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# TECHNICAL REPORT

## Naval Aviation Budgeting Cost Adjustment Sheets and the Flying Hour Program

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Prepared for the United States Navy

Approved for public release; distribution unlimited



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## Summary

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In this report, we examine Cost Adjustment Sheets (CASs) that modify the Navy’s Flying Hour Program (FHP) budget to assess whether process reforms may be appropriate.

CASs modify the FHP “baseline budget” of a Type Model Series (T/M/S). There are two ways in which a T/M/S baseline budget is formulated: For a newer aircraft lacking representative historical data, the T/M/S managers develop a budget more than a year in advance of the budgetary execution year based on expert insight and judgment including experiences with analogous aircraft. For older aircraft, prior annual costs (or expenditures) per flying hour (CPH) serve as the foundation of the baseline budget. After formulation of each T/M/S baseline budget—but before commencement of the year of budgetary execution—program managers, Integrated Weapons System Team leads, and fleet class desk representatives are responsible for researching relevant aircraft support issues and, if necessary, developing CASs that modify what then becomes the execution budget (XB), the last budget formulated before a fiscal year commences.

CAS usage varies considerably across T/M/Ss. The F/A-18 makes much greater proportional use of CASs than other T/M/Ss, relative to its share of the Navy aviation budget or Navy aviation expenditures. Use of CASs may not suggest anything unusual about a T/M/S cost structure or growth as much as it suggests delays in ascertaining a change to the T/M/S CPH. CASs can be submitted to reflect initiatives that are projected to reduce costs; they are also submitted to reflect modifications to in-service aircraft that are expected to incur operating and support costs, as well as transitions from one source of repair (such as interim contractor support) to another source (such as organic repair).

The report has three major sections. First, we discuss CASs and how the Navy aviation community uses them. Second, we note the sometimes considerable differences between Navy aviation budgets (which are affected by CASs) and Navy aviation expenditures. Third, we examine expenditure-per-flying-hour growth across different Navy aircraft. We find that while the F/A-18 program makes much more use of the CAS process than other Navy aircraft, there has been nothing unusual about its expenditure-per-flying-hour growth.

### **An Analysis of Cost Adjustment Sheets**

A given CAS affects the XB once, with a one-year lag between the XB and the CAS program objective memorandum (POM), e.g., a POM-11 CAS changed the CPH distribution in the XB for fiscal year 2010 (FY10). Yet CASs generally display projected cost change information

across multiple fiscal years, preceding, including, and subsequent to the budget-affected (or XB) fiscal year.

CAS-projected changes for years subsequent to the budget-affected fiscal year may be handled in different ways. One possibility is that the projected changes will be incorporated into the T/M/S baseline budgets. A second possibility is that an updated CAS will be issued in a subsequent year. A third possibility is that the projected out-year change never occurs. If we do not see a subsequent year CAS on the same subject, we cannot tell if the projected change was absorbed into baseline budgets or was abandoned.

There is a lag between formulation of CASs and formulation of the XB. In most cases, CAS values from the budget-affected year enter the XB without substantial alteration. Those CAS-to-XB alterations that do occur tend to be toward moderation, i.e., budget increases tend to become smaller.

The dollar value of F/A-18-related CAS-driven changes in XB has been disproportionate to that program's share of the FHP budget. Indeed, in both FY08 and FY09, the F/A-18 represented more than 100 percent of XB net dollar adjustments, i.e., other Navy T/M/Ss had net budget-reducing adjustments but were offset in aggregate by budget-increasing F/A-18 adjustments. F/A-18 XB adjustment dollar values have been considerably greater than the F/A-18's share of the naval aviation depot-level reparable (AVDLR) and consumables budget, of naval AVDLR and consumables expenditures, and of naval aviation modification (APN-5) appropriations.

While CASs change Navy XBs, the actual amount spent often differs from what is in those budgets, as we discuss next.

## **Differences Between Budgets and Expenditures**

Because of overseas contingency operations, the F/A-18 fleet has repeatedly flown more hours than it has been budgeted to fly. Also, based on receipt of contingency operations supplemental funding, in FY06–10, it had greater AVDLR and consumables expenditures than for which it was budgeted. That pattern changed in FY11, with the F/A-18 spending less than its AVDLR and consumables budget despite overexecuting its FHP.

F/A-18 AVDLR and consumables expenditures per flying hour have consistently come in under budget, with that difference growing in FY11. F/A-18 CASs have increased the six F/A-18 variants' XBs. Therefore, for FY06–10, the gap between AVDLR and consumables budgets and expenditures would have been greater had the CASs not been utilized. In FY11, the F/A-18 AVDLR and consumables budget with CASs exceeded expenditures; without CASs, it would have fallen below expenditures.

Next we examine the extent to which F/A-18 expenditure-per-flying-hour growth has been unusual relative to other aircraft.

## **Expenditure-per-Flying-Hour Growth by T/M/S**

We examined expenditure-per-flying-hour growth across a number of aircraft and found that observed rates of growth of F/A-18 CPH are not unusual compared to other Navy and

Air Force aircraft. So while the F/A-18 program has used CASs more intensively than other T/M/Ss, F/A-18 CPH has not grown unusually.

The MH-53E has had considerable CPH growth, but has only used CASs modestly. So usage of the CAS process is neither a necessary nor a sufficient condition for high growth in CPH.

## **Conclusions**

We are left with two possibilities as to why the F/A-18 program has made so much greater proportional use of the CAS process than almost any other naval aviation T/M/S. One possibility is that there is something intrinsic to the F/A-18—perhaps its acquisition strategy, mission, or point in the lifecycle—which makes it prone to CAS usage. Another possibility is that the F/A-18 program office has evolved to a norm of using CASs for budgetary changes that other T/M/S managers either build into baseline budgets or ignore altogether.

Ultimately, CAS usage (or lack thereof) is not of pre-eminent importance in identifying problematic T/M/Ss. Using the metric of CPH growth, the F/A-18 does not stand out either favorably or unfavorably.