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To meet the Commandant's fiscal guidance and the Deputy Commandant for Aviation's goal of retaining the highest quality and qualified personnel, the US Marine Corps (USMC) must reevaluate current aviation manpower initiatives to balance return-on-investment with the retention of highly qualified aviators. Returning to eight-year contracts, implementing statutory four-year tours for all first tour aviators, and reevaluating incentive programs is integral to targeted retention and achieving the best return-on-investment.
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Retaining the Best Marine Aviators Using Fiscally Sound Policies: An Analysis of USMC

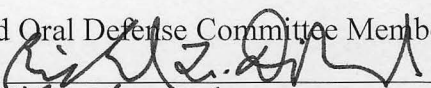
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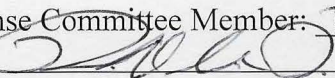
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Executive Summary

Title: Retaining the Best Marine Aviators Using Fiscally Sound Policies: An Analysis of USMC Aviator Manpower, Contracting, and Utilization

Author: Major Jay M. Palmer, United States Marine Corps

Thesis: To meet the Commandant's fiscal guidance and the Deputy Commandant for Aviation's goal of retaining the highest quality and qualified personnel, the US Marine Corps (USMC) must reevaluate current aviation manpower initiatives to balance return-on-investment with the retention of highly qualified aviators. Returning to eight-year contracts, implementing statutory four-year tours for all first tour aviators, and reevaluating incentive programs is integral to targeted retention and achieving the best return-on-investment.

Discussion: Today, reduced DoD budgets influenced by sequestration laws initiated in 2011, forced US service chiefs and leaders to review fiscal policies, budgets, habits, and maximize allotted monies. As the Marine Corps continues to "do more with less," it must look toward achieving fiscal efficiency in every aspect while retaining the best and brightest personnel.

Prior to 2011, the Marine Corps' authorized force end-strength was 202,000 active component Marines, and Manpower and Reserve Affairs (M&RA) used an eight-year contract to achieve this end goal. The contract carried aviators through 10-12 years of active service and through their first opportunity for promotion to O4/major. In 2011-12 the authorized end-strength dropped to 182,000 and M&RA reduced the contract length to six years for all platforms. This reduced the size of the aviator pool, made it easier for Marine Corps Recruiting Command (MCRC) to meet aviation goals, and it locked aviators into service just short of promotion to O4/major. In theory, by shortening the contract, the Marine Corps leveraged existing processes, like career designation and promotion, as filters to retain the highest quality aviators. M&RA experienced a drop in overall numbers, but the current process lacks a metric to prove that the filter retains the highest quality and qualified aviators. Subsequently, the decrease in contract length significantly reduced the Marine Corps' return-on-investment for initial aviator training.

The US Marine Corps' average return-on-investment per year/per student is lower than the US Navy or the US Air Force. The Navy receives on average, 5-6 years of operational service (vice the 3-4 years for USMC) and nearly 25-percent more in return-on-investment per year for each aviator. Similarly, the Air Force receives on average, eight-years of operational flight service and nearly 56-percent more in return-on-investment per year out of each pilot.

Conclusion: To meet the Commandant's fiscal guidance and the Deputy Commandant for Aviation's goal of retaining the highest quality and qualified personnel, the US Marine Corps (USMC) must reevaluate current aviation manpower initiatives to balance return-on-investment with the retention of highly qualified aviators. Returning to eight-year contracts, implementing statutory four-year tours for all first tour aviators, and reevaluating incentive programs is integral to targeted retention and achieving the best return-on-investment. By analyzing the results of the *2015 Aviator Retention Survey*, the USMC may better understand the best ways to retain the highest quality aviators while achieving fiscal and manpower management parity. As this develops, the Marine Corps should be able to research the options and best determine the incentives that are the most viable toward retaining the best and brightest, while remaining fiscally prudent and keeping the faith with our Marines.

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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

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Preface

I received the idea of this topic from Headquarters Marine Corps, Aviation Manpower and Support (ASM). I chose to write on the topic because of the fiscal and manpower ramifications of manpower management as well as the importance of getting this right in today's fiscally accountable environment. The following people, departments, and agencies greatly contributed toward my research efforts and I greatly appreciate their support:

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Introduction

After the United States Congress passed what was known as the sequestration law in 2011, the Department of Defense (DoD) has dealt with some hard but necessary choices regarding the defense budget and the programmed force.¹ Shortly after the bill was passed, the Secretary of Defense, Robert Gates, and Chairman of the Joint Chiefs of Staff, Admiral Michael Mullen, announced that each service would be asked to reduce the size of its force amidst impending budget reductions. For the Marine Corps, this resulted in steps reducing the size of the total force from 202,000 (2011) to 182,000 personnel by Fiscal Year (FY) 2017.²

Understanding that cuts needed to be made, Marine Commandants General James Amos, General Joseph Dunford, and General Robert Neller echoed sentiments regarding the need for force downsizing in light of stricter budgetary constraints. Each one independently outlined his own method for maintaining a force adequately sized for meeting Title 10 and Geographic Combatant Commander's (GCC) requirements while remaining fiscally responsible. General Amos highlighted in his *2014 Report to Congress on the Posture of the United States Marine Corps* that,

Marines are key components to the range of military missions our national security demands. We are proud of our reputation for frugality and remain one of the best values for the defense dollar. In these times of budget austerity, the nation continues to hold high expectations of its Marine Corps, and our stewardship of taxpayer dollars. The Marine Corps will continue to meet the needs of the Combatant Commanders as a strategically mobile force optimized for forward-presence, and crisis response.³

General Dunford reiterated this point in February of 2015 in his statement to the House Appropriations Committee Subcommittee on Defense (HAC-D), and outlined how the Marine Corps will achieve a symbiotic balance between readiness and fiscal intelligence in "5 pillars of readiness – high quality people, unit readiness, capacity to meet the combatant commanders' requirements, infrastructure sustainment, and equipment modernization."⁴ *Expeditionary Force*

21, the United States Marine Corps capstone operating concept, also lists “high quality people” as the foundation of the Corps’ ten-year vision; investment in the Marine will act as the enabler to achieving the Marine Corps’ future capabilities.⁵

It appears that the Marine Corps writ large understands that the era of unconstrained budgets has gone away and that future budgets will be whittled down to afford exactly what is needed, instead of what is wanted, to fight its wars of today and tomorrow. Therefore, the Marine Corps must recruit, train, and retain the highest quality people at all levels and Military Occupational Specialties (MOS) to ensure its units’ performance, efficiency, effectiveness, and readiness are maintained at the highest levels. This must coincide with being good stewards of the American taxpayer funds while continuing to stand guard as America’s force-in-readiness. It is also important that all Marine leaders take a hard look at their organizations, ask hard questions, and determine what can be leveraged to best accomplish this. This paper will focus on the direct examination of the Marine Corps Air Combat Element, specifically looking at contracting and tour lengths for Marine aviators.

The Deputy Commandant for Aviation (DCA), Lieutenant General Jon M. Davis, outlined in the *Marine Aviation Plan 2016*, the importance of “identifying our best and most-qualified Marines and investing in them to safeguard our future capabilities and readiness.”⁶ Marine Corps Manpower and Reserve Affairs’ (M&RA) current aviation manpower policies attempt to achieve this by targeting the retention of the highest quality aviators instead of simply focusing on the quantity of aviators in its pool. This cannot be achieved by leveraging a shorter aviation contract or by utilizing the normal promotion process to filter the best and highest qualified aviators. The research clearly shows that the current manpower system aptly filters Marine aviators to a large extent, but what it fails to demonstrate is that it is actually retaining the

“best and the most-qualified” Marine aviators.⁷ The shorter contract length is not adequately supporting aviation manpower goals, and it significantly diminishes the return-on-investment for pilot training, leading to substandard fiscal management. Therefore, to meet the Commandant’s fiscal guidance and the Deputy Commandant for Aviation’s goal of retaining the highest quality and qualified personnel, the US Marine Corps (USMC) must reevaluate current manpower initiatives to balance return-on-investment with the retention of highly qualified aviators. Returning to eight-year contracts, implementing statutory four-year tours for all first tour aviators, and reevaluating incentive programs is integral to targeted retention and achieving the best return-on-investment.⁸

Maximizing Fiscal Efficiency

In 2015, the goal of maximizing fiscal efficiency in the US Military was an incentive for service chiefs and leaders. As the DoD service budgets shrank, the amount of discretionary funds available for leaders to spend also decreased. This goal forced leaders to review fiscal policy, budgets, and habits to determine where money can be saved, to cut existing funds, or identify areas that require additional monies. At the DoD level, large cuts were made to force-structure (personnel, equipment, and assets) in an effort to reduce the non-discretionary spending, thereby freeing money to meet current budget constraints as well as redirecting funds to invest in force modernization, critical resources, and military readiness.⁹ These re-adjustments were made at the highest echelons of military leadership and extended down to the individual unit level.

Fiscal conservation is not new to the Marine Corps. Since its inception, the Marine Corps has been forced to “do more with less” and operate with budgets far smaller than those of the other services. Because it operates under the Department of the Navy (DoN), it is required to share a portion of the DoN budget with the US Navy. General Dunford stated in February 2015

that, “The Marine Corps is a force of economy. For 6.0% of the defense budget, the Marine Corps provides 21% of the Nation’s infantry battalions and 15% of the fighter/attack aircraft.”¹⁰ This is a part of the Marine Corps ethos, you get the “best bang for the buck.” Nominally, there are various ways to get the best return-on-investment in aviation personnel, but this paper specifically addresses various methods to achieving a fiscal balance between aviation contracting and aviator utilization.

Aviation Contracts

History

The use of military contracts or service obligations for a volunteer army are not new concepts, and are a foundational part of the armed forces aviation history. During the Revolutionary War, militaries required volunteers to sign service contracts to ensure that fighting forces were managed at levels needed to sustain war, predict war expenditures, and to advocate for contract term limits allowing citizen-soldiers the ability to return to their previous occupations after the war.¹¹ These contracts gave the defense service a security blanket, and the ability to predict manpower shortages and surpluses for future operations.

These service requirements are still in use and are defined in US law or code. Specifically, Title 10 of the US Code outlines the governance and use of the Armed Forces of the United States and delineates the minimum service obligation for military service: “Each person who becomes a member of an armed force...shall serve in the armed forces for a total initial period of not less than six years nor more than eight years, as provided in regulations prescribed by the Secretary of Defense for the armed forces under his jurisdiction.”¹² Additional service obligations have been written into law and established for specialty aviation MOSs in an effort to recoup the large investments required to train personnel as aviators, navigators, and flight

officers. Signed into law on November 29, 1989, Title 10 of US Code § 653 delineates the payback term limits for aviators to eight years for “fixed-wing jet aircraft,” six years for all other aircraft, six years for navigators, and six years for naval flight officers.¹³ These obligations begin upon successful completion of a Military Occupational Specialty (MOS) producing school and are intended to be served while in an active duty status.¹⁴

Shortly after the passing of the sequestration act in Congress, the Marine Corps began looking for ways to meet the overall manpower end strength numbers outlined by the DoD, but retain options allowing it to do so without harming its warfighting capabilities. One avenue identified the retention of the most highly qualified personnel in aviation, and looked at how pilot contracts aligned with the Marine Corps officer promotion process. In 2011, USMC Manpower and Reserve Affairs (M&RA) and the Marine Corps Recruiting Command (MCRC) agreed to shorten the active duty service obligation of fixed wing jet aviators from eight years after completing training to a period of six years.¹⁵ The Marine Corps changed the contract length of these aviators for three reasons. First, the Marine Corps’ restructuring and downsizing required a contractual period that gave M&RA the most flexibility for force shaping. Secondly, aviation officer planning has demonstrated that the Marine Corps has historically met accession goals, retention goals, and has not needed a longer contract length to retain the requisite pool of aviators.¹⁶ Finally, the Marine Corps preferred to retain the highest quality aviators possible and views the longer contract length as an unnecessary requirement for aviators.¹⁷

Current Contract

In 2015, the Student Naval Aviator contract stated,

“I consent to serve as a commissioned officer on extended active duty for the following minimum periods and understand that a request for release from active duty prior to completion of the minimum period will normally be rejected: seventy-two (72) months

from the date of my successful completion of flight training and designation as a Naval Aviator.”¹⁸

This contract is signed by prospective Student Naval Aviators (SNA) during their final year of college or upon the completion of The Basic School (TBS), when receipt of an aviation contract occurs. The contractual period does not begin for service payback until the officer successfully earns his/her “Wings of Gold”, signifying the successful completion of flight school. The time to complete flight school depends on many factors (weather, student pool size, time of year, and budgets) but is largely dependent on the Type/Model/Series (T/M/S) or pipeline the individual pilot selects upon completion of primary flight training.

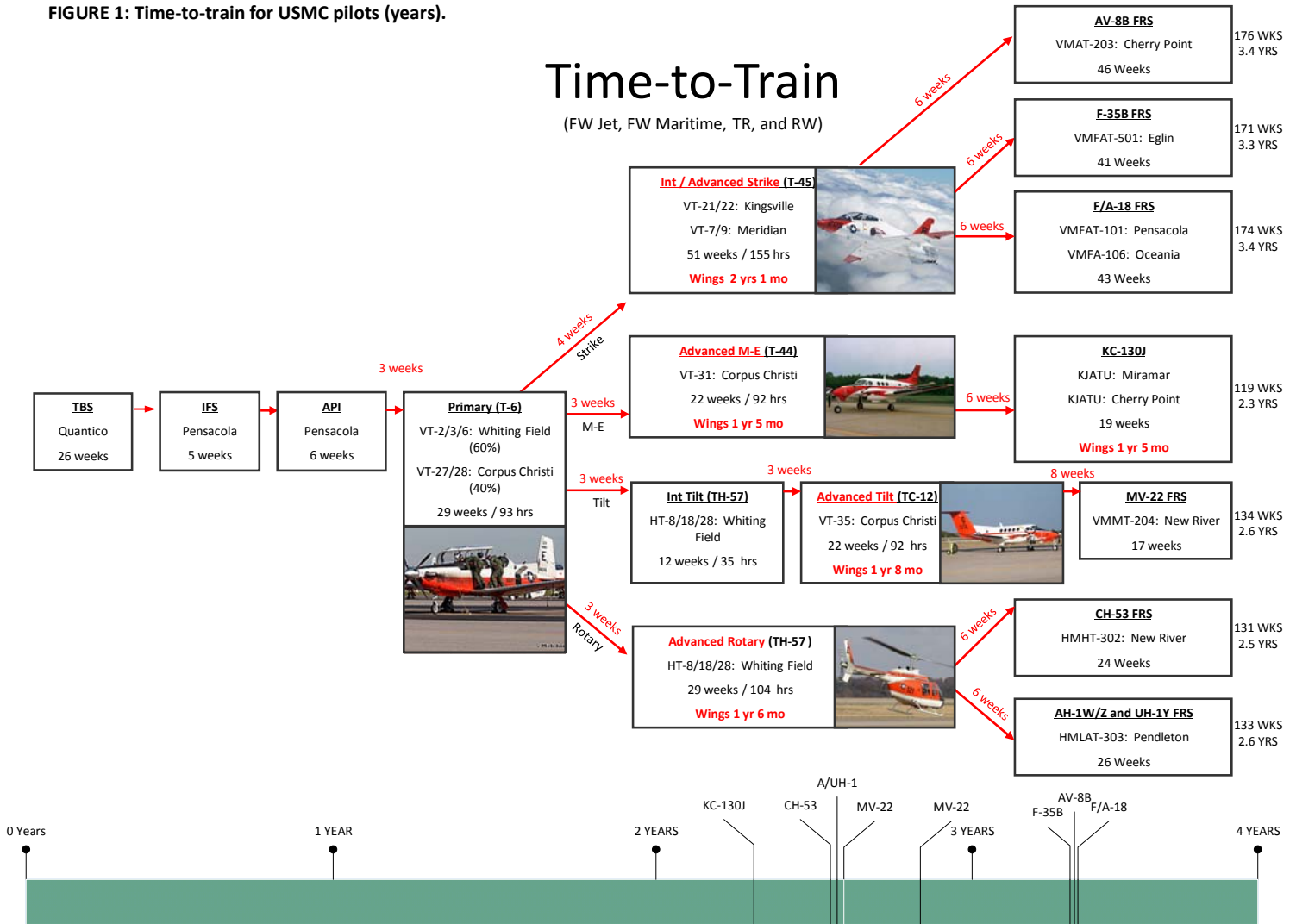
Once a Marine graduates TBS, he/she receives orders to Pensacola, Florida to begin flight training. The first step Marines complete is Introductory Flight Screening (IFS). See Figure 1 to view the different time-to-train requirements for USMC pilots. As illustrated, over a period of no more than fifty days, each student receives fifteen hours of flight time in a single-engine aircraft at a Federal Aviation Administration (FAA) approved facility; they demonstrate the ability to successfully solo an aircraft and are required to pass the FAA Private Pilot’s knowledge test with a minimum grade of eighty-percent.¹⁹

Once complete with IFS, the student begins Aviation Preflight Indoctrination (API) where each student receives approximately six weeks of training in aviation ground training (aerodynamics, weather, engines, navigation, and federal regulations), water survival, land survival, high altitude physiology, and parachuting techniques.²⁰ Once complete with API, each student is assigned to begin military flight training at Naval Air Station (NAS) Whiting Field near Milton, Florida or NAS Corpus Christi, Texas.

FIGURE 1: Time-to-train for USMC pilots (years).

Time-to-Train

(FW Jet, FW Maritime, TR, and RW)



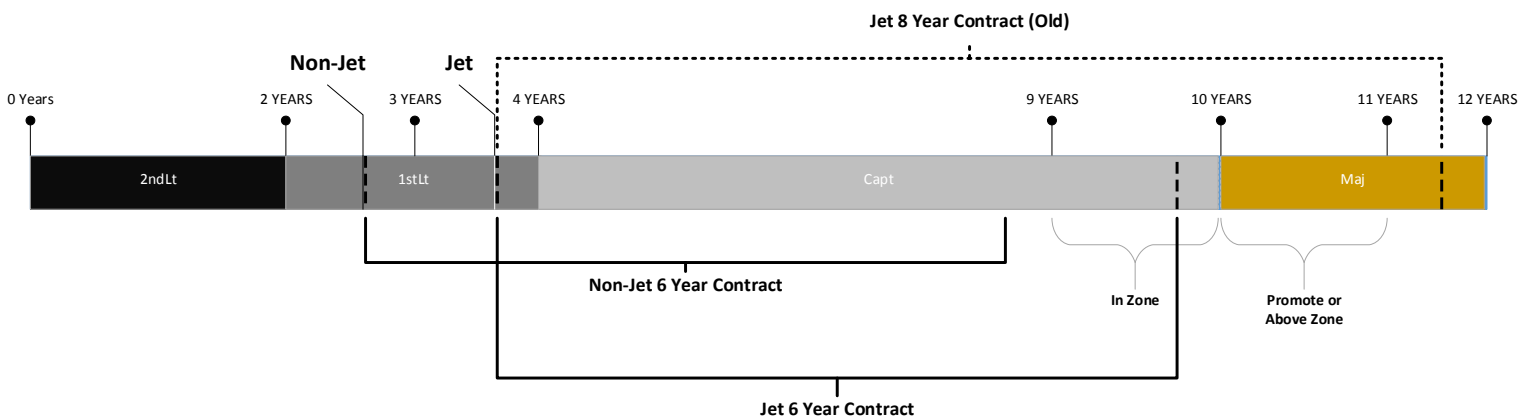
*Flowchart adapted from product received from USMC TECOM Aviation Production Management 2015.

Primary students receive a few weeks of ground training and approximately 93 hours of flight training in the T-6B, this includes day and night visual flights as well as day and night instrument training.²¹ Upon completion of Primary, the students select Intermediate/Advanced pipelines for their next phase of flight training, and depending on the student’s grades, he/she can select from jet training (feeder for F/A-18, F-35, AV-8B, or EA-6B), tilt-rotor training (MV-22), rotary-wing helicopter training (AH-1, UH-1 or CH-53), or maritime training (KC-130).²² See Figure 1, it illustrates the branching of training based on platform selected as well as time to train for each respective platform.

After the students select their respective aircraft type, SNAs move onto Intermediate flight training and subsequent Advanced phases of training. During these phases, the students receive additional visual, instrument, and tactical training in various aircraft, and flight training may require anywhere from six months to one year to complete. Upon successful completion of Advanced, each student aviator receives his/her wings, follow-on orders to the Fleet Replacement Squadron for their T/M/S, and their aviation contract commitments.

In total, a pilot can spend as little as 2.5 years (from commissioning to FRS complete) in flight training for rotary-wing or tilt-rotor aircraft or as much as 3.5 years for fixed-wing jet aircraft (Figure 1).²³ Under the current contract and in-line with training pipelines, all Marine aviators serve somewhere between eight to ten years on active duty before the aviation contract payback is complete, and they become eligible for promotion or separation from service. Figure 2 compares the normal officer promotion rate with the six and eight year contracts. Based on the time-to-train for FW jet aviators, an eight-year contract potentially extends a Marine to nearly twelve years of active duty service and through promotion/selection to O4/major.

FIGURE 2: Approximate USMC Officer Promotion rates compared with Aviation Training and contract length (years).



Contract Change

In 2011-2012, MCRC under the direction of M&RA, changed the aviator service contract (post-winging) of all Marine aviators (regardless of platform/pipeline) from eight years to a term of six years.²⁴ This change helped align the contract period of all T/M/S aviators to a term just short of the period when they will be in zone for selection/promotion to Major. The shorter six-year contract leverages the normal USMC promotion selection process to filter the Marines who fail to meet the criteria for promotion to Major. According to a senior official at USMC Training and Education Command (TECOM), “The Marine Corps manpower process is built around an up or out policy. In order to stick around you have to get promoted, the Marine Corps promotes its officers based on their performance, regardless of their military occupational specialty.”²⁵ If a FW jet pilot begins an eight-year aviation contract following four years of flight training, he/she could be obligated to approximately twelve-years of service. If this Marine fails to meet the performance requirements to be selected for O4/Major, then he/she will normally be separated for failure to select.²⁶ In this instance, the eight-year aviation contract may not be fully repaid nullifying the purpose of having an eight-year contract.

Is the purpose of the contract to ensure that aviators serve a requisite amount of time prior to separation to ensure that the amount of time, resources, and monies spent of aviation training were fully recouped? Or is the purpose of the contract, as the DCA put it, to retain the highest quality and skilled aviators?²⁷ According to multiple sources at USMC Manpower and Support and M&RA, the Marine Corps’ prioritizes ‘quality’ over ‘quantity’ and prefers to allow the promotion process to act as the second screening tool, behind career designation, to filter the officers who fail to meet retention requirements.²⁸ This rationale makes sense theoretically, but it only works if manpower goals are met consistently, highly qualified aviators are retained, the

payback period is of sufficient length to offset USMC’s investment for training, and HQMC MPP maximizes the operational flight time payback during the contract period. To discuss the correct term for the payback period, it is important to understand the training process by looking at how much money it costs to train (cost-to-train) each aviator as well as how long it takes to train an aviator for each T/M/S.

Return on Investment

When the Marine Corps began downsizing from 202K to 182K, it chose to leverage the aviation contract as a way to reduce the number of aviators to meet the new reduced manpower goals.²⁹ In 2011, the Marine Corps changed its aviation contract terms to six years for all aviators, with no delineation between platforms, time-to-train, or cost-to-train. By reducing the contract period without any other process in place to ensure retention of high quality and qualified aviators, the Marine Corps simply gave high quality and highly trained pilots (especially FW jet pilots) the ability to exit service early. This change resulted in a twenty-five percent reduction in payback time and a twenty-five percent loss in return-on-investment per year.

Table 1. FY 2015 Time-to-Train and Cost-to-Train for USMC Aviator Pipelines			
Pipeline	Avg Time-to-Train (Years)	Avg Cost-to-Train (US Dollars)	Cost/Year of Payback (6 Years)
Maritime (KC-130J)	1.4	\$346,492	\$57,749
Rotary-wing (A/UH-1, CH-53)	1.5	\$289,945	\$48,324
Tilt Rotor (MV-22)	1.7	\$349,370	\$58,228
Strike (F/A-18, AV-8B, F-35B)	2.1	\$1,496,127	\$249,355

*Table adapted from data received from USMC Training Command, Aviation Production Management and CNATRA Financial Management Office, 2015.

Table 1 outlines the average time-to-train for FY 2015 and covers the period of training from IFS all the way through to an aviator receiving wings, inclusive also of the total cost-to-train for the same period (All cost and times are based on the average cost and time to complete

undergraduate flight training).³⁰ For example, Strike pilots average 2.1 years to train at a cost of almost \$1.5 million. Based on the current six-year contract, this equates to nearly \$250,000 per year for payback. The longer the contract length, the more return-on-investment received. Compare this to a KC-130J pilot. Average time-to-train is 1.4 years, with a six-year contract the payback equates to almost \$58,000 per year. The Marine Corps would have to reduce the Maritime contract to less than one year to equal the extremely high cost-to-train of a Strike pilot on a six-year contract. When analyzing the data of the cost-to-train of all T/M/S compared to low payback requirement of the six-year contract for all aviators, the question arises, is Marine Corps getting its money's worth?

Even though the historical context of Title 10, code 653 (minimum service requirement) is beyond the scope of this research paper, as illustrated in Table 1, the assumption can be made that when the code was researched and published, one fiscally-based concern was creating a contract length sufficient in active duty payback to offset the cost-to-train of aviators. It is important that manpower managers and aviation planners understand the metric by which measuring return-on-investment for aviators is relevant. Is there a metric currently in place? What does/would that metric look like? What data would it look at? Although, this paper does not address the current process, whether or not one exists, it is worth understanding how much money the government is getting in return from highly trained aviators. As illustrated in Table 1, rotary-wing pilots are the cheapest to train (\$289,945) and strike (fighter/attack) cost nearly 1.5 million dollars to train one student to receive his/her wings. Keep in mind that the cost-to-train is calculated from IFS to the point of receiving wings.

Once an aviator gets winged, he/she will then receive further extensive training at the FRS to become qualified in the fleet aircraft, and the aviator's training will continue with the

operational squadron as the aviator progresses through the Training and Readiness (T&R) syllabus. Although it costs \$1.5 million to train a basically qualified T-45 pilot, the cost-to-train an F/A-18 pilot to a level of operational readiness is significantly more. The “Cost/Year of Payback” column in Table 1 illustrates the total cost divided by the contracted six-years of service. The average payback (maritime, tilt-rotor, and rotary-wing) equates to \$54,767 per year of service, but for strike it is 4.5 times greater than for the other three. The fact that the payback period is the same for fixed wing jets and all others seems counterintuitive, but this leads the author to ask, what is the minimum number of years that an aviator must serve in order to repay the government back for the training? To answer this question and search for a potential viable way forward for Marine Corps aviation contracting, this paper will examine how the US Navy and the US Air Force manage aviation contracting.

US Navy Comparison

Pipeline	Avg Time-to-Train (Years)	Avg Cost-to-Train (US Dollars)	Cost/Year of Payback (8 Years)
Maritime (P-3/P-8, EP-3, E-6)	1.4	\$346,492	\$43,312
Rotary-wing (SH/HH/MH-60, MH-53)	1.5	\$289,945	\$36,243
Carrier Prop (E2/C2A)	1.9	\$1,130,092	\$141,262
Strike (F/A-18A-F, EA-18G)	2.1	\$1,496,127	\$187,016

*Table adapted from data received from USMC Training Command, Aviation Production Management, Training Air Wing 1 Operations Department, and CNATRA Financial Management Office, 2015.

All Student Naval Aviators commissioned in the US Navy, regardless of commissioning source, incur an “8-year active duty obligation upon date of designation as a Naval aviator,” or they must agree to serve six years if they voluntarily/involuntarily dis-enroll from flight training.³¹ This requirement differs for Marines receiving commissions from the United States

Naval Academy (USNA). The USNA Marine graduates are required to payback only 72 months on active duty from the date of designation (the standard Marine Corps Student Naval Aviator agreement) as outlined in the Navy Marine Corps (NAVMC) form 11885 (Revision 11-12).³² Overall, the Navy strictly adheres to the law outlined in US Code Title 10, code 653 for all aviation contracts. As illustrated in Table 2, all Navy pilots incur an eight-year contract, and this gives the Navy a comparative advantage over the Marine Corps when you compare the cost-to-train of all platforms.

Overall, the Navy uses the same training organizations for undergraduate flight training as the Marine Corps, resulting in similar time-to-train and cost-to-train. As illustrated in Table 2, the Navy's time-to-train and cost-to-train nearly mirrors the USMC's costs for strike, rotary-wing, and maritime; however, when you compare the cost per year of contractual payback (cost-to-train divided by years of contract length), the difference is significant for every single platform. This is because the Navy requires an eight-year contract, as opposed to the six-year contract of the Marine Corps. With the exception of E2/C2 data, the average payback for one Navy FW jet pilot is \$187,016 per year of active duty when calculated with an eight-year contract.¹ This represents a twenty-five percent (\$62,339) savings per-year, per-pilot compared to the Marine Corps' six-year payback for fixed-wing jet pilots. For FY 2015, the Marine Corps' had approximately 396 Marine (03/Captain) fixed-wing jet aviators; assuming each of these aviators was still under contract, the total payback lost for FY 2015 equates to \$24,686,244 when compared to the Navy's contractual payback length.³³ The eight-year contract pays significant

¹ The only Navy pipeline that differs from Marine aviation is the training for the E2/C2 pilots. Although the E2/C2 data does not directly compare to USMC comparison, it is interesting to see how much money is invested in carrier-based aviators. Once complete with primary, SNAs that select E2/C2 receive orders to Training Wing Four in Corpus Christi, Texas. In Texas, SNAs receive approximately fifteen-weeks of training in the T-44 syllabus, then they transition to Training Air Wing 1, where they receive approximately thirty-three weeks of training flying the T-45C Goshawk.³⁰

dividends for the Navy's return-on-investment for aviator training, so now an examination of USAF data will illustrate how shorter training pipelines and ten-year contracts affect the USAF bottom line.

US Air Force Comparison

US Air Force undergraduate flight training is slightly different than USMC/USN training. Officers selected for flight training complete three phases (Phase I-III) prior to receiving their wings. Phase I lasts approximately nine weeks and consists of ground school training similar to USMC/USN Aviation Preflight Indoctrination.³⁴ During Phase II, student pilots train for approximately twenty-two weeks (90 training days), receive roughly 90 hours of flight instruction in the T-6A, and focus on basic contact flights, formation, instrument, and navigation training.³⁵ Upon completion of Phase II, students select their flight tracks for follow-on training; track selection is based on performance and their selected track determines which pool or aircraft they will eventually operate in the US Air Force. The tracks have similarities to the USN/USMC pipelines, but they are divided in Fighter/Bomber, Tanker/Airlift, Helicopter, and Multi-engine Turboprop as depicted in Table 3.³⁶ Once winged, all pilots attend Advanced Flight Training (AFT) at one of the many Formal Training Units (FTU) located around the continental United States for initial training in their specific assigned platforms; once complete with this training each pilot will receive orders to his/her operational squadron.³⁷ After examining the USAF pilot contracting, this paper will only investigate the Fighter/Bomber track since it is the only track that adequately compares to USMC FW jet training.

The USAF adheres to the Title 10 U.S.C 653 (a) with regards to aviation contracts but takes it one step further: all pilots that successfully complete "Undergraduate Pilot Training (UPT)" are required to complete an Active Duty Service Commitment (ADSC) of ten years,

Table 3. FY 2014 (FY 2015 adjusted for inflation) Time-to-Train and Cost-to-Train for USAF Pilot Pipelines			
Pipeline/Track	Avg Time-to-Train (Years)	Avg Cost-to-Train (US Dollars)	Cost/Year of Payback (10 Years)
Fighter/Bomber	1.1 (53 Weeks)	\$1,098,325 (\$1,103,359)	\$109,833 (\$110,335)
Tanker/Airlift	1.1 (53 Weeks)	\$749,354 (\$752,788)	\$74,935 (\$75,278)

*Table adapted from data received from CNATRA Financial Management Office and the USAF 19th Air Force, Operations, LtCol Brian LaMirande A3, January 9, 2015. FY 2014 data adjusted for inflation to FY 2015.

regardless of track.³⁸ This contract runs concurrently with any other service commitments, but it does not start until after each Airman receives his/her wings. Considering the average time from commissioning to winging for all tracks is approximately one year, ten months (1.8 years), the average Airman will graduate flight training and receive his/her wings as a Second Lieutenant.³⁹ With an average time-in-service (TIS) of 1.8 years to winging, the ten-year contract will take most USAF pilots to the eleven to twelve-year mark in his/her career. This timeline matches up closely with the current USN contract or the older eight-year contract for USMC fixed-wing jet aviators. Refer to Table 3 for time-to-train and cost-to train for US Air Force pilots.

As illustrated in Table 3, the average time-to-train for all USAF pilots is only one year (53 weeks); this is almost one-half the time required for USMC/USN fixed-wing jet aviator training. Additionally, the average cost-to-train for Fighter/Bomber pilots is nearly \$400,000 less than what is required to train to a USN/USMC fixed-wing jet aviator. With current contracts, the Air Force is guaranteed ten years of payback service out of every pilot trained, unless it decides to reduce its force size and retain a smaller population. This this allows the USAF to pick-and-choose the highest quality and qualified pilots that it wants to retain in service. Lastly, the amount of active-duty payback received and money (cost/year of payback) saved per year by the USAF compared to the Marine Corps is remarkable. Based on Tables 1 (USMC) and 3 (USAF ten-year contract), the USAF saves nearly \$139,000 per-pilot per-year (56%), considerably more than the Marine Corps.

How does the USAF train its pilots in nearly half the time, compared to the Navy and Marine Corps? The Navy and Marine Corps average 2.1 years to train a Strike pilot, and the USAF averages 1.1 years for a Fighter/Bomber pilot. The biggest distinction is that all USN and USMC FW jet aviators must earn their carrier qualification before earning their wings. This time alone, can account for a large portion of the difference in time-to-train.

Ultimately, the average Air Force Fighter/Bomber pilot costs \$1 million to train to wings, one-year to train to wings, and upon completion of flight training the service will receive a minimum of ten years of payback service from each pilot. Keep in mind that each pilot generally accrues more ADSC with each level of training, certification, and instruction received; therefore, the average pilot may end up owing slightly more than ten years of service. For example, officers receive additional ADSCs for Advanced Flight Training (except first-term Airmen) for initial and refresher training, USAF Weapons Instructor Course (WIC), and all flight instructor qualification courses.⁴⁰

Although all of these ADSCs are served concurrently with other commitments, the Air Force is able to leverage the instructor courses (two years) and WIC (three years) as a means to retain high quality officers. Take for example a Fighter/Bomber pilot, an Airman will have accrued nearly two years of service once they are winged. The Airman will sign the ten-year ADSC and this contract will retain him/her in service until twelve years of service. Provided the officer meets the promotion requirements and the service wishes to retain this Airman, then he/she will have held the rank of O4/Major for nearly two years. Depending on the officer's performance and the Air Force's desire to train this airman further, he/she could receive instructor training or be sent to WIC to become a weapons instructor. If this additional training were to occur just prior to the end of the ten-year contract, the Air Force could retain this high

quality officer for nearly fifteen years of service without having to employ other means of retention (bonuses). The biggest difference between the USAF contracting methods and that of the USMC is that the Air Force is able to lock pilots into twelve years of active service, potentially past the typical decision point to get out or make service a career. This gives the Air Force substantially greater payback with the ten-year contract, and it gives the Air Force a larger pool of careerist to choose when looking to retain the highest quality and qualified personnel. Time-to-train, cost-to-train, and aviation service contracts significantly affect return-on-investment for aviator training, but how each service utilizes its pilots during that contractual period can further determine the cost-effectiveness of each service's manpower policy.

Pilot Utilization

Each service uses its pilots very differently across-the-board. Oftentimes, the difference relates to the size of the officer pool available to each service, the service's personnel management policies, or the desire to use highly skilled personnel for short periods of time in areas where their skills help augment other force requirements.

USMC

One of the key factors with pilot utilization is to ensure that the payback period maximizes the aviator's operational time in flying status. The ideal way to accomplish this is to keep the aviator in-the-cockpit (Duty Involving Flight Operations-DIFOPS) as long as possible, and to limit the time out-of-cockpit (Duty Involving Flight Denied-DIFDEN).⁴¹ This makes sense from a fiscal perspective: the more operational payback the Marine Corps receives from an aviator in-cockpit, the more "bang for the buck" the Marine Corps receives from its aviators. The difficulty arises because M&RA must leverage aviator Marines to fill non-flying billets of operational necessity such as Forward Air Controllers (FAC), augmenting Marine Wing Support

Squadrons (MWSS), acting as instructors at flight school, or filling staff billets on a Marine Air-Ground Task Force (MAGTF) staff. Additionally, the Marine Corps prides itself in having well-rounded officers, trained as provisional rifle platoon commanders prior to beginning training in their primary MOSs. Once a Marine has completed his/her first tour in his/her MOS, the Marine moves to a billet outside his/her MOS to build experience as a MAGTF officer. This experience, moving back and forth between jobs, is leveraged in future billets/commands for synergy and cohesiveness in the elements of the MAGTF. Therefore, the balance of time between DIFOP and DIFDEN becomes a sort-of pattern or battle-rhythm. How does this battle-rhythm of moving back and forth between jobs affect the Marine Corps' payback for highly trained aviators?

Prior to MCRC changing all aviator contracts from eight years to six, the Marine Corps could get five or six years of DIFOP time out of each aviator. This assumes that each DIFDEN period was twenty-four months or less between each period of DIFOP.² If the Marine Corps maximizes DIFOP time and reduces DIFDEN time, it is possible to get five to seven years of operational flight time out of each aviator. For example, a Strike pilot who serves five years of

² For example, a tactical aircraft (TACAIR) pilot receives his/her wings and begins the payback period of eight years. Depending on aircraft readiness, training squadron, and hold times for the FRS, the aviator would complete the FRS within 1-1.5 years from winging. This means the aviator has 6.5-7 years of payback remaining prior to his/her first tour. He/she would then be required to serve "a minimum of 2 years (optimally 3 years) after completing Core Skill Introduction Phase training," prior to any assignment outside the operational squadron."² Assuming the Marine serves the standard three-year tour, this leaves the Marine with 3.5-4 years of payback remaining. Traditionally, the aviator receives orders at this point to serve a 2-3 year DIFDEN tour; assuming he/she serves a non-standard two years, this leaves the Marine with 1.5-2 years of payback remaining on contract. Now apply this math to the current six-year contract. Now the Marine Corps receives only 3-4 years' maximum payback. This nearly reduces the return-on-investment by half.

At this point, the Marine could accept orders to an operational squadron and incur a two-year obligation. However, if the DIFDEN tour is extended to three years, then the aviator will have only six months to one year remaining on contract prior to PCS. At this point there are a number of alternatives the aviator could execute to prevent a subsequent PCS and a two-year extension. With this example of the 3-2-2, the Marine Corps received two operational tours for a total of five years of flying service. On the other hand, if the 3-3-0 option is executed then the Marine Corps only received one, three-year tour of service from the highly trained aviator under an eight-year contract. Put in fiscal terms (refer to Table 1); with the Marine serving five out of the original eight years, the payback per year is approximately \$300,000 per year; if the Marine only serves three out of the original eight contracted years, the payback per year is nearly \$500,000 per year. Thus it is fiscally smarter to maximize the operational time flying for the given contractual period.

total DIFOP in an eight-year contract will payback the Marine Corps nearly \$300,000 per year (calculated from Table 1). Now apply this same example to the current six-year contract. The Strike pilot now serves only three years of total DIFOP in a six-year contract. This increases the Marine Corps' losses per-year by approximately forty-percent. As the time spent in operational flight status decreases further, the losses continue to grow.

The aviation contract conversion from eight years to six years reduced the available operational flight time (DIFOP) for each pilot, and the Marine Corps' return-on-investment dwindled. The Deputy Commandant of Aviation (DC/AVN) recognizes the importance of maximizing DIFOP time, and he advocated to establish minimums for first-tour pilots in his *2015 Marine Aviation Plan*:

...first-tour TACAIR aviators will spend four years in a fleet squadron, and tiltrotor and helicopter pilots three years in a fleet squadron, with no individual augment commitment, before those aviators become eligible for PCS orders.⁴²

If implemented, a Marine tactical aircraft (TACAIR) pilot could potentially have less than six months left on contract when he/she is eligible for PCS orders, and possibly separate from service without ever having served in a DIFDEN billet. Although this policy was modified by removing the yearly requirements in the *2016 Marine Aviation Plan*, the initial policy maximized the operational flight time and service payback for TACAIR pilots.^{3,43} Unfortunately for manpower, the policy does not provide any capability to retain or recoup any of the expenditures required to operationalize this Marine, post-winging.

³ "The Deputy Commandant for Aviation advocated for first-tour aviators to spend a dedicate [sic] period of years in their fleet squadrons before those aviators become eligible for PCS orders. The goal is to maximize the return on investment while also allowing for their professional growth and maturity in their primary MOS."

USN

The Navy's manpower usage policies are nearly identical to those of the Marine Corps' former eight-year contract. USN aviators cycle between shore-tours and sea-tours similar to Marine aviators.⁴⁴ The time spent in each billet varies, but this process generally equates to five or six years of operational flying (DIFOP) out of an eight-year contract.⁴

USAF

Once an Airman receives his/her wings just prior to the two-year mark, he/she must serve at least ten years of an ADSC before becoming eligible for retention bonuses or to resign from service. During this ten-year payback period, the Air Force gets substantially more operational flight time from its Airmen than the USMC/USN.⁵ This is due to the longer contractual period and increased pilot utilization during that period. The USAF manpower utilization policy can get nearly eight years of operational flight time out of every pilot.^{45,46} Using the cost-to-train in Table 3, eight years of operational flight time equates to an average payback of only \$140,000 per year; this is a substantially greater than that achieved by the Marine Corps. The USAF's key caveat is the fact that it has a significantly larger manpower pool, and it does not require a large portion of its pilots to serve in b-billet (out-of-cockpit) tours to make up for the reduced

⁴ For example, USN aviators complete flight school and receive 3-3.5 year orders for their initial sea tours; after successful sea tours they receive 2-3.5 year orders for initial shore tours.⁴⁴ This equates to nearly five years of operational service and this compares to the Marine utilization/payback periods if only serving a 2-year DIFDEN. This assumes the sailor goes straight from commissioning to flight school, spends two years in flight school, receives wings, spends 2.5 years in first sea tour, spends 2.0 years in shore tour, and completes his/her obligation with another 2.5 years on a second sea tour. Overall, you can consider manpower usage USMC versus USN nearly identical.

⁵ Using the Fighter/Bomber track as an example, an airman slated to fly the F-16 will complete the F-16 AFT prior to getting assigned to an operational squadron. This will take approximately one year to complete and puts him/her into an operational aircraft around the three year TIS mark or one year into the ten-year contract.⁴⁵ From here most pilots receive orders to their first operational duty station where they will spend the next three to four years flying. This is where the Air Force takes a detour. Once complete with the first operational tour, the majority of pilots receive another set of orders to continue flying operationally for an additional three to four years.⁴⁶ Once the airman completes this second tour, this is typically the first time he/she will be eligible for PME or a short out-of-cockpit tour, after which he/she will receive an additional set of orders back to an operational squadron. Assuming the pilot in this example completed 3-3-1 then an additional 2-year tour, this equates to an operational payback of eight years (1-year for AFT and 1-year for PME) out of the original ten-year contract.

manpower. Additionally, the USAF does not cross-train its officers like the Marine Corps, nor does it ask its officers to serve in other elements/capacities like those requirements of the MAGTF.

The Marine Corps and the Navy's aviator utilization is nearly identical assuming the Marine Corps uses a shorter DIFDEN tour (less than two years). The Navy receives more operational flight time (5-6 years) than the USMC (3-4 years) because of aviation contract length differences. On the other hand, the USAF receives nearly eight years of operation flight time out of each pilot with a ten-year contract. As the operational flight goes up, the return-on-investment also increases. Comparing all three services, the US Air Force has the best return-on-investment. Next this paper will examine aviation manpower to look at the current processes for the maintenance of high quality and highly qualified aviators, address the issues of having too few quality aviators, and then look at the common trends among active USMC aviators.

Attaining/Maintaining a Pool of the Highest Quality Aviators

Manpower Today

Table 4. USMC FY09-FY13 Officer Accession Data				
Fiscal Year	# of Officers Commissioned	# of Aviator Slots Allotted	% of Aviators Commissioned	% Change of Aviator Slots
FY09	2050	430	21%	Null
FY10	1800	325	18%	-24%
FY11	1700	325	19%	0%
FY12	1450	367	25%	+13%
FY13	1450	320	22%	-13%

*Data retrieved from USMC Deputy Commandant of M&RA FY09-13 Manpower Accession and Retention Plans, Memo-01.

As the Marine Corps downsizes to its target goal of 182,000 active duty personnel by the end of 2017, the Deputy Commandant for Manpower and Reserve Affairs directs other Marine Corps manpower agencies [MCRC, TECOM, Manpower Plans, Programs, and Budget (MPP)] on the number of officer accessions allotted for each fiscal year (FY) to meet manpower goals.⁴⁷ As illustrated in Table 4, the overall number of officer accessions from FY09 to the peak of the sequestration period in FY13, dropped nearly thirty-percent with aviation officer allotments dropping twenty-five percent over the same period. This data illustrates that the Marine Corps reduction in the size of the officer force as a whole was mirrored in the aviation community with aviation officer accessions. When services downsize, it makes sense that the reductions should be spread evenly across the MOS spectrum, but this philosophy reigns true only if the pre-downsize MOS pools can afford the reductions.⁴⁸

Figure 3 outlines the aviator inventory levels for the Marine Corps for FY 2009 to FY 2015 broken down by MOS and rank. The percentage was calculated by comparing the actual aviator inventory number versus the target aviator number established by Manpower Plans (MPP-30). As illustrated with the 03/Captain inventory, (with the exception of MV-22, CH-46, and F-35 inventories) nearly every MOS suffered shortages in inventory levels for the period: 67% for FA-18s, 68% for UH-1s, 79% for AH-1s, 80% for CH-53s, 82% for AV-8Bs, 83% for KC-130s, and 85% for EA-6Bs.^{6,49}

⁶ For F-35s (16%) the manpower shortage results from the development of the new platform and the fluctuation of available aircraft and aviators. For MV-22s (51%), the shortage is due to the production of the aircraft outpacing the training production of manpower to operate the aircraft.⁴⁹ The exception for CH-46s (133%) is due to the retirement of the aircraft fleet wide and the remaining pool of qualified aviators that have not transitioned to alternate platforms.

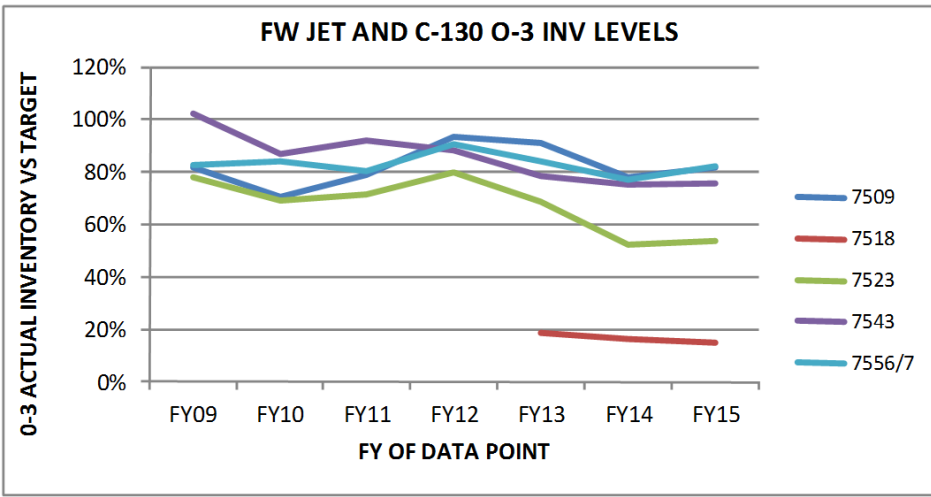
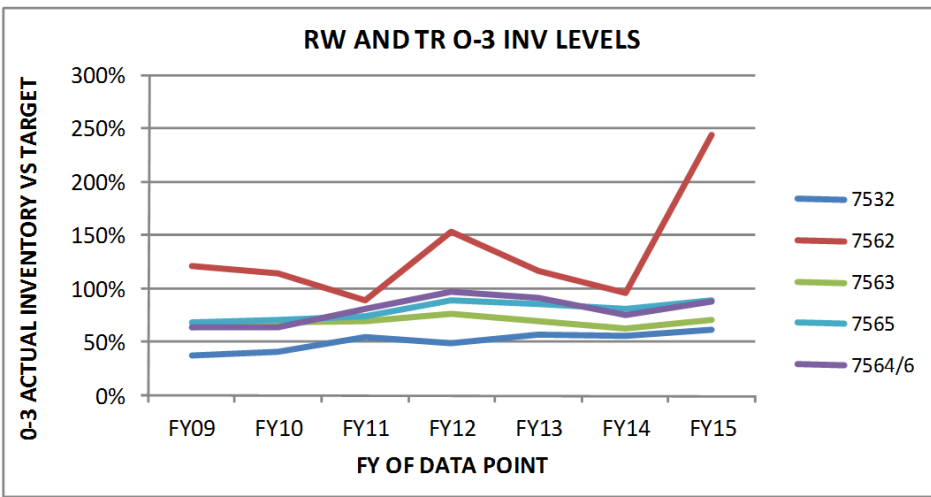


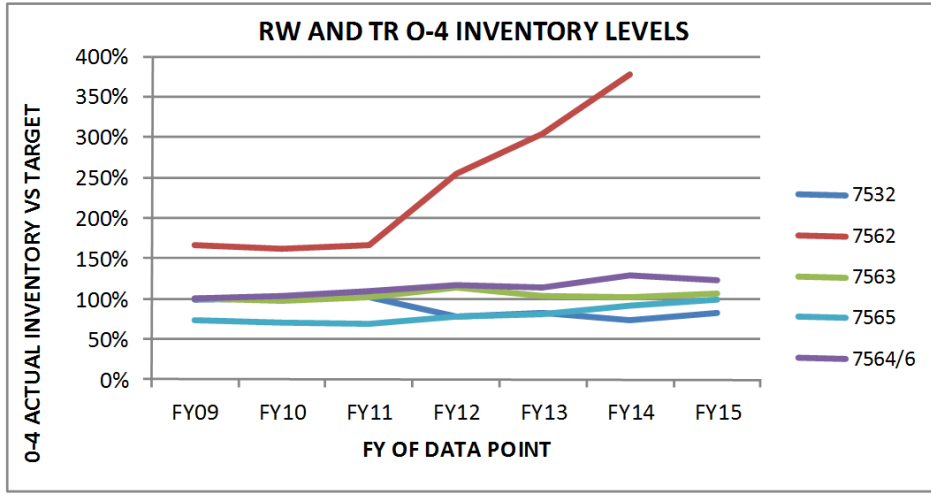
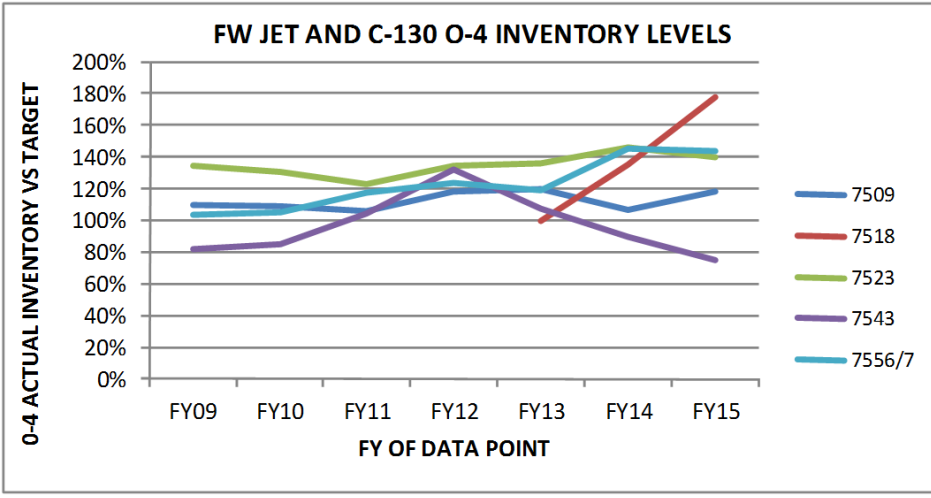
FIGURE 3: USMC Pilot (03/04) inventory levels (Actual vs target) for FY09-FY15 by MOS (Percentage).

FW Jet
 7509: AV-8B
 7518: F-35B
 7523: F/A-18
 7543: EA-6B

FW Non-Jet
 7556/57: KC-130J



RW/TILTROTOR
 7532: MV-22
 7562: CH-46
 7563: UH-1
 7564/66: CH-53
 7565: AH-1



*Charts and data adapted from products received from the USMC Aviation Officer Planner at M&RA MPP-30 November 9, 2015.

The O4/major inventories illustrate the opposite trend (with similar exceptions for MV-22, F-35, and CH-46 inventories) compared to the O3/Capt levels. The averages for the period were: 79% for MV-22s, 90% for AH-1s, 91% for EA-6Bs, 104% for UH-1s, 113% for AV-8Bs, 122% for CH-53s, 136% for KC-130s, and 141% for F/A-18s. For the period from FY 2009 through FY 2015, every platform (except F-35s and MV-22s) experienced a decrease in target inventories. Although it is understood that these numbers reflect the downsizing trend of the Marine Corps as a whole, these contrasting inventories demonstrate the potential for operational squadrons to be experiencing a shortage in captains and a surplus in majors.

Typically, the number of majors in a squadron is lower than captains due to the availability of O4/department head billets, but the results in figure 3 demonstrate an hour-glass effect in the pool of current manpower numbers. This means that squadrons are getting the appropriate number of pilots, but may not be receiving the preferred number of captains and majors based on squadron desires. The potential for problems exists when squadron commanders have too many majors and not enough department head opportunities for the pool of majors. To be competitive for promotion to O5/LtCol and selection to O5 command, boards typically look for requisite performance, combat leadership, and aviators who have successfully completed department head tours. In most operational squadrons, you have three billets that meet the standard requirement for a department head tour: the squadron executive officer (XO), the operations officer (OPSO), and the aviation maintenance officer (AMO). If there are too many majors and only three billets, then the majors either get shortened department head tours (less than one year), which leads to continuity issues, or they get skipped. If the officer gets skipped based on seniority, there is potential he/she will not make it back to a squadron before his/her first look at O5/LtCol and ultimately get passed over. This factor has the potential of affecting the

promotion process. It does not positively contribute to the retention of high quality officers, and although it may be fleeting, requires attention so that the Marine Corps can retain the best and highly qualified aviators and ensure the exorbitant amount of resources put toward training these aviators is not wasted.

M&RA has many tools it can use to shape the quality of its officer corps. Career designation (CD) is the first filter used:

CD is the process used to determine which company grade officers will be offered the opportunity for continued active service beyond their initial active service obligation...it accomplishes the objectives of retaining the best qualified officers on active duty and maintaining the AC officer population in each year of commissioned service (YCS) at a level that supports the promotion timing and opportunity guidelines to the rank of major.⁵⁰

The problem with the applicability of this tool in aviation is that it is not a matter of “if” but more of “when” an aviator gets career designated. Pilots spend nearly the first three years of their careers in training, where the majority of fitness reports are processed as not-observed reports, and this leads boards to push officers’ packages from one officer retention board (ORB) to the next until they meet the requisite number of days of observation. Effectively, the first manpower tool available to retain the highest quality officers does little to filter high quality marine aviators. The promotion process to O4/major is the next filter used and this is what the current aviation contract leverages to filter the high quality aviators.

The time-to-train aviators, the statutory 6-year contract, and the normal promotion timelines all line up so that a Marine aviator’s contract will expire just before he/she gets looked at the first time for promotion to O4/major. Many leaders in HQMC agree that this allows the Marine Corps to retain the “quality” over “quantity” without having to create and leverage another unnecessary process. Although the current process filters a high percentage of aviators and retains the “quality officer,” the current process lacks a method to identify or address those

highly qualified aviators, and the process has removed all tools traditionally leveraged to retain those individuals. Anyone, including high quality aviators, can tactically depart the service involuntarily. If a Marine fails to accomplish the necessary steps to become eligible for promotion to major (FITREPs, photos, PME completion), then he/she would not be likely selected. If he/she fails to select for promotion twice, and subsequently agree to serve in the Individual Ready Reserve (IRR) for three years, then he/she can leave the service with separation pay and no further active duty service obligation.⁵¹

In Table 5, the first column represents the total number of fixed-wing jet aviators twice passed (2P) for selection to 04/major for FY 2009-2012 and 2015. The second column (%2Ps) shows the percentage of aviators twice passed, out of all Marines receiving a 2P that year. According to USMC Manpower Management Promotions (MMPR-1), from 2009-2011 (the three-year period of time when the decision to change the contract occurred) nearly fifty-two fixed-wing jet pilots were passed over for promotion a second time.⁵² Understand that the data pool only looks at jet pilots because they are the only aviators, who under an eight-year contract, would be carried past the 04/major window. Interestingly, out of all T/M/S, AV-8 and F/A-18 pilots had the highest number of aviators twice passed for promotion, compared with all other

Platform	AV-8B 7509		F/A-18 7523		EA-6B 7543	
	# w/ 2Ps	% 2Ps	# 2Ps	% 2Ps	# 2Ps	% 2Ps
2009	4	21%	5	26%	1	5%
2010	5	25%	4	16%	2	8%
2011	2	13%	3	19%	1	6%
2012	5	15%	7	21%	1	3%
2015	4	10%	5	12%	3	7%

*Data received from USMC Deputy Commandant for M&RA, Manpower Management Promotions (MMPR-1).

fixed-wing/rotary-wing/tilt-rotor pilots, for the same period.⁵³ In FY 2009, there were nine AV-8B and F/A-18 pilots that received 2Ps; these accounted for nearly forty-seven percent of Marines twice passed that year.

Why did FW jet aviators have the highest rate of 2Ps from FY 2009-2012? This is surprising considering these highly trained aviators require high grades for selection out of flight school, they have the longest time-to-train, and have the highest cost-to-train out of all T/M/S. It seems clear that the current O4/major promotion process does succeed in filtering a large portion of aviators, but does the current process truly filter the lower quality while retaining the highest quality and qualified Marines? What happens when squadrons have too many O4/majors, a filter process that does not clearly meet the sought-after goal until screened by the O5/LtCol boards, and a majority of squadrons with incredibly high operational tempos?

In the 2015 USMC aviation *Aviator Retention Survey*, 2,173 aviators (approximately 1,025 captains, 785 majors, and 340 lieutenant colonels) were surveyed regarding their overall satisfaction with MOS, their intention to remain in service, and the other factors that affect their decisions to stay in or get out.⁵⁴ The results illustrate a few interesting points regarding the current state of Marine aviation. For overall satisfaction with MOS: O3/O4 (FW and RW) the majority of respondents who reported a satisfaction with MOS as “dissatisfied” reported it was due to “amount of flight hours/training, manning level, and personal/family time,” and they said “availability of equipment, parts and resources” was the most common response for reports of “very dissatisfied.”⁵⁵ This data illustrates (with the exception of flight hours and training) that Marine aviators are not happy with the current manning levels in the squadrons. If manning levels drop too low, this increases the workload and responsibility on individual Marines. In turn, this reduces the time home with families, including personal time. Additionally, a low manning

level increases the frequency of deployment on individual Marines, and this can significantly affect time home with families and personal time.

For retention, regarding the decision to stay in or get out, the majority of respondents reported an “influence to leave” or a “strong influence to leave” when the responses were filtered by grade (except O4/major); each group showed significant increases in the desire to separate when comparing answers from their initial career intentions to their current intentions.⁵⁶ This shows there is a large portion of USMC aviators that have changed their minds from the time they joined the service to the time this report was published in 2015. It is important to note that this time span varies widely, from relatively new aviators with as little as one year of service to the more senior (LtCol) aviators with as many as ten or more years of aviation experience. Considering a large portion of the pool is dissatisfied, what factors could contribute to and influence the aviators’ decisions to stay in? Overall, the reported noted that the job dissatisfaction or intention to stay-in was tied to flight training/hours, large periods of time away from family, and the fact that pay is “not commensurate with work load or responsibilities.”⁵⁷ The ironic point of the report, with regards to the last statement, is that a bonus was viewed as a positive incentive, but was not a single-source of retention for those surveyed.⁵⁸

Way ahead for USMC Aviation

Traditionally, the Marine Corps has maintained a sufficient pool of aviators to fulfill fleet requirements, and the contract was one lever used to adjust the size of the pool easily without having to invest additional monies into bonuses. Similarly, it is understandable that M&RA focuses on the numbers (quantity) required for filling aviator slots, but the current methodologies alone of adjusting the contract does little to identify and retain the best and brightest aviators.

The problem that needs to be solved: How can the Marine Corps constantly meet its requirements while also retaining the highest quality and qualified aviators?

First, the Marine Corps needs to reevaluate the aviation contract length to find a good balance between return-on-investment, a contract period that gives the Marine Corps the best opportunity to retain the highest quality aviator, and one that aligns with M&RA manpower goals. The current six-year contract does not meet the objective of retaining the high quality and qualified aviators, and although this six-year contract makes it easier for MCRC to fulfill aviation contracts, it also prevents Manpower Management from having to separate Marines who fail to select for promotion while still under contract. The six-year term takes the average aviator to a point just short of ten years, historically the point where Marines decide whether or not to make a career in military service. By doing this the Marine Corps is losing high quality aviators who are overworked and receiving the same pay as the next Marine even though their amount of responsibility is greater. It simply gives those aviators an opportunity to get out two years earlier without any incentive to stay in.

The return-on-investment with a six-year contract when coupled with the current utilization of the DIFOP and DIFDEN tours is fiscally insensitive. The Navy uses the eight-year contract where it gets on average five years of operational service (instead of the 3-4 years for USMC) and nearly twenty-five percent more in return-on-investment per year. Similarly, the Air Force uses a ten-year contract where it gets on average eight years of operational service and nearly fifty-six percent more in return-on-investment per year. Splitting the difference with the contract term and going back to the eight-year contract for all platforms ensures that the USMC is getting its money's worth from each highly trained aviator and would then take each aviator through one O-4 selection/promotion process. This would likely increase the number of Marine

aviators wanting to stay in. In turn, this would give Manpower Management (MM) a larger/more competitive pool of potential, high-quality aviators from which to select for retention and move up in the ranks.

Next, the Marine Corps needs to reevaluate the first-term utilization for all aviators and make the first tour a statutory four-years for every platform, not just for fixed-wing jet pilots as previously proposed by the DC/AVN. This helps maximize the return-on-investment per aviator and rebalances the number of company grade officers to the number of field grade officers in the squadrons. If leveraged correctly, it can also reduce the dissatisfaction found in the *2015 Aviator Retention Survey*.⁵⁹ Coupled with an eight-year contract, a mandatory four-year operational payback tour will be difficult to implement Corps-wide for manpower timing, but the benefits will be worth it. This will allow MM to get an additional year out of every first-tour aviator before he/she is required to move. Additionally, MM will be able to get an additional three years out of each Marine before the individual's contract expires offering the Marine Corps some leverage in retaining higher quality Marines. How it is implemented is debatable.

Lastly, HQMC should take the results of the *2015 Aviator Retention Survey* and build a working group that focuses on reevaluating the best way to improve return-on-investment and retain the highest quality aviators. Integrate the DC/AVN's new *MOS Initiative* program that will provide a metric and allow aviation manpower track the highly qualified aviators.⁶⁰ Combining this with career designation and the promotion processes for O-4 and O-5 may provide enough fidelity to answer the question. Currently, the normal retention processes are not providing enough of an incentive to keep those Marines targeted and desired for retention. The current six-year contract is hamstringing the Marine Corps by giving all aviators, including the higher quality Marines, the opportunity to exit service much sooner. Generally, the highest quality

aviators are the most overworked, the ones who receive the most responsibility without commensurate pay increases, deploy more often due to capabilities/qualifications, and after their initial contracts are completed, they are the first to resign.

Conclusion

To achieve the Commandant's fiscal guidance and the Deputy Commandant for Aviation's goal of retaining the highest quality and qualified personnel, the US Marine Corps (USMC) must reevaluate current aviation manpower initiatives to balance return-on-investment with the retention of highly qualified aviators. Consider returning to eight-year contracts, implementing statutory four-year tours for all first tour aviators, and reevaluating incentive programs in order to support targeted retention and achieving the best return-on-investment. In doing so, the USMC would be wise to look at the other services and even look towards the business-world for potential "talent management" solutions. The 37th Commandant of the Marine Corps said it best:

Marines have historically possessed an innate drive to succeed, to excel in all that they do, including winning in combat. We will sustain this trait and ensure this drive to succeed, excel, and win continues to define our Corps by maintaining a force of the highest quality, which is smart, resilient, fit, disciplined, and able to overcome adversity. Recruiting and retaining quality men and women of character in today's Corps is our friendly center of gravity and our highest priority. To achieve this end, we must continue to recruit and retain the best men and women, across the changing demographic of the Nation, who are ready and willing to step up and accept the challenge of becoming Marines.⁶¹

The Marine Corps needs viable solutions to retain the best and brightest aviators and Marines. They are the bedrock of the Marine Corps and its aviation readiness; without the ability to identify, retain, and promote these outstanding Marines, it will be much more difficult to fight the future fights while continuing to keep the faith.

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