	31.9	24.3	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.90	59.1	42.7	31.7	24.1	18.8	15.1	12.3	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	58.7	42.4	31.4	23.9	18.7	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	58.2	42.0	31.2	23.7	18.6	14.8	12.1	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	57.7	41.6	30.9	23.5	18.4	14.7	12.0	10.0	8.5	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.70	57.1	41.2	30.5	23.3	18.2	14.6	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.65	56.5	40.7	30.2	23.0	18.0	14.4	11.8	9.8	8.3	7.1	6.1	5.4	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.60	55.7	40.1	29.7	22.6	17.7	14.2	11.6	9.7	8.2	7.0	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.55	54.7	39.4	29.2	22.2	17.4	14.0	11.4	9.6	8.1	7.0	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.50	53.6	38.6	28.5	21.7	17.0	13.7	11.2	9.4	8.0	6.9	6.0	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.45	52.3	37.5	27.7	21.1	16.6	13.3	11.0	9.2	7.8	6.7	5.9	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.40	50.6	36.2	26.8	20.4	16.0	12.9	10.6	8.9	7.6	6.6	5.7	5.0	4.5	3.9	3.5	3.1	2.8	2.5	2.3
0.35	48.4	34.6	25.5	19.4	15.3	12.3	10.2	8.6	7.4	6.4	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.30	45.5	32.4	23.8	18.2	14.3	11.6	9.6	8.2	7.0	6.1	5.4	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2
0.25	41.4	29.3	21.5	16.4	12.9	10.5	8.8	7.5	6.5	5.8	5.1	4.5	4.1	3.6	3.3	3.0	2.7	2.4	2.2
0.20	35.2	24.6	18.0	13.7	10.9	9.0	7.6	6.6	5.8	5.2	4.7	4.2	3.8	3.4	3.1	2.8	2.6	2.3	2.1
0.15	25.0	16.9	12.1	9.2	7.5	6.4	5.6	5.1	4.6	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0
0.10	4.6	1.4	0.3	0.3	0.6	1.1	1.6	2.0	2.3	2.4	2.5	2.6	2.5	2.4	2.3	2.2	2.1	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.8	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 8. Enlisted Policy Chart: 1 YOS / E-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	50.9	37.8	28.7	22.3	17.8	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.95	50.6	37.5	28.5	22.2	17.6	14.3	11.8	9.9	8.4	7.2	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.90	50.2	37.2	28.3	22.0	17.5	14.2	11.8	9.9	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	49.7	36.9	28.0	21.8	17.4	14.1	11.7	9.8	8.3	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	49.2	36.5	27.7	21.6	17.2	14.0	11.6	9.7	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.75	48.7	36.1	27.4	21.3	17.0	13.8	11.5	9.6	8.2	7.1	6.1	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.70	48.0	35.6	27.0	21.1	16.8	13.7	11.3	9.6	8.1	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.65	47.3	35.0	26.6	20.7	16.6	13.5	11.2	9.4	8.1	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.60	46.4	34.4	26.1	20.4	16.3	13.3	11.0	9.3	8.0	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.55	45.4	33.6	25.5	19.9	15.9	13.0	10.8	9.2	7.8	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.50	44.2	32.7	24.8	19.4	15.5	12.7	10.6	9.0	7.7	6.7	5.8	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.45	42.7	31.5	24.0	18.7	15.0	12.3	10.3	8.7	7.5	6.5	5.7	5.0	4.5	4.0	3.5	3.1	2.8	2.5	2.3
0.40	40.8	30.1	22.9	17.9	14.4	11.8	9.9	8.5	7.3	6.4	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.35	38.4	28.3	21.5	16.9	13.6	11.2	9.5	8.1	7.0	6.2	5.4	4.8	4.3	3.8	3.4	3.1	2.7	2.5	2.2
0.30	35.2	25.9	19.7	15.5	12.5	10.4	8.8	7.6	6.7	5.9	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.25	30.7	22.5	17.1	13.5	11.0	9.3	8.0	6.9	6.1	5.5	4.9	4.4	4.0	3.6	3.2	2.9	2.6	2.4	2.1
0.20	24.0	17.4	13.2	10.5	8.8	7.5	6.6	5.9	5.3	4.9	4.4	4.0	3.7	3.3	3.0	2.8	2.5	2.3	2.1
0.15	12.8	8.9	6.8	5.6	5.0	4.7	4.4	4.2	4.0	3.8	3.6	3.4	3.2	3.0	2.8	2.5	2.3	2.2	2.0
0.10	--	--	--	--	--	--	0.0	0.9	1.4	1.8	2.1	2.2	2.3	2.2	2.2	2.1	2.0	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.5	0.7	0.9	1.0	1.1

Figure 9. Enlisted Policy Chart: 2 YOS / E-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	59.6	43.1	32.0	24.4	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.95	59.2	42.8	31.8	24.2	18.9	15.1	12.3	10.2	8.6	7.4	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.90	58.8	42.5	31.5	24.0	18.8	15.0	12.3	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.85	58.4	42.2	31.3	23.8	18.6	14.9	12.2	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.80	57.9	41.8	31.0	23.6	18.5	14.8	12.1	10.0	8.5	7.2	6.3	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	57.3	41.4	30.7	23.4	18.3	14.6	12.0	10.0	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.70	56.7	40.9	30.3	23.1	18.1	14.5	11.8	9.9	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.65	55.9	40.3	29.9	22.8	17.8	14.3	11.7	9.8	8.3	7.1	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.60	55.1	39.7	29.4	22.4	17.5	14.1	11.5	9.6	8.2	7.0	6.1	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.55	54.1	38.9	28.8	21.9	17.2	13.8	11.3	9.5	8.0	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.50	52.8	38.0	28.1	21.4	16.8	13.5	11.1	9.3	7.9	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.8	2.5	2.3
0.45	51.3	36.8	27.2	20.8	16.3	13.1	10.8	9.1	7.7	6.7	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.40	49.5	35.4	26.2	19.9	15.7	12.6	10.4	8.8	7.5	6.5	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.35	47.1	33.6	24.8	18.9	14.8	12.0	10.0	8.4	7.2	6.3	5.5	4.9	4.3	3.8	3.4	3.1	2.8	2.5	2.2
0.30	43.9	31.2	22.9	17.5	13.8	11.2	9.3	7.9	6.9	6.0	5.3	4.7	4.2	3.7	3.3	3.0	2.7	2.4	2.2
0.25	39.4	27.8	20.4	15.5	12.3	10.0	8.4	7.3	6.3	5.6	5.0	4.4	4.0	3.6	3.2	2.9	2.6	2.4	2.1
0.20	32.7	22.7	16.5	12.6	10.0	8.3	7.1	6.2	5.5	5.0	4.5	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.15	21.4	14.2	10.0	7.7	6.3	5.5	4.9	4.5	4.2	4.0	3.7	3.5	3.2	3.0	2.8	2.6	2.3	2.2	2.0
0.10	--	--	--	--	--	--	0.5	1.2	1.6	2.0	2.2	2.3	2.3	2.3	2.2	2.1	2.0	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.5	0.8	0.9	1.0	1.1

Figure 10. Enlisted Policy Chart: 2 YOS / E-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	52.4	38.9	29.5	23.0	18.2	14.8	12.2	10.2	8.6	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.95	52.1	38.6	29.3	22.8	18.1	14.7	12.1	10.2	8.6	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.90	51.7	38.3	29.1	22.7	18.0	14.6	12.1	10.1	8.6	7.3	6.3	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.85	51.3	38.0	28.9	22.5	17.9	14.5	12.0	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	3.0	2.6	2.3
0.80	50.9	37.7	28.6	22.3	17.7	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	50.3	37.3	28.3	22.1	17.6	14.3	11.8	9.9	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.70	49.7	36.9	28.0	21.8	17.4	14.1	11.7	9.8	8.3	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.65	49.1	36.3	27.6	21.5	17.1	13.9	11.5	9.7	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.60	48.3	35.7	27.1	21.1	16.9	13.7	11.4	9.6	8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.55	47.3	35.0	26.6	20.7	16.5	13.5	11.2	9.4	8.1	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.50	46.2	34.2	26.0	20.2	16.2	13.2	11.0	9.3	7.9	6.8	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.45	44.8	33.1	25.2	19.6	15.7	12.8	10.7	9.1	7.8	6.7	5.9	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.40	43.1	31.8	24.2	18.9	15.1	12.4	10.4	8.8	7.6	6.6	5.7	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.35	40.8	30.1	22.9	17.9	14.4	11.8	9.9	8.5	7.3	6.4	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.30	37.9	27.9	21.2	16.6	13.4	11.1	9.3	8.0	7.0	6.1	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.5	2.2
0.25	33.7	24.7	18.8	14.8	12.0	10.0	8.5	7.4	6.5	5.7	5.1	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	27.5	20.0	15.2	12.1	9.9	8.4	7.3	6.4	5.7	5.2	4.7	4.2	3.8	3.5	3.1	2.8	2.6	2.3	2.1
0.15	17.1	12.1	9.2	7.5	6.5	5.8	5.3	4.9	4.5	4.2	3.9	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	0.5	1.2	1.7	2.1	2.4	2.5	2.5	2.5	2.4	2.3	2.2	2.1	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.7	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 11. Enlisted Policy Chart: 3 YOS / E-4 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	61.1	44.2	32.8	25.0	19.5	15.6	12.7	10.5	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.95	60.8	43.9	32.6	24.9	19.4	15.5	12.6	10.5	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.90	60.4	43.7	32.4	24.7	19.3	15.4	12.6	10.4	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.85	60.0	43.4	32.2	24.5	19.1	15.3	12.5	10.4	8.7	7.4	6.4	5.6	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.80	59.5	43.0	31.9	24.3	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.75	59.0	42.6	31.6	24.1	18.8	15.0	12.3	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.70	58.4	42.2	31.3	23.8	18.6	14.9	12.2	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.65	57.7	41.7	30.9	23.5	18.4	14.7	12.0	10.0	8.5	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.60	56.9	41.1	30.4	23.2	18.1	14.5	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.55	56.0	40.3	29.9	22.8	17.8	14.3	11.7	9.7	8.3	7.1	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.50	54.9	39.5	29.2	22.3	17.4	14.0	11.5	9.6	8.1	7.0	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.45	53.5	38.4	28.4	21.7	17.0	13.6	11.2	9.4	8.0	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.40	51.7	37.1	27.4	20.9	16.4	13.2	10.9	9.1	7.8	6.7	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.35	49.5	35.4	26.2	19.9	15.6	12.6	10.4	8.8	7.5	6.5	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.30	46.6	33.2	24.5	18.6	14.7	11.9	9.8	8.3	7.2	6.2	5.5	4.8	4.3	3.8	3.4	3.1	2.7	2.5	2.2
0.25	42.4	30.0	22.1	16.8	13.3	10.8	9.0	7.7	6.7	5.8	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	36.2	25.3	18.5	14.1	11.2	9.2	7.8	6.8	5.9	5.3	4.7	4.3	3.8	3.5	3.1	2.9	2.6	2.3	2.1
0.15	25.8	17.5	12.5	9.5	7.7	6.6	5.8	5.2	4.7	4.4	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0
0.10	5.0	1.7	0.6	0.5	0.8	1.2	1.7	2.1	2.3	2.5	2.6	2.6	2.5	2.5	2.4	2.2	2.1	2.0	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.8	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 12. Enlisted Policy Chart: 3 YOS / E-4 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	53.5	39.7	30.2	23.5	18.6	15.1	12.4	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.95	53.2	39.5	30.0	23.3	18.5	15.0	12.4	10.3	8.7	7.5	6.4	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.90	52.8	39.2	29.8	23.2	18.4	14.9	12.3	10.3	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.85	52.4	38.9	29.5	23.0	18.3	14.8	12.2	10.2	8.6	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.80	51.9	38.5	29.3	22.8	18.1	14.7	12.1	10.1	8.6	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.75	51.4	38.1	29.0	22.5	17.9	14.5	12.0	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	3.0	2.6	2.3
0.70	50.8	37.7	28.6	22.3	17.7	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.65	50.1	37.1	28.2	22.0	17.5	14.2	11.7	9.9	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.60	49.3	36.5	27.8	21.6	17.2	14.0	11.6	9.7	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.55	48.3	35.8	27.2	21.2	16.9	13.8	11.4	9.6	8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.50	47.2	34.9	26.5	20.7	16.5	13.5	11.2	9.4	8.0	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.45	45.8	33.9	25.7	20.1	16.0	13.1	10.9	9.2	7.9	6.8	5.9	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	44.0	32.5	24.7	19.3	15.5	12.7	10.6	8.9	7.7	6.7	5.8	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.35	41.8	30.8	23.4	18.3	14.7	12.1	10.1	8.6	7.4	6.4	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.30	38.8	28.5	21.7	17.0	13.7	11.3	9.5	8.1	7.1	6.2	5.4	4.8	4.3	3.8	3.4	3.1	2.8	2.5	2.2
0.25	34.5	25.4	19.3	15.2	12.3	10.2	8.7	7.5	6.6	5.8	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	28.2	20.6	15.6	12.4	10.2	8.6	7.5	6.6	5.8	5.2	4.7	4.3	3.8	3.5	3.2	2.9	2.6	2.3	2.1
0.15	17.7	12.6	9.6	7.8	6.7	5.9	5.4	5.0	4.6	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	0.5	1.3	1.8	2.2	2.4	2.5	2.5	2.5	2.4	2.3	2.2	2.1	2.0	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.7	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 13. Enlisted Policy Chart: 4 YOS / E-4 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	62.1	45.0	33.4	25.5	19.9	15.9	12.9	10.7	9.0	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.95	61.8	44.8	33.3	25.3	19.8	15.8	12.8	10.6	8.9	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.90	61.4	44.5	33.0	25.2	19.6	15.7	12.8	10.6	8.9	7.6	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.6	2.4
0.85	61.0	44.2	32.8	25.0	19.5	15.6	12.7	10.5	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.80	60.6	43.8	32.5	24.8	19.4	15.5	12.6	10.4	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.75	60.0	43.4	32.2	24.6	19.2	15.3	12.5	10.4	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.3
0.70	59.4	43.0	31.9	24.3	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.65	58.7	42.4	31.5	24.0	18.7	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.60	57.9	41.8	31.0	23.6	18.5	14.8	12.1	10.0	8.5	7.2	6.3	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.55	57.0	41.1	30.5	23.2	18.2	14.5	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.50	55.8	40.2	29.8	22.7	17.8	14.2	11.7	9.7	8.2	7.1	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.45	54.4	39.2	29.0	22.1	17.3	13.9	11.4	9.5	8.1	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	52.7	37.8	28.0	21.3	16.7	13.4	11.0	9.3	7.9	6.8	5.9	5.2	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.35	50.4	36.1	26.7	20.3	16.0	12.9	10.6	8.9	7.6	6.6	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.30	47.4	33.8	25.0	19.0	15.0	12.1	10.0	8.5	7.3	6.3	5.5	4.9	4.3	3.8	3.4	3.1	2.8	2.5	2.2
0.25	43.2	30.7	22.5	17.2	13.5	11.0	9.2	7.8	6.8	5.9	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	36.9	25.9	18.9	14.4	11.4	9.4	7.9	6.9	6.0	5.4	4.8	4.3	3.9	3.5	3.2	2.9	2.6	2.3	2.1
0.15	26.3	17.9	12.8	9.8	7.9	6.7	5.9	5.3	4.8	4.4	4.1	3.7	3.4	3.2	2.9	2.7	2.4	2.2	2.0
0.10	5.2	1.9	0.7	0.6	0.9	1.3	1.7	2.1	2.4	2.5	2.6	2.6	2.6	2.5	2.4	2.2	2.1	2.0	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.7	1.0	1.1	1.2	1.2

personal discount rate (annual)

Figure 14. Enlisted Policy Chart: 4 YOS / E-4 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	55.1	40.9	31.1	24.2	19.2	15.5	12.7	10.6	9.0	7.6	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.95	54.7	40.6	30.9	24.0	19.0	15.4	12.6	10.6	8.9	7.6	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.90	54.2	40.3	30.6	23.8	18.9	15.3	12.6	10.5	8.9	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.85	53.7	39.9	30.3	23.5	18.7	15.1	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.80	53.1	39.4	30.0	23.3	18.5	15.0	12.3	10.3	8.7	7.5	6.4	5.6	4.9	4.3	3.8	3.4	3.0	2.6	2.4
0.75	52.5	38.9	29.6	23.0	18.3	14.8	12.2	10.2	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.70	51.7	38.3	29.1	22.7	18.0	14.6	12.1	10.1	8.6	7.3	6.3	5.5	4.8	4.2	3.8	3.3	3.0	2.6	2.3
0.65	50.8	37.7	28.6	22.3	17.7	14.4	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.60	49.8	36.9	28.0	21.8	17.4	14.1	11.7	9.8	8.3	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.55	48.6	36.0	27.3	21.3	17.0	13.8	11.4	9.6	8.2	7.1	6.1	5.4	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.50	47.1	34.9	26.5	20.7	16.5	13.4	11.2	9.4	8.0	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.45	45.3	33.5	25.5	19.9	15.9	13.0	10.8	9.1	7.8	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.40	43.1	31.9	24.2	18.9	15.2	12.4	10.4	8.8	7.6	6.6	5.7	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.35	40.3	29.7	22.6	17.7	14.2	11.7	9.8	8.4	7.2	6.3	5.5	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.30	36.5	26.8	20.4	16.0	12.9	10.7	9.1	7.8	6.8	6.0	5.3	4.7	4.2	3.7	3.4	3.0	2.7	2.4	2.2
0.25	31.1	22.8	17.3	13.7	11.1	9.4	8.0	7.0	6.2	5.5	4.9	4.4	4.0	3.6	3.2	2.9	2.6	2.4	2.1
0.20	23.1	16.7	12.7	10.2	8.5	7.3	6.5	5.8	5.2	4.8	4.4	4.0	3.6	3.3	3.0	2.8	2.5	2.3	2.1
0.15	9.8	6.6	5.1	4.3	4.0	3.9	3.8	3.8	3.7	3.6	3.4	3.3	3.1	2.9	2.7	2.5	2.3	2.1	1.9
0.10	--	--	--	--	--	--	--	--	0.6	1.2	1.6	1.8	2.0	2.0	2.0	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	0.6	0.8	0.9

Figure 15. Enlisted Policy Chart: 5 YOS / E-5 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	63.8	46.2	34.4	26.2	20.4	16.3	13.2	10.9	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.95	63.3	45.9	34.1	26.0	20.3	16.2	13.1	10.9	9.1	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.90	62.9	45.6	33.9	25.8	20.1	16.0	13.0	10.8	9.1	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.85	62.4	45.2	33.6	25.6	19.9	15.9	12.9	10.7	9.0	7.6	6.6	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.80	61.8	44.7	33.2	25.3	19.8	15.8	12.8	10.6	8.9	7.6	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.75	61.1	44.2	32.8	25.0	19.5	15.6	12.7	10.5	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.70	60.3	43.6	32.4	24.7	19.3	15.4	12.5	10.4	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.65	59.5	43.0	31.9	24.3	19.0	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.60	58.4	42.2	31.3	23.8	18.6	14.9	12.2	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.55	57.2	41.3	30.6	23.3	18.2	14.6	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.50	55.8	40.2	29.8	22.7	17.7	14.2	11.7	9.7	8.2	7.1	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.45	54.0	38.8	28.8	21.9	17.2	13.8	11.3	9.5	8.0	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	51.8	37.2	27.5	20.9	16.4	13.2	10.9	9.1	7.8	6.7	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.35	48.9	35.0	25.8	19.7	15.5	12.5	10.3	8.7	7.4	6.4	5.6	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.30	45.1	32.1	23.6	18.0	14.2	11.5	9.6	8.1	7.0	6.1	5.4	4.7	4.2	3.8	3.4	3.0	2.7	2.4	2.2
0.25	39.8	28.1	20.6	15.7	12.4	10.1	8.5	7.3	6.4	5.6	5.0	4.5	4.0	3.6	3.2	2.9	2.6	2.4	2.2
0.20	31.8	22.0	16.0	12.2	9.7	8.1	7.0	6.1	5.4	4.9	4.4	4.0	3.7	3.3	3.0	2.8	2.5	2.3	2.1
0.15	18.5	11.9	8.3	6.4	5.3	4.7	4.3	4.1	3.9	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.3	2.1	1.9
0.10	--	--	--	--	--	--	--	0.1	0.8	1.3	1.7	1.9	2.0	2.0	2.0	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.6	0.8	0.9

Figure 16. Enlisted Policy Chart: 5 YOS / E-5 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

probability	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	56.7	42.1	32.0	24.8	19.7	15.9	13.0	10.9	9.1	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.95	56.3	41.8	31.8	24.7	19.5	15.8	13.0	10.8	9.1	7.7	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.90	55.8	41.4	31.5	24.5	19.4	15.7	12.9	10.7	9.0	7.7	6.6	5.7	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.85	55.2	41.0	31.2	24.2	19.2	15.5	12.8	10.6	9.0	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.80	54.6	40.6	30.8	24.0	19.0	15.4	12.6	10.5	8.9	7.6	6.5	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.75	54.0	40.1	30.4	23.7	18.8	15.2	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.70	53.2	39.5	30.0	23.3	18.5	15.0	12.4	10.3	8.7	7.5	6.4	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.65	52.3	38.8	29.5	22.9	18.2	14.8	12.2	10.2	8.6	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.60	51.3	38.0	28.9	22.5	17.9	14.5	12.0	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.55	50.0	37.1	28.2	21.9	17.5	14.2	11.7	9.8	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.50	48.5	36.0	27.3	21.3	17.0	13.8	11.4	9.6	8.2	7.1	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.45	46.7	34.6	26.3	20.5	16.4	13.3	11.1	9.4	8.0	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.40	44.5	32.9	25.0	19.5	15.6	12.8	10.6	9.0	7.7	6.7	5.8	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.35	41.6	30.7	23.3	18.2	14.6	12.0	10.1	8.6	7.4	6.4	5.6	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.30	37.7	27.7	21.1	16.5	13.3	11.0	9.3	8.0	6.9	6.1	5.4	4.8	4.2	3.8	3.4	3.0	2.7	2.5	2.2
0.25	32.2	23.6	17.9	14.1	11.5	9.6	8.2	7.2	6.3	5.6	5.0	4.5	4.0	3.6	3.3	2.9	2.6	2.4	2.2
0.20	24.1	17.4	13.3	10.6	8.8	7.6	6.6	5.9	5.4	4.9	4.4	4.0	3.7	3.3	3.0	2.8	2.5	2.3	2.1
0.15	10.5	7.2	5.5	4.6	4.3	4.1	4.0	3.9	3.8	3.6	3.5	3.3	3.1	2.9	2.7	2.5	2.3	2.1	1.9
0.10	--	--	--	--	--	--	--	--	0.6	1.2	1.6	1.8	2.0	2.0	2.0	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	0.6	0.8	0.9

Figure 17. Enlisted Policy Chart: 6 YOS / E-5 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

probability	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	65.3	47.4	35.3	26.9	20.9	16.7	13.5	11.2	9.3	7.9	6.8	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.95	64.9	47.1	35.0	26.7	20.8	16.6	13.4	11.1	9.3	7.9	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.90	64.4	46.7	34.7	26.5	20.6	16.4	13.4	11.0	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.85	63.9	46.3	34.4	26.2	20.5	16.3	13.2	10.9	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.80	63.3	45.9	34.1	26.0	20.3	16.2	13.1	10.9	9.1	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.75	62.6	45.4	33.7	25.7	20.0	16.0	13.0	10.8	9.0	7.7	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.70	61.8	44.8	33.3	25.3	19.8	15.8	12.8	10.6	8.9	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.65	60.9	44.1	32.7	24.9	19.5	15.6	12.7	10.5	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.60	59.9	43.3	32.1	24.5	19.1	15.3	12.5	10.3	8.7	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.3
0.55	58.7	42.4	31.4	24.0	18.7	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.50	57.2	41.2	30.6	23.3	18.2	14.6	11.9	9.9	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.45	55.4	39.9	29.5	22.5	17.6	14.1	11.6	9.7	8.2	7.0	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.40	53.1	38.2	28.2	21.5	16.9	13.5	11.1	9.3	7.9	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.8	2.5	2.3
0.35	50.2	36.0	26.6	20.2	15.9	12.8	10.6	8.9	7.6	6.6	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.30	46.3	33.0	24.3	18.5	14.6	11.8	9.8	8.3	7.1	6.2	5.4	4.8	4.3	3.8	3.4	3.1	2.7	2.5	2.2
0.25	40.9	28.9	21.2	16.2	12.8	10.4	8.7	7.5	6.5	5.7	5.1	4.5	4.0	3.6	3.3	2.9	2.7	2.4	2.2
0.20	32.7	22.7	16.5	12.6	10.1	8.3	7.1	6.2	5.6	5.0	4.5	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.15	19.2	12.5	8.7	6.7	5.5	4.9	4.5	4.2	4.0	3.8	3.6	3.3	3.1	2.9	2.7	2.5	2.3	2.1	2.0
0.10	--	--	--	--	--	--	--	0.1	0.8	1.3	1.7	1.9	2.0	2.0	2.0	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	0.6	0.8	0.9

Figure 18. Enlisted Policy Chart: 6 YOS / E-5 / female

BRS preferred | High-3 preferred | break-even CP multiplier

Rows: probability of reaching retirement eligibility (>20 YOS); columns: personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	58.3	43.4	33.0	25.6	20.2	16.3	13.4	11.1	9.3	7.9	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.95	57.9	43.0	32.7	25.4	20.1	16.2	13.3	11.0	9.3	7.9	6.8	5.9	5.1	4.5	3.9	3.4	3.1	2.7	2.4
0.90	57.4	42.7	32.4	25.2	19.9	16.1	13.2	11.0	9.2	7.9	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.85	56.9	42.3	32.1	24.9	19.8	15.9	13.1	10.9	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.80	56.2	41.8	31.8	24.7	19.5	15.8	13.0	10.8	9.1	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.75	55.5	41.3	31.4	24.4	19.3	15.6	12.8	10.7	9.0	7.7	6.6	5.7	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.70	54.8	40.7	30.9	24.0	19.0	15.4	12.7	10.6	8.9	7.6	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.65	53.8	40.0	30.4	23.6	18.7	15.2	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.60	52.8	39.2	29.8	23.1	18.4	14.9	12.3	10.3	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.55	51.5	38.2	29.0	22.6	18.0	14.6	12.0	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	3.0	2.6	2.3
0.50	50.0	37.0	28.2	21.9	17.5	14.2	11.7	9.8	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.45	48.1	35.6	27.1	21.1	16.8	13.7	11.4	9.6	8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.40	45.8	33.9	25.7	20.1	16.1	13.1	10.9	9.2	7.9	6.8	5.9	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.35	42.8	31.6	24.0	18.8	15.1	12.3	10.3	8.8	7.5	6.5	5.7	5.0	4.5	4.0	3.5	3.1	2.8	2.5	2.3
0.30	38.8	28.6	21.7	17.0	13.7	11.3	9.5	8.2	7.1	6.2	5.4	4.8	4.3	3.8	3.4	3.1	2.8	2.5	2.2
0.25	33.2	24.4	18.5	14.6	11.9	9.9	8.4	7.3	6.4	5.7	5.1	4.5	4.1	3.6	3.3	3.0	2.7	2.4	2.2
0.20	24.9	18.0	13.7	10.9	9.1	7.8	6.8	6.1	5.5	4.9	4.5	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.15	10.9	7.5	5.7	4.8	4.4	4.2	4.1	4.0	3.8	3.7	3.5	3.3	3.1	2.9	2.7	2.5	2.3	2.1	2.0
0.10	--	--	--	--	--	--	--	--	0.6	1.2	1.6	1.8	1.9	2.0	2.0	1.9	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	0.6	0.7	0.9

Figure 19. Enlisted Policy Chart: 7 YOS / E-5 / male

BRS preferred | High-3 preferred | break-even CP multiplier

Rows: probability of reaching retirement eligibility (>20 YOS); columns: personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	67.0	48.7	36.2	27.6	21.5	17.1	13.9	11.4	9.5	8.1	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.95	66.5	48.3	36.0	27.4	21.4	17.0	13.8	11.3	9.5	8.0	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.90	66.0	48.0	35.7	27.2	21.2	16.9	13.7	11.3	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.4	3.1	2.7	2.4
0.85	65.5	47.6	35.4	27.0	21.0	16.7	13.6	11.2	9.4	7.9	6.8	5.9	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.80	64.9	47.1	35.0	26.7	20.8	16.6	13.4	11.1	9.3	7.9	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.75	64.2	46.6	34.6	26.4	20.6	16.4	13.3	11.0	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.70	63.4	46.0	34.2	26.0	20.3	16.2	13.2	10.9	9.1	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.65	62.5	45.3	33.6	25.6	20.0	16.0	13.0	10.7	9.0	7.7	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.60	61.4	44.4	33.0	25.2	19.6	15.7	12.8	10.6	8.9	7.6	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.6	2.4
0.55	60.1	43.5	32.3	24.6	19.2	15.4	12.5	10.4	8.7	7.4	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.50	58.6	42.3	31.4	23.9	18.7	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.45	56.7	40.9	30.3	23.1	18.1	14.5	11.9	9.9	8.3	7.1	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.40	54.4	39.2	29.0	22.1	17.3	13.9	11.4	9.5	8.1	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.35	51.4	36.9	27.3	20.8	16.3	13.1	10.8	9.1	7.7	6.7	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.30	47.5	33.9	25.0	19.1	15.0	12.1	10.0	8.5	7.3	6.3	5.5	4.9	4.3	3.9	3.4	3.1	2.8	2.5	2.2
0.25	41.9	29.7	21.8	16.6	13.1	10.7	8.9	7.6	6.6	5.8	5.1	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	33.5	23.3	17.0	13.0	10.3	8.5	7.3	6.4	5.6	5.1	4.6	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.15	19.6	12.8	9.0	6.8	5.7	5.0	4.6	4.3	4.0	3.8	3.6	3.4	3.2	2.9	2.7	2.5	2.3	2.1	2.0
0.10	--	--	--	--	--	--	--	0.1	0.8	1.3	1.6	1.9	2.0	2.0	2.0	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.3	0.6	0.8	0.9

Figure 20. Enlisted Policy Chart: 7 YOS / E-5 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	60.1	44.7	34.0	26.4	20.8	16.8	13.7	11.4	9.5	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.95	59.7	44.4	33.7	26.2	20.7	16.7	13.6	11.3	9.5	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.90	59.2	44.0	33.5	26.0	20.5	16.5	13.5	11.2	9.4	8.0	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.85	58.7	43.6	33.1	25.7	20.4	16.4	13.4	11.2	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.80	58.1	43.2	32.8	25.5	20.2	16.2	13.3	11.1	9.3	7.9	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.75	57.4	42.7	32.4	25.2	19.9	16.1	13.2	11.0	9.2	7.8	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.70	56.6	42.1	32.0	24.8	19.7	15.9	13.0	10.8	9.1	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.65	55.7	41.4	31.4	24.4	19.4	15.6	12.8	10.7	9.0	7.7	6.6	5.7	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.60	54.6	40.6	30.8	24.0	19.0	15.4	12.6	10.5	8.9	7.6	6.5	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.55	53.4	39.6	30.1	23.4	18.6	15.0	12.4	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.50	51.9	38.5	29.3	22.8	18.1	14.7	12.1	10.1	8.6	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.45	50.1	37.1	28.2	22.0	17.5	14.2	11.7	9.9	8.4	7.2	6.2	5.4	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.40	47.8	35.4	26.9	21.0	16.7	13.6	11.3	9.5	8.1	7.0	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.35	44.8	33.2	25.2	19.7	15.7	12.9	10.7	9.1	7.8	6.7	5.9	5.1	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.30	40.9	30.2	22.9	18.0	14.4	11.9	9.9	8.5	7.3	6.4	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.25	35.4	26.0	19.8	15.5	12.6	10.5	8.9	7.6	6.7	5.9	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.20	27.2	19.8	15.1	11.9	9.8	8.4	7.3	6.4	5.7	5.1	4.6	4.2	3.8	3.4	3.1	2.8	2.6	2.3	2.1
0.15	13.5	9.4	7.2	5.9	5.3	4.8	4.6	4.3	4.1	3.9	3.7	3.5	3.2	3.0	2.8	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	--	--	0.2	0.9	1.4	1.8	2.0	2.1	2.1	2.1	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.6	0.8	0.9

personal discount rate (annual)

Figure 21. Enlisted Policy Chart: 8 YOS / E-5 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	68.8	50.0	37.2	28.4	22.1	17.6	14.2	11.7	9.7	8.2	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.95	68.3	49.7	37.0	28.2	21.9	17.4	14.1	11.6	9.7	8.2	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.90	67.8	49.3	36.7	28.0	21.8	17.3	14.0	11.5	9.6	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.85	67.3	48.9	36.4	27.7	21.6	17.2	13.9	11.5	9.6	8.1	6.9	5.9	5.2	4.5	3.9	3.5	3.1	2.7	2.4
0.80	66.7	48.5	36.1	27.5	21.4	17.0	13.8	11.4	9.5	8.0	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.75	66.0	47.9	35.7	27.2	21.2	16.9	13.7	11.3	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.4	3.0	2.7	2.4
0.70	65.2	47.4	35.2	26.8	20.9	16.7	13.5	11.1	9.3	7.9	6.8	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.65	64.3	46.7	34.7	26.4	20.6	16.4	13.3	11.0	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.60	63.3	45.9	34.1	26.0	20.3	16.2	13.1	10.9	9.1	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.55	62.0	44.9	33.4	25.4	19.8	15.8	12.9	10.7	9.0	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.50	60.5	43.8	32.5	24.8	19.3	15.5	12.6	10.4	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.45	58.7	42.4	31.5	24.0	18.7	15.0	12.2	10.2	8.6	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.40	56.4	40.7	30.2	23.0	18.0	14.4	11.8	9.8	8.3	7.1	6.1	5.4	4.7	4.1	3.7	3.3	2.9	2.6	2.3
0.35	53.5	38.5	28.5	21.7	17.0	13.6	11.2	9.4	8.0	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.9	2.5	2.3
0.30	49.6	35.5	26.2	20.0	15.7	12.6	10.4	8.8	7.5	6.5	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.25	44.1	31.3	23.1	17.6	13.8	11.2	9.4	8.0	6.9	6.0	5.3	4.7	4.2	3.7	3.3	3.0	2.7	2.4	2.2
0.20	35.8	25.1	18.3	14.0	11.1	9.1	7.7	6.7	5.9	5.3	4.7	4.2	3.8	3.5	3.1	2.8	2.6	2.3	2.1
0.15	22.1	14.7	10.4	8.0	6.5	5.6	5.1	4.6	4.3	4.0	3.8	3.5	3.3	3.0	2.8	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	--	--	0.5	1.1	1.6	1.9	2.0	2.1	2.1	2.1	2.0	1.9	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.4	0.6	0.8	0.9

personal discount rate (annual)

Figure 22. Enlisted Policy Chart: 8 YOS / E-5 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	62.1	46.2	35.1	27.2	21.5	17.3	14.1	11.7	9.8	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.95	61.6	45.9	34.8	27.0	21.3	17.1	14.0	11.6	9.7	8.2	7.0	6.1	5.2	4.6	4.0	3.5	3.1	2.8	2.4
0.90	61.1	45.5	34.6	26.8	21.2	17.0	13.9	11.5	9.7	8.2	7.0	6.0	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.85	60.6	45.1	34.3	26.6	21.0	16.9	13.8	11.4	9.6	8.1	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.80	60.0	44.6	33.9	26.3	20.8	16.7	13.7	11.3	9.5	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.75	59.3	44.1	33.5	26.0	20.6	16.6	13.5	11.2	9.4	8.0	6.9	5.9	5.2	4.5	3.9	3.5	3.1	2.7	2.4
0.70	58.5	43.5	33.1	25.7	20.3	16.4	13.4	11.1	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.65	57.6	42.8	32.5	25.3	20.0	16.1	13.2	11.0	9.3	7.9	6.8	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.60	56.6	42.0	31.9	24.8	19.6	15.9	13.0	10.8	9.1	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.55	55.3	41.1	31.2	24.2	19.2	15.5	12.8	10.6	9.0	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.50	53.8	40.0	30.4	23.6	18.7	15.2	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.45	52.0	38.6	29.3	22.8	18.1	14.7	12.1	10.1	8.6	7.4	6.4	5.5	4.8	4.3	3.8	3.3	3.0	2.6	2.4
0.40	49.7	36.9	28.0	21.8	17.4	14.1	11.7	9.8	8.3	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.35	46.8	34.6	26.3	20.5	16.4	13.4	11.1	9.4	8.0	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.30	42.9	31.7	24.1	18.8	15.1	12.4	10.3	8.8	7.5	6.5	5.7	5.0	4.5	4.0	3.5	3.1	2.8	2.5	2.3
0.25	37.4	27.5	20.9	16.4	13.2	11.0	9.3	7.9	6.9	6.1	5.3	4.7	4.2	3.8	3.4	3.0	2.7	2.5	2.2
0.20	29.2	21.3	16.2	12.8	10.5	8.9	7.6	6.7	5.9	5.3	4.8	4.3	3.9	3.5	3.2	2.9	2.6	2.4	2.1
0.15	15.5	10.9	8.3	6.8	5.9	5.4	5.0	4.6	4.4	4.1	3.8	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	--	--	0.5	1.2	1.6	1.9	2.1	2.2	2.2	2.1	2.1	2.0	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.4	0.7	0.8	0.9

Figure 23. Enlisted Policy Chart: 9 YOS / E-5 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	70.7	51.5	38.4	29.2	22.7	18.0	14.6	12.0	10.0	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.95	70.3	51.2	38.1	29.0	22.6	17.9	14.5	11.9	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.4
0.90	69.8	50.8	37.8	28.8	22.4	17.8	14.4	11.8	9.9	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.4
0.85	69.3	50.4	37.5	28.6	22.2	17.7	14.3	11.8	9.8	8.3	7.0	6.1	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.80	68.7	49.9	37.2	28.3	22.0	17.5	14.2	11.7	9.7	8.2	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.75	68.0	49.4	36.8	28.0	21.8	17.3	14.0	11.6	9.6	8.1	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.70	67.2	48.8	36.3	27.7	21.6	17.1	13.9	11.4	9.6	8.1	6.9	5.9	5.2	4.5	3.9	3.5	3.1	2.7	2.4
0.65	66.3	48.1	35.8	27.3	21.3	16.9	13.7	11.3	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.60	65.3	47.4	35.2	26.8	20.9	16.6	13.5	11.1	9.3	7.9	6.8	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.55	64.0	46.4	34.5	26.3	20.5	16.3	13.3	11.0	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.50	62.5	45.3	33.6	25.6	20.0	15.9	13.0	10.7	9.0	7.7	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.45	60.7	43.9	32.6	24.8	19.4	15.5	12.6	10.5	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.40	58.4	42.2	31.3	23.8	18.6	14.9	12.2	10.1	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.35	55.5	39.9	29.6	22.5	17.6	14.1	11.6	9.7	8.2	7.0	6.1	5.3	4.7	4.1	3.6	3.2	2.9	2.6	2.3
0.30	51.6	37.0	27.3	20.8	16.3	13.1	10.8	9.1	7.7	6.7	5.8	5.1	4.5	4.0	3.5	3.2	2.8	2.5	2.3
0.25	46.1	32.8	24.2	18.4	14.5	11.7	9.7	8.3	7.1	6.2	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.5	2.2
0.20	37.9	26.6	19.5	14.8	11.8	9.6	8.1	7.0	6.1	5.4	4.9	4.4	3.9	3.5	3.2	2.9	2.6	2.4	2.1
0.15	24.2	16.3	11.6	8.8	7.2	6.1	5.5	4.9	4.6	4.2	3.9	3.6	3.3	3.1	2.8	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	--	0.1	0.8	1.4	1.8	2.0	2.1	2.2	2.2	2.1	2.1	2.0	1.8	1.7
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.4	0.7	0.8	0.9

Figure 24. Enlisted Policy Chart: 9 YOS / E-5 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	63.9	47.6	36.1	28.0	22.1	17.7	14.5	11.9	10.0	8.4	7.2	6.2	5.3	4.6	4.1	3.6	3.1	2.8	2.5
0.95	63.5	47.3	35.9	27.8	22.0	17.6	14.4	11.9	9.9	8.4	7.2	6.2	5.3	4.6	4.1	3.6	3.1	2.8	2.5
0.90	63.0	46.9	35.6	27.6	21.8	17.5	14.3	11.8	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.85	62.5	46.5	35.3	27.4	21.6	17.4	14.2	11.7	9.8	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.80	61.9	46.0	35.0	27.1	21.4	17.2	14.1	11.6	9.7	8.3	7.0	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.4
0.75	61.2	45.5	34.6	26.8	21.2	17.0	13.9	11.5	9.7	8.2	7.0	6.0	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.70	60.4	44.9	34.1	26.5	20.9	16.8	13.8	11.4	9.6	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.65	59.5	44.3	33.6	26.1	20.6	16.6	13.6	11.3	9.5	8.0	6.9	5.9	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.60	58.5	43.5	33.0	25.6	20.3	16.3	13.4	11.1	9.4	7.9	6.8	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.55	57.2	42.5	32.3	25.1	19.9	16.0	13.1	10.9	9.2	7.8	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.50	55.8	41.4	31.5	24.4	19.4	15.7	12.9	10.7	9.0	7.7	6.6	5.7	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.45	54.0	40.1	30.4	23.7	18.8	15.2	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.40	51.7	38.3	29.1	22.7	18.0	14.6	12.1	10.1	8.6	7.3	6.3	5.5	4.8	4.2	3.8	3.3	3.0	2.6	2.3
0.35	48.8	36.1	27.5	21.4	17.1	13.9	11.5	9.7	8.2	7.1	6.1	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.30	44.9	33.2	25.2	19.7	15.8	12.9	10.7	9.1	7.8	6.7	5.9	5.2	4.5	4.0	3.6	3.2	2.8	2.5	2.3
0.25	39.5	29.1	22.1	17.3	14.0	11.5	9.7	8.3	7.1	6.2	5.5	4.9	4.3	3.8	3.4	3.1	2.8	2.5	2.2
0.20	31.4	23.0	17.5	13.8	11.2	9.4	8.1	7.0	6.2	5.5	4.9	4.4	4.0	3.6	3.2	2.9	2.6	2.4	2.2
0.15	17.8	12.7	9.7	7.8	6.7	6.0	5.4	5.0	4.6	4.3	4.0	3.7	3.4	3.1	2.9	2.6	2.4	2.2	2.0
0.10	--	--	--	--	--	--	0.1	0.9	1.5	1.9	2.1	2.2	2.3	2.3	2.2	2.1	2.0	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.5	0.7	0.9	1.0

Figure 25. Enlisted Policy Chart: 10 YOS / E-6 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	72.5	52.9	39.4	30.0	23.4	18.5	14.9	12.2	10.2	8.6	7.3	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.95	72.1	52.5	39.2	29.8	23.2	18.4	14.9	12.2	10.1	8.5	7.2	6.2	5.4	4.7	4.1	3.6	3.1	2.8	2.5
0.90	71.6	52.2	38.9	29.6	23.1	18.3	14.8	12.1	10.1	8.5	7.2	6.2	5.3	4.6	4.1	3.6	3.1	2.8	2.5
0.85	71.1	51.8	38.6	29.4	22.9	18.2	14.7	12.0	10.0	8.4	7.2	6.2	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.80	70.5	51.3	38.2	29.1	22.7	18.0	14.5	11.9	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.75	69.8	50.8	37.9	28.8	22.4	17.8	14.4	11.8	9.9	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.4
0.70	69.0	50.2	37.4	28.5	22.2	17.6	14.3	11.7	9.8	8.2	7.0	6.0	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.65	68.1	49.6	36.9	28.1	21.9	17.4	14.1	11.6	9.7	8.2	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.60	67.1	48.8	36.3	27.7	21.5	17.1	13.9	11.4	9.5	8.1	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.55	65.9	47.8	35.6	27.1	21.1	16.8	13.6	11.2	9.4	8.0	6.8	5.9	5.1	4.5	3.9	3.4	3.0	2.7	2.4
0.50	64.4	46.7	34.7	26.5	20.6	16.4	13.4	11.0	9.2	7.8	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.45	62.6	45.3	33.7	25.7	20.0	16.0	13.0	10.8	9.0	7.7	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.40	60.3	43.6	32.4	24.7	19.3	15.4	12.6	10.4	8.8	7.5	6.4	5.6	4.9	4.3	3.8	3.3	3.0	2.6	2.4
0.35	57.4	41.4	30.7	23.4	18.3	14.7	12.0	10.0	8.4	7.2	6.2	5.4	4.7	4.2	3.7	3.3	2.9	2.6	2.3
0.30	53.6	38.5	28.5	21.7	17.0	13.7	11.2	9.4	8.0	6.9	6.0	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.25	48.1	34.4	25.4	19.4	15.2	12.3	10.2	8.6	7.3	6.4	5.6	4.9	4.4	3.9	3.5	3.1	2.8	2.5	2.2
0.20	40.0	28.3	20.7	15.8	12.5	10.2	8.6	7.3	6.4	5.6	5.0	4.5	4.0	3.6	3.2	2.9	2.6	2.4	2.2
0.15	26.5	18.0	12.9	9.9	8.0	6.7	5.9	5.3	4.8	4.4	4.1	3.7	3.4	3.2	2.9	2.7	2.4	2.2	2.0
0.10	--	--	--	--	--	--	0.6	1.2	1.7	2.0	2.2	2.3	2.3	2.3	2.2	2.1	2.0	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.5	0.7	0.9	1.0

Figure 26. Enlisted Policy Chart: 10 YOS / E-6 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	65.9	49.1	37.3	28.9	22.8	18.3	14.9	12.2	10.2	8.6	7.3	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.95	65.5	48.8	37.1	28.7	22.6	18.1	14.8	12.2	10.2	8.6	7.3	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.90	65.0	48.5	36.8	28.5	22.5	18.0	14.7	12.1	10.1	8.5	7.3	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.85	64.5	48.1	36.5	28.3	22.3	17.9	14.6	12.0	10.1	8.5	7.2	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.80	63.9	47.6	36.2	28.0	22.1	17.7	14.5	11.9	10.0	8.4	7.2	6.2	5.3	4.6	4.1	3.6	3.1	2.8	2.5
0.75	63.3	47.1	35.8	27.7	21.9	17.6	14.3	11.8	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.6	3.1	2.8	2.5
0.70	62.5	46.5	35.4	27.4	21.6	17.4	14.2	11.7	9.8	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.65	61.6	45.9	34.9	27.0	21.3	17.2	14.0	11.6	9.7	8.2	7.0	6.1	5.2	4.6	4.0	3.5	3.1	2.8	2.4
0.60	60.6	45.1	34.3	26.6	21.0	16.9	13.8	11.4	9.6	8.1	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.55	59.4	44.2	33.6	26.0	20.6	16.6	13.6	11.3	9.5	8.0	6.9	5.9	5.2	4.5	3.9	3.5	3.1	2.7	2.4
0.50	57.9	43.1	32.7	25.4	20.1	16.2	13.3	11.0	9.3	7.9	6.8	5.9	5.1	4.5	3.9	3.4	3.1	2.7	2.4
0.45	56.2	41.7	31.7	24.6	19.5	15.8	12.9	10.8	9.1	7.7	6.7	5.8	5.0	4.4	3.9	3.4	3.0	2.7	2.4
0.40	53.9	40.0	30.4	23.7	18.8	15.2	12.5	10.4	8.8	7.5	6.5	5.6	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.35	51.1	37.9	28.8	22.4	17.8	14.5	11.9	10.0	8.5	7.3	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.30	47.3	35.0	26.6	20.7	16.5	13.5	11.2	9.4	8.1	6.9	6.0	5.3	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.25	41.9	31.0	23.5	18.4	14.8	12.1	10.1	8.6	7.4	6.5	5.7	5.0	4.4	3.9	3.5	3.1	2.8	2.5	2.3
0.20	34.0	24.9	18.9	14.9	12.1	10.1	8.6	7.4	6.5	5.7	5.1	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.15	20.6	14.8	11.3	9.1	7.6	6.7	6.0	5.4	5.0	4.5	4.2	3.8	3.5	3.2	3.0	2.7	2.5	2.2	2.0
0.10	--	--	--	--	--	--	0.7	1.4	1.9	2.2	2.3	2.4	2.4	2.4	2.3	2.2	2.0	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	0.6	0.8	0.9	1.0

personal discount rate (annual)

Figure 27. Enlisted Policy Chart: 11 YOS / E-6 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	74.6	54.4	40.6	30.9	24.0	19.0	15.3	12.6	10.4	8.7	7.4	6.3	5.5	4.7	4.1	3.6	3.2	2.8	2.5
0.95	74.1	54.1	40.3	30.7	23.9	18.9	15.3	12.5	10.4	8.7	7.4	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.90	73.7	53.7	40.1	30.5	23.7	18.8	15.2	12.4	10.3	8.7	7.4	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.85	73.1	53.3	39.8	30.3	23.6	18.7	15.1	12.3	10.3	8.6	7.3	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.80	72.6	52.9	39.4	30.0	23.4	18.5	15.0	12.3	10.2	8.6	7.3	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.75	71.9	52.4	39.1	29.8	23.1	18.4	14.8	12.2	10.1	8.5	7.2	6.2	5.3	4.6	4.1	3.6	3.1	2.8	2.5
0.70	71.1	51.8	38.6	29.4	22.9	18.2	14.7	12.0	10.0	8.4	7.2	6.2	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.65	70.3	51.2	38.1	29.0	22.6	17.9	14.5	11.9	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.4
0.60	69.2	50.4	37.5	28.6	22.3	17.7	14.3	11.8	9.8	8.3	7.0	6.1	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.55	68.0	49.5	36.8	28.1	21.8	17.4	14.1	11.6	9.7	8.2	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.50	66.6	48.4	36.0	27.4	21.4	17.0	13.8	11.4	9.5	8.0	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.45	64.8	47.0	35.0	26.6	20.8	16.5	13.4	11.1	9.3	7.9	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.40	62.6	45.3	33.7	25.7	20.0	16.0	13.0	10.7	9.0	7.7	6.6	5.7	5.0	4.3	3.8	3.4	3.0	2.7	2.4
0.35	59.7	43.2	32.0	24.4	19.1	15.2	12.4	10.3	8.7	7.4	6.4	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.30	55.9	40.3	29.9	22.8	17.8	14.3	11.7	9.7	8.2	7.1	6.1	5.3	4.7	4.1	3.7	3.2	2.9	2.6	2.3
0.25	50.6	36.3	26.8	20.4	16.0	12.9	10.6	8.9	7.6	6.6	5.7	5.0	4.5	4.0	3.5	3.1	2.8	2.5	2.3
0.20	42.6	30.2	22.2	16.9	13.4	10.9	9.1	7.7	6.7	5.9	5.2	4.6	4.1	3.7	3.3	3.0	2.7	2.4	2.2
0.15	29.3	20.1	14.5	11.1	8.9	7.5	6.5	5.7	5.2	4.7	4.3	3.9	3.6	3.3	3.0	2.7	2.5	2.3	2.0
0.10	2.6	--	--	--	--	0.6	1.2	1.7	2.1	2.3	2.4	2.5	2.4	2.4	2.3	2.2	2.1	1.9	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	0.6	0.8	0.9	1.0

personal discount rate (annual)

Figure 28. Enlisted Policy Chart: 11 YOS / E-6 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	68.3	50.9	38.7	29.9	23.6	18.9	15.3	12.6	10.5	8.8	7.5	6.4	5.5	4.8	4.2	3.7	3.2	2.8	2.5
0.95	67.9	50.6	38.4	29.7	23.4	18.7	15.2	12.5	10.4	8.8	7.5	6.4	5.5	4.8	4.2	3.7	3.2	2.8	2.5
0.90	67.4	50.2	38.2	29.5	23.3	18.6	15.1	12.5	10.4	8.8	7.4	6.4	5.5	4.8	4.2	3.6	3.2	2.8	2.5
0.85	66.9	49.9	37.9	29.3	23.1	18.5	15.0	12.4	10.3	8.7	7.4	6.3	5.5	4.8	4.1	3.6	3.2	2.8	2.5
0.80	66.4	49.4	37.6	29.1	22.9	18.4	14.9	12.3	10.3	8.7	7.4	6.3	5.5	4.7	4.1	3.6	3.2	2.8	2.5
0.75	65.7	49.0	37.2	28.8	22.7	18.2	14.8	12.2	10.2	8.6	7.3	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.70	65.0	48.4	36.8	28.5	22.5	18.0	14.7	12.1	10.1	8.5	7.3	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.65	64.2	47.8	36.3	28.1	22.2	17.8	14.5	12.0	10.0	8.5	7.2	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.60	63.2	47.0	35.7	27.7	21.9	17.6	14.3	11.8	9.9	8.4	7.1	6.1	5.3	4.6	4.0	3.6	3.1	2.8	2.5
0.55	62.0	46.2	35.1	27.2	21.5	17.3	14.1	11.7	9.8	8.3	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.50	60.6	45.1	34.3	26.6	21.0	16.9	13.8	11.5	9.6	8.1	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.45	58.9	43.8	33.3	25.8	20.4	16.5	13.5	11.2	9.4	8.0	6.9	5.9	5.1	4.5	3.9	3.5	3.1	2.7	2.4
0.40	56.8	42.2	32.1	24.9	19.7	15.9	13.1	10.9	9.2	7.8	6.7	5.8	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.35	54.1	40.2	30.5	23.7	18.8	15.2	12.5	10.5	8.8	7.6	6.5	5.7	4.9	4.3	3.8	3.4	3.0	2.7	2.4
0.30	50.5	37.4	28.4	22.1	17.6	14.3	11.8	9.9	8.4	7.2	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.25	45.4	33.6	25.5	19.9	15.9	13.0	10.8	9.2	7.8	6.8	5.9	5.2	4.6	4.0	3.6	3.2	2.9	2.6	2.3
0.20	37.8	27.8	21.1	16.6	13.4	11.1	9.3	8.0	7.0	6.1	5.4	4.8	4.3	3.8	3.4	3.0	2.7	2.5	2.2
0.15	25.1	18.2	13.8	11.0	9.1	7.8	6.8	6.1	5.5	5.0	4.5	4.1	3.7	3.4	3.1	2.8	2.5	2.3	2.1
0.10	--	--	--	--	0.7	1.3	1.9	2.3	2.5	2.7	2.7	2.7	2.7	2.5	2.4	2.3	2.1	2.0	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.5	0.8	0.9	1.0	1.1

personal discount rate (annual)

Figure 29. Enlisted Policy Chart:12 YOS / E-6 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	76.9	56.2	41.9	31.9	24.8	19.6	15.8	12.9	10.7	9.0	7.6	6.5	5.6	4.8	4.2	3.7	3.2	2.8	2.5
0.95	76.5	55.9	41.7	31.8	24.7	19.5	15.7	12.9	10.6	8.9	7.6	6.4	5.5	4.8	4.2	3.7	3.2	2.8	2.5
0.90	76.1	55.5	41.4	31.6	24.5	19.4	15.6	12.8	10.6	8.9	7.5	6.4	5.5	4.8	4.2	3.7	3.2	2.8	2.5
0.85	75.6	55.2	41.2	31.3	24.4	19.3	15.5	12.7	10.5	8.8	7.5	6.4	5.5	4.8	4.2	3.6	3.2	2.8	2.5
0.80	75.0	54.7	40.8	31.1	24.2	19.2	15.4	12.6	10.5	8.8	7.4	6.4	5.5	4.8	4.1	3.6	3.2	2.8	2.5
0.75	74.4	54.3	40.5	30.8	24.0	19.0	15.3	12.5	10.4	8.7	7.4	6.3	5.5	4.7	4.1	3.6	3.2	2.8	2.5
0.70	73.6	53.7	40.0	30.5	23.7	18.8	15.2	12.4	10.3	8.7	7.4	6.3	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.65	72.8	53.1	39.6	30.1	23.4	18.6	15.0	12.3	10.2	8.6	7.3	6.2	5.4	4.7	4.1	3.6	3.2	2.8	2.5
0.60	71.8	52.3	39.0	29.7	23.1	18.3	14.8	12.1	10.1	8.5	7.2	6.2	5.4	4.6	4.1	3.6	3.1	2.8	2.5
0.55	70.7	51.5	38.3	29.2	22.7	18.0	14.6	12.0	10.0	8.4	7.1	6.1	5.3	4.6	4.0	3.5	3.1	2.8	2.5
0.50	69.3	50.4	37.5	28.6	22.3	17.7	14.3	11.8	9.8	8.3	7.0	6.1	5.2	4.6	4.0	3.5	3.1	2.7	2.4
0.45	67.6	49.1	36.6	27.9	21.7	17.3	14.0	11.5	9.6	8.1	6.9	6.0	5.2	4.5	4.0	3.5	3.1	2.7	2.4
0.40	65.5	47.5	35.4	26.9	21.0	16.7	13.6	11.2	9.4	7.9	6.8	5.9	5.1	4.4	3.9	3.4	3.0	2.7	2.4
0.35	62.8	45.5	33.8	25.7	20.1	16.0	13.0	10.8	9.0	7.7	6.6	5.7	5.0	4.4	3.8	3.4	3.0	2.7	2.4
0.30	59.1	42.7	31.7	24.2	18.9	15.1	12.3	10.2	8.6	7.4	6.3	5.5	4.8	4.2	3.7	3.3	2.9	2.6	2.3
0.25	54.0	38.9	28.8	21.9	17.2	13.8	11.3	9.5	8.0	6.9	6.0	5.2	4.6	4.1	3.6	3.2	2.9	2.6	2.3
0.20	46.4	33.1	24.4	18.6	14.6	11.8	9.8	8.3	7.1	6.2	5.5	4.8	4.3	3.8	3.4	3.1	2.7	2.5	2.2
0.15	33.7	23.5	17.1	13.0	10.4	8.6	7.3	6.4	5.7	5.1	4.6	4.1	3.8	3.4	3.1	2.8	2.5	2.3	2.1
0.10	8.3	4.3	2.5	1.9	1.9	2.1	2.4	2.6	2.7	2.8	2.8	2.8	2.7	2.6	2.4	2.3	2.1	2.0	1.8
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.5	0.8	0.9	1.1	1.1

personal discount rate (annual)

Figure 30. Enlisted Policy Chart: 12 YOS / E-6 / female

Appendix B: Officer Policy Tables

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	59.9	42.9	31.3	23.3	17.8	13.8	11.0	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	59.4	42.5	31.0	23.1	17.6	13.7	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.90	58.8	42.0	30.6	22.8	17.4	13.5	10.7	8.7	7.1	6.0	5.1	4.3	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.85	58.2	41.5	30.2	22.5	17.1	13.3	10.6	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	57.5	41.0	29.8	22.1	16.8	13.1	10.4	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.75	56.7	40.3	29.3	21.7	16.5	12.8	10.2	8.2	6.8	5.7	4.8	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.70	55.8	39.6	28.7	21.3	16.2	12.5	10.0	8.1	6.7	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.2	1.9	1.7
0.65	54.7	38.8	28.1	20.8	15.7	12.2	9.7	7.9	6.5	5.4	4.6	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.60	53.5	37.8	27.3	20.2	15.3	11.8	9.4	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.55	52.0	36.6	26.4	19.4	14.7	11.4	9.0	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.50	50.2	35.2	25.3	18.6	14.0	10.8	8.6	7.0	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.45	48.1	33.5	23.9	17.5	13.2	10.2	8.1	6.6	5.4	4.6	4.0	3.5	3.0	2.7	2.4	2.2	1.9	1.7	1.6
0.40	45.4	31.4	22.3	16.2	12.1	9.3	7.4	6.0	5.0	4.3	3.7	3.2	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	41.9	28.7	20.1	14.5	10.8	8.3	6.5	5.3	4.5	3.8	3.3	3.0	2.6	2.4	2.1	1.9	1.8	1.6	1.5
0.30	37.3	25.1	17.3	12.2	9.0	6.8	5.4	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.8	1.6	1.5	1.4
0.25	30.9	20.0	13.2	9.0	6.4	4.8	3.8	3.2	2.7	2.4	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3
0.20	21.2	12.4	7.2	4.3	2.7	1.8	1.4	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
0.15	5.0	--	--	--	--	--	--	--	--	--	--	--	0.2	0.4	0.6	0.7	0.7	0.8	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 31. Officer Policy Chart: 0 YOS / O-1 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	63.2	44.9	32.5	24.1	18.2	14.1	11.2	9.0	7.4	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	62.6	44.5	32.2	23.8	18.0	14.0	11.0	8.9	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.90	62.1	44.0	31.9	23.6	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.85	61.4	43.5	31.5	23.3	17.6	13.6	10.7	8.7	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	60.7	43.0	31.0	22.9	17.3	13.4	10.6	8.5	7.0	5.8	5.0	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.75	59.9	42.3	30.5	22.5	17.0	13.1	10.4	8.4	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.70	59.0	41.6	29.9	22.1	16.6	12.8	10.1	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.2	1.9	1.7
0.65	57.9	40.8	29.3	21.5	16.2	12.5	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.60	56.7	39.8	28.5	20.9	15.7	12.1	9.6	7.7	6.4	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.55	55.2	38.6	27.6	20.2	15.2	11.7	9.2	7.4	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.50	53.5	37.2	26.5	19.3	14.5	11.1	8.8	7.1	5.9	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.45	51.3	35.5	25.2	18.3	13.6	10.5	8.2	6.7	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.2	1.9	1.7	1.6
0.40	48.6	33.4	23.5	16.9	12.6	9.6	7.6	6.1	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	45.2	30.7	21.3	15.2	11.2	8.6	6.7	5.5	4.6	3.9	3.4	3.0	2.7	2.4	2.1	1.9	1.8	1.6	1.5
0.30	40.6	27.1	18.5	13.0	9.4	7.1	5.6	4.6	3.8	3.3	2.9	2.6	2.4	2.1	2.0	1.8	1.6	1.5	1.4
0.25	34.1	22.0	14.5	9.8	6.9	5.1	4.0	3.3	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3
0.20	24.4	14.3	8.4	5.0	3.1	2.1	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
0.15	8.3	1.6	--	--	--	--	--	--	--	--	--	--	0.2	0.4	0.6	0.7	0.7	0.8	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 32. Officer Policy Chart: 0 YOS / O-1 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	59.7	42.7	31.1	23.2	17.7	13.8	10.9	8.8	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	59.1	42.3	30.8	22.9	17.5	13.6	10.8	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.90	58.5	41.8	30.4	22.7	17.2	13.4	10.6	8.6	7.1	5.9	5.0	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.85	57.9	41.3	30.0	22.3	17.0	13.2	10.5	8.5	7.0	5.8	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	57.1	40.7	29.6	22.0	16.7	13.0	10.3	8.3	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.7
0.75	56.3	40.0	29.0	21.5	16.4	12.7	10.1	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.70	55.3	39.2	28.4	21.1	16.0	12.4	9.8	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.65	54.2	38.4	27.7	20.5	15.5	12.1	9.6	7.8	6.4	5.4	4.6	4.0	3.4	3.0	2.7	2.4	2.1	1.9	1.7
0.60	52.9	37.3	26.9	19.9	15.0	11.6	9.2	7.5	6.2	5.2	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.55	51.3	36.1	26.0	19.1	14.4	11.2	8.9	7.2	6.0	5.0	4.3	3.7	3.3	2.9	2.5	2.3	2.0	1.8	1.6
0.50	49.5	34.7	24.8	18.2	13.7	10.6	8.4	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.45	47.2	32.9	23.4	17.1	12.8	9.9	7.8	6.4	5.3	4.5	3.9	3.4	3.0	2.7	2.4	2.1	1.9	1.7	1.6
0.40	44.4	30.7	21.7	15.7	11.7	9.0	7.2	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.3	2.0	1.8	1.7	1.5
0.35	40.8	27.8	19.4	13.9	10.3	7.9	6.3	5.1	4.3	3.7	3.2	2.9	2.6	2.3	2.1	1.9	1.7	1.6	1.4
0.30	35.9	24.0	16.4	11.5	8.4	6.4	5.1	4.2	3.5	3.1	2.7	2.5	2.2	2.1	1.9	1.7	1.6	1.5	1.3
0.25	29.1	18.6	12.2	8.2	5.8	4.3	3.4	2.8	2.5	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.20	18.9	10.6	5.8	3.2	1.8	1.1	0.9	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2	1.1	1.1	1.1	1.0
0.15	2.0	--	--	--	--	--	--	--	--	--	--	--	0.0	0.3	0.4	0.6	0.6	0.7	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 33. Officer Policy Chart: 1 YOS / O-1 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	62.9	44.7	32.4	24.0	18.1	14.0	11.1	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	62.4	44.2	32.0	23.7	17.9	13.9	11.0	8.8	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.90	61.8	43.8	31.7	23.4	17.7	13.7	10.8	8.7	7.2	6.0	5.1	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.85	61.1	43.2	31.3	23.1	17.4	13.5	10.7	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	60.4	42.7	30.8	22.7	17.2	13.3	10.5	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.7
0.75	59.5	42.0	30.3	22.3	16.8	13.0	10.3	8.3	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.70	58.5	41.2	29.7	21.8	16.4	12.7	10.0	8.1	6.7	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.65	57.4	40.3	29.0	21.3	16.0	12.3	9.8	7.9	6.5	5.4	4.6	4.0	3.5	3.0	2.7	2.4	2.1	1.9	1.7
0.60	56.1	39.3	28.2	20.6	15.5	11.9	9.4	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.55	54.6	38.1	27.2	19.9	14.9	11.5	9.0	7.3	6.0	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.50	52.7	36.6	26.0	19.0	14.2	10.9	8.6	6.9	5.7	4.8	4.1	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.45	50.5	34.9	24.6	17.9	13.3	10.2	8.0	6.5	5.4	4.6	3.9	3.4	3.0	2.7	2.4	2.1	1.9	1.7	1.6
0.40	47.6	32.6	22.9	16.5	12.2	9.3	7.3	5.9	4.9	4.2	3.6	3.2	2.8	2.5	2.3	2.0	1.8	1.7	1.5
0.35	44.0	29.8	20.6	14.7	10.8	8.2	6.4	5.2	4.4	3.7	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.6	1.4
0.30	39.1	26.0	17.6	12.3	8.9	6.7	5.2	4.3	3.6	3.1	2.8	2.5	2.3	2.1	1.9	1.7	1.6	1.5	1.4
0.25	32.4	20.6	13.4	9.0	6.2	4.6	3.6	2.9	2.5	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.20	22.2	12.6	7.1	4.0	2.3	1.4	1.1	0.9	0.9	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.1	1.1	1.0
0.15	5.2	--	--	--	--	--	--	--	--	--	--	--	0.0	0.3	0.4	0.6	0.6	0.7	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 34. Officer Policy Chart: 1 YOS / O-1 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	59.4	42.5	31.0	23.1	17.6	13.7	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	58.9	42.0	30.6	22.8	17.4	13.5	10.7	8.7	7.1	6.0	5.1	4.3	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.90	58.2	41.6	30.3	22.5	17.1	13.3	10.6	8.6	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.85	57.6	41.0	29.8	22.2	16.9	13.1	10.4	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	56.8	40.4	29.3	21.8	16.5	12.9	10.2	8.3	6.8	5.7	4.8	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.75	55.9	39.7	28.8	21.3	16.2	12.6	10.0	8.1	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.2	1.9	1.7
0.70	54.9	38.9	28.2	20.8	15.8	12.3	9.7	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.65	53.7	38.0	27.4	20.3	15.3	11.9	9.4	7.7	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.4	2.1	1.9	1.7
0.60	52.3	36.9	26.6	19.6	14.8	11.5	9.1	7.4	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.55	50.7	35.6	25.6	18.8	14.2	11.0	8.7	7.1	5.9	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.50	48.7	34.1	24.4	17.8	13.4	10.4	8.2	6.7	5.6	4.7	4.0	3.5	3.1	2.7	2.4	2.2	2.0	1.8	1.6
0.45	46.4	32.2	22.9	16.7	12.5	9.6	7.6	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.40	43.4	29.9	21.0	15.2	11.3	8.7	6.9	5.6	4.7	4.0	3.5	3.1	2.7	2.5	2.2	2.0	1.8	1.6	1.5
0.35	39.6	26.9	18.7	13.3	9.9	7.5	6.0	4.9	4.1	3.5	3.1	2.8	2.5	2.3	2.0	1.9	1.7	1.6	1.4
0.30	34.5	22.9	15.5	10.8	7.9	6.0	4.7	3.9	3.3	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.6	1.4	1.3
0.25	27.4	17.2	11.1	7.3	5.1	3.7	3.0	2.5	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2
0.20	16.7	8.8	4.4	2.1	0.9	0.4	0.3	0.4	0.5	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.0	1.0
0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.3	0.4	0.6	0.6	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 35. Officer Policy Chart: 2 YOS / O-2 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	62.7	44.5	32.2	23.9	18.1	14.0	11.0	8.9	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.95	62.1	44.0	31.9	23.6	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.90	61.5	43.5	31.5	23.3	17.6	13.6	10.8	8.7	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.85	60.8	43.0	31.1	22.9	17.3	13.4	10.6	8.5	7.0	5.9	5.0	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.80	60.0	42.4	30.6	22.5	17.0	13.1	10.4	8.4	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.75	59.1	41.7	30.0	22.1	16.7	12.9	10.2	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.2	1.9	1.7
0.70	58.1	40.9	29.4	21.6	16.3	12.6	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.65	56.9	39.9	28.6	21.0	15.8	12.2	9.6	7.8	6.4	5.4	4.6	3.9	3.4	3.0	2.7	2.4	2.1	1.9	1.7
0.60	55.5	38.9	27.8	20.4	15.3	11.8	9.3	7.5	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.55	53.9	37.6	26.8	19.6	14.6	11.3	8.9	7.2	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.3	2.0	1.8	1.6
0.50	52.0	36.1	25.6	18.6	13.9	10.7	8.4	6.8	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.2	2.0	1.8	1.6
0.45	49.6	34.2	24.1	17.4	13.0	9.9	7.8	6.3	5.3	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.40	46.6	31.9	22.3	16.0	11.8	9.0	7.1	5.7	4.8	4.1	3.5	3.1	2.8	2.5	2.2	2.0	1.8	1.6	1.5
0.35	42.8	28.8	19.9	14.1	10.3	7.8	6.1	5.0	4.2	3.6	3.1	2.8	2.5	2.3	2.0	1.9	1.7	1.6	1.4
0.30	37.7	24.8	16.7	11.6	8.3	6.3	4.9	4.0	3.4	2.9	2.6	2.4	2.2	2.0	1.8	1.7	1.6	1.4	1.3
0.25	30.6	19.2	12.3	8.1	5.6	4.0	3.1	2.6	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.3	1.2
0.20	19.9	10.8	5.7	2.8	1.4	0.7	0.5	0.5	0.6	0.7	0.8	0.9	1.0	1.0	1.1	1.1	1.1	1.0	1.0
0.15	2.1	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.3	0.5	0.6	0.6	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 36. Officer Policy Chart: 2 YOS / O-2 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	60.4	43.3	31.6	23.6	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.95	59.9	42.9	31.3	23.3	17.8	13.8	11.0	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.90	59.3	42.4	30.9	23.0	17.5	13.6	10.8	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.85	58.6	41.9	30.5	22.7	17.3	13.4	10.7	8.6	7.1	5.9	5.0	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.80	57.9	41.3	30.0	22.3	17.0	13.2	10.5	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.75	57.1	40.6	29.5	21.9	16.7	12.9	10.3	8.3	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.7
0.70	56.1	39.9	28.9	21.5	16.3	12.6	10.0	8.1	6.7	5.6	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.65	55.0	39.0	28.2	20.9	15.9	12.3	9.8	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.60	53.7	38.0	27.4	20.3	15.4	11.9	9.4	7.7	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.4	2.1	1.9	1.7
0.55	52.2	36.8	26.5	19.5	14.8	11.4	9.1	7.4	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.50	50.3	35.3	25.3	18.6	14.0	10.9	8.6	7.0	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.45	48.1	33.6	23.9	17.5	13.2	10.2	8.1	6.6	5.4	4.6	4.0	3.5	3.0	2.7	2.4	2.2	1.9	1.7	1.6
0.40	45.3	31.4	22.2	16.1	12.1	9.3	7.4	6.0	5.0	4.3	3.7	3.2	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	41.7	28.5	20.0	14.4	10.7	8.2	6.5	5.3	4.4	3.8	3.3	2.9	2.6	2.4	2.1	1.9	1.8	1.6	1.5
0.30	36.9	24.7	17.0	12.0	8.8	6.7	5.3	4.3	3.7	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.6	1.5	1.4
0.25	30.1	19.4	12.8	8.7	6.2	4.6	3.6	3.0	2.6	2.4	2.2	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2
0.20	20.0	11.5	6.5	3.7	2.2	1.5	1.1	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1
0.15	3.2	--	--	--	--	--	--	--	--	--	--	--	0.1	0.3	0.5	0.6	0.7	0.7	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 37. Officer Policy Chart: 3 YOS / O-2 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) vs. personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	63.7	45.3	32.8	24.3	18.4	14.3	11.3	9.1	7.5	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.95	63.1	44.8	32.5	24.1	18.2	14.1	11.2	9.0	7.4	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.90	62.5	44.4	32.1	23.8	18.0	13.9	11.0	8.9	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.85	61.9	43.9	31.7	23.5	17.8	13.7	10.8	8.7	7.2	6.0	5.1	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.80	61.1	43.3	31.3	23.1	17.5	13.5	10.7	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.75	60.3	42.6	30.7	22.7	17.1	13.2	10.5	8.4	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.7
0.70	59.3	41.9	30.2	22.2	16.8	12.9	10.2	8.2	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.65	58.2	41.0	29.5	21.7	16.3	12.6	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.60	56.9	40.0	28.7	21.0	15.8	12.2	9.6	7.8	6.4	5.4	4.6	3.9	3.4	3.0	2.7	2.4	2.1	1.9	1.7
0.55	55.4	38.8	27.7	20.3	15.2	11.7	9.3	7.5	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.50	53.6	37.3	26.6	19.4	14.5	11.2	8.8	7.1	5.9	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.45	51.3	35.5	25.2	18.3	13.6	10.5	8.2	6.7	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.2	1.9	1.7	1.6
0.40	48.5	33.3	23.4	16.9	12.5	9.6	7.6	6.1	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	44.9	30.5	21.2	15.1	11.1	8.5	6.7	5.4	4.5	3.9	3.4	3.0	2.6	2.4	2.1	1.9	1.8	1.6	1.5
0.30	40.1	26.7	18.2	12.8	9.3	7.0	5.5	4.5	3.8	3.2	2.9	2.6	2.3	2.1	1.9	1.8	1.6	1.5	1.4
0.25	33.4	21.4	14.0	9.5	6.6	4.9	3.8	3.1	2.7	2.4	2.2	2.0	1.9	1.8	1.6	1.5	1.4	1.3	1.2
0.20	23.3	13.5	7.7	4.5	2.7	1.8	1.3	1.2	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1
0.15	6.5	0.2	--	--	--	--	--	--	--	--	--	--	0.1	0.3	0.5	0.6	0.7	0.7	0.7
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 38. Officer Policy Chart: 3 YOS / O-2 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	61.8	44.3	32.4	24.2	18.5	14.4	11.4	9.2	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.95	61.2	43.9	32.1	24.0	18.3	14.2	11.3	9.1	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.90	60.6	43.4	31.7	23.7	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.85	60.0	42.9	31.3	23.4	17.8	13.8	11.0	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.80	59.2	42.3	30.9	23.0	17.5	13.6	10.8	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.75	58.4	41.7	30.3	22.6	17.2	13.3	10.6	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.70	57.4	40.9	29.7	22.1	16.8	13.0	10.4	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.7
0.65	56.3	40.0	29.0	21.5	16.4	12.7	10.1	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.60	55.0	39.0	28.2	20.9	15.8	12.3	9.8	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.55	53.5	37.8	27.3	20.1	15.2	11.8	9.4	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.50	51.6	36.3	26.1	19.2	14.5	11.2	8.9	7.2	6.0	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.45	49.3	34.5	24.7	18.1	13.6	10.5	8.4	6.8	5.6	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.40	46.5	32.3	23.0	16.7	12.5	9.7	7.7	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.35	42.9	29.5	20.7	15.0	11.1	8.5	6.8	5.5	4.6	4.0	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.6	1.5
0.30	38.1	25.7	17.7	12.6	9.2	7.0	5.6	4.6	3.9	3.3	3.0	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.25	31.3	20.3	13.5	9.2	6.6	5.0	3.9	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3
0.20	21.1	12.3	7.2	4.3	2.6	1.8	1.4	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
0.15	4.2	--	--	--	--	--	--	--	--	--	--	--	0.2	0.4	0.5	0.6	0.7	0.7	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 39. Officer Policy Chart: 4 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	65.0	46.3	33.7	25.0	19.0	14.7	11.6	9.4	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.95	64.5	45.9	33.3	24.7	18.7	14.5	11.5	9.2	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.90	63.9	45.4	33.0	24.4	18.5	14.3	11.3	9.1	7.5	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.85	63.2	44.9	32.6	24.1	18.3	14.1	11.2	9.0	7.4	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.80	62.5	44.3	32.1	23.7	18.0	13.9	11.0	8.9	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.75	61.6	43.6	31.6	23.3	17.6	13.6	10.8	8.7	7.1	6.0	5.0	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.70	60.7	42.9	31.0	22.9	17.3	13.3	10.5	8.5	7.0	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.65	59.5	42.0	30.3	22.3	16.8	13.0	10.3	8.3	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.60	58.2	41.0	29.5	21.7	16.3	12.6	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.55	56.7	39.8	28.5	20.9	15.7	12.1	9.6	7.7	6.4	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.50	54.8	38.3	27.3	20.0	15.0	11.5	9.1	7.4	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.45	52.6	36.5	25.9	18.9	14.1	10.8	8.5	6.9	5.7	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.40	49.8	34.3	24.2	17.5	13.0	10.0	7.9	6.4	5.3	4.5	3.8	3.3	3.0	2.6	2.3	2.1	1.9	1.7	1.5
0.35	46.1	31.4	21.9	15.7	11.6	8.8	7.0	5.6	4.7	4.0	3.5	3.1	2.7	2.4	2.2	2.0	1.8	1.6	1.5
0.30	41.3	27.6	18.9	13.3	9.7	7.3	5.8	4.7	3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.25	34.5	22.3	14.7	10.0	7.1	5.2	4.1	3.4	2.9	2.5	2.3	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3
0.20	24.4	14.3	8.4	5.0	3.1	2.1	1.6	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.2	1.1	1.1
0.15	7.4	1.0	--	--	--	--	--	--	--	--	--	--	0.2	0.4	0.5	0.6	0.7	0.7	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 40. Officer Policy Chart: 4 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) \ personal discount rate (annual)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	63.1	45.4	33.3	24.9	19.0	14.8	11.8	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9
0.95	62.6	45.0	33.0	24.7	18.8	14.7	11.6	9.4	7.7	6.4	5.4	4.6	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.90	62.0	44.5	32.6	24.4	18.6	14.5	11.5	9.3	7.6	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.85	61.4	44.0	32.2	24.0	18.3	14.3	11.3	9.2	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.80	60.6	43.4	31.7	23.7	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.75	59.8	42.8	31.2	23.3	17.7	13.8	10.9	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.70	58.8	42.0	30.6	22.8	17.3	13.5	10.7	8.7	7.1	6.0	5.1	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.65	57.7	41.1	29.9	22.2	16.9	13.1	10.4	8.4	7.0	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.60	56.4	40.1	29.1	21.6	16.4	12.7	10.1	8.2	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.55	54.9	38.9	28.2	20.9	15.8	12.3	9.7	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.50	53.0	37.5	27.0	20.0	15.1	11.7	9.3	7.5	6.2	5.2	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.45	50.8	35.7	25.6	18.9	14.2	11.0	8.7	7.1	5.9	5.0	4.2	3.7	3.2	2.8	2.5	2.3	2.0	1.8	1.6
0.40	48.0	33.5	23.9	17.5	13.1	10.1	8.0	6.5	5.4	4.6	4.0	3.5	3.0	2.7	2.4	2.2	1.9	1.7	1.6
0.35	44.4	30.6	21.6	15.7	11.7	9.0	7.1	5.8	4.9	4.1	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.7	1.5
0.30	39.6	26.9	18.7	13.3	9.8	7.5	6.0	4.9	4.1	3.5	3.1	2.8	2.5	2.2	2.0	1.9	1.7	1.6	1.4
0.25	32.8	21.6	14.5	10.0	7.2	5.4	4.3	3.6	3.0	2.7	2.4	2.2	2.0	1.9	1.8	1.6	1.5	1.4	1.3
0.20	22.7	13.6	8.2	5.1	3.3	2.3	1.8	1.6	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.1
0.15	5.9	0.3	--	--	--	--	--	--	--	--	--	0.0	0.3	0.5	0.6	0.7	0.8	0.8	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 41. Officer Policy Chart: 5 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) \ personal discount rate (annual)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	66.4	47.4	34.5	25.7	19.5	15.1	12.0	9.6	7.9	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9
0.95	65.8	47.0	34.2	25.4	19.3	15.0	11.8	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.90	65.3	46.5	33.8	25.1	19.1	14.8	11.7	9.4	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.85	64.6	46.0	33.4	24.8	18.8	14.6	11.5	9.3	7.6	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.80	63.9	45.4	33.0	24.4	18.5	14.3	11.3	9.1	7.5	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.75	63.0	44.7	32.4	24.0	18.2	14.1	11.1	9.0	7.4	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.70	62.1	44.0	31.8	23.5	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.65	60.9	43.1	31.1	23.0	17.4	13.4	10.6	8.6	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.60	59.6	42.1	30.3	22.4	16.9	13.0	10.3	8.3	6.8	5.7	4.8	4.2	3.6	3.1	2.8	2.4	2.2	1.9	1.7
0.55	58.1	40.9	29.4	21.6	16.3	12.6	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.50	56.3	39.4	28.2	20.7	15.6	12.0	9.5	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.45	54.0	37.7	26.9	19.6	14.7	11.3	8.9	7.2	5.9	5.0	4.3	3.7	3.2	2.9	2.5	2.3	2.0	1.8	1.6
0.40	51.2	35.5	25.1	18.2	13.6	10.4	8.2	6.6	5.5	4.6	4.0	3.5	3.1	2.7	2.4	2.2	1.9	1.7	1.6
0.35	47.6	32.6	22.9	16.5	12.2	9.3	7.3	5.9	4.9	4.2	3.6	3.2	2.8	2.5	2.3	2.0	1.8	1.7	1.5
0.30	42.8	28.8	19.9	14.1	10.3	7.8	6.1	5.0	4.2	3.6	3.1	2.8	2.5	2.3	2.0	1.9	1.7	1.6	1.4
0.25	36.1	23.5	15.7	10.8	7.7	5.7	4.5	3.7	3.1	2.7	2.5	2.2	2.1	1.9	1.8	1.6	1.5	1.4	1.3
0.20	26.0	15.6	9.4	5.8	3.8	2.6	2.0	1.7	1.5	1.5	1.4	1.4	1.4	1.4	1.3	1.3	1.2	1.2	1.1
0.15	9.2	2.3	--	--	--	--	--	--	--	--	--	0.0	0.3	0.5	0.6	0.7	0.8	0.8	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 42. Officer Policy Chart: 5 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) \ personal discount rate (annual)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	64.6	46.6	34.2	25.7	19.6	15.3	12.1	9.8	8.1	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.95	64.1	46.2	33.9	25.4	19.4	15.1	12.0	9.7	8.0	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.90	63.6	45.7	33.6	25.1	19.2	15.0	11.9	9.6	7.9	6.6	5.5	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.85	62.9	45.2	33.2	24.8	18.9	14.8	11.7	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.4	2.1	1.9
0.80	62.2	44.7	32.7	24.5	18.7	14.5	11.5	9.3	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.75	61.4	44.0	32.2	24.1	18.3	14.3	11.3	9.2	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.70	60.4	43.3	31.6	23.6	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.65	59.4	42.4	31.0	23.1	17.6	13.7	10.8	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.3	2.0	1.8
0.60	58.1	41.4	30.2	22.4	17.1	13.3	10.5	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.55	56.6	40.3	29.3	21.7	16.5	12.8	10.2	8.2	6.8	5.7	4.8	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.50	54.8	38.9	28.1	20.8	15.8	12.3	9.7	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.45	52.7	37.2	26.8	19.8	15.0	11.6	9.2	7.5	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7
0.40	49.9	35.0	25.1	18.4	13.9	10.7	8.5	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.35	46.4	32.3	22.9	16.7	12.5	9.7	7.7	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.30	41.8	28.6	20.0	14.4	10.7	8.2	6.5	5.3	4.5	3.8	3.3	2.9	2.6	2.4	2.1	1.9	1.8	1.6	1.5
0.25	35.2	23.4	16.0	11.2	8.2	6.2	4.9	4.0	3.4	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3
0.20	25.4	15.7	9.9	6.4	4.3	3.2	2.5	2.1	1.9	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.2	1.2
0.15	9.1	2.9	--	--	--	--	--	--	--	--	0.0	0.3	0.5	0.6	0.7	0.8	0.8	0.9	0.8
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 43. Officer Policy Chart: 6 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) \ personal discount rate (annual)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	67.9	48.6	35.5	26.4	20.1	15.6	12.3	9.9	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.95	67.4	48.2	35.1	26.2	19.9	15.4	12.2	9.8	8.0	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.90	66.8	47.7	34.8	25.9	19.7	15.3	12.1	9.7	8.0	6.6	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.85	66.1	47.2	34.4	25.6	19.4	15.1	11.9	9.6	7.9	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.4	2.1	1.9
0.80	65.4	46.7	33.9	25.2	19.1	14.8	11.7	9.4	7.7	6.4	5.4	4.6	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.75	64.6	46.0	33.4	24.8	18.8	14.6	11.5	9.3	7.6	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.70	63.7	45.3	32.9	24.4	18.5	14.3	11.3	9.1	7.5	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.65	62.6	44.4	32.2	23.8	18.0	14.0	11.0	8.9	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.60	61.3	43.4	31.4	23.2	17.5	13.6	10.7	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.55	59.9	42.3	30.5	22.5	17.0	13.1	10.4	8.4	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.50	58.1	40.9	29.4	21.6	16.3	12.6	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.45	55.9	39.1	28.0	20.5	15.4	11.9	9.4	7.6	6.2	5.2	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.40	53.2	37.0	26.3	19.2	14.4	11.0	8.7	7.0	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.35	49.7	34.2	24.1	17.5	13.0	10.0	7.8	6.3	5.3	4.5	3.8	3.3	3.0	2.6	2.3	2.1	1.9	1.7	1.5
0.30	45.0	30.6	21.2	15.2	11.2	8.5	6.7	5.4	4.5	3.9	3.4	3.0	2.6	2.4	2.1	1.9	1.8	1.6	1.5
0.25	38.5	25.4	17.2	12.0	8.6	6.5	5.1	4.1	3.5	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3
0.20	28.7	17.7	11.1	7.1	4.8	3.4	2.7	2.2	2.0	1.8	1.7	1.6	1.6	1.5	1.4	1.4	1.3	1.2	1.2
0.15	12.3	4.8	0.9	--	--	--	--	--	--	--	0.1	0.3	0.5	0.6	0.7	0.8	0.8	0.9	0.9
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.2
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 44. Officer Policy Chart: 6 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	66.3	47.9	35.3	26.5	20.3	15.8	12.6	10.1	8.3	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	1.9
0.95	65.8	47.5	35.0	26.2	20.1	15.7	12.4	10.0	8.2	6.8	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.2	1.9
0.90	65.3	47.1	34.6	26.0	19.9	15.5	12.3	9.9	8.1	6.8	5.7	4.9	4.2	3.6	3.1	2.8	2.4	2.1	1.9
0.85	64.7	46.6	34.2	25.7	19.6	15.3	12.1	9.8	8.0	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.80	64.0	46.1	33.8	25.3	19.3	15.1	12.0	9.7	7.9	6.6	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.75	63.2	45.4	33.3	24.9	19.0	14.8	11.8	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9
0.70	62.3	44.7	32.8	24.5	18.7	14.6	11.6	9.3	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.65	61.3	43.9	32.1	24.0	18.3	14.2	11.3	9.1	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.60	60.1	43.0	31.4	23.4	17.8	13.9	11.0	8.9	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.55	58.6	41.8	30.5	22.7	17.3	13.4	10.6	8.6	7.1	5.9	5.0	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.50	56.9	40.5	29.4	21.8	16.6	12.9	10.2	8.3	6.8	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.45	54.8	38.8	28.1	20.8	15.8	12.2	9.7	7.9	6.5	5.5	4.6	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.40	52.2	36.8	26.5	19.5	14.8	11.4	9.1	7.4	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.35	48.8	34.1	24.4	17.9	13.4	10.4	8.2	6.7	5.6	4.7	4.0	3.5	3.1	2.7	2.4	2.2	2.0	1.8	1.6
0.30	44.3	30.6	21.6	15.7	11.7	9.0	7.1	5.8	4.9	4.1	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.7	1.5
0.25	38.1	25.7	17.7	12.6	9.2	7.0	5.6	4.6	3.9	3.3	3.0	2.6	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.20	28.6	18.2	11.8	7.9	5.6	4.1	3.3	2.7	2.4	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.15	12.9	5.9	2.1	0.2	--	--	--	--	--	0.2	0.4	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.2	0.3
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 45. Officer Policy Chart: 7 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	69.6	49.9	36.5	27.2	20.7	16.1	12.7	10.3	8.4	7.0	5.8	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.95	69.1	49.5	36.2	27.0	20.5	15.9	12.6	10.2	8.3	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.2	1.9
0.90	68.5	49.1	35.9	26.7	20.3	15.8	12.5	10.0	8.2	6.8	5.7	4.9	4.2	3.6	3.1	2.8	2.4	2.1	1.9
0.85	67.9	48.6	35.5	26.4	20.1	15.6	12.3	9.9	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.80	67.2	48.1	35.0	26.1	19.8	15.4	12.2	9.8	8.0	6.7	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.75	66.4	47.4	34.6	25.7	19.5	15.1	12.0	9.6	7.9	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9
0.70	65.5	46.7	34.0	25.3	19.2	14.8	11.7	9.5	7.7	6.4	5.4	4.6	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.65	64.5	45.9	33.4	24.7	18.8	14.5	11.5	9.3	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.60	63.3	45.0	32.6	24.1	18.3	14.2	11.2	9.0	7.4	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8
0.55	61.9	43.8	31.7	23.4	17.7	13.7	10.8	8.7	7.2	6.0	5.1	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.50	60.2	42.5	30.6	22.6	17.1	13.2	10.4	8.4	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.45	58.1	40.8	29.3	21.6	16.2	12.5	9.9	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.40	55.4	38.8	27.7	20.3	15.2	11.7	9.2	7.5	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.8	1.7
0.35	52.1	36.1	25.6	18.6	13.9	10.7	8.4	6.8	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.2	2.0	1.8	1.6
0.30	47.6	32.6	22.8	16.4	12.2	9.3	7.3	5.9	4.9	4.2	3.6	3.2	2.8	2.5	2.3	2.0	1.8	1.7	1.5
0.25	41.3	27.6	18.9	13.3	9.7	7.3	5.8	4.7	3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.20	31.9	20.2	13.1	8.7	6.0	4.4	3.4	2.8	2.5	2.2	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.15	16.2	7.8	3.3	1.0	--	--	--	--	--	0.2	0.4	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.9
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.1	0.2	0.3
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Figure 46. Officer Policy Chart: 7 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	67.8	49.1	36.2	27.2	20.9	16.3	12.9	10.4	8.6	7.1	6.0	5.1	4.3	3.7	3.3	2.8	2.5	2.2	1.9
0.95	67.4	48.7	35.9	27.0	20.7	16.1	12.8	10.3	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.90	66.8	48.3	35.6	26.7	20.5	16.0	12.7	10.2	8.4	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.85	66.2	47.8	35.2	26.4	20.2	15.8	12.5	10.1	8.3	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.5	2.2	1.9
0.80	65.6	47.3	34.8	26.1	20.0	15.6	12.4	10.0	8.2	6.8	5.7	4.9	4.2	3.6	3.2	2.8	2.4	2.1	1.9
0.75	64.8	46.7	34.3	25.7	19.7	15.3	12.2	9.8	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.70	63.9	46.0	33.8	25.3	19.3	15.1	12.0	9.7	7.9	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.65	62.9	45.2	33.2	24.8	19.0	14.8	11.7	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.4	2.1	1.9
0.60	61.8	44.3	32.4	24.2	18.5	14.4	11.4	9.2	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.55	60.4	43.2	31.6	23.6	18.0	14.0	11.1	9.0	7.4	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.50	58.7	41.9	30.6	22.7	17.3	13.5	10.7	8.6	7.1	6.0	5.0	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.45	56.7	40.3	29.3	21.8	16.5	12.8	10.2	8.2	6.8	5.7	4.8	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.40	54.1	38.3	27.7	20.5	15.5	12.0	9.6	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.7	2.4	2.1	1.9	1.7
0.35	50.9	35.8	25.7	18.9	14.3	11.0	8.8	7.1	5.9	5.0	4.3	3.7	3.2	2.9	2.5	2.3	2.0	1.8	1.6
0.30	46.5	32.3	23.0	16.8	12.6	9.7	7.7	6.3	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.25	40.4	27.5	19.2	13.8	10.2	7.8	6.2	5.1	4.3	3.7	3.2	2.8	2.5	2.3	2.1	1.9	1.7	1.6	1.4
0.20	31.3	20.4	13.5	9.3	6.6	5.0	3.9	3.3	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.6	1.5	1.4	1.3
0.15	16.1	8.4	4.1	1.8	0.7	0.3	0.2	0.3	0.4	0.6	0.7	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0
0.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	0.3	0.4
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 47. Officer Policy Chart: 8 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	71.1	51.1	37.5	28.0	21.3	16.6	13.1	10.6	8.6	7.2	6.0	5.1	4.4	3.8	3.3	2.8	2.5	2.2	1.9
0.95	70.6	50.7	37.2	27.8	21.2	16.4	13.0	10.5	8.6	7.1	6.0	5.1	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.90	70.1	50.3	36.8	27.5	20.9	16.3	12.9	10.4	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.85	69.5	49.8	36.5	27.2	20.7	16.1	12.7	10.2	8.4	7.0	5.8	5.0	4.2	3.7	3.2	2.8	2.5	2.2	1.9
0.80	68.8	49.3	36.0	26.9	20.5	15.9	12.6	10.1	8.3	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.1	1.9
0.75	68.0	48.7	35.6	26.5	20.2	15.6	12.4	10.0	8.2	6.8	5.7	4.8	4.2	3.6	3.1	2.7	2.4	2.1	1.9
0.70	67.2	48.0	35.0	26.1	19.8	15.4	12.2	9.8	8.0	6.7	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.65	66.2	47.2	34.4	25.6	19.4	15.1	11.9	9.6	7.9	6.5	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9
0.60	65.0	46.3	33.7	25.0	19.0	14.7	11.6	9.4	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.1	1.8
0.55	63.6	45.2	32.8	24.3	18.4	14.3	11.3	9.1	7.5	6.2	5.2	4.5	3.9	3.4	2.9	2.6	2.3	2.0	1.8
0.50	61.9	43.9	31.8	23.5	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.3	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.45	59.9	42.3	30.5	22.5	17.0	13.1	10.4	8.4	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.40	57.4	40.3	28.9	21.3	16.0	12.3	9.7	7.9	6.5	5.4	4.6	4.0	3.5	3.0	2.7	2.4	2.1	1.9	1.7
0.35	54.1	37.7	26.9	19.7	14.7	11.3	8.9	7.2	6.0	5.0	4.3	3.7	3.2	2.9	2.5	2.3	2.0	1.8	1.6
0.30	49.8	34.3	24.2	17.5	13.0	10.0	7.9	6.4	5.3	4.5	3.8	3.4	3.0	2.6	2.3	2.1	1.9	1.7	1.5
0.25	43.7	29.5	20.4	14.5	10.7	8.1	6.4	5.2	4.3	3.7	3.2	2.9	2.6	2.3	2.1	1.9	1.7	1.6	1.4
0.20	34.6	22.3	14.8	10.0	7.1	5.3	4.1	3.4	2.9	2.6	2.3	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3
0.15	19.3	10.4	5.3	2.6	1.2	0.6	0.4	0.4	0.5	0.6	0.8	0.9	1.0	1.0	1.0	1.1	1.0	1.0	1.0
0.10	--	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	--	0.0	0.0	0.0	--	0.0	0.0	0.2	0.3	0.4
0.05	0.0	--	0.0	--	--	0.0	--	--	--	--	--	--	--	--	0.0	--	0.0	--	--

personal discount rate (annual)

Figure 48. Officer Policy Chart: 8 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	69.5	50.4	37.3	28.1	21.5	16.8	13.4	10.8	8.8	7.3	6.1	5.2	4.5	3.8	3.3	2.9	2.5	2.2	2.0
0.95	69.1	50.1	37.0	27.8	21.3	16.7	13.2	10.7	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.90	68.6	49.7	36.7	27.6	21.2	16.5	13.1	10.6	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.85	68.0	49.3	36.3	27.3	20.9	16.3	13.0	10.5	8.6	7.1	6.0	5.1	4.4	3.8	3.3	2.8	2.5	2.2	1.9
0.80	67.4	48.8	35.9	27.0	20.7	16.1	12.8	10.4	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.75	66.7	48.2	35.5	26.7	20.4	15.9	12.6	10.2	8.4	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.70	65.9	47.5	35.0	26.3	20.1	15.7	12.4	10.0	8.2	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.2	1.9
0.65	64.9	46.8	34.4	25.8	19.7	15.4	12.2	9.9	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.60	63.8	45.9	33.7	25.2	19.3	15.0	11.9	9.6	7.9	6.6	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.55	62.5	44.9	32.9	24.6	18.8	14.6	11.6	9.4	7.7	6.4	5.4	4.6	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.50	60.9	43.7	31.9	23.8	18.2	14.1	11.2	9.1	7.5	6.2	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.45	59.0	42.2	30.7	22.9	17.4	13.6	10.8	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.40	56.6	40.3	29.3	21.7	16.5	12.8	10.2	8.2	6.8	5.7	4.8	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.35	53.6	37.9	27.4	20.2	15.3	11.9	9.4	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.30	49.5	34.6	24.8	18.2	13.7	10.6	8.4	6.8	5.7	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.25	43.7	30.1	21.2	15.4	11.5	8.8	7.0	5.7	4.8	4.1	3.5	3.1	2.8	2.5	2.2	2.0	1.8	1.6	1.5
0.20	35.1	23.4	15.9	11.2	8.1	6.2	4.9	4.0	3.4	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3
0.15	20.8	12.1	7.0	4.1	2.5	1.7	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2	1.1	1.1
0.10	--	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	--	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5	0.5
0.05	--	--	--	--	--	--	--	0.0	0.0	--	--	--	0.0	--	--	--	--	--	--

personal discount rate (annual)

Figure 49. Officer Policy Chart: 9 YOS / O-3 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	72.8	52.4	38.5	28.8	22.0	17.1	13.5	10.9	8.9	7.4	6.2	5.2	4.5	3.8	3.3	2.9	2.5	2.2	2.0
0.95	72.3	52.1	38.2	28.6	21.8	17.0	13.4	10.8	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.90	71.8	51.7	37.9	28.4	21.6	16.8	13.3	10.7	8.7	7.2	6.1	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.85	71.3	51.2	37.6	28.1	21.4	16.6	13.2	10.6	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	1.9
0.80	70.6	50.7	37.2	27.8	21.2	16.4	13.0	10.5	8.6	7.1	6.0	5.1	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.75	69.9	50.2	36.7	27.4	20.9	16.2	12.8	10.3	8.4	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.70	69.1	49.5	36.2	27.0	20.6	16.0	12.6	10.2	8.3	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.2	1.9
0.65	68.1	48.8	35.6	26.5	20.2	15.7	12.4	10.0	8.2	6.8	5.7	4.8	4.2	3.6	3.1	2.7	2.4	2.1	1.9
0.60	67.0	47.9	34.9	26.0	19.8	15.3	12.1	9.8	8.0	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.55	65.7	46.9	34.1	25.4	19.3	14.9	11.8	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.3	2.1	1.8
0.50	64.2	45.7	33.2	24.6	18.6	14.4	11.4	9.2	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.45	62.3	44.2	32.0	23.7	17.9	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.40	59.9	42.3	30.5	22.5	17.0	13.1	10.4	8.4	6.9	5.7	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9	1.7
0.35	56.8	39.9	28.6	21.0	15.8	12.2	9.6	7.7	6.4	5.4	4.6	3.9	3.4	3.0	2.6	2.4	2.1	1.9	1.7
0.30	52.7	36.6	26.0	19.0	14.2	10.9	8.6	6.9	5.7	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6
0.25	47.0	32.1	22.5	16.1	11.9	9.1	7.2	5.8	4.8	4.1	3.6	3.1	2.8	2.5	2.2	2.0	1.8	1.6	1.5
0.20	38.4	25.3	17.1	11.9	8.6	6.4	5.1	4.1	3.5	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.3
0.15	24.0	14.1	8.2	4.9	3.0	2.0	1.5	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.1	1.1
0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	--	0.0	0.0	0.2	0.4	0.5	0.5
0.05	--	--	--	--	--	--	--	0.0	--	0.0	0.0	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 50. Officer Policy Chart: 9 YOS / O-3 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	71.2	51.7	38.3	28.9	22.2	17.3	13.8	11.1	9.1	7.5	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.95	70.7	51.4	38.0	28.7	22.0	17.2	13.6	11.0	9.0	7.5	6.3	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.90	70.3	51.0	37.7	28.4	21.8	17.0	13.5	10.9	8.9	7.4	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.85	69.7	50.6	37.4	28.2	21.6	16.9	13.4	10.8	8.9	7.3	6.2	5.2	4.5	3.8	3.3	2.9	2.5	2.2	2.0
0.80	69.1	50.1	37.0	27.9	21.4	16.7	13.2	10.7	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.75	68.4	49.6	36.6	27.5	21.1	16.5	13.1	10.6	8.6	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.70	67.6	49.0	36.1	27.1	20.8	16.2	12.9	10.4	8.5	7.1	6.0	5.1	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.65	66.7	48.2	35.5	26.7	20.4	15.9	12.7	10.2	8.4	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.60	65.7	47.4	34.9	26.2	20.0	15.6	12.4	10.0	8.2	6.8	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.1	1.9
0.55	64.4	46.4	34.1	25.6	19.5	15.2	12.1	9.8	8.0	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.50	62.9	45.2	33.2	24.8	18.9	14.8	11.7	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.4	2.1	1.9
0.45	61.1	43.8	32.0	23.9	18.2	14.2	11.3	9.1	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.40	58.8	42.0	30.6	22.8	17.3	13.5	10.7	8.7	7.1	6.0	5.1	4.3	3.7	3.3	2.9	2.5	2.2	2.0	1.8
0.35	55.8	39.7	28.8	21.3	16.2	12.6	10.0	8.1	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.2	1.9	1.7
0.30	51.9	36.6	26.3	19.4	14.7	11.4	9.0	7.3	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.25	46.4	32.2	22.9	16.7	12.5	9.6	7.6	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.20	38.1	25.7	17.8	12.6	9.3	7.1	5.6	4.6	3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.15	24.4	14.9	9.2	5.9	3.9	2.8	2.2	1.9	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.2	1.1
0.10	--	0.0	0.0	0.0	--	0.0	0.0	--	--	0.0	0.0	0.0	0.0	--	0.2	0.4	0.5	0.6	0.6
0.05	--	--	--	--	--	--	--	--	--	0.0	--	--	--	0.0	0.0	--	--	--	--

Figure 51. Officer Policy Chart: 10 YOS / O-4 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS) by personal discount rate (annual)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	74.4	53.7	39.5	29.6	22.6	17.6	13.9	11.2	9.2	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.95	74.0	53.4	39.3	29.4	22.5	17.5	13.8	11.1	9.1	7.5	6.3	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.90	73.5	53.0	39.0	29.2	22.3	17.3	13.7	11.0	9.0	7.5	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.85	73.0	52.6	38.6	28.9	22.1	17.2	13.6	10.9	8.9	7.4	6.2	5.2	4.5	3.9	3.3	2.9	2.6	2.2	2.0
0.80	72.4	52.1	38.2	28.6	21.8	17.0	13.4	10.8	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.75	71.7	51.6	37.8	28.3	21.6	16.8	13.3	10.7	8.7	7.2	6.1	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.70	70.9	50.9	37.3	27.9	21.3	16.5	13.1	10.5	8.6	7.1	6.0	5.1	4.3	3.7	3.3	2.8	2.5	2.2	1.9
0.65	70.0	50.2	36.8	27.4	20.9	16.2	12.8	10.3	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.60	68.9	49.4	36.1	26.9	20.5	15.9	12.6	10.1	8.3	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.2	1.9
0.55	67.7	48.4	35.3	26.3	20.0	15.5	12.3	9.9	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.50	66.2	47.2	34.4	25.6	19.4	15.1	11.9	9.6	7.9	6.5	5.5	4.7	4.0	3.5	3.0	2.7	2.4	2.1	1.9
0.45	64.3	45.8	33.3	24.7	18.7	14.5	11.5	9.2	7.6	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.0	1.8
0.40	62.0	44.0	31.8	23.5	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.35	59.1	41.7	30.0	22.1	16.7	12.9	10.2	8.2	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.2	1.9	1.7
0.30	55.1	38.6	27.5	20.2	15.1	11.6	9.2	7.4	6.1	5.1	4.4	3.8	3.3	2.9	2.6	2.3	2.0	1.8	1.6
0.25	49.6	34.2	24.1	17.5	13.0	9.9	7.8	6.3	5.3	4.5	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.20	41.4	27.7	19.0	13.4	9.8	7.4	5.8	4.7	4.0	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.7	1.5	1.4
0.15	27.6	16.9	10.4	6.6	4.4	3.1	2.4	2.0	1.8	1.7	1.6	1.6	1.5	1.5	1.4	1.3	1.3	1.2	1.1
0.10	0.1	0.0	0.0	0.0	0.0	0.0	--	0.0	0.0	0.0	0.0	--	0.0	--	0.2	0.4	0.5	0.6	0.6
0.05	--	--	--	--	--	--	--	--	--	--	--	--	0.0	--	--	--	--	--	--

Figure 52. Officer Policy Chart: 10 YOS / O-4 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	73.2	53.3	39.5	29.8	22.9	17.9	14.2	11.5	9.4	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.95	72.8	53.0	39.3	29.6	22.8	17.8	14.1	11.4	9.3	7.7	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.90	72.3	52.6	39.0	29.4	22.6	17.7	14.0	11.3	9.3	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.85	71.8	52.2	38.7	29.2	22.4	17.5	13.9	11.2	9.2	7.6	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.80	71.2	51.8	38.3	28.9	22.2	17.3	13.8	11.1	9.1	7.5	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.75	70.6	51.3	37.9	28.6	21.9	17.1	13.6	11.0	9.0	7.4	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.70	69.9	50.7	37.5	28.2	21.6	16.9	13.4	10.8	8.9	7.4	6.2	5.2	4.5	3.9	3.3	2.9	2.6	2.2	2.0
0.65	69.0	50.0	36.9	27.8	21.3	16.6	13.2	10.7	8.7	7.2	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.60	68.0	49.3	36.3	27.3	20.9	16.3	13.0	10.5	8.6	7.1	6.0	5.1	4.4	3.8	3.3	2.8	2.5	2.2	1.9
0.55	66.9	48.3	35.6	26.7	20.5	16.0	12.7	10.2	8.4	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.50	65.5	47.2	34.7	26.1	19.9	15.5	12.3	10.0	8.2	6.8	5.7	4.9	4.2	3.6	3.2	2.8	2.4	2.1	1.9
0.45	63.8	45.9	33.7	25.2	19.3	15.0	11.9	9.6	7.9	6.6	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.40	61.6	44.2	32.4	24.2	18.4	14.4	11.4	9.2	7.6	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.35	58.9	42.1	30.7	22.8	17.4	13.5	10.7	8.7	7.1	6.0	5.1	4.3	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.30	55.2	39.2	28.4	21.0	15.9	12.4	9.8	8.0	6.6	5.5	4.7	4.0	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.25	50.1	35.1	25.2	18.5	13.9	10.8	8.6	6.9	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.20	42.4	29.1	20.4	14.7	11.0	8.4	6.7	5.4	4.6	3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.6	1.5
0.15	29.6	19.0	12.5	8.4	6.0	4.4	3.5	2.9	2.5	2.3	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.10	4.0	--	--	0.0	--	0.0	0.0	0.0	0.0	0.0	--	--	0.2	0.4	0.5	0.6	0.7	0.7	0.8
0.05	0.0	0.0	0.0	0.0	0.0	--	0.0	--	0.0	--	0.0	--	--	--	0.0	--	--	--	--

personal discount rate (annual)

Figure 53. Officer Policy Chart: 11 YOS / O-4 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)

	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	76.4	55.3	40.7	30.6	23.4	18.2	14.4	11.6	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.95	76.0	55.0	40.5	30.4	23.2	18.1	14.3	11.5	9.4	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.90	75.5	54.6	40.2	30.2	23.1	17.9	14.2	11.4	9.3	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.85	75.0	54.2	39.9	29.9	22.9	17.8	14.1	11.3	9.2	7.6	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.80	74.5	53.8	39.5	29.6	22.6	17.6	13.9	11.2	9.2	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.75	73.8	53.3	39.2	29.3	22.4	17.4	13.8	11.1	9.1	7.5	6.3	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.70	73.1	52.7	38.7	29.0	22.1	17.2	13.6	10.9	8.9	7.4	6.2	5.2	4.5	3.9	3.3	2.9	2.6	2.2	2.0
0.65	72.3	52.0	38.2	28.6	21.8	16.9	13.4	10.8	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.60	71.3	51.2	37.6	28.1	21.4	16.6	13.2	10.6	8.7	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	1.9
0.55	70.1	50.3	36.8	27.5	20.9	16.3	12.9	10.4	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.50	68.7	49.2	36.0	26.8	20.4	15.8	12.5	10.1	8.3	6.8	5.8	4.9	4.2	3.6	3.2	2.8	2.4	2.1	1.9
0.45	67.0	47.9	34.9	26.0	19.7	15.3	12.1	9.7	8.0	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.40	64.9	46.2	33.6	24.9	18.9	14.6	11.6	9.3	7.6	6.4	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.35	62.1	44.0	31.9	23.6	17.8	13.8	10.9	8.8	7.2	6.0	5.1	4.4	3.8	3.3	2.9	2.5	2.2	2.0	1.8
0.30	58.5	41.2	29.6	21.8	16.4	12.7	10.0	8.1	6.6	5.6	4.7	4.1	3.5	3.1	2.7	2.4	2.1	1.9	1.7
0.25	53.3	37.1	26.4	19.3	14.4	11.1	8.7	7.1	5.8	4.9	4.2	3.6	3.2	2.8	2.5	2.2	2.0	1.8	1.6
0.20	45.7	31.1	21.6	15.5	11.4	8.7	6.8	5.6	4.6	3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.8	1.6	1.5
0.15	32.9	21.0	13.7	9.2	6.4	4.7	3.7	3.0	2.6	2.3	2.1	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.2
0.10	7.3	0.8	0.0	0.0	--	0.0	0.0	--	--	0.0	0.0	0.0	0.2	0.4	0.5	0.6	0.7	0.7	0.8
0.05	--	0.0	--	--	0.0	--	0.0	0.0	--	0.0	--	--	0.0	0.0	--	--	0.0	--	--

personal discount rate (annual)

Figure 54. Officer Policy Chart: 11 YOS / O-4 / female

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	75.0	54.8	40.7	30.7	23.6	18.5	14.7	11.8	9.7	8.0	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1
0.95	74.6	54.4	40.4	30.6	23.5	18.4	14.6	11.8	9.6	8.0	6.7	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1
0.90	74.2	54.1	40.2	30.3	23.3	18.2	14.5	11.7	9.6	7.9	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.3	2.1
0.85	73.7	53.7	39.9	30.1	23.1	18.1	14.4	11.6	9.5	7.8	6.6	5.5	4.7	4.1	3.5	3.0	2.7	2.3	2.1
0.80	73.2	53.3	39.5	29.9	22.9	17.9	14.2	11.5	9.4	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.75	72.6	52.8	39.2	29.6	22.7	17.7	14.1	11.4	9.3	7.7	6.4	5.5	4.6	4.0	3.5	3.0	2.6	2.3	2.0
0.70	71.9	52.3	38.7	29.2	22.4	17.5	13.9	11.2	9.2	7.6	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.65	71.1	51.7	38.2	28.8	22.1	17.3	13.7	11.1	9.1	7.5	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.60	70.1	50.9	37.6	28.4	21.8	17.0	13.5	10.9	8.9	7.4	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.55	69.0	50.1	37.0	27.8	21.3	16.6	13.2	10.7	8.7	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.50	67.7	49.0	36.1	27.2	20.8	16.2	12.9	10.4	8.5	7.1	6.0	5.1	4.3	3.7	3.2	2.8	2.5	2.2	1.9
0.45	66.1	47.7	35.1	26.4	20.2	15.7	12.5	10.1	8.3	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.4	2.2	1.9
0.40	64.1	46.1	33.9	25.4	19.4	15.1	12.0	9.7	8.0	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1	1.9
0.35	61.5	44.1	32.3	24.1	18.4	14.3	11.4	9.2	7.5	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.30	58.0	41.4	30.1	22.4	17.0	13.2	10.5	8.5	7.0	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.25	53.1	37.5	27.1	20.0	15.1	11.7	9.3	7.5	6.2	5.2	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.20	45.8	31.8	22.5	16.4	12.3	9.5	7.5	6.1	5.1	4.3	3.7	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.15	33.7	22.2	15.0	10.4	7.5	5.7	4.5	3.7	3.2	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.5	1.4	1.3
0.10	9.4	3.1	--	--	--	--	--	--	--	--	0.1	0.3	0.5	0.7	0.8	0.8	0.8	0.9	0.9
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 55. Officer Policy Chart: 12 YOS / O-4 / male

BRS preferred | High-3 preferred | break-even CP multiplier

probability of reaching retirement eligibility (>20 YOS)	2%	3%	4%	5%	6%	7%	8%	9%	10%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%
1.00	78.2	56.7	41.9	31.5	24.1	18.8	14.9	12.0	9.8	8.1	6.7	5.7	4.8	4.1	3.6	3.1	2.7	2.4	2.1
0.95	77.9	56.4	41.7	31.3	24.0	18.7	14.8	11.9	9.7	8.0	6.7	5.6	4.8	4.1	3.5	3.1	2.7	2.4	2.1
0.90	77.4	56.1	41.4	31.1	23.8	18.5	14.7	11.8	9.6	7.9	6.6	5.6	4.8	4.1	3.5	3.1	2.7	2.3	2.1
0.85	77.0	55.7	41.1	30.9	23.6	18.4	14.6	11.7	9.6	7.9	6.6	5.6	4.7	4.1	3.5	3.0	2.7	2.3	2.1
0.80	76.4	55.3	40.8	30.6	23.4	18.2	14.4	11.6	9.5	7.8	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.75	75.8	54.8	40.4	30.3	23.2	18.0	14.3	11.5	9.4	7.7	6.5	5.5	4.7	4.0	3.5	3.0	2.6	2.3	2.0
0.70	75.1	54.3	40.0	30.0	22.9	17.8	14.1	11.3	9.3	7.7	6.4	5.4	4.6	4.0	3.4	3.0	2.6	2.3	2.0
0.65	74.3	53.6	39.5	29.6	22.6	17.6	13.9	11.2	9.1	7.6	6.3	5.3	4.6	3.9	3.4	3.0	2.6	2.3	2.0
0.60	73.4	52.9	38.9	29.1	22.2	17.3	13.7	11.0	9.0	7.4	6.2	5.3	4.5	3.9	3.4	2.9	2.6	2.3	2.0
0.55	72.3	52.0	38.2	28.6	21.8	16.9	13.4	10.8	8.8	7.3	6.1	5.2	4.4	3.8	3.3	2.9	2.5	2.2	2.0
0.50	71.0	51.0	37.4	27.9	21.3	16.5	13.1	10.5	8.6	7.1	6.0	5.1	4.3	3.7	3.3	2.8	2.5	2.2	1.9
0.45	69.3	49.7	36.4	27.1	20.6	16.0	12.7	10.2	8.4	6.9	5.8	4.9	4.2	3.7	3.2	2.8	2.4	2.2	1.9
0.40	67.3	48.1	35.1	26.1	19.9	15.4	12.2	9.8	8.0	6.7	5.6	4.8	4.1	3.6	3.1	2.7	2.4	2.1	1.9
0.35	64.7	46.1	33.5	24.8	18.8	14.6	11.5	9.3	7.6	6.3	5.4	4.6	3.9	3.4	3.0	2.6	2.3	2.1	1.8
0.30	61.2	43.3	31.3	23.1	17.5	13.5	10.7	8.6	7.1	5.9	5.0	4.3	3.7	3.2	2.8	2.5	2.2	2.0	1.8
0.25	56.4	39.5	28.3	20.8	15.6	12.0	9.5	7.7	6.3	5.3	4.5	3.9	3.4	3.0	2.6	2.3	2.1	1.9	1.7
0.20	49.1	33.8	23.8	17.2	12.8	9.8	7.7	6.2	5.2	4.4	3.8	3.3	2.9	2.6	2.3	2.1	1.9	1.7	1.5
0.15	36.9	24.2	16.2	11.2	8.0	6.0	4.7	3.8	3.3	2.8	2.5	2.3	2.1	1.9	1.8	1.7	1.5	1.4	1.3
0.10	12.6	5.1	1.1	--	--	--	--	--	--	--	0.1	0.3	0.5	0.7	0.8	0.8	0.9	0.9	0.9
0.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

personal discount rate (annual)

Figure 56. Officer Policy Chart: 12 YOS / O-4 / female

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The 2016 NDAA authorized changes to the military retirement system transitioning from the legacy High-3 defined benefit annuity to the new Blended Retirement System (BRS). In exchange for a reduced defined benefit annuity, the BRS incorporates automatic and matching contributions to the member's Thrift Savings Plan and a continuation payment offered at 12 years of service. In 2018, service members with less than 12 years of service will make an irrevocable decision between the two retirement systems. This research effort addresses the problem by developing a decision analysis model incorporating up to 27 different input variables. Service members can use the associated spreadsheet tool to calculate the expected net present value of each alternative based on their own personal circumstances. We analyze 26 typical career demographic groups to understand how the recommended alternative is impacted by various factors including personal discount rate, expected continuation pay multiplier, and probability of reaching 20 years of service. Each demographic group must make difficult assessments of these variables in order to determine their preferred alternative. We conduct two-variable sensitivity analysis and present the results in third-variable break-even policy charts, providing members with clarity of thought and action as they approach the 2018 opt-in window.

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