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All Pensionable Time: Comparing the Military Pension of Australia, Canada and the United Kingdom

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Lieutenant-Colonel Jeremy Sugimoto

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ALL PENSIONABLE TIME: COMPARING THE MILITARY PENSION OF AUSTRALIA, CANADA AND THE UNITED KINGDOM

Introduction

Pensions are part of a robust compensation package that employers use to attract human labour to an organization and take several forms, most common are: Defined Contribution (DC), Defined Benefit (DB), and Hybrid.

The Roman Empire created Pensions to compensate soldiers who had fought for the Roman Army and “discouraged soldiers from being tempted to support a coup through poverty or a helpless old age.”¹ For the military, it was customary that veterans received plots of land. In 6 A.D., Augustus established the *aerarium militare* (military treasury) to provide a pension for the Roman Army using his funds (170 million sesterces).² The long-term funding was financed “by new taxes, a sales tax and the *vicesima hereditatum* or five percent tax on inheritances.”³ A Legionary (professional heavy infantryman) would receive 3,800 denarii. Soldiers were well prepared to enter private life with a discharge pension and accrued savings.⁴ Continually funding for the *aerarium militare* was complex, and “By the last years of his reign, this capitalization was exhausted, not yet supplemented by the new taxes. Soldiers were retained in service past their normalized discharge dates to avoid paying their pensions.”⁵

¹ Sara E. Phang, *Roman Military Service: Ideologies of Discipline in the Late Republic and Early Principate* (Cambridge: Cambridge University Press, 2008), 163.

² Pat Southern, *The Roman Army: A Social and Institutional History*. (Santa Barbara, Calif: ABC-CLIO, 2006), 167. <https://search-ebscohost-com.cfc.idm.oclc.org/login.aspx?direct=true&db=nlebk&AN=148573&site=ehost-live&scope=site>.

³ Phang, *Roman Military Service* . . . , 163.

⁴ Southern, *The Roman Army* . . . , 167.; Phang, *Roman Military Service* . . . , 163. “Fixed praemia (pension) were assigned to soldiers when they completed a fixed length of service. Praetorians served twelve years, shortly changed to sixteen years, and received 20,000 HS at the end of Augustus’ reign; legionaries served sixteen years, shortly changed to twenty years, and received 12,000 HS.”

⁵ Ibid.

The pension's purpose remains the same: compensation for time served in the country's defence, but the obstacles to providing that benefit are equally relevant, namely funding the pension. Ancient Rome's practice of varying pension payouts and deferring soldiers' retirement to avoid *praemia* continues as "The older soldiers were at their discharge, the fewer their numbers were, due to natural death."⁶

This paper will examine Australia's and the United Kingdom's military pension systems to identify the critical attributes of each, then compare them to the Canadian Armed Forces pension to determine its adequacy and suitability as a retention tool. It will expand on this theme by analyzing the effect of the immediate annuity age change from 20 to 25 years in Canada. Australia and the UK are comparable because of their similar standard of living, military and government legislative construct and overall population size. The comparison will discuss Regular Force (Reg F) pensions only and use a scenario to illustrate the comparisons. It will exclude features such as insurance, disability and dismemberment clauses as they are similar. The paper will conclude with the comparison result and offer some concluding thoughts.

Pension Schemes

People are hesitant about pensions because of the complex calculations and terms. In addition, the period between initiation and benefiting from it is significant. To enable a better understanding, a description of the types of pensions follows.

Contributory basic pension. A pension paid, often at a flat rate, to a person with a full record of contributions, or pro rata to a person with an incomplete contributions record.

Defined-benefit (DB) pension. A pension in which the benefit is determined as a function of the worker's history of pensionable earnings.

⁶ Southern, *The Roman Army* . . . , 164.

The formula may be based on the worker's final wage and length of service, or on wages over a longer period, for example the worker's full career. A DB system may be fully or partially funded, or unfunded. In a pure DB arrangement the sponsor's contributions are adjusted to meet obligations. Insofar as the degree of funding is maintained, contributions are adjusted to meet anticipated obligations; thus the risk of varying rates of return to pension assets falls on the sponsor.

Defined-contribution (DC) pension. A pension in which the benefit is determined by the value of assets accumulated toward a person's pension. Benefits may be taken as a lump sum, as a sequence of withdrawals, or by purchase of an annuity. Thus the expected discounted value of benefits is equal to the value of assets, referred to as benefits being determined actuarially. Thus, a pure DC plan adjusts obligations to match available funds, so that the individual bears the portfolio risk.

Fully-funded pensions pay all benefits from accumulated funds. Partially funded pensions pay benefits both from accumulated assets and from current contributions.

A non-contributory universal pension is based on years of residence. Notional defined-contribution (NDC) pensions are financed on a pay-as-you-go or partially-funded basis, with a person's pension bearing a quasi-actuarial relationship to his or her lifetime pension contributions.

Pay-as-you-go (PAYG) pensions. PAYG pensions are paid out of current revenue (usually by the state, from tax revenue) rather than out of accumulated funds. Partially-funded pensions are often referred to as PAYG.⁷

Trends

The Defined Benefit (DB) pension is popular in Government agencies and union jobs. However, that popularity is decreasing with corporations. Corporations incur risk and financial liability to fund DB pension plans to ensure future funds are available to distribute annuity payments. The risk is an issue for corporations prioritizing short-term profits over the welfare of workers. Both public and private sector employers must alter their pension schemes to meet the changing demands of the workforce population. In

⁷ Nicolas Barr and P. Diamond, "Reforming Pensions: Principles, Analytical Errors and Policy Directions," *International Social Security Review* 62, no. 2 (April 2009), 8.

particular, the bloated “Baby Boomer” demographic combined with increasing life expectancy and smaller Generation X, Millennial, and Generation Z contributions cannot make up for the draw from the pension fund. As a result, many firms are now moving toward Defined Contribution (DC) pensions.

DC pensions place the risk on the beneficiary. There are variations within this genre where employers contribute to the employee's fund in matching contributions. DC pensions relieve the firm from retaining significant liabilities, lower the cost of labour and thus reduce the cost of goods and services, increasing profits at the employee's expense. Another issue with DC pensions is that it requires employees to forecast future living expenses to ensure sufficient contributions. This is challenging for new employees, projecting their future 45 years later. The paper will examine these nuances using the selected countries.

Country Comparison

The analysis portion of this paper will present the critical elements of the pension systems of Australia, the United Kingdom (UK) and Canada and compare the financial benefits, including some additional elements.

Australia: History

The evolution of the Australian military pension system has advanced to match trends, financial realities and corporate practices. Military pensions in the Australian Defence Force (ADF) have existed since 1948 with four pension schemes: Defence Forces Retirement Benefits (DFRB, 1948-1972), Defence Force Retirement & Death Benefits (DFRDB, 1972-1991), Military Superannuation and Benefits Scheme (MilitarySuper or MSBS, 1991-2016), and Australian Defence Force Superannuation

(ADF Super 2016-current).⁸ The first three schemes were DB pensions followed by a DC scheme. The ADF Super marks a significant change in Australian Schemes. The Military Super and the ADF will be discussed further for comparison and scope.

Australia: Military Super (MSBS)

“MilitarySuper is a hybrid scheme (part accumulation, part defined benefit)” that requires members to contribute five percent of their after-tax salary to the member’s benefits fund while also providing the flexibility to contribute an additional five percent.⁹ The first component is the employer benefit. It is funded in two ways: the productivity contribution (ADF funded) is 3% of the member's salary plus investment earnings, and the unfunded component (Australian Government funded), an unknown risk that depends on the return investment. Under the MSBS, members reaching preservation age at 55 (have the opportunity to receive an annuity under normal circumstances).¹⁰ The annuity under this scheme is a fortnight payment for life.¹¹ The second component of the MSBS is the member benefit. Members can access this fund at age 60 as a lump sum, move to another superannuation scheme or transfer to an annuity. The size of the member’s (DC) benefit is a function of the member's contribution and the performance of the investment

⁸ Commonwealth Superannuation Corporation, “Our Super Funds and Products: Military Superannuation and Benefits Scheme (MilitarySuper), last accessed 1 May 2022. <https://www.csc.gov.au/Members/Superannuation/Funds-and-products>.

⁹ Commonwealth Superannuation Corporation, “Our Super Funds and Products: Military Superannuation and Benefits Scheme (MilitarySuper), last accessed 1 May 2022. <https://www.csc.gov.au/Members/Superannuation/Funds-and-products>.

¹⁰ Commonwealth Superannuation Corporation, “Product Disclosure Statement: Military Superannuation & Benefits Scheme, Seventh edition,” 6 December 2019, 3. “There are circumstances where a condition of release might occur before preservation age. These include circumstances of invalidity, hardship and on compassionate grounds.”; Department of Veterans’ Affairs, “9.9 Preservation age,” last modified 15 August 2017. <https://clik.dva.gov.au/military-compensation-mrca-manuals-and-resources-library/incapacity-policy-manual/9-superannuation/99-preservation-age>.

¹¹ “Military Superannuation Schemes,” Vimeo video, 20:07, posted by “ADF Consumer Centre,” 23 February 2022, <https://vimeo.com/680745023>. Superannuation Salary includes: normal salary, service allowance, higher duties allowance, payment for acting or temporary rank, and environmental allowances.

performance of strategies chosen in the scheme.¹² Members can also contribute Ancillary benefits, including salary sacrifice contributions (pre-tax, similar to the Canadian Registered Retirement Savings Plan), additional personal contributions (after-tax), spouse contributions (after-tax), rollovers, Government contributions, and Super Guarantee contributions.¹³ Table 1 illustrates an example for comparison.

As an illustration, Major Smith (age 55) earned a final average salary of \$132,000 after 25 years of service.

Table 1 – MSBS Employer Benefit Example

Final Average Salary (FAS)	Multiply by Years of Service (YoS) Factor	Divide by Conversion Factor (age 55)	MSBS Employer Benefit (AUD)
\$132,131.62	5.65	12	\$ 62,211.97

Major Smith would have a lump sum member benefit of \$505,048 AUD (compounded annually) available at age 60. Additionally, he would have received \$1,928,571 AUD in annuity by age 85, for a total benefit of \$2,433,619 AUD. Using the historical data provided by CSC dating back to 2003 and forecasting six future years, Major Smith’s total contributions after 25 years would be \$118,492.61 AUD contributing at the mandatory minimum rate of 5%.¹⁴

Australia: ADF Super

ADF Super is the current scheme (DC) offered to enrollees and those members of the MSDS that choose to switch or continue after reaching the Maximum Benefit Limits

¹² Commonwealth Superannuation Corporation, “Your investment options,” last accessed 1 May 2022. <https://www.csc.gov.au/Members/Investment/Investment-options>. “Military Super members can choose one or more of four investment options.” Cash, Income Focused, Balanced (default), Aggressive.

¹³ Commonwealth Superannuation Corporation, “Your investment options”

¹⁴ Commonwealth Superannuation Corporation, “Military Super: Unit Prices and Earning Rates,” last accessed 28 Apr 2022. <https://www.csc.gov.au/Members/Investment/How-we-perform/Unit-prices-and-earning-rates>. Forecast accomplished with Microsoft Excel’s FORECAST.ETS function.

(MBL).¹⁵ ADF Super is the default option, but members may select or choose any other complying Australian superannuation fund, providing flexibility and choice. The ADF contributes 16.4% of the member's salary into the fund, one percent higher than other workers and 6.9% high than the Normal Superannuation Guarantee rate legislated by the Australian government for all workers.¹⁶ Unlike the ADF's previous schemes, members are not required to contribute but may contribute additionally. Members can access the accumulated benefits tax-free at age 60 as a lump sum or purchase an income stream (annuity).¹⁷ One disadvantage of this scheme is the fees. Similar to private investments, ADF Super charges administration fees (\$84 per year), annual investment fees (0.84% of the total balance), transaction costs (0.09%), and buy-sell transaction fees (0.15% for buying and selling units).¹⁸ Fees reduce members' benefits.

Australia: Performance

Using the Major Smith scenario, with a starting salary of \$65,000 AUD working in the ADF for 25 years and retiring with a final average salary of \$132,131 AUD, he would have accumulated \$2,337,032 AUD using the same forecasting method as above. However, Major Smith would not have an annuity pension payment but could invest in one with these funds.

¹⁵ Commonwealth Superannuation Corporation, "Lump Sum Maximum Benefit Limits," September 2019. <https://www.csc.gov.au/-/media/Files/MilitarySuper/Factsheets/MS02-lump-sum-maximum-benefit-limits.pdf>. MilitarySuper rules provide limits to contributions which can be made relative to a member's Pension Maximum Benefit Limit (Pension MBL) or Lump Sum Maximum Benefit Limit (Lump Sum MBL). Once you reach the lower Lump Sum MBL you can choose whether or not to continue to contribute to MilitarySuper.

¹⁶ "ADF Superannuation Arrangement Commencing 1 July 2016," Vimeo video, 35:00, posted by "ADF Consumer Centre," 23 February 2022, <https://vimeo.com/680744859>.

¹⁷ Ibid.

¹⁸ Commonwealth Superannuation Corporation, "ADF Super Product Disclosure Statement, Sixth edition," 24 September 2021, 5.

Australia: Comparison

While the total financial benefits between the two are similar at age 85, the MSBS provides benefits sooner with more income security for the member. Table 2 summarizes the features of the two schemes.

Table 2 – MSBS and ADF Super feature Comparison

MSBS	ADF Super
Defined Benefit	Defined Contribution
Annuity at age 55	N/A
Partially portable benefit	Fully portable benefit
Contributions can only be made to MSBS	Choice of Funds
Mandatory employee Contributions	No requirement to contribute
Lump-sum can also be converted to full or partial pension (age 60)	Lump-Sum only (age 60)
No admin fees	Admin fees
No risk to DB	All risk

The ADF's Pensions Schemes have become less beneficial to the member. The current ADF Super is more advantageous to the member in only one way. It is more flexible, allowing the member to port the Fund to any other recognized Superannuation Scheme, including investment schemes outside the ADF. While this may be beneficial should the external fund outperform the ADF super funds, the comparison of Major Smith has revealed a discrepancy in the value of the schemes. The other major issue is risk. Whereas the DB portion of the MSBS guarantees the member has the opportunity to receive an annuity reaching age 55, the ADF Super's accumulated funds are not available until age 60, and those funds are susceptible to market conditions. Historically, losing money on pension fund investments is unlikely in the long term but can occur. Even when there are losses, recent history has not seen consecutive losses. Overall, Australian

pension funds' assets (1.75 trillion USD) decreased by 1.2% in 2020, following a 6.3% gain the year prior.¹⁹

The ADF, like some militaries and private companies, are moving away from DB schemes in favour of DC schemes which alleviate liabilities at the cost of employee security. While this means companies may be more profitable, government-funded pensions more sustainable, and governments leaner, beneficiaries suffer the consequences and must plan accordingly to counter future financial uncertainties.

United Kingdom: History

“Navy pensions were first instituted by William III of England in 1693 and regularly established by an order in council of Queen Anne in 1700.”²⁰ The Armed Forces Pension Scheme (AFPS 75) was created in 1975, followed by a revision in 2005 (AFPS 05) and 2015 (AFPS 15).²¹ Nevertheless, “Prior to 6th April 1975, there were no rights to deferred pensions in any public or private pension schemes.”²² However, this changed when the UK's pension scheme was government-funded from the start of AFPS, and the member/beneficiary did not contribute. AFPS 75, 05 and 15 were “designed to reflect the unique nature of Service life, provide a retirement income for you and your dependents, and incentivize retention in Service as a key part of your overall

¹⁹ Organisation for Economic Co-operation and Development (OECD), “Pension Funds in Figures,” June 2020. <https://www.oecd.org/pensions/Pension-Funds-in-Figures-2020.pdf>; Organisation for Economic Co-operation and Development (OECD), “Pension Funds in Figures,” June 2021. <https://www.oecd.org/daf/fin/private-pensions/Pension-Funds-in-Figures-2021.pdf>.

²⁰ Wikipedia, “Pensions in the United Kingdom,” last modified 1 March 2022. https://en.wikipedia.org/wiki/Pensions_in_the_United_Kingdom.

²¹ Ibid.; AFPS 05 (Regulars only – entry closed on 31/03/2015); AFPS 15 (Regulars and Reservists)

²² Ministry of Defence, *Armed Forces Pension Scheme 1975: Your Pension Scheme Explained* July 2020, 4.

remuneration package.”²³ The three schemes are similar; as such, the analysis will follow a breakdown of the components and compare the format of the three throughout.

United Kingdom: Membership

Membership in the AFPS 15 introduced a new rule that if a member under AFPS 75 or AFPS 05 had more than ten years to serve to reach age 55, they would automatically transfer into AFPS 15 on the 1st April 2015.²⁴ The result is that “the majority of members of the Armed Forces and Reserve Forces Pension Schemes have now joined AFPS 15.”²⁵ Thus forcing an end to the long-running AFPS 75 and the shorter AFPS 05. Why would the Government want to accelerate this process, as it would have naturally become extinct?

Governments are interested in finding efficiencies. With an aging population contributing to more withdrawal from the pension fund and increasing life expectancy, the budgets of publicly funded pension schemes are insufficient. The new scheme delays the eligible age to draw a pension, thus reducing fund expenditures by making pension payouts over the same number of years. Members' life expectancy as an annuitant becomes realigned with the pension scheme. However, this is not a benefit from the member's perspective.

One notable point about AFPS 75 is that pensionable service begins at age 21 for officers and 18 for enlisted members. The minimum age to join the UK Armed Forces is 18 for officers and 16 for enlisted members.²⁶ This restriction potentially results in 3

²³ Ministry of Defence, *Armed Forces Pension Scheme 1975*... 3.

²⁴ Ibid., 4.

²⁵ Ibid.

²⁶ Ministry of Defence, “Army Be the Best: Age.” Last accessed 1 May 2022, <https://apply.army.mod.uk/how-to-join/can-i-join/age>.

years of non-pensionable service. Whereas the time completing an identical training regime by someone joining as an officer at age 21 would have been considered pensionable time. This policy was removed from AFPS 05 and 15 but still affects members of AFPS75 while another age-related issue lingers in the UK pension system.

United Kingdom: McCloud Judgement

In late 2018, the England and Wales Court of Appeal (Civil Division) ruled simultaneously on two cases: 1) The Lord Chancellor and Secretary of State for Justice and The Ministry of Justice versus 1) V. McCloud & Others 2) N. Mostyn & Others (Judges) and the second case, The Secretary of State for the Home Department, The Welsh Ministers & Others versus R. Sargent & Others (Firefighters).²⁷ The cases resulted from alleged age discrimination on the part of the Government following through on the recommendation for “wholesale public sector pension reform in order to place public sector pensions on a more sustainable footing.”²⁸ The effect was to give transitional protection to scheme members based on age to retirement. What this meant in most schemes was “members within 10 years of normal pension age stayed in their existing schemes (known as “transitional protection”) and members between 10 and 13.5 or 14 years of Normal Pension Age could stay in their existing schemes for a period ranging from a few months to several years after 2015 (known as “tapered protection”).”²⁹ The judgement concluded that “in both the judges' and firefighters' cases the manner in which

²⁷ England and Wales Court of Appeal (Civil Division) Decisions. The Lord Chancellor and Secretary of State for Justice and another v McCloud and Mostyn and others [2018] EWCA Civ 2844, [2018] EWCA Civ 2844 Case Nos. A2/2018/0636, A2/2018/0505 & A2/2018/0647. 20 December 2018. <https://www.bailii.org/ew/cases/EWCA/Civ/2018/2844.html>.

²⁸ England and Wales Court of Appeal (Civil Division) Decisions, *Press Summary The Lord Chancellor and Secretary of State for Justice and another v McCloud and Mostyn and others* [2018] EWCA Civ 2844, 20 December 2018. <https://www.bailii.org/ew/cases/EWCA/Civ/2018/2844.image.pdf>.

²⁹ UK Parliament: House of Commons Library. “Public service pensions – response to McCloud,” last modified 31 August 2021. <https://commonslibrary.parliament.uk/research-briefings/cbp-9177/>

the transitional provisions have been implemented has given rise to unlawful direct age discrimination.”³⁰ Because the AFPS pensions fall under this umbrella, the implications between the AFPS 75, 05, and 15 are significant. This Judgment has forced the UK Government to offer a *Deferred Choice Underpin* as remediation allowing UK Armed Forces members to choose which pension scheme best suits their needs upon retirement.³¹ “This approach will enable eligible members, when they retire with a pension, to choose whether the legacy or reformed schemes would be better for them for the period between 1 April 2015 to 31 March 2022.”³² The significance of this case illustrates the conflict between the pension provider’s desire to reduce costs and the pension recipients to retain more generous legacy pension schemes. It highlights the trend of decreasing benefits in pension schemes.

United Kingdom: Pension Calculations

The formulae for each subsequent scheme are less beneficial than the previous. The *Armed Forces Pension Calculator* was used to determine the pension benefits using the Major Smith scenario as an Army Officer.³³ These figures do not account for Consumer Price Index adjustments (indexation) or growth in investments and are for comparison between the UK AFPS schemes. Figure 1 illustrates the annual pension payments of the three schemes over time.

³⁰ England and Wales Court of Appeal (Civil Division) Decisions.

³¹ UK Parliament: House of Commons Library. “Public service pensions..., “A deferred choice underpin, where the choice would be made at retirement, or when benefits are drawn and, up until that point, members would be treated as having been in their legacy scheme during the remedy period.”

³² Forces Pension Society, *McCloud Remedy Announced!*, last accessed 1 May 2022. <https://forcespensionsociety.org/2021/02/mccloud-remedy-announced/>.

³³ Ministry of Defence. *Pension Calculator*. <https://mod-pc.co.uk/>. Maj Smith joins the Army as a 2Lt at age 18 and works for 25 years and retires as a Maj at age 43. His Salary when he retires is £ 62,865.

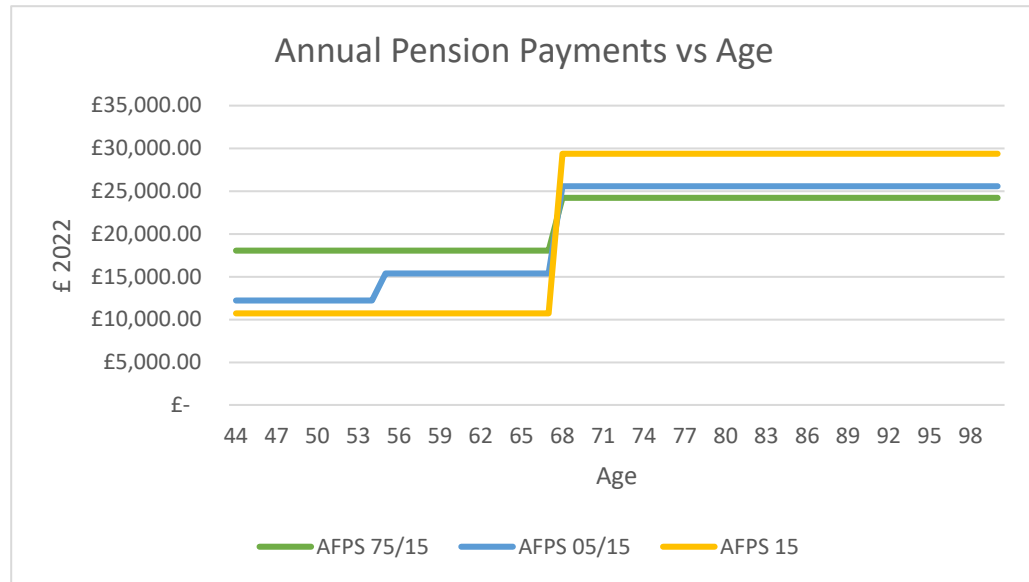


Figure 1: Annual Pension Payments Versus Age

Table 3 demonstrates the variance in present value between the pension schemes.

Common to all is the convergence of value at age 100. The values are approximately the same at this age, removing any advantages within schemes. However, assuming the average life span of 85 years, AFPS 05/15 and AFPS 15 are less valuable, and the trend continues the lower the age. The UK Government is delaying payments in the newer schemes to reduce the pension burden by pushing more costly payments to the future when fewer members will be alive to collect.

Table 3 – Cumulative Present Value of AFPS Schemes for Major Smith

Age	AFPS 75/15	AFPS 05/15	AFPS 15
70	£ 571,459.00	£ 527,792.00	£ 411,763.00
80	£ 813,619.00	£ 783,542.00	£ 705,423.00
85	£ 934,699.00	£ 911,417.00	£ 852,253.00
90	£ 1,055,779.00	£ 1,039,292.00	£ 999,083.00
100	£ 1,297,939.00	£ 1,295,042.00	£ 1,292,743.00

Canada: History

The Canadian military pension system dates back to the First World War when the Government provided meagre benefits to veterans. Veteran's pensions ranged from clothing allowances (\$35) to disability pensions. Reactive with slow responsiveness was a key theme. Initially, benefits were directed to members with service overseas, while members contributing to the war effort in Canada received little compensation.³⁴ This was a similar situation following the Second World War. However, the Korean War was again different, deeming it a "United Nations "police action" rather than a war," negating any benefit provisions.³⁵ The Government implemented changes through the Veterans Benefits Act from 1951 to 1954, from providing the needs of the Second World War veterans to providing benefits to members that remained in the Armed Forces (Reg F) and re-establishment credits and vocational training.³⁶ A reactive policy for veterans' needs continued. The Defence Services Act was the first Act to provide an annuity and was succeeded by the Canadian Forces Superannuation Act (CFSA). The current CFSA is part of "a well-thought-out and up-to-date scheme of veterans benefits – one that links recruitment, retention, and recognition – is essential to the well-being and operational effectiveness of today's Canadian Forces."³⁷

Canada: Membership

The CAF pension is a DB pension scheme funded partially by the Government of Canada and from compulsory contributions by a member of the Canadian Armed Forces.

³⁴ Veterans Affairs Canada – Canadian Forces Advisory Council. *The Origins and Evolution of Veterans Benefits in Canada 1914-2004*. P. 4.
<https://www.veterans.gc.ca/public/pages/forces/nvc/reference.pdf>.

³⁵ Ibid., 19.

³⁶ Ibid., 20.

³⁷ Veterans Affairs Canada – Canadian Forces Advisory Council ..., 1.

A crown corporation manages the fund, the Public Sector Pension Investment Board (PSP), which “invest[s] funds for the pension plans of the Public Service, the Canadian Armed Forces, the Royal Canadian Mounted Police and the Reserve Force.”³⁸ Joining the Regular Force Plan is automatic upon enrollment in the CAF. The compulsory membership deducts contributions monthly from pay at a rate determined annually by the Government Treasury Board (Table 4). Contribution rates are adjusted annually and have risen significantly since 1999, where the rates in 2009 were 5.2% and 8.4%, respectively. As a result of the ability to annually change the contribution rates, the Government can reduce its risk of underfunding and make the scheme more sustainable. Rate increases exist “to improve the long-term financial management . . . These measures will ensure that the costs of these pension plans are shared in a more balanced way between plan members and the Canadian public, whose tax dollars support these programs.”³⁹

Table 4 – Canadian Armed Forces–Regular Force pension plan contribution rates effective January 1, 2022

Contribution Rates Table			
From your salary...	In 2020 you contributed...	In 2021 you contributed...	In 2022 you will contribute...
On earnings up to the maximum covered by the Canada/Quebec Pension Plan (\$64,900 in 2022)	9.53%	9.83%	9.36%
On earnings over the maximum covered by the Canada/Quebec Pension Plan	11.72%	12.26%	12.48%

³⁸ Public Sector Pension Investment Board, “We are PSP: Investing with a purpose,” last accessed 28 April 2022. <https://www.investpsp.com/en/psp/>.

³⁹ Public Services and Procurement Canada, “New to the Canadian Armed Forces—Regular Force enrolled before March 1, 2007,” last modified, 6 January 2021. <https://www.tpsgc-pwgsc.gc.ca/fac-caf/act/vnt-bfr/nvnw-force-eng.html>.

Note: Contribution rates are reduced to 1% of salary for all plan members who reach the maximum 35 years of pensionable service.

Source: Treasury Board of Canada Secretariat ⁴⁰

In the 2006 amendment to the CFSA Regulations, a significant change was enacted, which lengthened the period of service required to draw a pension annuity from 20 years to 25 years. Members serving under the terms of the Intermediate Engagement (IE) 20 prior to 1 Apr 2005 would be eligible for pension upon completion of 20 YoS.⁴¹ Members who had not signed an IE20 due to current Terms of Service obligations had the option to sign the IE25 when offered, accept a Continuing Engagement (CE) or release from the Canadian Armed Forces. The consequences of this choice are discussed further in the paper.

Under the CFSA, members are entitled to an unreduced pension upon release from the CAF if a member has achieved one of the following:

1. have 25 years (9,131 days) of Canadian Forces service
2. are age 60 with at least two years of pensionable service
3. are age 55 with 30 years of pensionable service
4. are involuntarily released due to a reduction in the Canadian Armed Forces (CAF) and either:
 - have 20 years of pensionable service or
 - are age 55 or older with 10 years of pensionable service⁴²

Canada: Pension Calculations

The pension is calculated as follows:

⁴⁰ Treasury Board of Canada Secretariat, "Pension contribution rates for the 3 major public sector pension plans," last accessed 28 April 2022. <https://www.canada.ca/en/treasury-board-secretariat/services/pension-plan/active-members/pension-contribution-rates-major-public-sector-pension-plans.html>.

⁴¹ Justice Laws Website, "Canadian Forces Superannuation Regulations C.R.C., c. 396, 2006-03-22 to 2006-12-31," last accessed 28 April 2022. https://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._396/20060322/P1TT3xt3.html.

⁴² Public Services and Procurement Canada, "Active member with two or more years of pensionable service," last modified 6 January 2021. <https://www.tpsgc-pwgsc.gc.ca/fac-caf/act/rnsrgm/aprdap-petmy-eng.html>.

$2\% \times \text{number of years of pensionable service (maximum 35 years)} \times \text{average salary for the 5 consecutive years of highest-paid service (maximum 35 years)} = \text{Annuity}$

Scenario: Major Smith, $2\% \times 25 \text{ YoS} \times \$123,429 = \$61,714$ per annum

Members that release prior to fulfilling the IE25 criteria are returned their pension contributions to the fund plus interest if their service was less than two years or will receive a deferred annuity at age 60. “A deferred annuity is an unreduced pension that becomes payable at age 60.”⁴³ Members are entitled to a deferred annuity with two or more years of pensionable service and are not entitled to an immediate annuity upon release from the Regular Force.”⁴⁴ Release from the Regular Force before reaching age 50 allows redemption of earned pension benefits as a transfer value, lump-sum payment equal to the value of the future pension benefit (deferred pension) in exchange⁴⁵. These features provide some flexibility and allow members to gain employment outside the CAF while investing in an alternative pension scheme. While members have some choices in particular situations, the plan maintains its simplicity through ridged regulations, unlike the flexible Australian pension schemes.

Canada: Comparison

Suppose Major Smith joined the CAF at age 18 and decided to leave after 20 YoS, the former immediate annuity point for IE20. The annuity would be \$49,371 but deferred until age 60. As a result, under the former IE20, the cumulative present value at age 85 would have been \$2,369,848 versus \$1,283,667 under the IE25 scheme because of the cumulative values of 22 missed annuities. The benefits for members are significantly

⁴³ Public Services and Procurement Canada, “Active member...”

⁴⁴ Ibid..

⁴⁵ Ibid..

different if a member leaves between 20 and 25 YoS but are the same between schemes once completing 25 YoS. The policy design change encourages members to remain in the CAF until 25 YoS; however, there is a potential drawback to retention by pushing the “carrot” (immediate annuity) down the road.

Canada: Retention

The 2006 amendment from IE20 to IE25 to the CFSA Regulations intended to increase personnel retention later in members' careers. How did the amendment impact retention? A Chief of Military Personnel study plotted attrition against YoS (Figure 2).⁴⁶ The graph showed several trends, with three being particularly obvious. The first point, labelled "A" at 20 YoS, is attributable to members completing the IE20 and releasing with an immediate annuity. Presumably, this point spike should shift to 25 YoS when members serving under the IE 25 reach this point in 2030. The second point, labelled "B" at 25 YoS, is notable only as an even multiple at which to retire. This point is similar to the third point, labelled "C" at 30 YoS, enabling pension annuity indexing at the earliest opportunity of age 55. The fourth area labelled "D" represents the heightened releases by Men and Women in YoS 10 through 13 and is the period when Regular Officer Training Plan (ROTP) members complete 60 months of obligatory service. Coincidentally, IE20 or IE25 is offered for the first time, depending on the member's trade. Accepting an IE20 meant that the member had between seven and ten years until receiving an immediate annuity; therefore, more YoS completed than remaining. However, accepting an IE25 means completing more YoS (12 to 15) before receiving an immediate annuity than has passed. The theory expected elevated levels of releases at Point "D."

⁴⁶ Chief of Military Personnel, Director General Military Personnel Research and Analysis, *Annual Update of Regular Force (Reg F) Attrition*, April 2022. P. 6.

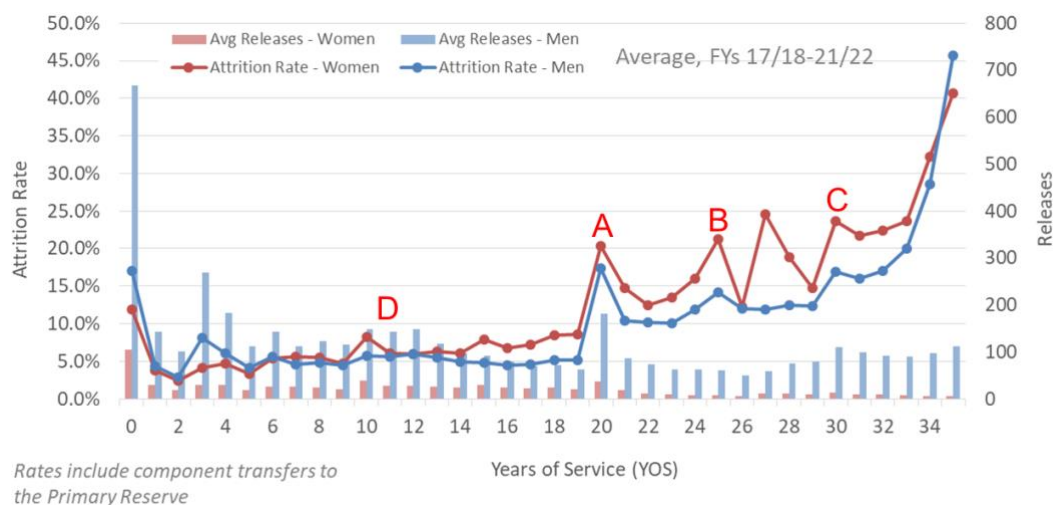


Figure 2: Attrition Rates by YoS and Gender

Member release data (Annex A) from the Director General Military Personnel Research was plotted on a 3D chart (Figure 3). An additional dimension added the actual releases expanded over fiscal years. This approach shows the distribution of releases instead of the average in Figure 2. Analysis of the data did not show a correlation between the introduction of IE25 and releases as anticipated. The red ellipse indicates the area where it would most likely have appeared. The number of releases in the last few years is higher than before the Force Reduction Plan (1997); however, other factors likely had a more significant impact embedded in the data. Around the same time as the introduction of IE25, the forces conducted accelerated recruiting, which resulted in elevated levels of releases within members' first YoS. This YoS was removed from Figure 3 as it greatly overwhelmed the chart's scale, making it unusable. Annex A numerically presents these statistics. The expected result was that there would be significantly more releases starting in FY12/13 by members with 9 to 13 YoS than in FYs prior to this point. FY12/13 was significant because it is six years past the introduction of the IE25 and is approximately when members on a Variable Initial Engagement (VIE) begin to expire. VIE lengths for NCMs average 5.6 years and Officers 9.4 years and is

the point when members first choose IE25 and realize the YoS before them prior to an immediate annuity.⁴⁷

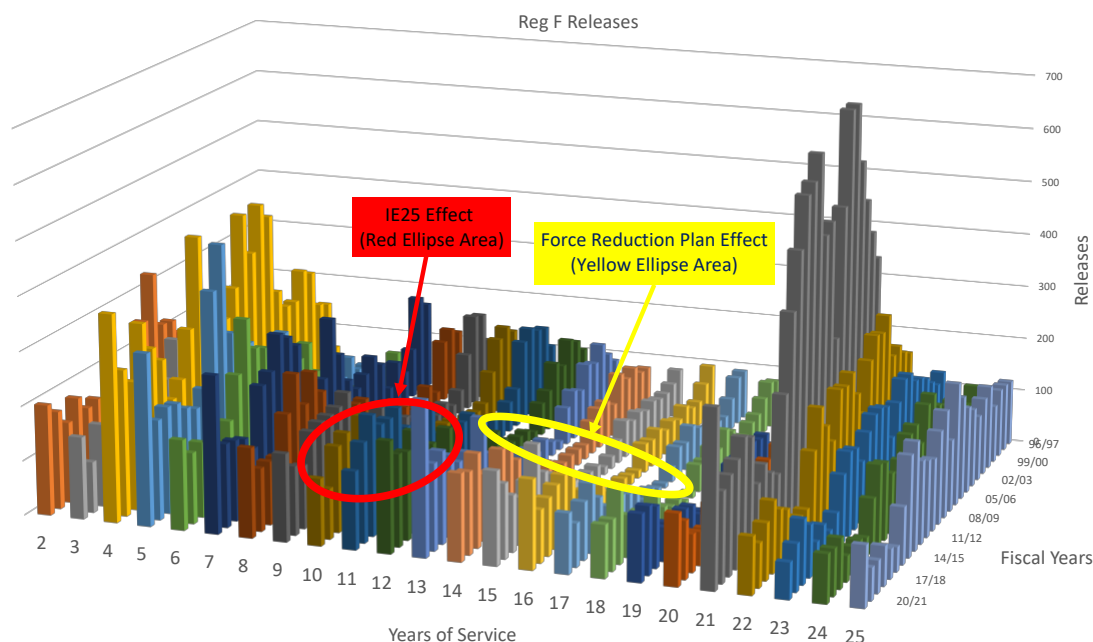


Figure 3: Reg F releases as a function of Years of Service and Fiscal Years

Figure 3 shows that the effect of the Force Reduction Plan's low number of releases, beginning prior to FY97/98, has progressed diagonally as a valley indicated by the yellow ellipse in Figure 3. Canada's contribution to Afghanistan likely suppressed releases during this time because of high morale in the CAF. Following this period, releases increased gradually and peaked between FY06 and FY09 during the CAF's aggressive hiring strategy and reduced enrollment standards. There was an increase in personnel, but the attrition rates were abnormally high, from 20% to 25%, where the objective rate is 6%. As this group progressed in YoS, the bulge merged with the

⁴⁷ Chief of Military Personnel, *Military Personnel Instruction 05/05, Annex A, Appendix 1, TOS Sequence by Occupation*, 16 March 2018. P. 1-4.

suspected IE25 effect. While there is a marginal increase in releases over this period, it is not enough to conclude that the change in the pension scheme affected retention.

Country Scheme Comparison

After presenting the three country's pension schemes and comparing the evolutions within each country, it is conclusive that the benefits for members have decreased in the last few decades. Using the Major Smith example throughout the paper allows for a quantitative comparison. As discussed throughout, many features of the pensions were not compared for brevity and are similar, including death (survivor) and disability insurance and indexation. Table 5 presents the results using the present value of the total benefit within the current schemes. Major Smith's salary was adjusted throughout the paper to align with the retiring salary of a senior ranked Major after 25 years of service.

Table 5 – Pension Comparisons (AUS, UK, CAN)

	Australia (AUD)	United Kingdom (GBP)	Canada (CAD)
Scheme	ADF Super	AFPS 15	IE25
Pensionable Salary (Final or Average)	\$132,131	£64,642	\$127,356
Annuity	N/A	£10,733	\$61,714
Total Annuity Payments to Age 85	N/A	£786,180	\$2,715,451
Lump sum	\$2,337,032	£29,366	N/A
Total Benefits (Present Value @ Age 85)	\$2,337,032	£815,546	\$2,715,451
Currency Exchange	AUD/CAD	GBP/CAD	N/A
Exchange Rate (29 Apr 2022)	\$0.91	\$1.62	N/A
Total Benefits (Present Value (CAD))	\$2,122,025	\$1,317,922	\$2,715,451

Table 5 shows the side-by-side comparison of the current schemes in each country. Australia's change from the Military Super to ADF Super has reduced the

benefits while shifting the fund risk to the member. The Military Super's generous scheme was once comparable to the CAF pension but is no longer in the ADF Super. The UK's AFPS 15 is the least beneficial, and it also took a significant decrease in benefits from its former versions. The McCloud Judgement may benefit members caught in transition in the short run. It is important to note that the UK Government fully funds this pension, and this fact must be a consideration when compared to the CAF IE25 pension, where members of the CAF must contribute up to 12% of their pre-tax pay. The contribution is more than double that of the mandatory contributions in Australian schemes. It could be enough to make up for the difference in benefits if the UK member invested that money. Finally, the CAF IE25 plan is the most beneficial to the member. The total fiscal benefits are the greatest, and the Government continues to bare the fund's investment risk.

Conclusion

This paper has shown two crucial points. The Canadian Armed Forces Pension showed its benefits are superior to the current pension schemes of Australia and the UK. The second point is that the modification to the CFSA Regulations in 2005 did not have an identifiable impact on personnel retention as anticipated. Therefore, altering the CAF pension scheme to retrograde it to an IE20 is not recommended. Additionally, doing so could allow the implementation of a DC scheme, which this paper has shown is less beneficial to members.

Pension history dating back to the Roman Empire had common reoccurring themes: pension necessity and cost reduction. Government and private sector employers continue to search for efficiencies to reduce costs. Statistics Canada reported that

Registered Pension Plans (RPP) membership is rising as of 2019, and two-thirds of RPPs are DB schemes; however, compared to the rise in DB pensions (1.4%), the rise of DC (2.4%) and hybrid models (3.8%) is increasing faster.⁴⁸ Motivated by profits, the private sector has moved away from DB pension schemes to DC pension schemes, putting the risk on employees and providing a less generous pension. While not previously mentioned, this trend deepens the global income inequality gap.

More than ever, Armed Forces are competing with the Private and Public sectors for personnel, especially quality personnel. One existing component of attracting personnel is the DB pension and the ability to receive an immediate annuity after 25 YoS. The Canadian Forces Recruiting Group needs to promote the uniqueness of the benefit and differentiate the CAF from the private sector's DC or hybrid schemes. Current CAF members must be educated on the CFSA to promote and retain personnel.

The year 2030 will be interesting if the spike in releases shifts from the 20 YoS points to the 25 YoS point. More importantly, to see if the release rate distribution remains the same. How will the Millennial and Generation Z workforce react to remaining in the CAF for 25 years? Is this part of the current recruiting deficit? There is also a potential to change the pension scheme by following suit with other allied nations and corporations toward a DC pension scheme, a realistic yet unpleasant thought to members of the CAF. For the time being, all CAF members should appreciate the benefits of a properly funded pension scheme.

⁴⁸ Statistics Canada, *Pension plans in Canada, as of January 1, 2020*, last modified 29 June 2021. <https://www150.statcan.gc.ca/n1/daily-quotidien/210629/dq210629c-eng.htm>

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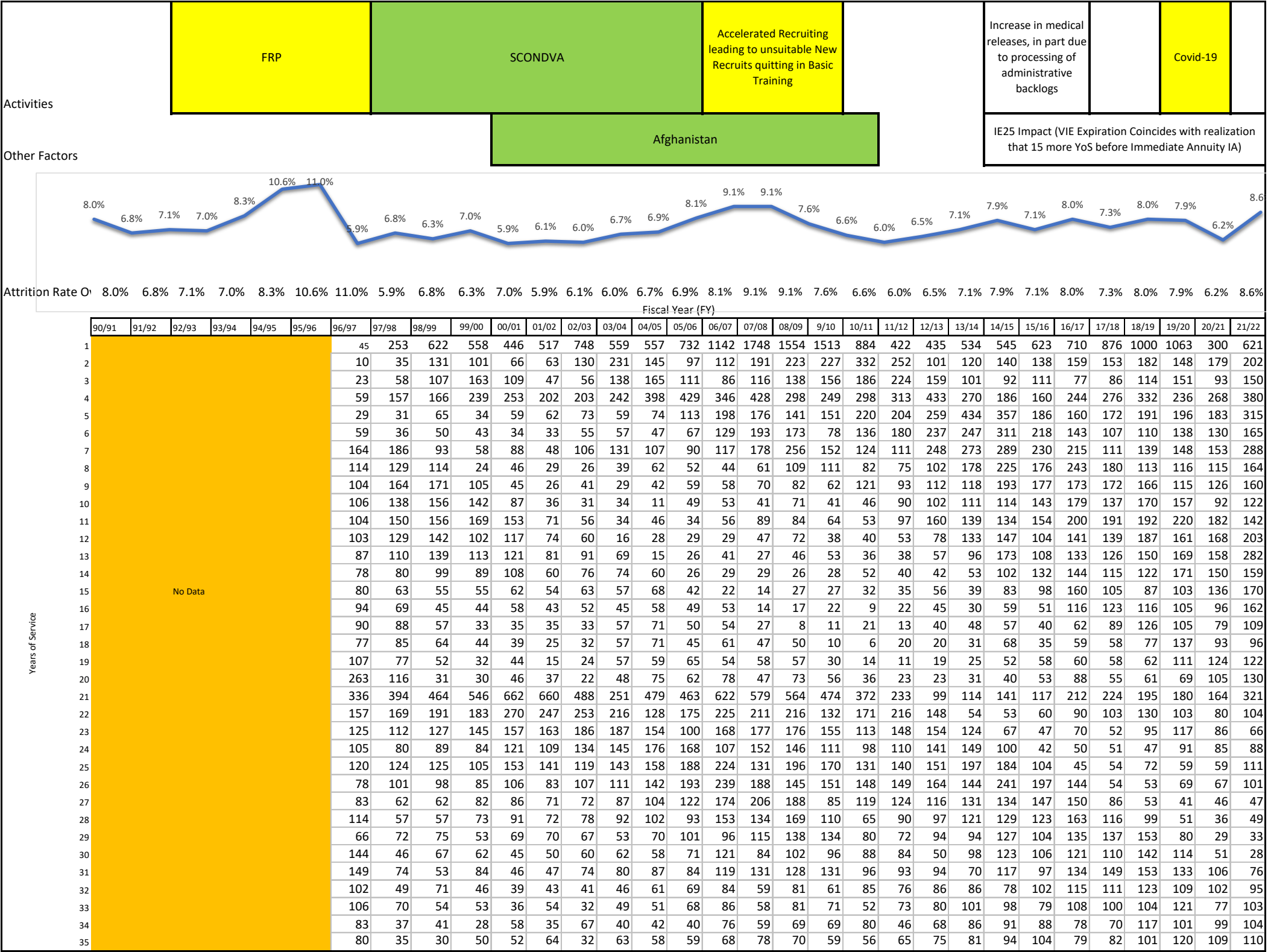


Table A – I: Years of Service versus Fiscal Year⁴⁹

⁴⁹ Chief of Military Personnel, Director General Military Personnel Research and Analysis, Director Research Workforce Analytics.