We have compared the current military retirement system as of August 1986 (commonly known as REDUX) with a proposed alternative (which we call MFERS) patterned after the retirement system for federal employees. The comparison included productivity, cost, implications for individual service members, and implications for force management. MFERS attempts to correct three alleged deficiencies with the current system—its unfairness to mid-career personnel who upon separation leave without retirement benefits, the lack of portability of the current system to other retirement systems including the federal system, and its cost. Although we recognize the first two potential deficiencies, they are not the focus of our analysis. The central focus of our analysis has been to determine how MFERS would affect both the cost and the productivity of military forces and whether MFERS would improve or hinder force management. We summarize our conclusions below.

MFERS coupled with an increase in basic pay that just maintains existing take-home pay would result in reductions in retention, experience, and productivity. These reductions occur because MFERS represents a significant decrease in lifetime compensation for personnel with long military careers. This decrease is not offset by increased benefits to those who separate before the 20-year mark. MFERS would need to be coupled with an increase in active duty pay to maintain the experience level and productivity of the REDUX force. Furthermore, the pay increases would need to be skewed—targeted to the higher ranks—to maintain productivity, because MFERS would undo the skewing in the current system.
Our analysis indicates that when coupled with a skewed pay increase that maintains the same general force size and structure as the current system, MFERS would raise productivity. It would do so by providing a greater incentive to supply effort and a higher retention of more-able personnel. Measured on grounds of productivity, MFERS appears to be an improvement over the current system.

How MFERS would affect manpower costs depends on the assumed government discount rate. Manpower costs consist of active duty pay outlays plus the accrual charge for future retirement liabilities. When the assumed government discount rate is 2 percent, MFERS is estimated to reduce total manpower costs by about 6 percent and produce a total force savings of about $2.4 billion. Savings are produced because MFERS reduces the military retirement accrual charge by more than it increases active duty pay outlays. Savings decline when the discount rate is increased; in fact, MFERS is estimated to increase total manpower costs at a real government discount rate of 5 percent. Therefore, although MFERS appears to improve upon REDUX on grounds of both productivity and cost at low discount rates, the case for MFERS is less clear at higher discount rates.

It has been argued that because the current system places such a high portion of compensation in the form of retirement benefits, it hampers force management and creates inflexibilities that could be avoided with a more front-loaded compensation system. In particular, it is argued that a more up-front system would (1) have more flexibility to target pay to services and skills with retention problems and (2) avoid the “implicit contract” problem of the services retaining mid-career personnel who are marginal performers but who are not yet vested in the 20-year retirement system. Although there may be merit to these criticisms, MFERS with skewed increases in active basic pay is not likely to solve them.

First, while in theory MFERS with a skewed pay raise addresses the implicit contract problem produced by the current system in that it offers a benefit to those who leave before the 20-year point, the size of these benefits is small, and the large raises associated with the higher grades may cause the services to retain marginal performers who are “due” a high raise. Retention of some of these individuals may be desirable if they are in occupational areas in which a long ca-
Conclusions and Policy Options 73

But for others, the high raises in the higher grades may create the same implicit contract problems found in the current retirement system.

Second, like the current system, MFERS with a skewed pay raise would be a one-size-fits-all system. Since the system cannot be tailored to meet the unique needs of specific populations such as occupations and services, it is likely to hamper force management flexibility at the micro level.

Third, MFERS with a skewed pay raise would rely to a greater extent on involuntary separations to maintain the youth and vigor of the force because it provides compensation more in the form of active duty pay and less in the form of retired pay—a form of compensation that induces voluntary separations at the appropriate time. Involuntary separations create ex post regret. Although service members were willing to enter the service knowing that most of their compensation would be in the form of active pay and less in the form of retired/separation pay, once they leave they regret having a compensation system that pays little separation pay and that involuntarily separates members. The ex post regret associated with involuntary separations creates organizational influence costs. Involuntary separations hurt morale, and must be offset by costly pay raises to maintain recruiting and retention outcomes. In addition, if the services choose to relax the involuntary separation policy, the force becomes older, with less youth and vigor, and the productivity of the force declines, another costly outcome. These organizational influence costs are difficult to measure but they may well swamp the cost advantage of MFERS with a skewed pay raise predicted by our empirical model.

MFERS WITH RETENTION BONUSES

An alternative to MFERS with a skewed pay raise is a system that would offer MFERS plus a 7 percent across-the-board pay raise to offset mandatory contributions and their tax consequences under the basic retirement plan, and a system of retention bonuses intended to solve any retention problems that arose. The bonuses could be “turned off” to induce members to leave the service. We could not analyze this system because our model is not occupation-specific and could not easily accommodate retention bonuses. Still,
the plan we analyzed is similar in that it would also offer MFERS and up-front compensation in the form of either active pay or active pay/retention bonuses.

Would our conclusions regarding MFERS with retention bonuses likely differ from the ones derived for MFERS plus a skewed pay raise? Our answer is yes, but probably not by much qualitatively. To the extent that the retention bonuses were skewed (higher in higher grades), MFERS with a 7 percent pay raise and a skewed system of bonuses is likely to increase productivity and reduce costs relative to the current system. This system will be portable to the civil service. Thus, MFERS with retention bonuses is likely to create the same three advantages over the current system that were found in MFERS with a skewed pay raise. In fact, the version with bonuses would probably cost less than the version with a skewed pay raise if the bonuses were targeted to only certain populations. Further, since the retention bonuses can be targeted, MFERS with retention bonuses is not a one-size-fits-all plan. Thus, one would expect more force management flexibility at the micro level under this plan than under MFERS with a skewed pay raise.

With the exception of the one-size-fits-all problem, MFERS with retention bonuses would likely be subject to the same disadvantages as MFERS with a skewed pay raise. Both systems would probably create an implicit contract if the retention bonuses and pay were skewed to maintain effort and ability sorting incentives. The services are likely to be reluctant to involuntarily separate any member who is “owed” a big pay raise or retention bonus in a senior grade. Second, both systems would likely involve involuntary separations. While it is true that turning off retention bonuses will induce some voluntary separations, they only operate at the margin. Those who have a strong taste for military service will stay despite the lack of a bonus, and it is these individuals who must be involuntarily separated to maintain the youth and vigor of the force. Thus, MFERS with a 7 percent pay raise and a system of retention bonuses will also generate (potentially large) organizational influence costs.

**POLICY OPTIONS**

Should MFERS, either with a skewed pay raise or with retention bonuses, be adopted? Much depends on how one weighs the advan-
tages and disadvantages of these systems. A priori, we cannot make a judgment.

However, our analysis indicated that there is another MFERS alternative. The ideal retirement system alternative would be an improvement over the current system on (at least) all the dimensions analyzed: retention, productivity, cost, force management flexibility, portability, voluntary separations, and political acceptability. MFERS with a skewed pay raise and a system of separation pay would come very close to this ideal system. In other words, by adding separation pay, the military would have a compensation system that would have the advantages of MFERS with a skewed pay raise but would also address many of its disadvantages. It would have the advantages of MFERS with retention bonuses, but address its disadvantages. The separation pay system would be a generalization of the current involuntary separation pay program. Specifically, the separation payment would equal $spm \times YOS \times \text{final pay}$, where $spm$ is the separation pay multiplier.

To show how this system would produce the cost and productivity advantages of MFERS with a skewed pay raise (but no separation pay), Table 15 gives the predicted effects of MFERS plus a skewed pay raise plus separation pay when we assume an $spm$ and degree of skewness that produces the same general force size and structure as REDUX.¹ The results in Table 15 compared with those in Tables 10 and 11 show that on these dimensions, MFERS plus a skewed pay raise plus separation pay would be an improvement over the current system (although not to the same degree as MFERS with a skewed pay raise but no separation pay).² This system would retain the portability and political expediency advantages of MFERS.

¹Specifically, we set $spm = 1$, assume that all members who have 10 or more years of service are eligible for separation pay, and assume that the skewed pay raises are as follows: E-1 to E-4, 0 percent; E-5, 4 percent; E-6, 8 percent; E-7, 12 percent; E-8, 16 percent; and E-9, 20 percent. Comparing these skewness assumptions with those in Table 7 shows that the pay raise and degree of skewness that are necessary to maintain the force size and structure are less when MFERS is also coupled with separation pay. These assumptions are not unique. The same force size and structure could be roughly achieved with a higher $spm$ and a smaller set of raises or a smaller $spm$ and a larger set of raises.

²It should be noted that our analysis (not shown) indicates that for this system to be an improvement over REDUX, the pay raise must be skewed. We find that MFERS
Table 15
Predicted Effects of MFERS Plus Skewed Pay Raise
Plus Separation Pay

<table>
<thead>
<tr>
<th>Productivity Measure</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average effort</td>
<td>3.64</td>
</tr>
<tr>
<td>Average E-9 ability</td>
<td>.112</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Measure ($billions)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic pay</td>
<td>9.61</td>
</tr>
<tr>
<td>Retirement accrual</td>
<td>1.32</td>
</tr>
<tr>
<td>Total</td>
<td>10.93</td>
</tr>
</tbody>
</table>

NOTE: The cost analysis assumes a 2 percent real government discount rate.

The main advantage of adding separation pay to MFERS is that the separation pay could be targeted to specific groups and would reduce the organizational influence costs associated with involuntary separation (separating personnel would be eligible for separation pay). Since the services would have a tool they could use to ease the separation of personnel (much like the VSI/SSB program used during the drawdown), they would be more willing to separate personnel who are “due” large raises in the senior grades. Therefore, adding separation pay addresses the force management flexibility disadvantages and involuntary separation disadvantages that would likely exist under MFERS with a skewed pay raise (but no separation pay) or with retention bonuses.³

There is a potential drawback to MFERS with a skewed raise and separation pay. The separation pay might be operated like a bonus program that is subject to frequent changes by personnel managers or budgeteers. Frequent changes in separation pay would create uncertainty about benefits and have adverse effects on behavior.

³This system—MFERS plus a skewed raise plus separation pay—is very similar to the three-part retirement system analyzed in Asch and Warner (1994b), which was also shown to be an improvement over the current system. The three-part plan consists of an old-age annuity vested at 10 years of service, a skewed pay raise, and separation pay.
Therefore, once the separation pay scheme is in place, the formula and target populations should be changed rarely.

In conclusion, our analysis suggests that the current military retirement system can be improved. We show here that MFERS coupled with either a skewed pay raise or an across-the-board 7 percent pay raise plus a set of retention bonuses would be better than the current system on some dimensions but not others. Therefore, what system should be adopted depends on how the systems’ advantages and disadvantages are weighed. It is our view that MFERS with a skewed pay raise and a system of separation pay would be better than either of the alternatives or the current system.