The military retirement system has been subject to numerous criticisms, including that it is unfair to pre-20 YOS (years of service) separatees, excessively costly, inefficient, and inhibits force management flexibility. Although many commissions and study groups have examined the military compensation system and the retirement system, these efforts have tended to narrowly focus on the retention and recruiting effects of alternative compensation systems and not on the productivity effects as well. In this study, we use two measures of productivity: effort supply and ability sorting. By effort supply, we mean how hard and effectively service members work. By ability sorting, we mean the degree to which high-ability personnel are induced to stay and seek advancement to the upper grades.

In earlier reports (Asch and Warner [1994a, 1994b]), we developed a theoretical model and an empirical version of that model to analyze the force size and structure effects of alternative military compensation systems, the cost effects, and the effects on productivity. In this report, we summarize the main features of our theoretical and empirical model and use the model to analyze the effects of converting the military retirement system to a specific alternative system patterned after the Federal Employees Retirement System (FERS). (In Asch and Warner [1994b], we analyze other options for changing the military retirement system.)

The alternative system consists of three parts. The first is a retirement plan that is very similar to FERS, the retirement plan for civil service employees, which we call the Military Federal Employees Retirement System, or MFERS. The second part is a 7 percent across-
the-board pay increase to compensate members for mandatory contributions to the retirement plan, and the third part is a set of retention bonuses targeted to specific groups (such as occupations) to address any retention problems. MFERS would also consist of three parts: Social Security benefits, a defined benefit plan (called the basic plan) that vests employees at five years of service in an old-age annuity, and a defined contribution plan (called the thrift savings plan) that vests employees at three years of service and that matches employee contributions up to 5 percent of basic pay.

MFERS is a less-generous system than the current military retirement system for those who separate with 20 or more years of service. Consequently, we find that military retention falls significantly in the steady state under MFERS. Because the empirical version of our model is not occupation specific, it cannot easily accommodate the retention bonuses that initially were considered to address this problem. Therefore, to address this retention problem, we analyze in this report a system that couples MFERS with an active duty pay increase that is larger, on average, than the 7 percent increase included in the second part of the alternative plan. Although pay and bonuses are distinct policy options for addressing retention problems (for example, they have different cost implications), they are similar insofar as, together with MFERS, they both result in a compensation system that places a greater share of compensation in the form of active compensation and less in the form of retired pay, in contrast to the current system. Thus, for the purposes of much of our analysis, the plan we analyze (MFERS plus a pay raise) and the plan we initially set out to evaluate (MFERS plus retention bonuses) are similar. However, throughout this summary and the report, we note where our findings for the two plans might differ.

We first estimated the pay incentives necessary to maintain a force similar in structure to REDUX\(^1\) and evaluated its productivity effects. We find that coupling MFERS with a 13 percent across-the-board pay raise is sufficient to produce the same force size and structure under MFERS as under REDUX. However, we also estimate that with an across-the-board pay raise, our measures of productivity would fall.

\(^1\)REDUX is the current military system for those members who entered service after August 1, 1986.
Average effort is predicted to fall by about 2.5 percent and average E-9 ability—our measure of ability sorting—is predicted to decline by 21 percent. The productivity measures are predicted to decline because MFERS reduces the main source of deferred compensation under the current compensation system—retired pay—and thus the main source of effort and ability sorting incentives. An across-the-board pay raise that gives the same percentage raise to all individuals does not offset this reduction in deferred compensation. In other words, MFERS with an across-the-board pay raise undoes much of the skewness of the current compensation system. Therefore, although MFERS with an across-the-board pay raise can maintain the force size, we predict that it is not an improvement over the current system (given that force size and structure are being held constant) because our measures of productivity are predicted to decline.

We find that for MFERS to be an improvement over the current retirement system, it must be coupled with a skewed pay raise—higher raises in higher grades (or, alternatively, a skewed set of retention bonuses). Coupling MFERS with a skewed pay raise can increase productivity (and reduce costs) relative to REDUX while producing the same general force size and structure. Specifically, for the Army enlisted force, we estimate that average effort rises by 17 percent and average E-9 ability rises by 87 percent.

For MFERS to represent an unambiguous improvement over REDUX, it must reduce costs at the same time it maintains the force structure and raises productivity. Costs are composed of active duty pay plus an accrual charge to fund future retirement liabilities of the current force. A critical element in costing is the real discount rate used to determine the military retirement accrual charge. Until very recently, the Department of Defense (DoD) Actuary used a 2 percent real rate in estimating the accrual charge. Beginning in FY 1995, the Actuary raised its real discount rate assumption to 2.75 percent. The real interest rate is an important determinant of the cost of the military retirement system, or the savings from changing it. An increase in the real discount rate reduces the accrual charge for the current force and tends to reduce the savings to be had from implementing policy changes that reduce future retirement outlays.

Just what the real discount rate for public decisions should be is an open question. Although the DoD Actuary raised its discount rate
assumption in FY 1995, 2.75 percent is still a relatively low real discount rate. In fact, there is a substantial body of economic literature arguing that the real discount rate that should be applied to public decisions is even higher than 2.75 percent. We account for the uncertainty in real discount rates by evaluating the cost of REDUX and MFERS under several alternative assumptions about the real government discount rate. We find that when 2 percent is used to calculate the accrual costs of either retirement system, MFERS with a skewed pay raise would reduce total manpower costs by about 6 percent and result in annual savings to DoD of about $2.4 billion based on FY 1997 force levels. When the government discount rate is very low, MFERS appears to be a clear improvement over REDUX on grounds of both higher productivity and reduced cost.

The case for MFERS is less compelling the higher the real discount rate. When the real discount rate is increased to 2.75 percent, the savings in total manpower costs decline to 2.2 percent (about $1 billion for the 1997 force). At this discount rate, MFERS may still be an improvement in that it raises productivity while costing slightly less. But when the discount rate is increased to 5 percent, MFERS is estimated to cost about 6 percent more than REDUX. In this case, the case for MFERS would depend on whether the estimated improvements to productivity are worth the extra costs, something that policymakers would have to decide.

We also used our empirical model to predict the pattern of retention and costs in transition to the steady state under two cases (assuming a 2 percent real discount rate). In the first case, current members would be grandfathered under REDUX and new entrants would be automatically enrolled into MFERS with a skewed pay raise. In the second case, current members would be allowed to convert to the new system. We find that although there is some variation in retention around the steady-state level, the variation is not large. We also find that most of the cost savings associated with moving to the new system would occur in the first three years in both cases. Beyond the third year, there are small variations in cost around the steady state. Thus, our model predicts that there would be no large spikes in retention or cost, and most of the cost savings (under a 2 percent real discount rate) would occur fairly soon under both cases.
The empirical model evaluates the productivity and costs of a force under MFERS that is comparable in rank and experience structure to the one produced by REDUX. MFERS has several implications for force management that are not reflected in the productivity and cost estimates discussed above. The 20-year retirement system creates a similar experience profile across the broad spectrum of military skills (Asch and Warner [1994b], Table 2). It has been argued that because of the “lock-in” effect created by the 20-year system, the services have little flexibility to alter the experience distribution of their forces even when productivity considerations might merit such changes. By diminishing the influence of retired pay in retention decisions of junior and mid-career personnel and by permitting more flexibility in the use of active duty pay (e.g., through bonuses), MFERS offers the potential for more flexibility in force management. At the individual level, MFERS could provide the services with a means of separating marginal performers in mid-career whom they are now reluctant to separate prior to the 20-year mark.

Although a more up-front compensation system—which MFERS coupled with a skewed active pay increase or greater use of bonuses would produce—would permit greater flexibility of force management at the junior or mid-career levels, MFERS might create inflexibilities of its own in the management of senior personnel. The current 20-year system offers strong incentives for senior personnel to leave upon qualifying for retirement benefits. But under MFERS, coupling skewed pay increases with a reduction in immediate separation benefits creates stronger retention incentives for senior, high-ranking personnel. The result would be higher retention among the personnel who remain to the 20-year mark and beyond. Although the increased numbers of senior personnel might be beneficial in many skill areas (e.g., the medical corps), superannuation might be a problem in skills demanding youth and vigor. If senior personnel are unwilling to leave voluntarily, the services would have to rely more heavily on involuntary separation to maintain the youth and vigor of the force than they do under the 20-year system with its inducement to senior personnel to separate voluntarily.

The prospect of a heavier reliance on involuntary separation of senior personnel to maintain the experience distribution of the force might impose what we have termed “organizational influence costs” (Asch and Warner [1994a]). These costs include the potential for
lower morale among senior personnel who are faced with the prospect of involuntary separation or the lower productivity that might be associated with modification of personnel policies to permit senior personnel to stay for longer careers. These organizational influence costs are difficult to measure but could swamp the savings associated with either version of MFERS.

While it is ambiguous whether MFERS offers improvements in force management over REDUX, MFERS does offer personnel an important advantage over REDUX—portability. MFERS would allow military members to transfer their accumulations and vested benefits to the civil service system, FERS. Although the evidence is limited on the number of military members who enter the civil service after their military service, anecdotal evidence suggests that the number may be high.

Finally, because the current back-loaded system creates strong incentives for career personnel to stay, it creates force stability and prevents premature losses in the face of uncertainty such as unforeseeable fluctuations in the labor market. How would MFERS compare on this dimension? Since MFERS more resembles a front-loaded compensation system, it would seem to compare unfavorably. However, if MFERS is coupled with a skewed pay raise, much of the member's compensation would still be deferred, and this deferred compensation would help create stability among the career force. Even if MFERS is coupled with an across-the-board pay raise, it might give added protection against retention fluctuations among more junior personnel. Therefore, whether MFERS creates more force stability relative to the current system is unclear.

Given these considerations together with the results of our empirical model, the question is, should the military adopt either plan? We cannot say, because the answer depends on how policymakers weigh the advantages and disadvantages of the systems. However, there is an alternative proposal that would maintain the advantages of the two systems while addressing their disadvantages. This alternative would include three components: MFERS, a skewed pay raise, and a system of cash separation pays.

Exercising our empirical model (and assuming a 2 percent real discount rate), we find that the alternative proposal would reduce costs
and increase our measures of productivity relative to Redux while producing the same general force size and structure. It would also be portable. Most important, because this system includes separation pay, it would most likely reduce the organizational influence costs associated with involuntary separation. In essence, like the Voluntary Separation Incentive/Special Separation Benefit (VSI/SSB) program used to facilitate the drawdown, the separation pay under this system would ease the transition of individuals who must leave the service. Since the transition of these individuals would be smoother, the services would likely be more willing to separate these individuals, and the system would thus enhance force management flexibility. A disadvantage of this proposal is the risk that the separation pay would be operated like a bonus program that is subject to frequent changes. Because such frequent changes would create uncertainty about benefits and have adverse effects on behavior, once the separation pay scheme was in place, the formula and target populations should change rarely. If this disadvantage could be overcome, then this system would likely be an improvement over the current system as well as the two systems analyzed in this report.