



The Canada First Defence Strategy of 2008 And The 20 Year Defence Budget

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Introduction

The long awaited “Canada First Defence Strategy” (*CFDS 2008*)¹ was quietly placed on the DND website over the evening of Thursday, June 19, 2008. Given that it followed the unveiling of the Liberal Party’s “Green Shift” carbon tax policy earlier in the day and immediately preceded the House rising for its summer break on Friday, those of a cynical persuasion might conclude that the unusual timing was carefully designed to avoid media attention.

This was unfortunate, since *CFDS 2008* provides an interesting and helpful innovation in the inclusion in it of a twenty-year “new long-term funding framework” for the Defence Department, a feature which was not characteristic of previous White Papers and Policy Statements.

First, the Good News

Three things stand out in that “long term funding framework.”

The first is the promise of an annual “Real Growth” in the defence budget of 0.6% from a FY2008-9 baseline of “approximately \$18 billion.”

The second is the promise that any operational deployments, such as that to Afghanistan, will be funded separately from the baseline defence budget.

The third is the impact on the capital budget of the adoption of Accrual Accounting and Budgeting.

As is usually the case when highly complex matters are reduced to a single sentence, “the devil is in the details,” and the *CFDS 2008* is no exception to that rule.

The “Real Growth” Promise

The Prime Minister’s key defence budget announcement at the 2008 seminar of the CDA Institute was that the annual automatic increase to the defence budget to compensate partially for the “loss of purchasing power” would be increased from 1.5% to 2% ,starting with FY2011/12.

CFDS 2008 repeats the promise, but the charts and tables provided lead to a bit of confusion with respect to the 2% figure. Chart 2 of the *CFDS 2008*, “Defence Average Growth,” covers three periods: the first is the 20 year period from FY1986/87 to FY2005/06 (including the “Decade of Darkness?”), the second is the two year period from FY2006/07 to FY 2007/08 (the defence programme “re-set” years), and the third is the 20 year period from FY2008/09 to 2027/28.

It provides for each a column showing a “Nominal Growth” column (which includes both Real Growth component and an Inflation component) and a Real Growth column. It doesn’t provide an Inflation column, however, but it is easy to calculate one, as we have done in the following table.

It appears, then, that the 2.0%

Period	Nominal Growth	Inflation	Real Growth
FY1986/8 to FY2005/6	2.2%	2.6%	-0.4%
FY2006/7 to FY2007/8	10.8%	2.3%	8.5%
FY2008/9 to FY2027/28	2.7%	2.1%	0.6%

1. http://www.forces.gc.ca/site/focus/first/defstra_e.asp



increase is really a 2.1% inflation increase, which, when coupled with a 0.6% Real Growth increase, produces a Nominal Growth (Real Growth plus Inflation) increase of 2.7% annually over the twenty year timeframe of the *CFDS 2008*.

The effect of that increase can be seen in the following table, which is in billions of dollars. The Equipment Budget is a constant 12% of the total budget.

Fiscal Year	2.7% Increase	Total Budget	Equipment Budget
2008		18.29	2.19
2009	0.49	18.79	2.25
2010	0.51	19.29	2.31
2011	0.52	19.82	2.38
2012	0.54	20.35	2.44
2013	0.55	20.90	2.51
2014	0.56	21.46	2.58
2015	0.58	22.04	2.64
2016	0.60	22.64	2.72
2017	0.61	23.25	2.79
2018	0.63	23.88	2.87
2019	0.64	24.52	2.94
2020	0.66	25.19	3.02
2021	0.68	25.87	3.1
2022	0.70	26.56	3.19
2023	0.72	27.28	3.27
2024	0.74	28.02	3.36
2025	0.76	28.77	3.45
2026	0.78	29.55	3.55
2027	0.80	30.35	3.64
Total	12.06	476.83	57.22

CFDS 2008 states that “Overall, the Government will spend close to \$490 billion on defence over the next 20 years,” which is about \$13 billion higher than that shown in the chart, which may be nothing more than a cumulative rounding error.

Whether the *CFDS 2008* estimate of future inflation rates of 2.1% annually will be correct is an interesting question, since the assumed rate for the future 20-year period represents a smaller figure than that experienced in the previous 20 year (2.6%) or 2 year (2.3%) periods.

A return to the 2.6% inflation rate of the previous 20-year period, for example, would cut the promised Real Growth rate from 0.6% to 0.1%.

Separate Funding for International Operations

CFDS 2008 also promises that “In addition to this new formula, the Government is committed to separately fund incremental costs for major operations.” It also states that “These adjustments will not affect the baseline for the long term planning figures”

These sums can be substantial. The *Report on Plans and Priorities 2008/9* reported the incremental cost of three Afghanistan operations (OP ATHENA, OP ARGUS, and OP ARCHER) to be \$1.011 billion in that year.

There is some question of whether the calculation of incremental cost fully captures the reduced service life of vehicles and equipment that have been subjected to the high usage and extreme environment of Afghanistan, since Treasury Board is reluctant to fund a projected loss of future life expectancy, though the funding of actual repairs undertaken does not present a particular problem.

Allocating the Defence Budget

CFDS 2008 allocates the cumulative twenty year Defence Budget to categories as follows, based on the total budget figure of \$490 billions in the *CFDS 2008*, instead of

Component	%	Total (Billions)
Personnel	51%	\$250
O&M	29%	\$140
Equipment	12%	\$60
Infrastructure	8%	\$40
Total	100%	\$490



the calculated \$477 billion.

The allocation of only 12% of the budget to Equipment will be of concern to those who have argued for a much higher investment in re-capitalization of equipment. Former Deputy Minister Buzz Nixon used to argue during the Cold War that it really should be in the order of 27% of the Defence Budget, and various statements have been made since that a figure of at least 23% would be required.

Unfortunately, four of the major capital projects listed in *CFDS 2008*, including two that are likely to be the most costly of all, the CF-18 replacement project and the destroyer/frigate replacement project, have not yet been assigned a preliminary costing, so it is difficult to determine at this stage what the appropriate capital share of the budget should be.

Moreover, the change of the Government of Canada accounting model from Cash Based Accounting to Accrual Based Accounting also changes the way in which capital costs are accounted for.

The Impact of Accrual Budgeting

With the advent of Accrual Accounting has also come the adoption of Accrual Budgeting. Readers familiar with accounting practices will recall that the key concept contained in Accrual Accounting is that Capital Equipment should be held on the Balance Sheet of an organization at the purchase value of the equipment and charged to the annual Income Statements only in proportion to the extent to which it has been “used up,” which is usually based upon a depreciation schedule based on the useful life of the item. DND, for example, has adopted for accounting purposes, accrual service lives of 25 years for ships, 20 years for aircraft and land vehicles, and shorter periods for IT hardware and software.

The practical difference between Cash Based Budgeting and Accrual Budgeting, in terms of the impact on the

Capital Budget, can be seen in the following table, based on data drawn from *Report on Plans and Priorities 2008/09*.

Strategic Airlift Project			
Total Project Cost \$1.8 billion			
Year	Cash Budget	Accrual Budget	Difference
FY2007/8	965,512	90,111	875,401
FY2008/9	256,863	141,080	115,783
FY2009/10	208,662	157,498	51,164
FY2010/00	237,092	79,770	157,322
Total	1,668,129	468,459	1,199,670
Future Years	131,871		

The Strategic Airlift Project involves a series of cash payments spread over the project life.

Within a Cash Budgeting framework the payments would be charged to the defence capital budget (Vote 5) in their entirety in the year that the payment was made. In this case, a charge of \$965.5 million would have been charged to the capital budget of FY2007/08.

In the Accrual Budgeting framework, however, only the depreciation for a specific year would be charged to the capital budget of that year—in this case, a sum of only \$90 million would be charged to the FY2007/08 capital budget. The difference, some \$875 million, could then be used to fund other capital projects.

The effect, then, of Accrual Budgeting is to permit a larger capital investment in the early years, until the total annual depreciation booked is equal to the Vote 5 (Capital) figure for that year.

The amount of re-capitalization room available can be quite substantial as the following table, which includes all major capital projects for the four-year period, demonstrates.

CFDS 2008 notes that the useful life



Total of All Major Capital Projects Included in RPP 2008/09			
Year	Cash Budget	Accrual Budget	Difference
FY2007/8	1,296,719	108,843	1,187,876
FY2008/9	1,301,207	232,482	1,068,929
FY2009/10	1,432,202	280,029	1,152,173
FY2010/00	1,657,423	222,278	1,435,145
Total	5,687,551	843,632	4,844.123

of a number of these fleets extends beyond the twenty year period of *CFDS 2008*, with the result that not all depreciation will have been booked by the end of the period. This was the source of what the media described as a contradiction between the statements of the Minister and the VCDS as to the total

size of the capital budget.

The Minister referred to the total amount of depreciation during the twenty year *CFDS 2008* period. The VCDS referred to the total value of the capital including the amount to be depreciated after the end of the twenty period.

The following table shows this division between the *CFDS 2008* timeframe and that post *CFDS 2008* timeframe.

In order to simplify calculations the "End of Life" year is based upon the Service Life and IOC (Initial Operational Capability) year. In fact, equipments will be delivered sequentially and those delivered will end their service lives later than the year shown.

Similarly, the amount of depreciation booked in a given year will be affected by the spacing of sequential deliveries, but that is a refinement which does not need to be addressed in an overview paper such as this.

Project	Number	Service Life	Planned IOC	End of Life	Years Expensed To 2027	Years Remaining After 2027
Leopard 2 MBTs	100	20	2007	2027	20	0
Heavy Airlift	4	20	2008	2028	19	1
Maritime Helicopter	28	20	2010	2030	17	3
Medium Trucks	2400	20	2011	2031	16	4
Medium Airlift	17	20	2011	2031	16	4
Medium Helicopters	16	20	2011	2031	16	4
Joint Support Ships	3	25	2012	2037	15	10
Arctic Patrol Ships	6-8	25	2014	2039	13	12
Fixed Wing SAR	17	20	2015	2035	12	8
Destroyers and Frigates	15	25	2015	2040	12	13
Fighter Aircraft	65	20	2017	2037	10	10
Maritime Patrol Aircraft	10-12	20	2020	2040	7	13



Will it Work? Assessing the Risks

Operational Risk

We have commented before on the impact of age on the major platforms of the Canadian Forces.¹ What remains to be asked is whether *CFDS 2008* will be able to deliver replacements in a timely enough fashion to enable the CF to function.

The following table compares the IOCs cited in *CFDS 2008* to the accrual lives, calculated using Accrual Accounting methodology, of the platforms to be replaced. In reality, of course, the CF has been forced to keep equipment in service far beyond the accrual service lives.

It is hard to avoid concluding that *CFDS 2008*, welcome as it is, has come too late to solve the severe operational risk associated with continuing to employ platforms which, in many cases, will be still operating at twice their accrual lifespans.

Platform	Service Life (years)	CFDS IOC Date	Predecessor Age at IOC Date (years)
Maritime Helicopter	20	2010	47
Medium Trucks	20	2011	29
Medium Airlift	20	2011	48
Medium Helicopters	20	2011	New
JSS	25	2012	43
AOPS	25	2014	New
FW SAR	20	2015	49
Destroyers	25	2015	43
CF18	20	2017	36
MPA	20	2020	40

1. *Understanding the Crisis in Canadian Security and Defence*. Ottawa: Conference of Defence Associations Institute, 2005

The increased maintenance costs, “mean times between failures,” and questionable availability of such platforms will act as severe, and perhaps unsolvable, constraints on the CF’s capacity to carry out some or many of its operational tasks.

In such a context the criticality of the procurement system being able to deliver replacement platforms on time and on budget becomes paramount.

Accrual Budgeting Caveats

To some extent the advent of Accrual Budgeting has seemed like the arrival of a “Good Fairy” whose shiny wand will magically solve all the financial problems of the CF. This has left some more skeptical and less-trusting observers to opine that there must be a catch there somewhere.

And there is.

In the private sector there are three key financial documents. In addition to the Balance Sheet and the Income Statement that we have mentioned earlier, there is also the “Cash Flow Statement,” which describes the sources and uses of Cash. The Cash Flow statement normally has three sections: Cash Provided by Operations, Investing Activities, and Financing Activities (borrowing money and/or issuing shares).

Such a document will be required for the application of Accrual Accounting to the public sector as well, since the Government must pay in cash for equipment deliveries when they occur, regardless of how the expenditure is accounted for. Government (that is, Treasury Board) approval is required for major purchases as they come forward. If the Government has limited spending room to commit to a purchase, it may delay, downscale, or reject a proposal.

In the end, the Government has to be in a position to sign the cheques for capabilities, and their ability to do this over the longer term is difficult to predict. If, for example, the economy trends downward and the Government faces a possible deficit, it may decide to defer or even reduce DND



spending. This could create pressures in the form of unfulfilled capabilities, the need to extend existing equipment, and forgone ‘accrual space’ in the capital budget.

Moreover, the provision of that money may be subject to the political risks inherent in future governments’ policies and priorities. And we have the precedent that even when a contract has been signed, it remains subject to the political risk of a future government tearing up the contract even when required to pay substantial sums to do so—as was exemplified by the decision by Prime Minister Chrétien to cancel the EH-101 contract.

CFDS 2008, in particular, is very much subject to this sort of risk since so much of the “New Major Fleet Requirements,” amounting to \$45-50 billion in “Cash” requirements, will not be contracted before the end of the current government’s term in fall 2009, or earlier if it is defeated in the House.

Moreover, care must be exercised to ensure that the projected resources available are exploited to the maximum benefit – the best bang for the buck in the long run. In the case of accrual accounting, commitments made in the short to medium term will incur a long term draw on the defence budget that will ‘fence off’ a part of the defence budget, not only for the acquisition but often for the long-term contracted in-service support as well. If initial capital acquisitions are too aggressive, or don’t work out for some reason, there will be limited flexibility to make adjustments.

Finally, there is the question of the overall appropriate depreciation rate to be used in department-wide analysis. A re-examination of the previous annual depreciation tables for the Strategic Airlifter project and for the totality of projects listed in RPP 2008/09 reveals that the annual rates vary considerably. Obviously, the stage of development of a robust whole-of-DND depreciation schedule is still in its infancy. There is

nothing untoward in this—it is simply an artefact of a research-in-progress.

But it means that robust analysis of DND Accrual Accounting and Budgeting is some time away.

Procurement Risk

The Canadian defence procurement system has been subjected to many studies seeking to understand what is wrong with it, what specific deficiencies exist, and what might be done to reform and eliminate them.

The effect of these deficiencies of the Canadian defence procurement system is, of course, to delay the timely acquisition of vitally needed equipment, and in some instances put at risk the lives of Canadian Forces members. This is particularly the case at this moment when the degree of Operational Risk of the CF has not been matched since the period of the 1930s.

Unfortunately, *CFDS 2008* has not provided any financial estimates of the cost of five critical procurement projects: the CF-18 replacement project (other than to indicate that the number of aircraft will be reduced from the current 80 to 65), the Destroyers and Frigates replacement project, the Fixed Wing Search and Rescue replacement project, the Maritime Patrol Aircraft project, and the Land Combat Vehicles and Systems project.

However, we are told that the initial version of the *Strategic Investment Plan* required for the full implementation of the *CFDS 2008* will be submitted to Treasury Board in November of 2008 as “part of a pilot project associated with that agency’s new Policy on Investment Planning.”

We are also promised that these projects will be implemented by means of the same transparent and open competitive bidding system that has been able to achieve a normal procurement cycle of sixteen years from the formal recognition of the legitimacy of the requirement to the actual delivery of the first platform designed to deal with that deficiency.



On the other hand, the government has been able to move some projects forward with unusual speed by the use of a single sourcing alternative process which involves the invocation of the National Security Exemption (NSE) to remove the contract from the provisions of the various trade pacts, and the use of an Advance Contract Award Notice (ACAN) which specifies an intent to award the contract to a specified supplier, but allows a firm which believes it has a competitive product to make an alternative proposal .

One example of the use of the ACAN process was the acquisition of the M-777 lightweight medium howitzers for immediate deployment to Afghanistan—an acquisition which provided the Canadian Artillery with the most effective lightweight medium howitzer in existence today.

Another was the acquisition of the four C-17 strategic air-lifters, the first of which came into service almost as soon as the contract was signed, and whose acquisition reduced the “platform burnout” impact on our severely overstretched C-130 fleet.

In both cases DND was able to get preferential treatment by the US DOD which allowed us to get priority in the delivery of the equipments. Another factor in the speed with which these contracts were awarded was that they were buys of “off the shelf” items, without special Canadian requirements which would necessitate a specific production run to accommodate those differences.

Other projects, such as the JSS project, have progressed with a more traditional Request for Proposals and a competitive bidding process.

Inflation Risk

The critical financial assumption of *CFDS 2008* is found in the projection that the annual Nominal Growth in the defence budget for the twenty year period from FY2008/09 to FY 2027/28 will be 2.7%. This projected Nominal Growth figure is

made up of Real Growth of 0.6% annually and Inflationary Growth of 2.1% annually.

The projected Inflationary growth factor is consistent with the Bank of Canada’s inflationary goals of 1-3%, even though there may be significant differences from year by year.

For example the Bank of Canada’s July 2008 *Monetary Policy Update* notes that whereas 2007 inflation of 2.1% was consistent with the policy goal, that of 2008, because of the impact of sharp increases in commodity and food prices resulted in projected inflation in 2008 of 3%, and that for 2009 is projected at 2.8%, both greater than the CFDS 2008 forecast.

There is also the question of how closely changes in the Consumer Price Index match changes in the price of the “basket” of goods and services consumed by the defence budget, which is quite different from that of the CPI.

Major military platforms, for example, characteristically contain a large Information Technology component in sensors, weapons, and systems integration. Information Technology in turn is characterized by an extremely rapid technological research and development cycle. This makes cost forecasting for military systems extremely difficult except over a very short timeframe.

The effect of this can be seen in the rapid escalation of costs during the Development stage of new equipments. For example, the US Congress Government Accountability Office report “Joint Strike Fighter: Recent Decisions by DOD Add to Program Risks,” published March 2008, noted that overall Development costs and Development costs per individual aircraft had risen sharply, and made the comment that “Two-thirds of budgeted funding for JSF development has been spent, but only about one-half of the work has been completed.”

The Report provided the figures in the following table which display a five year Development cost increase of 28.5%, or about 4.5% annually.



Year	2001	2003	2005	2006
Total Cost (\$ billions)				
Development	34.4	44.8	44.5	44.2
Procurement	196.6	199.8	231.7	255.1
Construction	2	0.02	0.02	0.05
Total Cost	233.0	244.6	276.2	299.4
Aircraft	2,866	2,457	2,458	2,458
Per aircraft cost (\$ millions)				
Total	81	100	112	122
Procurement Only	69	82	95	104

The 51% increase in “Procurement Only” costs per aircraft over the same period is driven primarily by the decision to reduce the total number of aircraft to be procured, which reduces the number of aircraft over which the fixed costs of the project can be spread—another factor to be considered in procurement analysis.

Nor can we ignore personnel costs, which account for 51% of the DND “basket.” Public sector wage settlements over the period 2005-2008, according to HRDC’s *Workplace Bulletin* of Jun 13, 2008, averaged 2.83%, with settlements in the first four months of 2008 running at 3.1%. Both figures are in excess of the Nominal Growth rate of 2.7% cited in *CFDS 2008*, let alone the 2.1% allowed for inflation. The competition for highly trained workers in short supply in technical sectors may well lead to salary increases well beyond such averages.

Moreover, the increasing use of private sector contractors to undertake an increasing share of long term O&M tasks indicates that private sector wage settlements should also be taken into consideration. *The Workplace Bulletin*, already cited, reports that the average private sector wage settlement over the four years cited ran at 2.85% with settlements in 2008 running at 3.6%.

Admittedly, these cost growth

examples are selective, and taken over a short 4-5 year period. They cannot be taken as a firm projection of overall cost increases over the future twenty year period.

Nonetheless, they should act as a cautionary with respect to the 2.7% Nominal Growth, 2.1% annual inflation growth, and 0.6% Real Growth projections used by *CFDS 2008*.

The Defence Budget As a Percentage of GDP

A statistic that appears frequently in the discussion of defence budgets is that of military spending as a percentage of GDP (ME/GDP). It is a useful concept as a means of providing comparative analysis, either between countries, or within a single country, when comparing defence spending in different years. Its value in cross-country comparisons is that it is independent of movements in exchange rates. And its utility in within-country time series comparisons is that it allows for nominal GDP growth rates to be accommodated.

To establish a base line we take Canada’s fourth quarter 2007 GDP (Expenditure based) which is reported by Statscan as \$1,535.6 billion and “Total Departmental Spending” reported by Treasury Board Secretariat of \$18.6 billion to arrive at an ME/GDP of 1.21%.

The Bank of Canada *Monetary Policy Report Update* of July 15, 2008 predicts that real growth in the Canadian economy will be 1.0% and that inflation will be 3.0% for a total Nominal GDP growth of 4.0% in 2008. This will increase Canadian GDP to \$1,597.0 billion. TBS predicts a defence budget of \$19.5 billion, leading to a predicted ME/GDP of 1.22%.

For 2009 the predictions are 2.35% in Real GDP growth and 2.8% inflation for Nominal GDP growth of 5.15%. This would increase GDP to \$1.679 billion, whereas the defence budget would increase to \$20.1 billion and ME/GDP would decrease slightly to 1.19%.

This brings us to the start of the



CFDS 2008 20 year period of annual 2.7% increases in the defence budget. The following table provides three different scenarios in which Nominal growth in GDP of 3.1%, 4.1%, and 5.1% (which corresponds to the CFDS 2008 projection of 2.1% inflation plus real GDP growth of 1%, 2%, or 3%) and shows the ME/GDP prediction for each scenario.

Year	ME/GDP at 3.1% GDP Growth	ME/GDP At 4.1% GDP Growth	ME/GDP at 5.1% GDP Growth
2009	1.19%	1.19%	1.19%
2011	1.18%	1.16%	1.14%
2013	1.18%	1.13%	1.09%
2015	1.17%	1.10%	1.04%
2017	1.16%	1.07%	0.99%
2019	1.15%	1.04%	0.95%
2021	1.14%	1.01%	0.90%
2023	1.13%	0.99%	0.86%
2025	1.12%	0.96%	0.82%
2027	1.11%	0.94%	0.79%

between the Liberal and Conservative parties that the cuts in the defence budget during the post-Cold War period had gone too deeply and had to be reversed, and reversed quickly, if the de facto destruction of Canada’s defence capabilities was to be avoided.

If you like, there was a real Paul Martin/Stephen Harper/Bill Graham/Gordon O’Connor/Rick Hillier consensus that a massive re-funding of defence in Canada was necessary, the end result of which was *CFDS 2008*.

As the old adage goes, “The proof of the pudding lies in the eating,” and the defence community will remain closely engaged in watching how *CFDS 2008* will eventually evolve, particularly after the next election.

The caveats and cautions expressed in this paper are real enough, but at least there is hope that we have made the initial steps in avoiding the “Canada Without Armed Forces” crisis that we had previously warned against.

Summation

While *CFDS 2008* is a Conservative government policy document, its budgetary roots are traceable to the previous Liberal Party administration of Paul Martin, which also recognized the critical need to increase defence spending substantially. The Conservative government increased the funding level promises made by their Liberal predecessors, and actually have delivered even more than they had promised.

Nonetheless, a credible case can be made for the proposition that we have had, in effect, a de facto bi-partisan agreement

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