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Reserve Participation and Cost Under a New Approach to Reserve Compensation

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Cover photo: U.S. Marines arrive at the impact site with French soldiers to recover the wreckage of a French Mirage 2000 jet fighter in Afghanistan's Helmand province, May 25, 2011. U.S. Marine Corps photo by Staff Sgt. Jeff Kaus.

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Summary

Every four years, the Department of Defense (DoD) conducts a Quadrennial Review of Military Compensation (QRMC). One issue considered in the 11th QRMC, which began in 2010, is ensuring that the pay and benefits of Reserve Component (RC) members are consistent with the current and planned use of RC personnel in an operational capacity. The 11th QRMC proposes a new approach to compensating RC members, a total-force approach, in which RC compensation is more closely aligned with the approach used to compensate Active Component (AC) members.

The total-force compensation approach has four elements:

- **Regular military compensation (RMC) based on days of reserve service, regardless of duty status.** RMC includes basic pay, allowances for housing and subsistence, and a tax advantage (allowances are not subject to taxation). Currently, RC members receive different pay levels depending on duty status. Under the total-force approach, they would receive a day of RMC for each day of duty, computed in the same way that active RMC is computed.
- **53 RC retirement points, one for each day of service, regardless of duty status.** In the existing system, RC members accumulate 75 points per year of participation under the model used in this assessment, while under the proposed system RC members accumulate 53 points for 53 days of service.
- **Retirement eligibility after 30 years of service (YOS)**, RC members who have attained 20 qualifying years for retirement benefits can begin receiving benefits on accumulating 10 additional years in the selected, individual ready, or retired reserve, or at age 60, whichever occurs first. Thus an individual could collect reserve retirement benefits within 30 years of starting service. Currently, RC retirement benefits begin at age 60; under the total-force approach, benefits might begin up to 13 years earlier for some individuals.
- **Supplemental pay.** Forms of supplemental pay include incentive pay, pay for RC travel in excess of 50 miles (or 100 miles round trip), and pay for currently unpaid reserve work.

The total-force approach would reduce RC pay but would compensate for the reduction by allowing RC members who qualify to claim retirement benefits earlier than age 60 and by providing supplemental pay, such as incentive pay. The study reported here assesses the force-management and cost effects of this new pay approach on RC participation, AC retention, and cost.

Approach of This Study

To assess these effects, we used a stochastic dynamic programming model of AC retention and RC participation developed at RAND for the 10th QRMC. Individuals in the model begin their military career in the AC and are assumed to make annual retention decisions to stay or leave. If they leave the AC, they may join the RC and flow in and out of the RC over the remainder of their career. Because individuals start out as AC members, our analysis of RC participation focuses on members who previously served on active duty. The majority of RC participants in the senior years of service have prior AC service and are therefore likely to qualify for RC retirement benefits. The majority of junior-level RC participants do not have prior AC service and are more likely to have fewer years of RC participation. We estimate that RC participants with prior AC service comprise 35 percent to 40 percent of total RC participants. While our model can be extended to non-prior-service RC members, the results reported here are only for those with prior AC service.

In the model, individuals are forward-looking in their decisions, accounting, for example, for the possibility of qualifying for future retirement benefits, and their decisions are affected by uncertainty (which we model with random shocks at every decision point), by compensation, and by their preferences for active and reserve military service relative to the civilian sector. We do not directly observe these preferences or the random shocks, but we can infer the parameters underlying their distributions using Defense Manpower Data Center (DMDC) data on actual active retention and reserve participation decisions through 2010 of members who began service in 1990–1991. The estimated model parameters permit us to conduct policy simulations to project how AC participation, affiliation with the RC, RC participation, and personnel costs would change under alternative compensation policies. This modeling approach permits evaluation of policies that do not yet exist or that have no direct historical analog. Thus, it is well suited to the purposes of the 11th QRMC.

We used the model estimates to simulate the effects of 11 variants of the total-force compensation approach on AC retention, RC participation, and cost relative to the current baseline approach to RC compensation for officer and enlisted personnel for all four service branches.

The first three variants represent the core QRMC proposal and include all four elements—RMC, 53 points, 30-YOS retirement, and supplemental pay. The form of

the supplemental pay is varied. One case considers incentive pay in the form of an annual bonus that is a percentage of basic pay, the amount of which would hold RC prior-service force size constant. In another case, incentive pay is structured as a flat dollar amount, regardless of years of service, also set to hold RC force size constant. In the third case, targeted incentive pay is structured as a flat dollar amount in each year of service between 8 and 15 years. The next three variants are the same as the first three but without the earlier retirement element—RC retirement benefits begin at age 60, as they do under the current retirement system. The seventh alternative includes all four elements, but the supplemental pay consists of travel reimbursement rather than incentive pay. In the remaining alternatives, we remove different elements and revert to the status quo for the purpose of comparison. In one of these variants, we remove supplemental pay, while in another, we remove both 30-YOS retirement and supplemental pay. None of these alternatives includes supplemental pay.

The simulations compute the current costs, retirement costs, and total costs of each variant and the change in cost relative to the baseline case. Current cost is the cost of current compensation and includes RMC (or baseline RC pay in the base case) and any additions to current compensation in the variant under consideration. AC retirement costs are based on the accrual charge sufficient to cover the retirement liability of AC members who retire from the AC plus the part of the retirement liability of AC members who retire from the RC. RC retirement costs are based on the RC retirement liability for the RC force minus the funds credited to the RC retirement account for the accrual charges made during AC service. The total cost for each component is the sum of current and retirement costs.

Findings

All of the variants we considered have little effect on the AC—effects on force size and cost are within a percentage point or two of the baseline. Thus, we focus on the effects on the RC.

A key finding of our analysis is that the total-force compensation approach with incentive pay set as a flat dollar amount rather than a percentage of basic pay is less costly than the baseline. By design, we chose the dollar amount of the incentive pay to hold RC prior force size constant, and the resulting total RC enlisted and officer cost decreases by about 2.7 percent across all services, a savings of $80 million annually in 2007 dollars. Total RC costs fall despite an increase in retirement costs because current costs fall. Retirement at 30 YOS increases retirement benefits and therefore retirement costs, but this increase is more than offset by a decrease in pay (relative to baseline pay) after YOS 5 and the reduction in retirement costs due to a reduction in retirement points. The simulations indicate that RC participation falls slightly before

YOS 20 and increases slightly after YOS 20, although the effects are small and overall RC force size is constant.

In addition, a flat-dollar-amount incentive that targets personnel in YOS 8 to 15 can yield additional savings. The total dollar amount needed to keep prior service RC force size constant when pay is targeted is less than the total needed under the nontargeted arrangements, resulting in a 6.6 percent cost savings ($190 million annually in 2007 dollars) when combined with retirement at 30 YOS, and a 7.3 percent cost savings ($220 million annually in 2007 dollars) when combined with retirement at age 60. It may be difficult for this kind of incentive to gain acceptance, as service members outside the targeted range would earn considerably less than their more senior or junior peers; however, this could be addressed by judicious allocation of some portion of the cost savings toward special or incentive pays for those service members. This point extends to non-prior-service reservists as well. That is, like prior-service reservists, they would not receive targeted incentive pay until YOS 8 to 15, but special or incentive pays such as reserve enlistment or affiliation bonuses could be used in earlier years to sustain non-prior-service participation.

We also considered the total-force compensation approach without the opportunity to retire early. Because the value of retirement benefits is lower under the current retirement-at-60 system, incentive pay would have to be higher to maintain prior-service RC force size. The net result is that this variant results in a more front-loaded RC compensation structure with higher current pay for many personnel and lower retirement benefits. As past research has found, a front-loaded system is more efficient, although the amount of cost savings depends on the structure of incentive pay. When incentive pay varies with YOS and is a percentage of basic pay, the cost saving is about $20 million, a 0.6 percent change in total prior-service RC cost across the services. When incentive pay is a flat dollar amount, the cost saving is $100 million, about a 3.5 percent change in RC total cost. Finally, when incentive pay is a flat amount but targeted to YOS 8 to 15, the cost saving is $220 million, a 7.3 percent decrease in RC costs. But as in the previous case, part of the cost savings might need to be allocated to special and incentive pays in earlier years to sustain non–prior-service participation. The structure of incentive pay affects the amount of cost savings because it affects the degree to which baseline pay is restored under the total-force pay approach. Interestingly, though not surprisingly, RC retirement costs are lower when RC members retire at age 60 than when they retire earlier at 30 YOS because the value of retirement benefits is lower and post-20-YOS RC participation is a bit lower, even though pre-20-YOS participation is higher. Our overall conclusion is that the total-force compensation approach is viable in either case in terms of maintaining RC force size, whether RC members retire earlier or not.

We also assessed the total-force approach with travel reimbursement as the supplemental pay and found that the RC force size increases by 3 to 4 percent relative to the baseline for enlisted personnel but decreases by 5 to 10 percent for officers.

Total RC cost falls for officers, but it stays roughly constant for enlisted personnel. Other considerations may also affect the use of travel reimbursement as supplementary pay. Reimbursing travel expenses may be inefficient if members are willing to travel more than 50 miles one way even in the absence of reimbursement. Our model was not designed to detect this effect. Nonetheless, in this case, the services would be paying an economic rent—i.e., more than required to induce the desired level of participation—which would be inefficient. Furthermore, reimbursing travel expenses may create unintended consequences by inducing RC members to travel longer distances in order to increase their compensation. Reimbursing travel may also be unfair to the extent that those who travel less than 50 miles one way would not receive this benefit. Finally, travel might be considered a work-related expense, not compensation for work performed. Thus, travel reimbursement should probably be used highly selectively for critical personnel or market areas.

We also considered variants in which incentive pay was omitted and the terms of retirement varied and found that supplemental pay is a critical element for maintaining RC force size. Under a policy that includes RMC, 53 retirement points, and retirement at 30 YOS but no supplemental pay, enlisted RC force size falls by 10 to 16 percent for officers and 10 to 19 percent for enlisted personnel.

Finally, we assessed a variant in which the terms of retirement are changed, but not RC pay. In this case, baseline RC compensation is unchanged, but RC members can retire at 30 YOS and they earn 53 points annually. We find that RC participation increases, and enlisted RC force size increases by from 2 to 5 percent, depending on service, but total cost rises because of an increase in retirement costs. Thus, changing the terms of retirement without changing RC pay based on the concept of a day of RMC for a day of duty increases total cost.

Concluding Thoughts

Our analysis finds that the total-force compensation approach is cost-effective when supplemental pay takes the form of either a flat-amount incentive or targeted incentive pay. The approach moves RC compensation closer in structure to that in the AC by paying RMC for each day of duty, using the same formula as the AC uses, and it allows RC members the opportunity to begin receiving retirement benefits sooner, at 30 YOS. Thus, we conclude that the approach is not only cost-effective but also fairer vis-à-vis the compensation for AC members, and it improves the transparency and simplicity of the overall military compensation system. The approach is viable in terms of meeting RC force requirements, even in the absence of a change in retirement age, but the supplemental pay feature, especially in the form of incentive pay, is critical to ensuring that the RC meets its desired force size. The addition of incentive pay also offers the opportunity for enhanced force-management flexibility, because the amount could

vary by occupation, unit type, YOS, and over time depending on force growth targets and economic conditions. Further, the cost savings from the total-force compensation approach could be programmed for other uses to manage the force, such as other special and incentive (S&I) pays or RC family support programs. Thus, the approach enhances force management.

The focus of the 11th QRMC on RC compensation continues a long tradition of policy debate and analysis of the structure of military compensation in general. It remains of utmost importance that the structure of compensation enables the AC and RC to meet their manpower requirements. The present analysis finds that the proposals under consideration by the current QRMC would do so, and the simulations indicate that certain variants would do so more cost-effectively than the baseline system. The 10th QRMC, the Defense Advisory Committee on Military Compensation, and earlier groups also considered proposals that affected the AC retirement benefit, and similar proposals seem likely to be put forth again. Our analysis assumed that AC compensation did not change, but such changes could affect our results. Because our model incorporates AC retention along with (prior-service) RC participation, it can analyze the effects of such changes on both the AC and the RC in conjunction with the 11th QRMC proposals.

Finally, because our analysis focuses on the steady state, it does not address the myriad of questions that may arise in implementing changes. Ensuring successful implementation will require input from many stakeholders and may require further analysis.