

*Accrual Accounting and
Budgeting in Defence*

Accrual Accounting and Budgeting in Defence

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The Claxton Papers

The Queen's University Defence Management Studies Program, established with the support of the Canadian Department of National Defence (DND), is intended to engage the interest and support of scholars, members of the Canadian Forces, public servants, and participants in the defence industry in the examination and teaching of the management of national defence policy and the Canadian Armed Forces. The program has been carefully designed to focus on the development of the theories, concepts, and skills required to manage and make decisions within the Canadian defence establishment.

The Chair of the Defence Management Studies Program is located within the School of Policy Studies and is built on Queen's University's strengths in the fields of public policy and administration, strategic studies, management, and law. The program offers, among other aspects, an integrated package of teaching, research, and conferences, all of which are designed to build expertise in the field and to contribute to wider debates within the defence community. An important part of this initiative is to build strong links to DND, the Canadian Forces, industry, other universities, and non-governmental organizations in Canada and abroad.

This series of studies, reports, and opinions on defence management in Canada is named for Brooke Claxton, Minister of National Defence from 1946 to 1954. Brooke Claxton was the first post-Second World War defence minister and was largely responsible for founding the structure, procedures, and strategies that built Canada's modern armed forces. As defence minister, Claxton unified the separate service ministries into the Department of National Defence; revamped the *National Defence Act*; established the office of Chairman of the Chiefs of

Staff Committee, the first step toward a single Chief of Defence Staff; organized the Defence Research Board; and led defence policy through the great defence rebuilding program of the 1950s, the Korean War, the formation of NATO, and the deployment of forces overseas in peacetime. Claxton was unique in Canadian defence politics: he was active, inventive, competent, and wise.

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Introduction

A growing number of national governments have made the transition from a cash-based accounting to an accrual-based accounting over the past two decades.¹ The shift in accounting methodology supports the broad-based reform and modernization of public sector management. This process, which is having a significant impact on how government is managed, needs to be clearly understood by practitioners, the Canadian public and the academic community. It should be noted, however, that management reform in the Canadian public sector has been an ongoing process that was effectively set in motion by establishment of the landmark Glassco Commission in 1960. The mandate of this commission was to

inquire into and report upon the organization and methods of operation of the departments and agencies of the government of Canada and to recommend the changes therein which [it considered] would best promote the efficiency, economy and improved service in the dispatch of public business.²

Despite the passage of forty-five years since the tabling of the Glassco Commission report in 1962, the issues investigated by that commission remain very topical.

Current public sector reforms followed the publication of *Results for Canadians: A Management Framework for the Government of Canada* in 2000.³ This report was aligned with other international developments to reform public sector financial management. The focus of the current international reform agenda is a response to demands from citizens across many developed countries for improved services

without increased tax levels. The response from governments was a shift from a traditional public sector management model to a model that was more aligned with private sector management. The citizen focus of *Results for Canadians*, and the shift in emphasis from inputs to outcomes, began the process of an ongoing profound shift in the way the public sector is managed in Canada. What is less apparent, however, is the impact that these changes are having on the internal management processes of the federal government. Perhaps the most important and influential long-term impact on public sector management from these changes will come through the adoption, and application, of accrual accounting within the federal government. The adoption of the private sector's accrual accounting practices and procedures by the Canadian government places the government alongside other developed nations and trading partners, including the United States, United Kingdom, Sweden, the Netherlands and Australia.⁴ The implementation of full accrual accounting in the federal government will have a profound impact on how the government operates and manages public resources. This is not simply a change in accounting procedures but a fundamental change in approach to the management of government resources. The application of "accrual accounting in public management has an impact far beyond the finance function. It affects regular work practices across government from political decision-making to daily operations."⁵

Accrual Accounting and Budgeting in Defence will examine how the transition to accrual accounting is having an impact on the defence of Canada. A unique study on accrual accounting in the Department of National Defence and the Canadian Forces ("Defence"), it provides the reader with both an academic and a practical perspective within National Defence Headquarters in Ottawa. The first chapter will provide the reader with essential background information on the federal government and on Defence, beginning with an outline of the budgeting process in the federal government. The second section of this chapter will emphasize that the Department of National Defence is a major land and equipment owner, and the third section will summarize the defence capital program. Chapter 2 will focus on accrual accounting, beginning with the basics of accrual accounting and followed by a discussion of accrual accounting in Defence. Chapter 3 is the central part of this study and considers accrual accounting in practice within the Department of National Defence. The first section of the chapter will discuss a number of current accrual accounting issues in Defence from

an overall corporate perspective, and the second section will focus on the application of accrual accounting within the Assistant Deputy Minister (Materiel) organization. Chapter 4 provides a summary of accrual accounting and budgeting in Defence. The study will conclude with an appendix illustrating an application of accrual accounting principles applied to new Defence capital equipment purchases.

CHAPTER 1

The Federal Government and Defence

BUDGETING IN THE FEDERAL GOVERNMENT

The government raises revenue through taxes, duties and tariffs, which is then spent on a multitude of programs and services that benefit all citizens. In order to manage these revenues and expenses, the government develops and implements a financial plan, commonly referred to as a budget. This financial plan, in effect, consists of two types of annual budgets. The first is a revenue budget, which is a forecast of government income over a twelve-month period. The second type is an expenditure budget, which is a forecast of government expenditures over the same period. The planning framework that this provides is called the fiscal framework and is a means of portraying the overall financial position of the government. The system currently used to manage the federal budget is called the Expenditure Management System.⁶

This section begins with a review of the principles underpinning the Expenditure Management System and the importance of accrual accounting in support of these principles. A description of the cyclical nature of the Expenditure Management System will follow, and the section will conclude with consideration of the role of central agencies in the budget process.

The Expenditure Management System

The EMS is at the heart of government operations. The processes and procedures by which the central agencies of government support Cabinet in allocating and managing government spending are key components

of the EMS. They are designed to help align resources with priorities, oversee spending, and establish the policies that departments will follow to manage and deliver their programs.

(Auditor General, 2006⁷)

The Expenditure Management System assists the government in making “responsible spending decisions by delivering the programs and services Canadians need in a way that they can afford and by meeting the required fiscal targets.”⁸ The system is based on four key principles. The first principle is the provision of a stable planning environment; the system sets the rules and the process to permit modifications to program spending. The second principle is a focus on medium- to long-term strategic planning, which consists of timely reviews of existing programs and their delivery, as well as the reallocation of expenditures to higher priorities. The third principle is consultation with Canadians and their parliamentary representatives; this includes public input to individual ministers, consultations with the Minister of Finance during budgets, and the House Standing Committee’s review and report on estimates. The fourth principle is process evaluation, which is achieved through the combined effect of providing incentives to encourage both effective planning and resource allocation, while generating performance information to attain better informed decisions and enhanced accountability. The four principles are linked and form an integrated process. The first three principles support establishment of a suitable environment, timely planning and broad consultations while the fourth principle focuses on improving performance management.

In a 1998 report to Parliament, the Auditor General assessed the government’s overall management of the Financial Information Strategy and emphasized the importance of that initiative in enabling effective scrutiny of government spending as envisioned under the Expenditure Management System. The report highlighted that, through the *Appropriation Act*, Parliament identifies funding available to the government. As a result, the Auditor General concluded, “Departmental planning, managing and reporting are primarily concerned with spending money to acquire resources. But governments do not exist to *acquire* resources; they exist to deliver programs and services and, in doing so, they *consume* or *use* resources.”⁹ The opinion of the Auditor General was that “a far better basis to plan, manage and report departmental operations is to focus on *the cost of resources consumed*, which requires full accrual accounting as envisioned by FIS.”¹⁰

Accrual accounting provides an effective bridge, linking internal government processes within the Expenditure Management System, for procuring, managing and disposing of capital assets. The use of generally accepted accounting principles to manage public sector capital assets increases the visibility and necessity of early strategic planning, involving the Department of Finance, Treasury Board and the department that will be purchasing the asset.¹¹ It assists and enhances maintenance of a stable planning environment and facilitates subsequent performance evaluation. This is particularly important for the Department of National Defence, which is the largest purchaser of capital assets in the federal government.

Principles of the Expenditure Management System

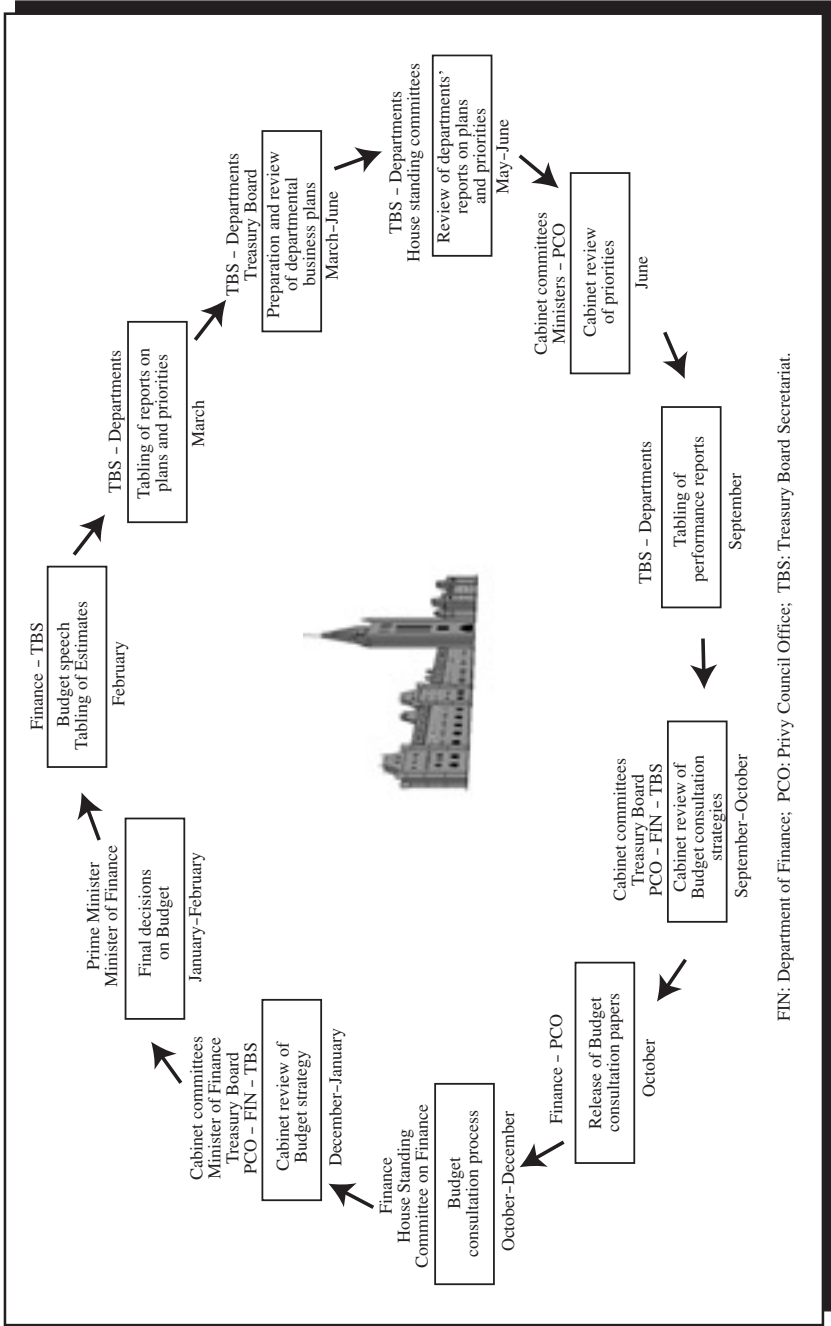
- Establishment of a stable environment
- Early strategic planning
- Consultation with Canadians and parliamentarians in the budget planning process
- Evaluation of the process

The financial or budgetary cycle “represents the practices and procedures employed by Parliament to plan, monitor, and control government spending over the fiscal year. It serves as a mechanism to ensure and enforce accountability and transparency of public fiscal management.”¹² Chart 1 outlines this budgetary cycle and highlights the integrated process that involves individual departments, central agencies, House standing committees, Cabinet committees, the Minister of Finance and the Prime Minister at different times during the cycle. The tabling of the Main Estimates in the House of Commons in February and the subsequent tabling of the annual Budget are of primary importance.

Central Agencies

Central agencies that support the budgetary process are the Privy Council Office, the Department of Finance and the Treasury Board Secretariat. A departmental priority of the Privy Council Office is to improve the management and accountability of the federal government, as well as to support the Prime Minister in his overall leadership responsibility.¹³ The Department of Finance is responsible for preparing

Chart 1. The Budgetary Cycle: The Expenditure Management System



the federal budget and for managing the fiscal framework.¹⁴ The Treasury Board Secretariat is responsible for providing advice and assistance to departments, as well as promoting and encouraging effective review practices; this is achieved through focusing on enhancing governance, accountability, and management practices.¹⁵

THE DEPARTMENT OF NATIONAL DEFENCE AS A MAJOR CAPITAL ASSET OWNER

This section will begin with a description of the assets owned by the Department of National Defence, followed by highlights of the categories of expenditure in the federal government that are dominated by the department. The section will conclude with a description of the realty assets owned by the Department of National Defence.

Defence Capital Assets

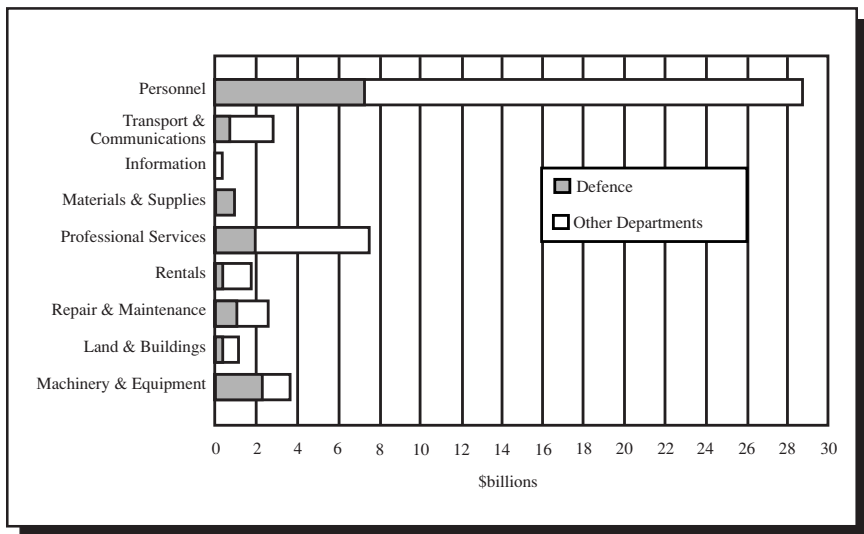
The Department of National Defence is one of the largest owners of capital assets in Canada. Table 1 lists the major categories of assets held by the department at March 31, 2007.¹⁶ The historical cost of the department's capital asset base of \$51.0 billion is distinguished by ownership of maritime vessels valued at \$12.7 billion, aircraft at \$12.3 billion, and military vehicles at \$1.3 billion. In addition, under the category of machinery and equipment, the inventory of arms and weapons amounted to \$4.9 billion, and informatics hardware and software were held at a cost of \$4.0 billion.¹⁷ These assets – specifically, the weapon systems they use, the armaments that support these weapons, and the information systems that allow the Canadian Forces to communicate and process vast sums of data – demonstrate the focus of the Canadian Defence establishment. Finally, the importance of a strong capital and infrastructure program is emphasized by the \$4.4 billion in work in progress.

Categories of Federal Expenditure Dominated by Defence

The Defence budget is unique within the federal system owing not only to its purpose and size, but also most notably to its composition. As demonstrated by Chart 2, the Department of National Defence's spending in several influential federal expenditure categories dominates the outlays in a number of central standard objects. The term *standard object* identifies the nature of expenditures that are made and provides

Table 1. Department of National Defence Capital Assets as at March 31, 2007 (in \$000s)

Land, buildings and works		\$ 7,331,705
Machinery and equipment		10,933,379
Ships, aircraft and vehicles		
Ships and boats	\$12,743,879	
Aircraft	12,296,194	
Non-military motor vehicles	555,285	
Military vehicles	1,333,978	
Other vehicles	<u>160,151</u>	
Total ships, aircraft and vehicles		27,089,487
Leasehold improvements		14,541
Leased tangible capital assets		1,264,751
Work in progress		<u>4,373,359</u>
Total capital assets		\$51,007,222

Chart 2. Defence Share of Federal Expenditure by Standard Object (2006–07 Estimates)

Source: Government of Canada Estimates 2005–2006: Part II, Main Estimates

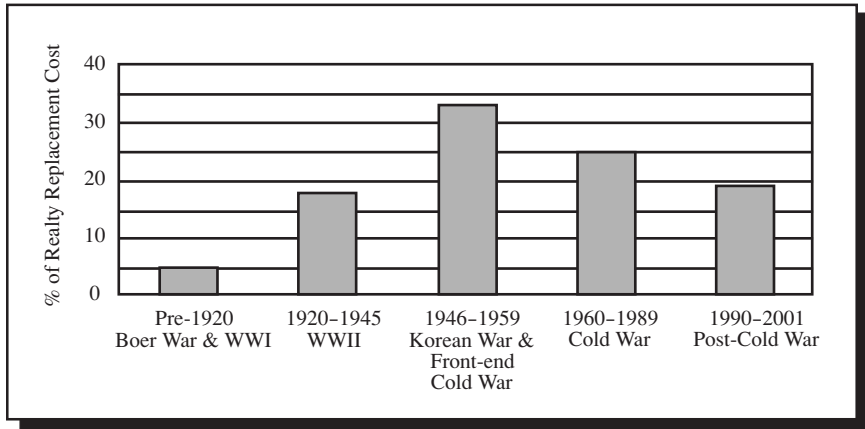
a consistent format in departmental reports to Parliament. In terms of goods and services procured and personnel employed, the Department of National Defence spends a considerable percentage of overall federal operating and capital funds. This category of expenditure is highly visible, generates employment and, to a certain extent, is discretionary; accordingly, these expenditures are particularly vulnerable to spending cuts during periods of budgetary expenditure retrenchment.

The most significant category in terms of total dollar value is personnel. Defence currently accounts for 26 percent of federal expenditures on personnel. This percentage is expected to increase in the coming years due to the planned expansion of the Regular Force and the Reserves and the growth in the number of Department of National Defence public servants to support that military expansion. The other noteworthy expenditure is the department's spending on machinery and equipment, which totals 66 percent of federal expenditure in this category. Also significant is the extensive defence inventory of weapon systems and equipment holdings, which accounts for 40 percent of total government spending on repair and maintenance. Within the Department of National Defence, these expenditures are highly correlated to the age of the equipment,¹⁸ its activity rate and operating environment.¹⁹ This is particularly relevant now for the Canadian Forces with a commitment of a battle group in Afghanistan through to at least 2009. Defence expenditure on professional services accounts for approximately 25 percent of federal expenditures on services, owing to the high level of technology employed in defence, the complexity inherent in Western military establishments, and the need for the Canadian Forces to remain current in diverse fields in a dynamic international strategic environment.

Realty Assets

In addition to having large equipment holdings, the Department of National Defence is one of the most significant landowners in Canada. At the end of the 2006–07 fiscal year, the department had an inventory of land, buildings and works valued at \$7.3 billion. The age profile of Department of National Defence realty assets is quite distinctive and problematic and is displayed in Chart 3. Specifically, 81 percent of the department's realty assets were designed, constructed or acquired in response to the First World War, the Second World War or the Cold War threat. Although the Treasury Board standard is forty years, based

Chart 3. Defence Realty Asset Allocation According to Purpose of Acquisition or Construction



on a Department of National Defence facility life cycle of approximately fifty years, more than half of the department's realty assets will need to be rebuilt over the next decade. This will increase demands for capital funding during a period when a great number of weapon systems will also be nearing the end of their expected life cycle. Such significant forecasted demand for capital replacement is relatively common among Western military forces.²⁰

THE DEFENCE CAPITAL PROGRAM

The capital program is critical to the effectiveness of the defence establishment in Canada. Indeed, military capability is viewed as a system of systems, with modern and effective equipment as a critical enabler. The capital investment plan is one element of a long-term, flexible program to re-equip the Canadian Forces, as well as maintain and enhance the combat capability of those forces.²¹ The capital program is linked to defence policy, with the policy informing what equipment capabilities will be needed by the Canadian Forces. In a report on capital equipment procurement in 1998, the Auditor General stated, "Defence capital acquisition decisions affect how well the Canadian Forces can implement defence policy. The amount and type of equipment they purchase directly affects their ability to carry out their roles, which in turn determines how and where the government can deploy them."²² Its planning horizon, the wide breadth of projects and the high

cost of the program distinguish the defence capital program. Nevertheless, without modern equipment, “training cannot occur, command and support systems are unnecessary, people cannot be employed, and commanders cannot accomplish their missions.”²³ This section will provide an overview of the defence capital program, beginning with the capital investment plan and then highlighting the impact of equipment life-cycle costs.

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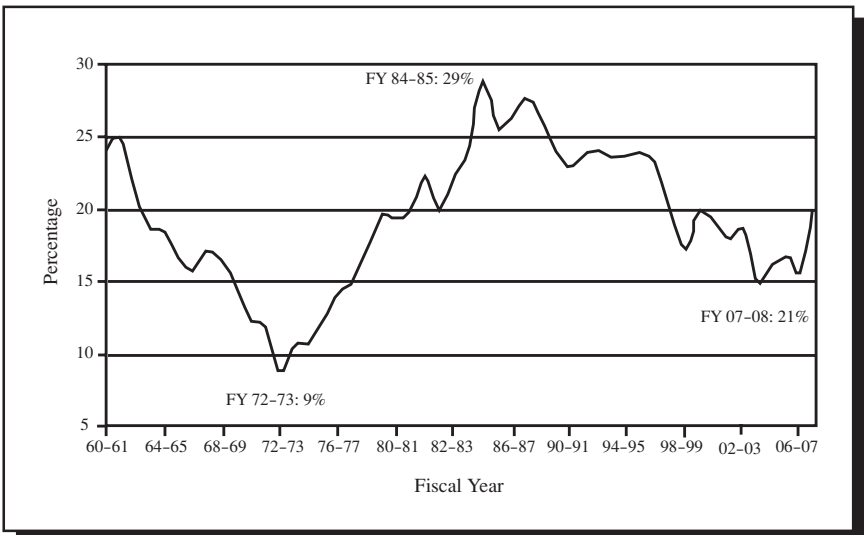
Capital Investment Plan

The capital investment plan of the Department of National Defence is a significant and ongoing preoccupation of defence planners at National Defence Headquarters. Its long-term planning horizon makes it distinctive in government. Within Defence there are three distinct planning horizons that, when combined, look thirty years into the future. Each of these horizons has a different time frame and consequently has a distinctive focus. Horizon One focuses on both replacing and enhancing current capabilities; the time frame is short term and looks from one to four years into the future. Horizon Two also focuses on both replacing and enhancing current capabilities, but the time frame is medium term and looks from five to ten years into the future. Horizon Three focuses on acquiring new capabilities; its time frame is long term and looks from ten to thirty years into the future. Consequently, this thirty-year view is constantly subject to review. According to the department:

a program as complex as the recapitalization of the Canadian Forces is under constant pressure to add new priorities. The current practice is to defer some priorities to release funding for new, more urgent requirements, which means simply displacing programs to make room for unexpected demands. Defence has decided that this practice will cease; in future, when new requirements are added, requirements of corresponding value will be removed to keep the Defence program affordable. There are several techniques for managing priorities, including delaying implementation, slowing spending, lowering the priority or removing it from the program.²⁴

This departmental perspective highlights the iterative nature of a capital program, yet acknowledges resource constraints. Nevertheless, there are certain invariants. Navies need ships, air forces need aircraft (as well as unmanned aerial vehicles), and armies need a broad range of vehicles. However, the constant factor in all three military environments is that Western military forces are extremely capital intensive, and thus, processes and procedures to effectively procure and manage defence assets are an essential component of defence management. This departmental perspective also emphasizes the ongoing long-term nature of defence resource management – which is perhaps the most distinctive feature of defence management. Indeed, defence resource managers must balance current demands against anticipated future demands; that is, they must balance resource allocations for the current force (personnel, operations and maintenance) against resource allocations for the future force (capital equipment and facilities).²⁵ This is further complicated by competition from the Army, Navy, Air Force, and joint environment for capital procurement funding. As illustrated by Chart 4, the ability of governments to maintain a constant level of expenditure on capital assets is difficult and must compete against all other demands from across the federal spectrum for funding.²⁶

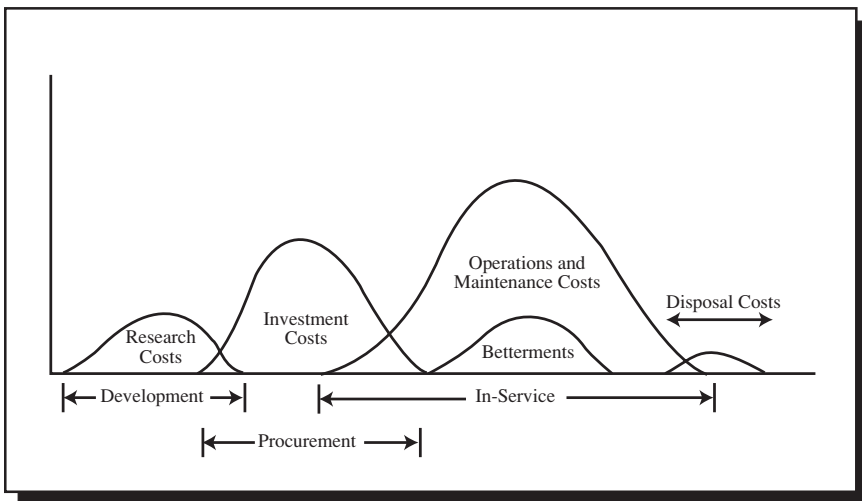
**Chart 4. Percentage of the Defence Budget Spent on Capital
Fiscal Years 1960–61 to 2007–08**



Equipment Life-Cycle Costs

The defence capital equipment procurement process has been well documented and analyzed by a number of sources.²⁷ However, ongoing equipment operating costs over the life cycle of that equipment normally amount to more than the initial procurement costs. Chart 5 illustrates weapon system life-cycle costs. Development, procurement, betterments (upgrades) and disposal costs are accounted for under accrual accounting in terms of equipment values. The ongoing operations and maintenance costs throughout the in-service period are expensed during the period in which they occur, which is the proper accrual accounting method. This chart includes the costs of betterments but is illustrative only; the need for betterments depends on the specific equipment and the life-cycle phase, and single or multiple betterments may be necessary during the use of that equipment. The costs of betterments also depend on the type of equipment, the level of technological change, and the funding available. The increasing average age of major Canadian Forces weapon systems will drive the operating cost of those systems²⁸ as they approach the peak of the in-service cycle. In some cases, betterments can reduce future operating costs.

Chart 5. Weapon System Life-Cycle Costs



CHAPTER 2

Accrual Accounting

THE BASICS OF ACCRUAL ACCOUNTING

In the 2003 budget, the Government implemented its commitment to present its financial statements on a full accrual accounting basis. Previously, the Government's financial statements were prepared under modified accrual accounting. Full accrual accounting provides a more comprehensive reporting of assets and liabilities and a more transparent picture of the Government's financial position. Under full accrual, the budgetary balance is now more reflective of current economic developments, rather than being influenced by prior-year developments. It is the accounting standard recommended for senior levels of government in Canada by the Public Sector Accounting Board of the Canadian Institute of Chartered Accountants and has been strongly recommended by the Auditor General of Canada and the House of Commons Standing Committee on Public Accounts.²⁹

In 2003, the Government of Canada completed a multi-year accounting methodology transition that began with a cash-based system and ended with an accrual-based system. The change is significant, yet the implications of it are generally not well understood. This section will first define cash-based accounting principles and then define accrual accounting principles. A conceptual framework for the transition process from cash-based accounting principles to accrual accounting principles will then be reviewed as a lead in to a discussion of accrual accounting in the federal public sector. The section will conclude with the impact on government operations resulting from the move to accrual accounting.

Cash-Based Accounting Principles

National governments in Canada have historically accounted for transactions, including the procurement of capital assets, on a cash basis. The cash-based accounting method records economic events when revenue is actually received and when expenses are paid. Moreover, cash management supports the traditional notion of Parliament approving the annual supply of funds. In cash-based accounting, transactions that do not involve movements of cash are not included. From the perspective of the average citizen, cash-based accounting is easiest to understand owing to its relative simplicity. Furthermore, this system is simple to implement and manage, thereby assisting in the timeliness of reports. Cash-based accounting provides a good perspective on short-run macroeconomic effects, yet it can be argued that the Canadian public is already sufficiently aware of short-term economic issues.

Principles of Cash-Based Accounting

- Revenue is recorded when cash is received
- Expenses are deducted when they are paid for

The main drawback of cash-based accounting is its limited scope. Specifically, this basis of accounting focuses only on cash flows, which may have significant long-term effects. Accountability in terms of managing assets and liabilities under a cash-based system has limitations. For example, with the purchase of a multi-billion-dollar weapon system, delivery of the system over a two-year period would drive cash expenditures significantly upwards for two years; however, in subsequent years when the weapon system is in use (which can be decades for defence equipment), the use of that asset will not be recognized. In addition, capital programs can take up to a decade to procure, with overall departmental work in progress accounting for several billion dollars at any given time. A cash-based accounting system does not account for future commitments or contingent liabilities, which is significant for defence organizations.

Defence planning requires a long-term focus that can extend up to thirty years. This intergenerational perspective is necessary in order to plan, fund and sequence a large number of high-value Army, Navy, Air Force and joint capital projects. Consequently, in these circumstances, cash-based accounting does not account for full costs. The cost of

defence establishments in Western mechanized, high-technology forces is significant. Therefore, a clear understanding of full operations and maintenance costs is important. In the current financial and political environment, where accountability and appropriate levels of disclosure demand high standards, cash-based accounting can no longer accommodate the level of information required either internally or externally.

Accrual Accounting Principles

In accrual-based accounting, revenue is reported when it is earned, regardless of when it is received, and expenses are deducted in the fiscal period during which they are incurred, whether or not they are paid for; in other words, using accrual-based accounting, both revenue and expenses are recorded when they occur. The accrual basis of accounting provides the most accurate picture of the financial status of an organization. Nevertheless, this increased level of detail comes at the cost of significantly increasing the complexity of the accounting process.³⁰

Principles of Accrual Accounting

- Expenses are recorded in the period during which goods or services are consumed
- Revenues are recorded in the period during which they are earned
- Use of capital assets is recognized by being exposed (amortized) over the time they are expected to be used (useful life)

The most significant impact that accrual accounting will have on Defence is amortization of new capital assets.³¹ Whereas previously under the cash-based system capital expenditures were recorded in the period they were purchased, under the accrual-accounting method capital equipment is recorded on the balance sheet at its historical costs and depreciated over the estimated useful life of each asset, based on normal wear and tear or usage. Consequently, the upfront capital equipment investment cost is attributed or expensed over the life of the asset using one of the generally accepted amortization methods. For simplicity, the Department of National Defence uses the straight-line method to calculate each asset's amortization schedule and annual rate.

The federal Budget, as well as the Government of Canada's summary financial statements, is now prepared on a full accrual basis. The

decision by the government to adopt accrual accounting is an important shift toward greater use of private sector accounting practices (general accepted accounting principles). It should be noted, however, that despite the adoption of accrual-accounting methodology, spending authority – through appropriations – remains with Parliament through the annual budgetary process. This impediment to realizing the full expected benefits of accrual accounting to the Government of Canada needs to be addressed during the period of transition.³²

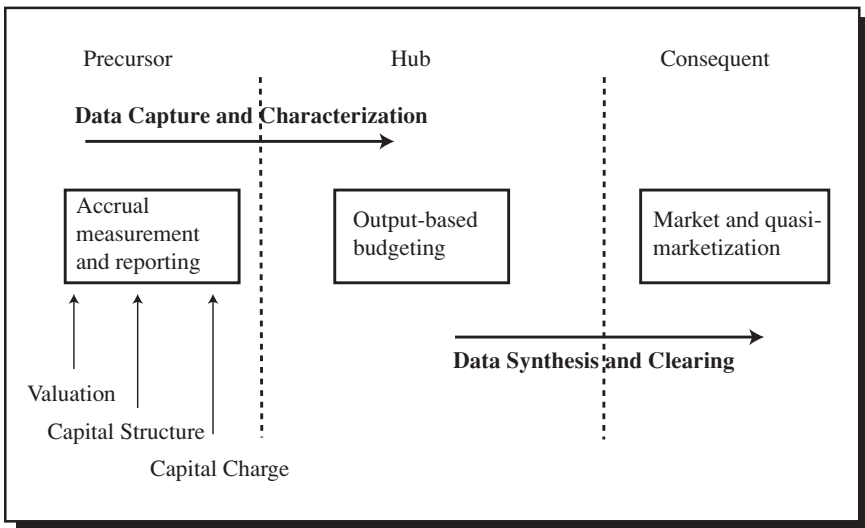
A CONCEPTUAL FRAMEWORK FOR TRANSITION TO ACCRUAL ACCOUNTING

The subject of transition in the public sector from cash-based accounting principles to accrual accounting principles has too often been discussed from a technical or narrow perspective. This study endeavours to frame the transition of accounting methodology within the construct of overall public financial management reforms. Rather than perceiving the adoption of accrual accounting and reporting as an end in itself, “the role and impact of accrual accounting is better understood as forming one part of an interconnected chain of reforms to public financial management techniques.”³³ This interconnected set of reforms is illustrated in Chart 6³⁴ and, in essence, can be viewed as a key element of new public management reforms.³⁵ The process in Chart 6 begins with precursor financial managerial reform, an essential precondition that establishes the enabling foundation for subsequent financial managerial reforms. Thus, the work completed by the federal government in implementing the Financial Information Strategy from 1995 through to 2003 is characteristic of this initial phase. The period was distinguished by a labour-intensive sequence of initiatives that laid the groundwork for implementation of accrual accounting in government, as well as by a shifting emphasis toward results-based management and performance measurement.³⁶

The government is currently in the hub phase, which is likely to continue to the end of fiscal year 2010–11, when the twenty-three largest departments will be subjected to an annual attest audit.³⁷ In the case of the Department of National Defence, work is in progress in preparation for the audit. To this end, a contracted departmental audit-readiness assessment is now complete, including recommendations on measures to improve inventory data integrity, as well as the level and use of information regarding tangible capital assets.³⁸ This hub phase for the

Department of National Defence focuses on fully integrating accrual accounting in departmental policies and procedures and includes procedures to manage new capital assets over their expected useful life, and developing audit processes and managing the myriad of issues that will arise until accrual accounting is well entrenched – and understood – within both the department and Canadian Forces. This is important because the real benefits accrue in the consequent phase, when decisions can be made based on the outputs generated from the hub phase on a sustained basis. Thus, the objective of this financial management reform process, in theory, is to enable a more strategic approach to public sector management. At this stage, decisions can be made on the appropriate mix of resources necessary in order to achieve desired outcomes.

Chart 6. The Public Financial Management Reform Environment



The Transition to Accrual Accounting in the Federal Public Sector

The Financial Information Strategy, which was initiated in 1989 and re-launched in 1995, “aims to modernize federal government accounting by bringing it in line with practices in the private sector and in other public sector jurisdictions. Among other things, its full implementation would see the costs of programs linked to results, giving government managers

better financial information to use in making day-to-day decisions.”³⁹ Treasury Board approved the strategy in 1995 as an initiative to improve government decision making and accountability, as well as government performance, through the use of both financial and non-financial performance information. The intent of the Financial Information Strategy is to provide decision makers within government with the appropriate tools and information to make sound decisions. The initiative included the change in government accounting from cash to full accrual accounting, which was identified in the 1995 and 1996 Budgets as a government priority.

The federal government defines capital assets as generally including “any asset which has been acquired, constructed or developed with the intention of being used on a continuous basis and is not intended for sale in the ordinary course of business.”⁴⁰ Capital assets also include betterments, which are expenditures relating to the alteration or modernization of an asset that appreciably prolongs the item’s period of usefulness or improves its functionality or significantly reduces operating costs. Capital assets held by government departments as of 1 April 2001 had to be identified and valued by use of an appropriate cost base.⁴¹ Where practical, this involved the use of historical costs, less the portion of the useful life of the asset that had already been consumed.

Accrual accounting was implemented in all federal government departments at the start of the 2001–02 fiscal year as a key pillar of the Financial Information Strategy,⁴² and the process was completed with the 2003 Budget.

In the transition from cash-based accounting to accrual accounting, capital assets held by the Department of National Defence as of 1 April 2001 had to be identified and valued by use of an appropriate cost base.

The transition to accrual accounting was a major event across all government departments. However, the most significant impact was on the Department of National Defence, largely owing to the existing multi-billion-dollar departmental land and equipment holdings. This difficulty was acknowledged by the Auditor General in her opening statement to the Statement to the Standing Committee on Public Accounts on

28 October 2004, where she highlighted the difficulty in accounting for Defence inventory “with systems that were not designed to support accrual accounting.”⁴³ The transition to accrual accounting in the Department of National Defence required a considerable investment in personnel and financial resources in order to evaluate existing assets and develop applicable procedures and practices.⁴⁴

The Impact of the Transition to Accrual Accounting in the Federal Public Sector

The purpose of accrual accounting as the basis of accounts in the private sector differs from that of the public sector. Within the private sector, the accrual basis of accounts is used to provide a more appropriate match between costs and revenues in the preparation of financial statements. Although corporations focus on cash flows as an important internal management tool, shareholders and suppliers are focused on the financial status of the company as represented through profit or loss reporting. Conversely, in the public sector, governments use accrual accounting as the basis of accounts in order to determine the budgetary surplus or deficit more accurately.

From the perspective of the Government of Canada, the shift from cash-based accounting to accrual accounting, in general terms, has not changed the nature of budgetary decision making. What has changed, however, is the level and detail of information provided. In the case of the Department of National Defence, there are likely to be some short-term impacts because of the operational nature of the Canadian Forces activity. Specifically:

[Accrual accounting] generates the ability for decision makers to take a longer-term focus. The information presented for the ownership interest, and in particular the balance sheet, raises issues such as the need to hold surplus assets, to invest, restructure or divest. Such decisions have a long-term impact and may in fact take more than one year to implement. Accrual accounting strengthens the information base for reaching those decisions.⁴⁵

Indeed, the major advantages to this transition are viewed as improved resource allocation, strengthened accountability, enhanced transparency of overall resource costs, and a more comprehensive perspective on the governmental impact on the economy.⁴⁶

Benefits of the Shift to Accrual Accounting Principles

- Improved resource allocation
- Stengthened accountability
- Enhanced transparency of overall resources costs
- More comprehensive perspective on the impact of the government on the economy

The introduction of accrual accounting into the public sector has been the subject of considerable debate.⁴⁷ One of the main arguments for accrual accounting is that accrual measures (as opposed to cash) provide “a more comprehensive indication of the total activity of Government and the long-term effects of current policy.”⁴⁸ Indeed, this debate can be summarized from the perspective of New Zealand and Australia, which countries have been leaders in adopting accrual accounting in the public sector: essentially, “scholars have written positively of the reforms as a whole but have scrutinized the details of the reforms in practice.”⁴⁹ In summary, implementation of accrual accounting in government is viewed as a positive step; however, the scope of change required by governments is considerable.

Although the decision to implement accrual accounting within the federal government has been the subject of much debate from a technical accounting perspective, much less has been written about how the change will affect managers within the public service. Indeed, in the long term, the effects of this change could outweigh the specific effect of the accounting change itself. The most important potential impact is that it will drive greater decentralization within the public service, involving changes in both responsibilities and management culture. With respect to responsibilities, in 2001 the Auditor General stated that under the Financial Information Strategy

departments and agencies become accounting entities in their own right, taking greater responsibility for their accounting information and producing their own financial statements using accrual accounting. They can no longer rely on central agencies to oversee the reporting of accurate and complete financial results.⁵⁰

Decentralization will occur through the greater interaction that is now necessary within the public service as a result of the Financial Information Strategy. Specifically, government managers (including line, financial and procurement managers) will need to work together more closely, particularly in decisions to acquire and use equipment or

facilities. This should largely replace a detailed control culture, at the senior corporate (government) level, with a more strategic business-like focus.

Finally, accrual accounting will facilitate a transition to a more results-oriented public service, which since 2000 has endeavoured to “promote discipline, due diligence and value for money in the use of public funds.”⁵¹ The increased emphasis on value for money in the public sector will strengthen private sector financial management practices in the public sector.⁵² This means knowing the cost of assets in use, having a clear understanding and measurement of results, and knowing the costs of the inputs to achieve those results. Full implementation of accrual accounting in government necessitates the adoption of accrual-based budgeting. The implications of the transition to accrual-based budgeting were the focus of the Standing Committee on Government Operations and Estimates in its December 2006 report entitled *Accrual Budgeting Committee on Government Operations and Estimates*. The committee was of the opinion that accrual-based budgeting and appropriations at the departmental level

may be a catalyst for wide-ranging reforms in government management. Adopting full accrual accounting could thus open new perspectives on investment decisions, accountability and the stewardship of government assets by

- providing a context conducive to debates on maintaining, renewing, replacing and funding assets;
- establishing a common basis of measurement to assess the value of assets;
- providing a point of departure to evaluate the physical condition of infrastructures and other assets on a regular basis over the years;
- providing a better idea of the costs related to the delivery of services to the public that require the use of real property or other assets.⁵³

Despite the broad scope of the committee’s report, it should be recognized that the Department of National Defence, Royal Canadian Mounted Police, and Public Works and Government Services Canada incur the majority of capital expenditures at the federal level. Consequently, the benefits of accrual budgeting described above are somewhat overstated, as they will only apply to a relatively small amount of funding in the vast majority of departments and agencies. Within the Department of National Defence specifically, decision making for major capital purchases will remain centrally controlled.⁵⁴ In addition, due to

the high cost of those projects, they will continue to be under significant political influence.

ACCRUAL ACCOUNTING IN DEFENCE

This section will begin with a description of the implementation of accrual accounting in the Department of National Defence, followed by definitions of land, buildings and works as well as machinery and equipment. An amortization table for the Department of National Defence asset class will then be provided. After a description of the asset capitalization in defence, the section will conclude with a list of Department of National Defence source systems of record for asset classes.

Implementing Accrual Accounting in Defence

Implementation of the federal government's Financial Information Strategy together with pressures to conform to private sector accounting practices and standards were two leading factors driving the adoption of accrual accounting within the government.⁵⁵ Of all government departments, the most significant impact was on the Department of National Defence. Indeed, the Department of National Defence managed close to half of the asset base of the government. Table 2 illustrates the asset and inventory challenge faced by the Department of National Defence in April 2000 as it began in earnest the labour-intensive transition to accrual accounting.⁵⁶

Table 2. Department of National Defence's Asset and Inventory Challenge

Line items of stock	1,400,000
Army vehicles	19,000
Aircraft	543
Warships	18
Land (hectares)	2,000,000
Buildings	33,000
Separate works	14,000
Headquarters	9
Bases	22
Stations	3
International operations	16

The challenges faced by the Department of National Defence were significant.⁵⁷ In addition to the asset and inventory challenge, the sheer volume of defence assets posed its own particular problem. Furthermore, many of the equipment fleets had been held for a decade or more, and finding sufficiently detailed historical records was difficult. Data integrity of engineering maintenance systems was also an issue. Given the age of some of the assets and the desired military practice of upgrading assets regularly due to technological obsolescence, tracking betterments over a long period of time proved to be demanding. Finally, the decentralized nature of information management and information technology made valuation of those assets challenging.

Concerns associated with Y2K (the year 2000) – combined with their related operational implications – resulted in the Department of National Defence taking a measured and incremental approach to accrual accounting implementation and the associated defence asset valuation. Consequently, initial work in Defence “largely centred on development and discussion of policies, processes and systems at a corporate level and contract research on the adequacy of DND inventory accounting for accrual accounting purposes.”⁵⁸ Initial work on accrual accounting started in January 1996 with the formation of the Accrual Accounting Working Group, which included representation from the functional and operational groups. At this initial stage, it was recognized that successful implementation of accrual accounting within the department would require active involvement and support from organizations responsible for strategic resource planning, procurement, personnel, information systems, as well as both material and capital asset management. Such an integrated and organization-wide effort was necessary as each functional group was required to modify its policies, processes and systems to collect the accrual accounting information required by the Financial and Managerial Accounting System.

In-depth work on accrual accounting implementation started in September 1998 with the establishment of the Accrual Accounting Implementation Team. Its members came from the Director General Finance, based within the Assistant Deputy Minister (Finance and Corporate Services) organization. The team’s tasks were to

- determine the accrual accounting framework for the Department of National Defence, based on Treasury Board policies and generally accepted accounting principles in use in the private sector; then write the applicable Defence administrative orders and directives;

- identify the Department of National Defence's offices of primary interest that would be affected by the new or changed accounting policies; then work with these offices to assess how to optimally implement the new accrual accounting reporting requirements in their area of responsibility;
- work with the Financial and Managerial Accounting Project to convert the Financial and Managerial Accounting System to a full accrual-accounting financial system;
- arrange for the reconfiguration of the various real property, materiel, inventory, engineering and personnel information systems to provide the necessary summary accrual information monthly to the Financial and Managerial Accounting System;
- produce financial statements for Fiscal Year 2001–02;
- identify the professional development or training needed for civilian or military personnel to work under full accrual accounting; and
- complete the above tasks without affecting the year 2000 effort.⁵⁹

Definitions and Concepts

The definitions and concepts used in the Department of National Defence's transition to accrual accounting were obtained from a variety of organizations and source documents. Table 3 lists these organizations.

The definition – for accounting purposes – of land, buildings and works, as well as machinery and equipment, is important. All departments in the federal government use a defined expenditure and revenue classification system. Twelve different standard objects are used for parliamentary reporting purposes and are reported in the Main and Supplementary Estimates as well as in the Public Accounts.⁶⁰ Expenditure for capital assets is largely incurred through the land, buildings and works standard object and the machinery and equipment standard object.

The acquisition of land, buildings and works includes the purchase of land as well as the cost of “all expenditures for the acquisition of buildings, roads, irrigation works, canals, airports, wharves, bridges and other such types of fixed assets.”⁶¹ Furthermore, the cost of improvements containing additions or changes of a structural nature and the installation of fixed equipment that is essentially a part of the work or structure, such as elevators and heating and ventilating equipment, is included. The acquisition of machinery and equipment includes the cost of:

motor vehicles, aeroplanes, tractors, road equipment, telecommunications and related equipment, laboratory and other scientific equipment, vessels, icebreakers and other aids to navigation and all other types of light and heavy equipment; includes ammunition and various types of equipment for National Defence, such as ships, aircraft, mechanical equipment, fighting vehicles, weapons, engines and such spare parts and supplies as are normally acquired with that equipment at the time of purchase.⁶²

This standard object also includes the cost of procuring office equipment, furnishings and electronic data processing equipment and constitutes the bulk of departmental and Canadian Forces assets.

Table 3. Sources of Definitions and Concepts

<i>Source</i>	<i>Description of Concepts</i>
Defence Administrative Orders and Directives	<ul style="list-style-type: none"> • Capital assets • Land • Buildings • Inventory
Treasury Board Accounting Standards	<ul style="list-style-type: none"> • Policy and principles • Financial statements • Capital assets
Public Sector Accounting Board	<ul style="list-style-type: none"> • Accounting policies and procedures (PSAB Manual)
Canadian Institute of Chartered Accountants	<ul style="list-style-type: none"> • Accounting policies and procedures (CICA Manual)

Department of National Defence Equipment Amortization Rates

The cost to the Department of National Defence for the use of capital assets is, in effect, an advance payment for the long-term use of those assets. From this perspective, as the economic life of that asset expires, the cost of that asset should be apportioned to that organization

as an expense over time. The expense is referred to as amortization. The maximum amortization period is limited to forty years. The service life of the asset is generally measured in years, although for assets such as aircraft, flight hours may be a more suitable measure of service life. Table 4 lists the amortization periods for Department of National Defence tangible capital assets.⁶³ A tangible asset is an asset that has a physical form and includes machinery, buildings and land. The Department of National Defence records tangible capital assets that have an initial cost of at least \$30,000 with a useful life greater than one year,

Table 4. Amortization of Department of National Defence's Tangible Capital Assets

<i>Asset Class</i>	<i>Amortization Period</i>
Buildings	10 to 40 years
Works	5 to 40 years
Machinery and equipment	3 to 30 years
Informatics hardware	3 to 30 years
Informatics software	2 to 12 years
Arms and weapons	3 to 30 years
Other equipment	5 to 30 years
Ships and boats	10 to 30 years
Aircraft	20 to 40 years
Non-military motor vehicles	2 to 30 years
Military vehicles	3 to 25 years
Other vehicles	4 to 25 years
Leasehold improvements	Lesser of useful life of the improvement or term of lease
Leased tangible capital assets	Economic life or term of lease
Inventory – repairables	Capitalized and amortized as an asset pool over the same useful life as the underlying asset
Inventory – consumables	Not a budget item until consumed

as well as capital leases, repairable assets, betterments, and leasehold improvements, at their acquisition cost.⁶⁴ For simplicity and accounting system limitations, the department values all tangible assets using the complete- or whole-asset principle rather than the more precise component approach. Under the whole-asset method a single estimate of useful life is applied when valuing large sophisticated military assets such as warships and aircraft that comprise several easily identifiable components with potentially different expected useful lives (for example, airframe, engines, and avionics in the case of aircraft).⁶⁵ Furthermore, the amortization of all tangible capital assets is done on a straight-line basis over the estimated useful life of the capital asset.

Amortization of tangible capital assets is done on a straight-line basis over the estimated useful life of the capital asset, using the whole-asset principle.

The impact of defence capital procurement resulting from accrual accounting is as follows:

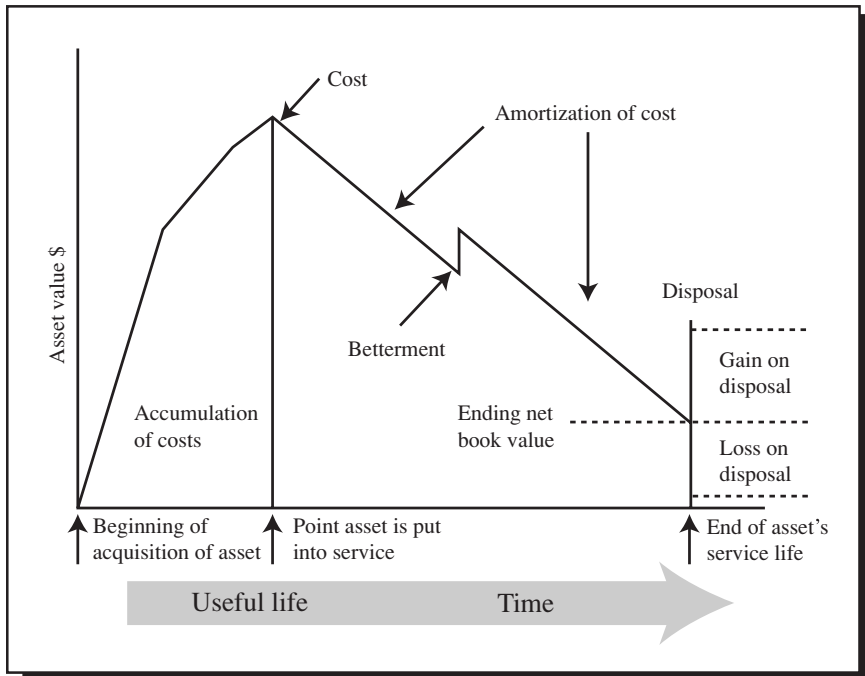
Under accrual accounting, the acquisition of capital assets has no direct budgetary impact in the year in which the asset is acquired. Instead, the amortization of the asset over its useful life is recognized in the budgetary balance. The acquisition of capital assets does, however, directly affect non-budgetary transactions and financial source/requirements.⁶⁶

To put it more succinctly, the use of cash to generate or acquire tangible assets or inventory items should not have budget implications under the current modified cash basis for budget appropriations. In the case of the Department of National Defence, starting in Budget 2005, the department was granted the flexibility to set aside a portion of its annual cash-based budget appropriation for recurring budgetary amortization expenditures. In effect, the Department of National Defence was granted the ability to use a portion of its cash-based budget to pay back (or reimburse) the government for “investment” (or non-budgetary) funds appropriated by Parliament to acquire new or replacement assets. The acquisition cost of the asset is then subsequently expensed (or amortized) on an annual basis over the useful life of the asset. This budgeting approach has been termed “accrual-based budgeting” within the department and will be discussed in more detail later.

Capitalization of Defence Assets

Capitalization of assets in Defence, as in other organizations, is essentially the process of entering all the costs incurred in making an asset operational into the general ledger or books of account. This process is then ongoing throughout the life of the asset.⁶⁷ Costs incurred to improve the service potential of a capital asset during its service life are known as “betterments” and are added to the unamortized value of the asset. Classification as betterment applies when there is a significant increase in the quality or quantity of physical output or performance, the operating costs are significantly lowered, or the useful life of the main asset is extended. Finally, capital assets are typically disposed of when they reach the end of their useful life, when they are retired from active military service, or when they are surplus to operational requirements. Disposals can occur through the sale, destruction, loss or abandonment of the asset. A gain or loss on the disposal of the asset occurs when there is a positive or negative difference between the proceeds obtained from the sale of the asset and its net book value. Chart 7 illustrates the value of a typical capital asset over its useful life.

Chart 7. Illustration of Accrual Accounting



Source Systems of Record for Defence Capital Assets

The Financial Managerial Accounting System is the financial system of record (general ledger) for the Department of National Defence. The source systems of record “are the Department’s subsidiary ledgers where individual, detailed records are held for all capital assets and related capital asset transactions.”⁶⁸ Table 5 lists the source systems of record for capital assets.

Table 5. Source Systems of Record for Department of National Defence Capital Assets

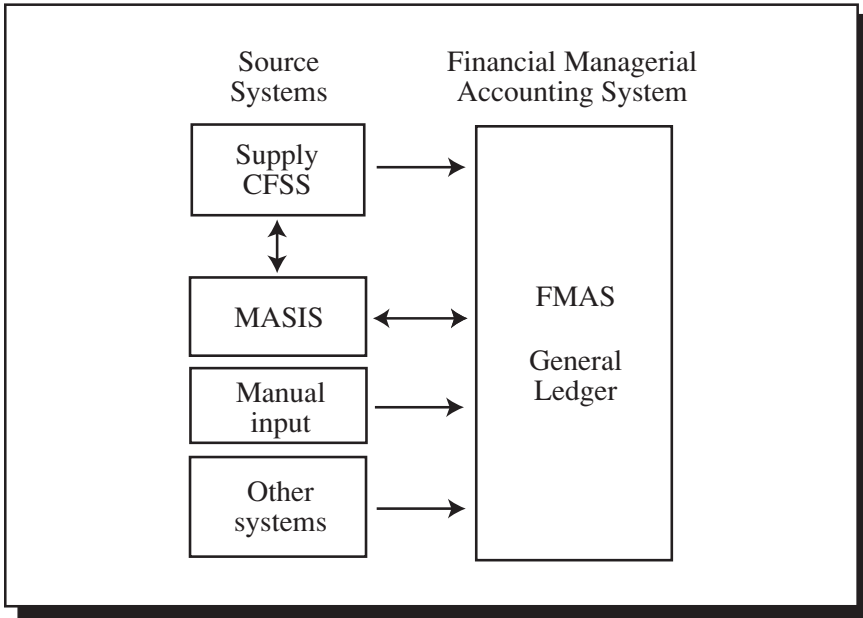
<i>Source System</i>	<i>Office of Primary Interest</i>	<i>Assets on Record</i>
Material Acquisition and Support Information System	Assistant Deputy Minister (Materiel)	All capital equipment assets, leases and betterments greater than \$30,000 in value (excluding inventory) except those held by other offices of primary interest below ⁶⁹
Realty Asset Accrual Accounting System	Assistant Deputy Minister (Infrastructure and Environment)	All realty assets (land, buildings, works, and leasehold improvements) except those in the Housing Agency Management Information System
Computer Assisted Material Management System	Canadian Forces Medical Group	Capital medical equipment assets and inventory
Financial Accounting Management Information System	Communications and Security Establishment	All capital assets held by the Communications and Security Establishment that are not recorded in other systems of record
Housing Agency Management Information System	Canadian Forces Housing Agency	All Canadian Forces Housing Agency managed residential assets
Financial and Managerial Accounting System Project System Module	Assistant Deputy Minister (Finance and Corporate Services)	All capital assets under construction (work-in-progress)
Automated Vehicle Information Management System	Assistant Deputy Minister (Materiel)	Not an official source system, but information is utilized to track all vehicles regardless of value
Canadian Forces Supply System	Assistant Deputy Minister (Materiel)	All inventory items – both repairables and consumables

While the above table lists a number of existing asset management systems, there are essentially two main tangible-asset management systems in the Department of National Defence. The first system is the Canadian Forces Supply System (CFSS), which was designed to record and track material acquisition and distribution. With the exception of ships, fitted parts, buildings, works, land and intangibles, this system contains all other levels and types of capital assets and inventories. Integrated with the Canadian Forces Supply System is the Material Acquisition and Support Information System (MASIS), which is still under development. A Chief of Review Services internal audit report in 2005 noted:

There is subjective evidence that MASIS will significantly improve the efficiency and effectiveness of materiel planning, acquisition, maintenance and reporting. Departmental efforts to implement accrual accounting are also tied to MASIS implementation. However, the full benefits will not be achieved for several years and only after concerted effort to implement all aspects of the project – including data conversion, system interfaces, a deployed solution, automated data capture, establishing a performance baseline, and technical documentation management.⁷⁰

The second system is Aladdin, which was designed to “categorize, structurally record, query and report upon pertinent realty and environmental information in support of departmental business output requirements.”⁷¹ The Realty Asset Accrual Accounting System extracts realty asset information from Aladdin to assist the Assistant Deputy Minister (Infrastructure and Environment) with the maintenance of the realty asset sub-ledger to the Financial and Managerial Accounting System. It should also be noted that those tangible assets and inventory items classified as secret (type, nature of use, and quantity not disclosed for reasons of national security) are exempted from being recorded and reported under the current accrual accounting regime. Chart 8 illustrates the Department of National Defence’s accrual accounting systems environment, within which there remains a considerable amount of manual input to reconcile and generate the department’s financial statements.

The process to account for the purchase of capital equipment in Defence under accrual accounting includes a number of steps. For major Crown projects, it starts with a submission to Cabinet requesting policy approval for the project. The memorandum to Cabinet includes an accrual accounting table illustrating future estimated investment cash

Chart 8. Accrual Accounting Systems Environment

expenditures and related amortization expenses. Treasury Board and the Department of Finance, as part of their fiscal framework management, use this table. Subsequent Treasury Board submissions from the Department of National Defence for project approval at the preliminary and effective project approval stages include an updated accrual accounting table. Once the contract has been awarded and signed, the Department of National Defence accounts for the purchase in the Financial Managerial Accounting System. For example, assume the department purchases 100 heavy-duty military pattern logistics trucks in one fiscal year for a price of \$200,000 each, plus other associated costs of \$100,000 each,⁷² for a total cost of \$30,000,000; with an estimated expected life of the asset of fifteen years, this would result in amortization charges of \$2,000,000 per year. In the event that the assets were purchased over two fiscal years, the table would reflect accounting for the vehicles purchased in each year. During the life of the asset, betterments would be accrued, and adjustments would be made for any gain or loss on disposal.

Although the accrual-based budget is one output of the federal budgetary process, the means that produce that budget are still largely

cash based. Within the federal estimates process, Department of National Defence expenditures continue to be recorded in the period in which they are incurred. The expenditures include such items as salaries, fuel and maintenance, and in this situation, cash equals accrual. In addition to the federal estimates process, departments and agencies are required to produce financial statements on an accrual-accounting basis. In terms of capital purchases valued at \$30,000 and over per asset, expenditures are capitalized and recorded as an expense over the period in which amortization occurs. In this situation, cash does not equal accrual. The department is now in a period of transition, and although the Department of Finance has prepared the budget on an accrual basis since Budget 2003, the Assistant Deputy Minister (Material), capital project offices and the Chief of Program are using both a cash basis and an accrual basis for capital planning. In essence, a cash basis is still required for the legacy capital program, and an amortization view is necessary for capital programs announced in Budget 2005 and subsequent budgets – although this is presently done ad hoc by the Department of Finance and Treasury Board Secretariat on a project-by-project basis.

Although the accrual-based budget is one output of the federal budgetary process, the means for producing that budget are still largely cash based.

In future, the assets of new capital projects will be essentially purchased using “investment cash.” Control by central agencies will be exercised by allocating a ceiling on how much the Department of National Defence can expense. The annual expense-ceiling total will consist of both cash expenses and amortization expenses. It should be noted that “investment cash” does not count against the department’s budgetary ceiling because the allocation of investment cash to the Department of National Defence is a treasury function that requires departmental negotiation with the Department of Finance and is separate from the Department of National Defence expense budget. Investment cash for capital projects can be requested in memoranda to Cabinet, Treasury Board submissions, the Annual Reference Level Update or Supplementary Estimates.

Parliamentary control over disbursement of public funds flows from the use of an annual appropriation (twelve months), as well as the use

of a vote structure to control how the appropriated funds are spent. It is important to note that investment cash can only be requested from Parliament in the estimate process. In this regard, memoranda to Cabinet provide policy coverage and earmark the funding in the federal fiscal framework. The subsequent Treasury Board submission gives project approval and the authority to ask Parliament for the release of funds through the estimate process. The Annual Reference Level Update incorporates the Treasury Board decision in an updated reference level for the department, which will appear in future Main Estimates. Finally, the Supplementary Estimates are used to ask Parliament for funds not included in the Main Estimates.

CHAPTER 3

Accrual Accounting in Practice

ACCRUAL BUDGETING IN DEFENCE

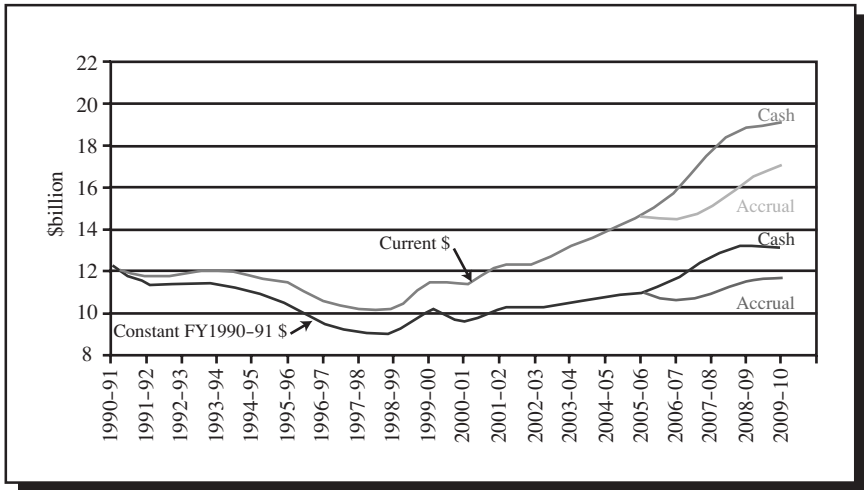
Prior to 2005 the federal government prepared and reported its annual budget using a modified cash basis of accounting; specifically, accrual accounting principles were used in the preparation of annual departmental financial statements, and the cash basis of accounting was used in the determination of budgetary appropriations. Commencing with Budget 2005, the federal government embarked, with much fanfare, on an ambitious program of sustained reinvestment in national defence. The 2005 Budget provided the Department of National Defence with \$7 billion in new budgetary funding over the subsequent five years that was to support a notional \$12.8 billion in additional cash expenditures by the Forces over that period. Not well communicated to or understood by the Canadian public was the fact that the government was, in reality, breaking new ground by applying full accrual accounting for the reporting and tracking of defence-related capital investment expenditures of almost \$6 billion (or 46 percent) of the announced \$12.8 billion increase in defence spending.

Specific re-capitalization initiatives outlined in Budget 2005 included the acquisition of new medium-capacity helicopters, logistics trucks, utility aircraft as well as specialized facilities and equipment for the Joint Task Force 2 organization.⁷³ The Budget Plan document specified that the actual cost of the capital investments would be spread over the life of the assets acquired and that the Department of National Defence would have to account for the full costs of the capital investments in budgetary cash during the years in which the assets were acquired. Moreover, the government committed to make the “investment cash” available to the department as it would be needed. Budget 2005,

in effect, authorized the Department of National Defence to charge up to \$300 million in annual amortization expense (or “accrual room”). The result is a dual system of control whereby the Department of National Defence will continue on a cash-appropriation basis, including investment cash, as well as on an accrual-accounting basis in a parallel system to Treasury Board which would include only the amortization for capital assets acquired through the use of budgetary investment cash. Chart 9 illustrates the projected planned spending for defence in terms of both cash and accrual budgeting.⁷⁴

The department uses the terms *accrual room* and *accrual space* interchangeably. Both terms can be defined as the budgetary amount that must be set aside within the Department of National Defence’s annually appropriated expenditure budget to cover the amortization expense (or deferred payback) for those assets procured using government investment funding.

**Chart 9. Defence Budget
Net Expenditures and Total Planned Spending
In Current and Constant FY1990–91 Dollars**



Notes:

1. Actual net expenditures from FY1990–91 to FY2005–06: from Public Accounts
2. Total planned spending from FY2006–07 to FY2009–10

Budget 2006 re-affirmed the adoption of accrual budgeting by announcing an additional \$5.3 billion for defence over the next five years, including \$1.1 billion (\$400 million in fiscal year 2006–07 and \$725 million in fiscal year 2007–08) in defence funding to strengthen the Canadian Forces' capacity to defend our national sovereignty and security. The only reference made to the accrual budgeting concept was found in a note to the funding table, which read as follows:

The cost of major capital equipment is spread over its life, so the annual budgetary amounts include only a portion of the full capital cost. As was the case with the budgetary increases provided last year, the full cost of capital acquisitions will be provided on a cash basis in the years they are acquired.⁷⁵

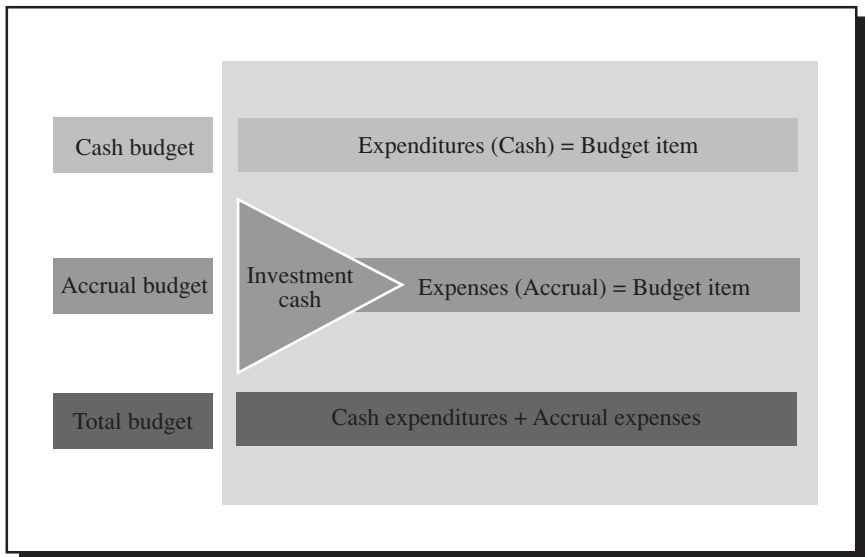
Post-Budget 2006 negotiations with the Department of Finance and Treasury Board indicated that the additional funds earmarked for defence would be provided in an accrual manner, thus allowing the department the flexibility to use a portion of these new funds to increase the accrual room provided in Budget 2005 and to accommodate additional capital acquisition funded through the use of investment cash. The department has started to utilize this new-found financial flexibility to its maximum benefit by advancing several substantial capital equipment acquisition projects since 2006, including

- strategic airlift – C-17,
- tactical airlift – C-130J,
- medium- or heavy-lift helicopters,
- medium-weight trucks,
- tank replacement,
- joint support ship,
- Halifax-class frigate modernization, and
- Arctic offshore patrol ship.

The value of these accrual budgeted projects is approximately \$17 billion, with the investment spending to be spread over the next ten years. While these combined investments represent the largest funding commitment to defence by the federal government in recent years, it is generally understood that such a planned massive infusion of funds for defence may not have been possible under the cash basis of accounting, given other competing priorities – thus the impetus for the government to adopt accrual-budgeting methods for funding all new major defence capital investments.

Chart 10 indicates that by applying accrual accounting principles to the budgetary process, the government will be able to expense most of the upfront acquisition costs of the new military equipment over the accounting useful life of the asset (twenty to forty years for most military equipment), rather than have the item expensed in the year in which it is purchased, as the government would under the cash basis of accounting. By so doing, the government's financial statements will not record as an expense the full disbursement of "investment cash" at the time the assets are procured; rather, the upfront disbursal will be amortized as a capital expenditure over the useful life and disclosed as a deferred expense in the department's income statement. In other words, the amortization expense now becomes a budget item, along with other cash-based funded activities. For this reason, each of the accrual-budgeted project approval submissions has had to include an estimate of the timing and amount of future year annual amortization expense to show the impact on the department's future year budgets. Furthermore, for each of the active accrual-budgeted capital investment projects, the government has, in effect, set aside the investment funds needed within its fiscal framework to ensure that the projects will have access to a relatively secure source of investment cash for their duration, with the ability to request a reprofile of the funding based on evolving project demands.⁷⁶

Chart 10. Components of an Accrual Budget



Within the Department of National Defence, the transition to accrual budgeting has been occurring in a legislative vacuum as the government's expenditure management framework and process for determining budget appropriations continues to be delivered on a modified cash basis. The absence of a legislative framework has created challenges for the Department of National Defence to fully implement accrual budgeting procedures for the aforementioned capital acquisition projects.

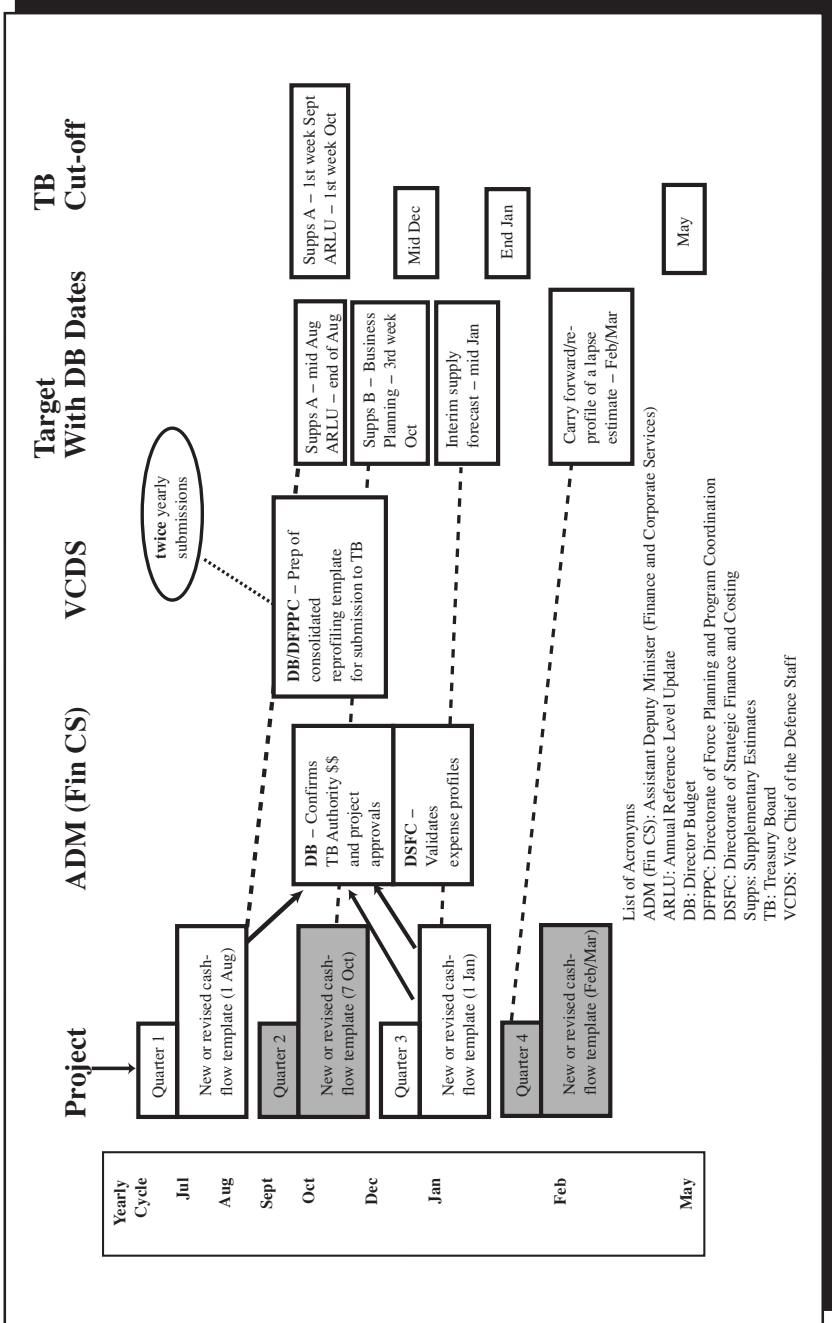
As with many government policy initiatives, the key elements are in the details. Both Budgets 2005 and 2006 provided limited information on how the government would adopt accrual-based appropriations for its capital investment expenditures. This has created a situation where it has been largely left up to the stakeholder departments to work out the procedures surrounding the implementation of accrual budgeting. It is noteworthy that the Department of National Defence has a significant majority of the capital assets owned by the federal government. The department is in the process of developing and modifying policies and procedures for its accrual budgeting. Given that the Department of National Defence has the in-depth knowledge and experience in managing complex military assets, it is perhaps optimal that the department assumes the lead role in developing departmental accrual budgeting policies and procedures for subsequent Treasury Board approval. The requirements and motivation of central government agencies such as the Treasury Board and the Department of Finance are by legislative necessity different from those of a line department like the Department of National Defence. A key concern of Treasury Board and the Department of Finance is the maintenance of fiscal prudence and probity within government operations, without which there is a risk of compromising overall government program integrity. As a consequence of the application of accrual accounting policies and procedures to the budgetary process, further training and experience are needed in this area within government departments. Therefore, central agencies are taking a risk-adverse approach, which by default imposes restrictions until specific thresholds of expertise and knowledge are in place in government departments. The full impact of these requirements and conditions is expected to come into effect in fiscal year 2007–08. This will place an extra workload on the Department of National Defence to meet more stringent and frequent financial reporting back to the central agencies of government whenever there are changes in the investment cash flow or expenditure profile, the amount of forecast amortization expense, or the total cost of the project from the original Treasury Board or Cabinet approval amounts.

The interim financial reporting framework for accrual-funded projects as negotiated with Treasury Board is illustrated in Chart 11. Despite the additional reporting, a key benefit of accrual budgeting will be the ability to reprofile investment funds from one fiscal year to another to match changing project expenditure demands without having an impact on the department's annual cash-based carry-forward limit.

The additional reporting workload will be driven by the unique characteristics of complex military procurement. At the time of initial Treasury Board expenditure approval for a capital investment initiative, the project's total costs are normally substantive in nature, having been independently verified and validated by the Assistant Deputy Minister (Finance and Corporate Services). While the total project costs may be well documented at the time of project approval, until the terms and conditions of a contract and the basis of payment have been negotiated and the agreement signed, the precise phasing of project expenditures cannot be known, and thus changes will occur. Accordingly, for each accrual-funded project approved to date, there will be a number of instances where deviations from the investment-cash spending profile outlined in the project's original expenditure approval document will range from moderate to substantial, as the particulars of the project's contract and deliverables are negotiated. Moreover, the Department of National Defence must rely on the services provided by Public Works and Government Services Canada to negotiate the contract with considerable input from Industry Canada on regional economic benefits. This high level of interdepartmental coordination required to expedite military procurement virtually assures that accrual project spending estimates will change frequently up until contract award, and then subsequent changes will continue to occur as a result of contract schedule and performance delays.

When viewed from the perspective of Treasury Board and the Department of Finance, the exigency for new, more robust financial reporting for the accrual-budgeted projects appears sound, presumably to ensure the optimum expenditure of taxpayer dollars. Alternatively, by placing the onus on the Department of National Defence to do all the financial reporting and requests for reprofiling, Treasury Board and the Department of Finance have effectively transferred all the risk of over- or under-spending within the department's investment cash account to the Department of National Defence. This risk can be mitigated by developing a risk-sharing mechanism that would see the maintenance of a certain level of fiscal flexibility to cover investment cash

Chart 11. Accrual-Funded Project: Interim Financial Reporting Framework for Fiscal Year 2007-08

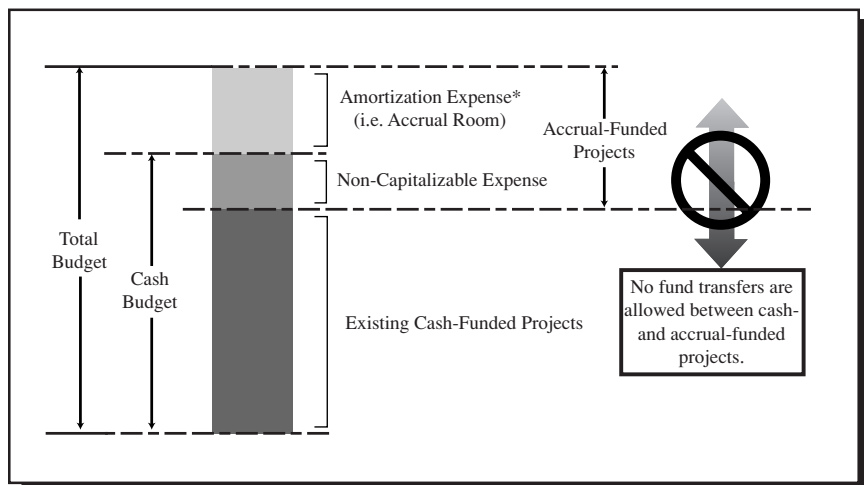


reprofile requests greater than, for example, \$100 million – or some alternative threshold limit – in any given fiscal year. Although the department is allowed to lapse unused investment cash amounts, the impact on the federal government of any sizable over-spending or lapsing of investment cash funds remains to be determined, as this represents an entirely new approach in expenditure management.

To facilitate the tracking of accrual-budgeted expenditures the department has established two new funds within its Financial and Managerial Accounting System: one for capitalizable expenditures and the other for non-capitalizable expenditures.

Chart 12 provides a graphical illustration of the defence capital equipment budget after Budget 2005, with the migration to accrual budgeting. Within its capital, or Vote 5, expenditure allotment, the department has retained its cash-based capital funds, but has now added the accrual-based or investment-cash Vote 5 funds, which are further categorized as being either capitalizable or non-capitalizable expenditures. The primary difference between these two types of accrual expenditures is that the capitalizable amounts are accumulated in a work-in-progress account until the project declares that the asset has been placed into operational service; at this time, the amortization expense will commence and start reducing the initial net book value of the asset. The forecast amortization and non-capitalizable expenses represent the department's accrual room and must be budgeted for since they will reduce the department's ability to spend during the year in which the expenses are expected to occur. The non-capitalizable expenditure amounts of investment cash are treated in the same manner as other cash-based expenditures and will be expensed during the year in which the funds are disbursed. The net result is that the department's capital equipment budget managers must now track, forecast and report on three distinct types of expenditures: capitalizable and non-capitalizable expenditures for accrual-based investment cash; traditional cash expenditures for cash-based investment funding; and one expense item, amortization expense. To facilitate the tracking and reporting of capitalizable and non-capitalizable type investment cash expenditures, the department has created two new funds in its financial system of record, requiring the Assistant Deputy Minister (Materiel) Comptroller to produce revised tracking and reporting spreadsheet templates for in-year expenditure forecasts.

Chart 12. Illustration of the Department of National Defence's Capital Equipment Budget (Post-Budget 2005)



*If the forecast "Accrual Room" is not fully utilized, it can be converted during the year to Vote 1 "Cash" as long as reprofiling is done on time.

Expenditure-management rules for accrual-based funding and cash-based funding are different. Consequently, there could be externally imposed restrictions on transfers between the two types of funds, hence the requirement to now track and report cash-based and accrual-based capital expenditures differently. At present, there are no external reporting requirements to report cash-based and accrual-based capital expenditures differently.⁷⁷ Informal working arrangements have been made among Treasury Board, the Department of Finance and the Department of National Defence in order for Defence to receive "investment cash" and, in turn, inform central agencies of future year amortization expense estimates. In terms of external reporting, cash-based and accrual-based expenditures are not separated in the government-wide chart of accounts. Therefore, this information is communicated in the department's financial statements as one total for amortization expense and a separate total for capital expenditures in the public accounts.

Another important feature of accrual budgeting is that if the previously forecast annual amortization expense or accrual room is not expected to be fully utilized (perhaps owing to asset "in-service" schedule delays) in the fiscal year in question, the department has the ability

to convert the unused accrual room to Vote 1 cash and spend it on other in-year operating priorities on a case-by-case basis. This in-year budget flexibility further highlights the need for projects to forecast as accurately as possible the timing and amount of their accrual-budgeted investment cash expenditures and subsequent amortization expense.

The budgetary distinction between cash-based and accrual-based investment funding is provided in the synopsis chart below:

	Cash-Based Funding	Accrual-Based Funding
Investment expenditures	Budgetary	Non-budgetary (except non-capitalizable expenditures)
Amortization expense	Non-budgetary	Budgetary

The challenge for the Department of National Defence will be to implement an effective financial management framework to accurately forecast, record and report on the different budgetary impacts associated with cash-based and accrual-based funding.

Besides the more frequent and detailed financial reporting imposed on the accrual-budgeted capital investment projects, the migration to accrual budgeting has also reinforced the need for capital equipment projects to focus their efforts on prudent budget management and the timely delivery of assets. In fact, it can be argued that under accrual budgeting, the accountabilities and responsibilities of the project manager have been heightened with due regard for cost and risk. Whether this results in more timely delivery of a much-needed military equipment capability remains to be seen, given the complexities and split departmental accountabilities of military procurement within Canada. Furthermore, Public Works and Government Services Canada (as the sole contracting authority for the Government of Canada) has, to date, not been fully engaged by Treasury Board and the Department of Finance in the implementation of accrual budgeting. This apparent oversight of not involving a major stakeholder in the process has added to the complexity of implementing accrual budgeting, since it is often

only through itemized invoices, as specified in the contracting process, that the accrual-budgeted projects can accurately determine whether or not a purchased good or service satisfies the definition of a capitalizable or non-capitalizable type of expenditure. The requirement for an accurate detailing of the goods or services procured under an accrual-budgeting regime is self-evident, but Public Works and Government Services Canada must negotiate the requirement into the contract up front, and it has often been reluctant to do so over concerns that such a demand would add cost to the government for limited added value.

Another challenge for the Department of National Defence is that the department's financial and managerial accounting system of record is presently configured for cash-based expenditure accounting, creating a situation where considerable staff effort will be required to generate the additional planning, tracking and reporting required for capital projects under accrual budgeting. To address this issue, an internal department working group has been formed under the leadership of Assistant Deputy Minister (Finance and Corporate Services), with membership from other key stakeholders including the Assistant Deputy Minister (Materiel) and the Vice Chief of the Defence Staff. To date, the working group has taken action to implement accounting system modifications and work-arounds to meet the unique accrual-budget reporting requirements, and it has been charged with developing and promulgating internal policy and procedural guidance for the management of accrual-funded projects. The steps being taken remain a work in progress and are not complete, given the extensive amount of internal stakeholder coordination required. Nevertheless, it should be self-evident that the migration to accrual budgeting in the Department of National Defence could not have occurred without the implementation of accrual accounting policies and procedures beforehand. The extent to which accrual accounting principles have been incorporated into departmental business planning and resource allocation processes will either facilitate or hinder the implementation of accrual budgeting. As discussed in the next section, it is the non-alignment of existing business processes in the department with accrual accounting principles and practices that remains the single greatest impediment to obtaining the full benefits of accrual accounting.

ACCRUAL ACCOUNTING AND BUDGETING IN PRACTICE

The Materiel Group is the custodian of record for most of the departmental capital equipment assets and inventory items and, as such,

represents a critical stakeholder in the adoption and integration of accrual accounting and budgeting within the Department of National Defence. Notwithstanding, accrual accounting has only recently started to have an impact on the way the Materiel Group (Assistant Deputy Minister [Materiel]) conducts the business of materiel acquisition and support on behalf of the department. This can be attributed to the relatively slow adoption of accrual accounting policies and procedures and their integration into the department's resource and program management framework.⁷⁸ Therefore, the foremost challenge for the Assistant Deputy Minister (Materiel) has been putting accrual accounting and budgeting policies and principles into operation in the materiel acquisition and life-cycle management processes of major defence assets and inventory; heretofore, accounting considerations were generally limited to selection of the correct appropriation vote (Vote 1, Operating Expenditures; or Vote 5, Capital Acquisition).

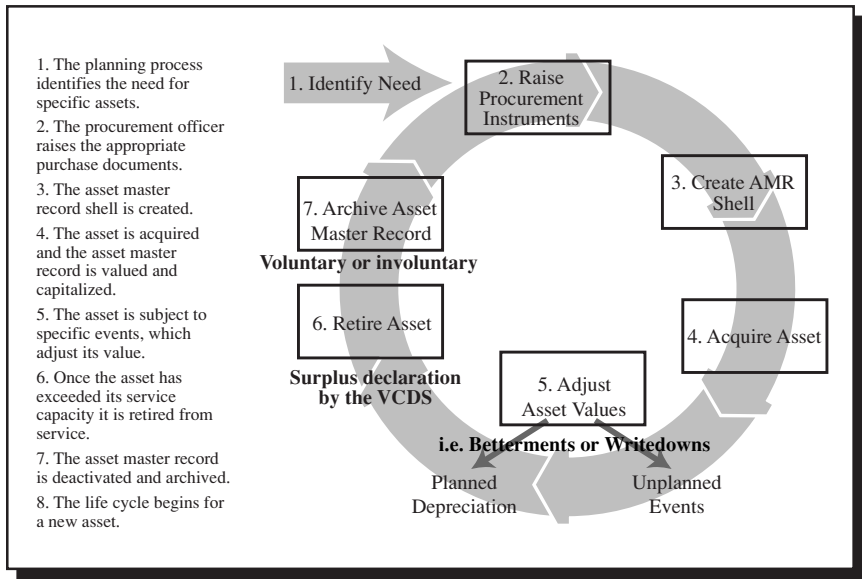
The Assistant Deputy Minister (Materiel) has the lead responsibility for maintaining the accuracy and completeness of the asset data records for all capital equipment assets in the department's equipment asset accounting system of record (Material Acquisition and Support Information System), in conjunction with other senior departmental managers.⁷⁹ This role has positioned the Assistant Deputy Minister (Materiel) as a focal point in the department-wide implementation of accrual accounting and has facilitated the development of critical knowledge and expertise in both recording and reporting on the capitalization of defence-owned equipment assets and inventory (lead responsibility for inventory management policies and practices resides within Assistant Deputy Minister [Materiel]). Nevertheless, one of the observed shortcomings of the implementation of accrual accounting within the Department of National Defence has been the failure to fully integrate new accounting policies and methods into existing departmental business processes and practices to thereby ensure consistent and effective application of accrual accounting policies in all business transactions.⁸⁰ This has prompted the Assistant Deputy Minister (Materiel) to initiate several bottom-up reviews of departmental materiel acquisition and support processes and practices to demonstrate to senior decision makers where such business practices were inconsistent with accrual accounting policy and to recommend procedural changes to build alignment.

A critical component of the Materiel Acquisition and Support function is equipment life-cycle management. Life-cycle management is defined by the United States Department of Defense as a management

process applied throughout the life of a system that bases all programmatic decisions on the anticipated mission-related and economic benefits derived over the life of the system.⁸¹ The life cycle of a weapon system includes all phases of a system's life including research, development, test and evaluation, production, operations and maintenance (in-service) and disposal. An important related concept is life-cycle cost, which is defined as the total cost to the government of acquisition and ownership of the system over its estimated useful life. Under the cash basis of accounting, all weapon system life-cycle costs were expensed in the year the expenditure was made, with no reference to the remaining economic value of the asset. However, under the accrual basis of accounting, once a decision has been made to procure a new weapon system, it is necessary to set up an asset master record in the department's asset accounting system to track the asset's starting or opening net book value and subsequent monthly rate of amortization expense. Over the asset's life cycle, the dollars spent on improvements or upgrades above a certain threshold value that result in substantially enhanced functionality, or extend the useful life of the main asset by more than one year, or significantly reduce an asset's operating costs (commonly referred to as betterments), will require an increase to the asset's net book value. Similarly, unplanned events, such as accidents or acts of war, that result in a reduction in the asset's useful life will require a write-down (either partial or complete) of the asset's remaining net book value. Likewise, write-downs are also done when there is a permanent impairment to the asset's capabilities, or when there has been a significant reduction in its value. Once a decision has been taken to retire an asset, either voluntarily or involuntarily, a similar write-down of the asset's remaining net book value would have to occur. These steps are illustrated in Chart 13.

Despite the efforts of the Assistant Deputy Minister (Materiel) Comptroller to educate acquisition project and life-cycle equipment managers within Assistant Deputy Minister (Materiel), an understanding of the impact of management decisions on the accrual accounting treatment of assets during the various phases of the equipment life cycle continues to be weak, requiring periodic awareness briefings, constant oversight and frequent comptroller staff intervention to maintain compliance with accrual accounting policy.

An example of where the Assistant Deputy Minister (Materiel) has had to take the lead to incorporate accrual accounting policy into departmental materiel acquisition and support and resource management

Chart 13. Accrual Accounting and Asset Life-Cycle Management

practices has been on the issue of changes to the estimated life expectancy of assets owned by the Department of National Defence. Even though official adoption of accrual accounting in the department occurred in 2001, there were no corresponding amendments in the department's capital equipment investment management policies. Consequently, there was no official mechanism to change the estimated life expectancy (or useful life) of capital equipment assets to ensure that such decisions would be taken strategically. In the absence of such guidance, there was minimal departmental oversight on changes to estimated life expectancy, with most being made along operational and technical lines, and little consideration was accorded to the potential long-term financial impacts on the department. Both accrual accounting and accrual budgeting demand that management fully understand and accurately document the financial impact of extending the estimated life expectancy of a capital asset, particularly the impact on the department's future annual amortization expense which has started to govern the amount of available capital investment planning room in a given period. Rigorous financial analysis is therefore key in supporting the decision-making process related to a proposed estimated-life-expectancy change.

Recognizing this shortfall, the Assistant Deputy Minister (Materiel) has taken action to formalize a policy, and associated process, through which capital assets, fleets and groups of equipment can be granted an extension to their estimated life expectancy. This new policy will ensure that all future decisions on equipment- or system-life extensions consider not only a comparison with the potential cost of replacing the asset, but also alignment with overall departmental plans, priorities and capability management plans. Along with the policy on estimated-life-expectancy changes, the Assistant Deputy Minister (Materiel) has successfully championed for the formal inclusion of betterments as a capital equipment project category in the department's capital equipment *Project Approval Guide*. The renewed policy guidance now clearly specifies that all capital equipment projects that meet the criteria of a betterment (under accrual accounting policy) will be treated as capital investment projects and, therefore, will be subject to a higher level of management scrutiny under the Department of National Defence's capital investment project review and approval process. The incorporation of the estimated-life-expectancy change process and betterment project criteria into the department's defence management practices is expected to go a long way in strengthening equipment-life-cycle management within the Department of National Defence by making better use of the department's accrual accounting information (such as net book value) for critical equipment-life-cycle decision points (such as extending the service life or replacing the asset).

Another area where the Assistant Deputy Minister (Materiel) has had to assume a leadership role is in the implementation of accrual budgeting within the department. Notwithstanding the efforts of the Assistant Deputy Minister (Finance and Corporate Services), the actual mechanics on how to implement accrual budgeting for capital projects in the Department of National Defence has, by default, fallen upon the Assistant Deputy Minister (Materiel) as the responsible agent for the acquisition of all major military equipment assets. In the absence of a legislated accrual budgeting framework, the department, and by extension the Materiel Group, has been forced to apply accrual budgeting principles within the government's existing modified system of cash-based expenditure management. As previously mentioned, this has burdened the department with additional budget reporting and the need for more frequent Treasury Board submissions to update both the expenditure and expense profiles of these projects. Much of this reporting

burden has been placed on the accrual budgeted projects themselves as the primary source of both spending and delivery schedule information. However, many of these new capital equipment projects have been established with a minimum amount of staff, given the current shortage of experienced acquisition engineering, logistics and procurement staff within the Materiel Group and the desire to expedite several large equipment acquisition projects simultaneously. As a consequence, the Assistant Deputy Minister (Materiel) Comptroller has taken action to keep the amortization expense or budgetary reporting activity within the supporting financial functional chain, thereby allowing each project to focus on accurately forecasting the investment cash expenditures based on its applicable schedule and performance criteria. Along these same lines, the Assistant Deputy Minister (Materiel) Comptroller has taken steps to implement full budgetary planning in the financial system of record (Financial Managerial Accounting System) for all accrual budgeted projects to ensure that all modifications to each project's spending plan are maintained within the system of record, rather than on stand-alone spreadsheets, thus making it easier to generate the required expenditure reports while maintaining a more robust audit trail. That said, the true workload impact of the increased financial reporting on the Materiel Group and the rest of the department remains to be seen.

The adoption of accrual accounting in Defence within the context of a cash-based expenditure management system has illuminated challenges around the concept of appropriation-vote integrity. Vote numbers vary by ministry. Under the current expenditure management system in the Department of National Defence, the Parliamentary votes confer certain expenditure rights and obligations, with the two most important being Vote 1 for the funding of day-to-day department or program delivery operations and Vote 5 for the funding of capital investments. Prior to the advent of accrual budgeting, all Vote 5-funded projects were funded on a cash basis with the expenditures expensed within the year appropriated. These votes represent cash-based appropriations for which the department is accountable to Parliament.

In addition to the above cash-based reporting, the implementation of accrual accounting has resulted in the department preparing accrual-based financial statements, which necessitated accounting for all expenditures on the department's balance sheet (asset-adjusted net book value and work-in-progress amounts) or its income statement (annual

amortization expense). These accounting transactions require that all capital projects categorize and track their planned expenditures as being either capitalizable or non-capitalizable, with the capitalizable expenditures settling to a work-in-progress account and being eventually amortized and expensed. The accrual accounting treatment of these cash-based expenditures is done by the Assistant Deputy Minister (Material) Comptroller staff, not the project management personnel. Visible to the capital projects is the cash-based financial reporting, which includes in-year spending forecasts, and there are immediate repercussions if spending exceeds the department's capital appropriation in a given year.

Owing to persistent capital budget constraints that first materialized in the late 1990s, departmental decisions were made to fund certain modernization or betterment projects (such as portions of CP-140 Aurora and CF18 Hornet incremental modernization projects) using operations and maintenance funds. These operations and maintenance-funded investment decisions were not initially captured by departmental accounting statements as resource allocation decisions, and were occurring without consideration as to how they would be reflected in the annual financial statements. The use of operations and maintenance funds in this manner was observed by the Office of the Auditor General of Canada in 2004 and resulted in the department having to implement interim procedural changes to strengthen vote integrity; this included designating a portion of the department's operations and maintenance-funded National Procurement budget as capital funds to pay for capital projects that were being undertaken using operations and maintenance funds.⁸² In effect, under accrual accounting, all capital investment to develop or acquire an asset must be undertaken using only capital funds, while the need for vote integrity under accrual accounting only exists because of the spending constraints inherent in a cash-based expenditure management system where funding is appropriated by vote. Although the current vote structure and cash-based parliamentary appropriations system are not likely to change, if the government were to adopt accrual-based budget appropriations fully, the parliamentary vote process could be replaced by a multi-year budget appropriation process, which would require departments to produce similar multi-year investment and operating plans that demonstrate their respective program delivery affordability and sustainability. However, the elimination of current controls would result in a much-diminished role for elected parliamentary representatives.

DEPARTMENT OF NATIONAL DEFENCE'S FINANCIAL REPORTING

Perhaps the most important aspect of accrual accounting is its impact on financial reporting and the generation of accurate financial statements – the *raison d'être* of accrual accounting. However, the accuracy and relevance of the accrual-based accounting information presented on the department's financial statements is only as good as the department's internal financial control framework. While the Department of National Defence, along with the rest of the federal government, begins the transition to audited financial statements, the emphasis will be on the accuracy and completeness of accrual accounting information so that the Department of National Defence can receive an unqualified audit opinion by the Auditor General within the department's reporting materiality threshold (currently established at one percent of annual expenditures). A recent Department of National Defence audit-readiness assessment conducted by an independent audit firm enumerated several areas requiring significant work by the department before an unqualified audit opinion could be realized.⁸³ Those areas include:

- Improvement in the computer controls and associated processes of the various systems feeding the production of financial statements, which currently make it difficult to reconcile and link accounting records and financial statements.
- Improvement in inventory valuation and reporting in order to reduce inventory inaccuracies and inconsistencies. This will require significant effort as the Canadian Forces Supply System was not designed to support financial statements.
- The need to conduct a physical verification of all capital assets by location to reconcile to the department's financial statements and asset system of record. This too will require significant effort, given the multitude of vehicles, ships and aircraft in the Canadian Forces inventory and their regular movement in support of operations and exercises.
- An increased level of documentation of controls for routine financial processes such as purchases and payables, revenue, receivables and payroll.
- The need to address shortfalls in the capacity (skills and number) of the departmental financial and non-financial staff to move to

a controls-reliant audit of its financial statements. This will require a significant sustained investment in training and education, as well as re-allocation of personnel to manage the effort.

Some key areas of non-alignment between accrual accounting policy and departmental defence management policy and practices are:

- Split funding for infrastructure in support of the capital equipment projects
- Submissions for project expenditure authority approval
- Equipment asset write-offs or write-downs
- Life-cycle and capital investment management decision making
- Identification of higher than anticipated equipment asset utilization rates and the potential need for early asset replacement
- Inventory valuation and reporting

CURRENT ACCRUAL ACCOUNTING AND BUDGETING ISSUES IN DEFENCE

The transition to accrual budgeting in the department has had the unexpected consequence of discovering areas of incongruence between Defence business management process and accrual accounting policy. For example, it is common practice in capital equipment acquisition projects to include in the submission to Treasury Board for project expenditure authority approval any related infrastructure (buildings and works) needed to achieve full operational capability of the equipment. Examples would be the construction of a jetty to accommodate a new class of Navy ship, or a new taxiway and parking ramp for oversized strategic transport aircraft. Construction in support of equipment, or CISE as it is commonly referred to within the department, often involves cost-sharing arrangements between capital equipment projects and their sponsors (or the eventual users of the new equipment) in an effort to control project costs and to share risks.

Construction in support of equipment is normally undertaken as stand-alone projects (requiring their own submission for expenditure authority approval) and simply uses the capital equipment project as a source of funds. It must also be acknowledged that while the Assistant

Deputy Minister (Materiel) is the accountable authority for all capital equipment acquisition, it is the Assistant Deputy Minister (Infrastructure and Environment) who is the accountable authority for all infrastructure projects. Consequently, CISE sub-projects can be characterized as being both funded and executed under split authorities, making it a challenge to determine accountability for project cost, schedule and performance. Nevertheless, under the modified cash basis of budgeting, split funding does not present a problem from either an expenditure management or an accounting perspective since all expenditures are expensed in the year they are made. While it is possible to use split funding under the accrual basis of budgeting (both cash and accrual funds) from an expenditure management perspective, it would be very difficult and labour intensive to accurately track and report the accrual-funded portion of the CISE sub-project, which would place in doubt the eventual accuracy of the department's financial position. For this reason, the practice of split funding for such sub-projects between capital cash and accrual-based, and of split accountabilities is under departmental review and will, in all likelihood, be curtailed.

The advent of accrual budgeting has also necessitated modifications to the department's documents for internal capital project approval and Treasury Board approval. However, there is limited guidance on how the accrual or budgetary perspective of the accrual-funded projects should be estimated and shown, making each accrual-budgeted project submission unique and, as a result, not in keeping with current departmental project management policy and practice. For example, there is no requirement to include in the departmental or Treasury Board project approval submission any information on how the project's accrual expense amount is determined, by including a table that shows the total project cost categorized as being either capitalizable or non-capitalizable. Similarly, accrual-budgeting policy or guidance at the corporate level is minimal, leading to the potential of procedural lapses by project management practitioners and supporting financial and procurement staff. While the department understands that it will be permitted to lapse unspent investment cash at fiscal year-end, the possible budgetary implications still have to be determined of an accrual-budgeted project failing to notify Treasury Board in time for its assigned investment funding to be reprofiled in the fiscal year and therefore lapsing sizable amounts of investment cash (a real possibility given the limitations of the cash-based budget appropriation process followed by Parliament). Likewise, the flexibility to increase the amount

of investment funding required in a particular fiscal year is also restricted by the parliamentary calendar. These are perhaps the greatest unknown and potential risk areas as the department adopts an accrual-based budgeting framework.

Arguably the greatest challenge in adopting full accrual accounting principles in relation to departmental management policies and practices lies in the area of inventory valuation and reporting. Treasury Board accounting policy requires that departments treat inventory holdings as a type of expenditure in suspense.⁸⁴ In reality this means that the department has had to institute financial monitoring and reporting procedures that capture inventory-related expenditure transactions (purchase of inventory items) to ensure that they are not expensed but rather attributed to an inventory valuation account. Inventory items are expensed, through a reduction of inventory value, only when the items are removed from inventory or issued to an end user. Much of the dissonance between accounting principles and management procedures and practice can be attributed to the lack of integration between the department's inventory management system of record and its financial system of record, which necessitates considerable manual reconciliation to ensure that inventory quantities and values are accurately recorded and reported. Likewise, the Canadian Forces Supply System (inventory management system of record) was never designed to report the value of the department's inventory holdings.⁸⁵ In addition, the department's current inventory valuation process only includes those inventory items held in Canadian Forces supply depots or contractor-owned facilities and excludes inventory items (except ammunition) held in field or operational units such as ships, squadrons or battalions, on the assumption that the items are considered consumed when issued to the supply accounts of operational units. The exclusion of inventory items held in Canadian Forces field units essentially means that large quantities of inventory items held, on a just-in-case basis, may not be valued. With a total inventory value of around five billion dollars, the level of risk associated with determining and maintaining accurate inventory values has been assessed by an independent audit firm to be high, likely requiring a sizable investment in information technology to adequately address.⁸⁶

Another area where there is a pressing need for better functioning of accrual accounting policy with departmental business practice is the area of capital equipment asset write-offs or write-downs. In a normal defence setting where advanced, complex military equipment is used

intensely – often in harsh environments – high-value weapon systems can be heavily damaged (permanently impaired) or destroyed. This can occur during normal daily use, on training exercises or during deployed operations. As a result, the equipment that is damaged beyond economical repair, or destroyed, has no residual value for the Canadian Forces. The use of a wide variety of multi-million-dollar weapon systems in deployed operations by the Canadian Forces over the past decade and a half has been extensive, and intensive use of certain weapon systems overseas can be expected to continue for the foreseeable future. Under accrual accounting, the weapon system or vehicle that is destroyed or damaged beyond economical repair would be written off, with the residual net book value written down to zero and any remaining amortization removed from future Department of National Defence obligations.⁸⁷ The difficulty has been in getting timely notification of capital asset impairment or destruction from the equipment-life-cycle managers to the finance functional chain in order to make the necessary accounting adjustments to asset valuations and amortization schedules. This is especially true for equipment on deployed operations. In an attempt to address this shortcoming, and to improve reporting under the Support to Deployed Operations Account, the Assistant Deputy Minister (Materiel) Comptroller has started to request that a report be completed quarterly on those capital assets damaged beyond repair or destroyed in theatre. A key expected benefit of this new accrual-based budgeting is that it will enable the Department of National Defence to negotiate better with central agencies for the funding to replace those destroyed weapon systems or vehicles, by determining the necessary “accrual room” to be allocated by central agencies for restoring diminished equipment capabilities.

Accrual accounting principles can be applied to the department’s advantage by the incorporation of asset amortization expense information for equipment and weapons systems, which will be particularly useful to the equipment-life-cycle management process within the department for determining the optimum time (from a financial perspective) to replace or modernize equipment, based on utilization rates. During the Cold War, managing the replacement of capital equipment was a relatively orderly process; in the face of a known and quantifiable threat, equipment utilization rates could be managed closely through detailed planning of exercises and operations within a defined budget. This is no longer the case. Since the end of the Cold War, a number of Canadian Forces weapon systems have been deployed

overseas repeatedly and more intensely. In effect, certain departmental weapon systems are being subjected to a much higher usage rate than was forecast during the procurement process. As a result, the estimated life expectancy of these specific weapon systems can reasonably be expected to decline,⁸⁸ and the earlier than planned replacement of heavily used equipment fleets will become a significant management issue for the Department of National Defence and central agencies. Accrual accounting can provide better information on the accelerated economic consumption of equipment assets. Adjustments can be made in the useful lives of equipment that result in the deliberate write-down of asset net book values as determined through engineering assessments that highlight reduced equipment life expectancy (or permanent impairment). Using this accrual-based financial information, the department will be able to demonstrate better the impact of deployed operations on equipment asset values and amortization rates, thereby positioning the department to negotiate the accrual room and future investment cash requirements.

Historically, defence budgets consisted of a moderate fixed component and a significant variable component.⁸⁹ The variable component shifted in relation to costs incurred, owing to changing activity rates, but it is gradually moving towards more fixed costs and less variable costs. A large contribution to this shift is the increased use of long-term maintenance contracts for new equipment fleets. The application of full accrual accounting to the budgetary process within the department will accelerate this trend. Amortization, or depreciation, locks in expenses over the long term to the defence budget, or until the asset is sold or disposed of; therefore, a significant element of long-term defence costs will become fixed over several decades. Consequently, the issue of stable defence funding over the long term becomes essential. Specifically, future-funding reductions to the Department of National Defence could reduce dollars available for personnel, operations and maintenance, the only remaining funding flexibility within the department.

Although it is under discussion, the budgetary treatment of equipment assets that are lost, destroyed or damaged beyond economical repair (permanently impaired) has yet to be determined. Possible budgetary treatments could include the department

- submitting a request in the supplementary estimates process to increase its budgetary ceiling by the net book value of the

permanently impaired equipment asset in the fiscal year in which the permanent impairment will be recognized and reported in the departmental financial statements; or

- absorbing the budgetary impact of the write-down of the net book value of the permanently impaired equipment asset in the fiscal year in which the permanent impairment will be recognized and reported in the departmental financial statements.

The historical defence policy and funding mismatch in the Department of National Defence has been well documented in recent Canadian defence policy literature.⁹⁰ The fundamental issue of affordability in Defence has been a long-standing issue for Western defence forces, one that has become increasingly difficult to ignore. Specifically, for a given unit of defence capability the cost “has been growing considerably faster than the year-on-year inflation figure.”⁹¹ Within this resource-constrained environment the department has the opportunity to realize the most significant benefit of accrual accounting and budgeting, and optimize the use of the department’s accrual budget (from Budgets 2005 to 2007 and beyond) for both the acquisition and sustainment of new and modernized defence capabilities. To accomplish this will present a challenge to departmental defence resource and capability planners and analysts to fully incorporate and exploit the accrual expense and sustainment expenditure information on existing equipment assets. It could be achieved by the development of data tables that show, by individual equipment asset, the accumulated depreciation or amortization expense, the current useful life and net book value, plus a forecasted (five to ten years) net book value based on the asset’s annual depreciation rate, along with any work-in-progress amounts that are expected to be added to the net book value of the asset. To this accrual expense information could be added actual and projected annual operating and maintenance expenditures by asset class, equipment utilization rates (hours in flight, days at sea, kilometres driven), as well as an estimate of the equipment replacement cost (updated periodically). Effectively, this combination of expense, expenditure and investment cost information would provide a solid empirical basis from which to discern the most cost-effective course of action (repair, refurbish or replace) during the life cycle of an asset and, by extension, to develop a long-term capital investment plan. In fact, it is reasonable to expect that capital investment priorities would be more rigorously informed by the objective lens that such detailed

life-cycle cost information would provide. Similarly, tracking such information by equipment or realty asset would strengthen the department's position in negotiating future accrual room from government central agencies by convincingly demonstrating sustainment and capital investment shortfalls. While they are not a panacea, accrual accounting and budgeting will have a profound and lasting impact on defence resource management practices and, if used appropriately, could have a positive impact on the previously elusive realization of an affordable and sustainable Canadian defence policy.

Although the focus of this study is accrual accounting and budgeting, it should be noted that such a change in accounting practice could link significantly with departmental capability-based planning⁹² as well as the development of a defence strategic cost model.⁹³ The development of planning processes and strategies within Western national defence establishments has been significant since the end of the Cold War, yet remains relatively unrecognized and unappreciated. Similarly, within Western defence, the rise of defence corporate strategy has been overshadowed by the massive restructuring and reorganization that has occurred since the end of the Cold War. Capability-based planning and strategic cost modelling both focus on the long-term perspective. Accrual accounting and budgeting facilitates these two initiatives by supporting long-term planning and decision making. Whereas the employment of capability-based planning and the assessment of the affordability of costs through use of a strategic cost model are internal benchmarking and assessment tools, accrual accounting and budgeting follow generally accepted accounting principles and result in public and transparent financial documents. The results of decisions stemming from capability-based planning and the use of the strategic cost model eventually flow through and are documented in the accounting budgetary process.

CHAPTER 4

Summary of Accrual Accounting and Budgeting in Defence

The federal government decided several years ago to replace the existing cash-based system of accounting with an accrual-based system of accounting. Although the transition has been in progress for several years, more work remains in order to incorporate this change fully into departmental processes and procedures. The government's decision to adopt accrual accounting has the greatest impact on the Department of National Defence, the largest holder of capital assets and inventory in the federal government. As a consequence, the department is shaping the development of overall federal accrual accounting policies and procedures, owing to the materiality – and impact – that defence will have on the eventual success or failure of the implementation of accrual accounting within the government. As was outlined in this analysis, much work remains to be done, and increased resource commitments will be needed over time to develop the capacity to manage under this different accounting system.

Although the full impact of accrual accounting and budgeting on defence is not clearly defined at this time, it can reasonably be expected that the change will be material. In the current situation the status quo is no longer viable and changes need to be made. In this regard, there are a number of similarities between the situation of today and that of the early 1960s. The most noteworthy similarity is the need to reinvest in defence capital. In the 1960s, savings to reinvest into capital were sought through administrative efficiencies,⁹⁴ and today the focus is not on cost savings but on increasing the quality of information to defence decision makers. The adoption of accrual budgeting in Defence is a key element in the application of full accrual accounting principles and practices, where the accounting data collected and reported by the

department do more than “merely *describe* financial reality – they in effect *define* reality, as real economic consequences flow from the reported numbers.”⁹⁵ The full impact of the transition to accrual accounting and budgeting will only become clear over the upcoming years. The resulting unambiguous delineation between capital investment and the remainder of the defence-funding envelope (personnel, operations and maintenance) will demand greater management attention to the capital program (future force development) and help ensure that the historical treatment of the capital program as a residual expenditure is diminished.⁹⁶ This will reduce the focus on immediate needs (personnel, operations and maintenance) and provide a more balanced approach that also reflects future needs (capital). Such indirect long-term benefit to defence will assist governments and defence planners in more accurately forecasting long-term needs and in addressing capability deficiencies over time. Indeed, from a defence management perspective, this could end up being the greatest benefit – although unintentional – of implementing accrual accounting in defence. The difficulty, however, will be to preserve a fragile state of sustainability with the department while simultaneously maintaining the deployed capabilities of the Canadian Forces on their assigned missions and tasks. This balance will be difficult given the planned massive influx of new capital equipment and the associated long-term annual operations and maintenance tail that this new capital equipment will generate.

Notwithstanding the expected benefits, the enormity of the challenges faced by the Department of National Defence to incorporate fully accrual accounting concepts and practices into the department’s business management and resource allocation processes will take years of concerted effort and millions of dollars to address. However, this significant long-term commitment will be competing against other pressures for funding and staff resources within the department. Accrual accounting and budgeting is not a resource-neutral activity. Accordingly, Defence will have to put in the necessary resources to achieve the desired results. Nevertheless, it is clear that accrual accounting and budgeting is here to stay and has begun to inform the department’s asset life cycle and capital investment decisions.

Appendix

Examples of Accrual-Budgeted Projects

SIMPLIFIED EXAMPLE NO. 1: ACCRUAL BUDGETED PROJECT

In this example, the Department of National Defence plans to acquire four new aircraft to provide assured strategic airlift capability for the Canadian Forces that meets an approved statement of operational requirements. A Treasury Board submission has to be drawn up for approval. Because the project is accrual budgeted (using investment cash), an accrual table has to be completed to accompany the submission and show the amortization expense schedule, which is, in reality, the planned budgetary expense for the upfront investment expenditure.

Expected project costs are as follows:

<i>Item</i>	<i>Cost (\$000s)</i>
Capitalizable costs	
4 aircraft (unit cost of \$50 million)	\$200,000
1 flight simulator (unit cost)	25,000
Project management office	15,000
Initial training and other set-up costs	<u>15,000</u>
Sub-total	<u>255,000</u>
Non-capitalizable costs	
Maintenance (Integrated Logistics Support) 2007–2011	<u>45,000</u>
Sub-total	<u>45,000</u>
Total cost	\$300,000

Expected in-service schedule:

<i>In-Service Date</i>	<i>Asset</i>
2007	1 flight simulator
2008	2 aircraft
2010	1 aircraft
2011	1 aircraft

Under accrual budgeting, all costs must be separated into two categories: non-capitalizable expenditures and capitalizable expenditures. Non-capital expenditures are expensed in the year in which they occur. Capital assets that are acquired or internally developed have to be individually identified. If there are a number of similar assets, they have to be grouped for the purpose of the amortization expense forecast. As a general rule, in the Department of National Defence straight-line amortization is used for all capital assets. Amortization expense commences in the month following the asset being declared in service or in use by the operator. (This is simplified in the examples to commence in the year during which the assets are placed in service.) The following calculation is required in order to forecast annual amortization expense for each individual asset or group of identical assets:

historical cost – salvage value

estimated useful life = estimated annual amortization expense

There are two types of capital assets identified in the project:

- flight simulator
- aircraft

Asset 1 (Flight Simulator)

Historical cost = \$25,000,000 (unit cost)

Apportionment of project overhead costs = \$1,875,000

Apportionment of training and set-up costs = \$1,875,000

Estimated useful life = 25 years

Salvage value = 0

$$\frac{\$28,750,000 - 0}{25} = \$1,150,000 \text{ (estimated annual amortization expense)}$$

Amortization Schedule (Flight Simulator)

<i>Number of Assets</i>	<i>Starting Date</i>
1	2007

Asset 2 (Aircraft)

Historical cost = \$50,000,000

Apportionment of project overhead costs = \$13,125,000 / 4 = \$3,281,250

Apportionment of training and set-up costs = \$13,125,000 / 4 = \$3,281,250

Estimated useful life = 25 years

Salvage value = 0

$$\frac{\$56,562,500 - 0}{25} = \$2,262,500 \text{ (estimated annual amortization expense per aircraft)}$$

Amortization Schedule (Aircraft)

<i>Number of Assets</i>	<i>Starting Date</i>
2	2008
1	2010
1	2011

Cash Flow Table (in \$000s)

	<i>FY 07–08</i>	<i>FY 08–09</i>	<i>FY 09–10</i>	<i>FY 10–11</i>	<i>Total</i>
Capitalizable expenditures (V511)	\$33,750	\$108,750	\$58,750	\$53,750	\$255,000
Non-capitalizable expenditures (V510)	5,000	10,000	15,000	15,000	45,000
Total expenditures	\$38,750	\$118,750	\$73,750	\$68,750	\$300,000

	<i>FY 25–26</i>	<i>FY 26–27</i>	<i>FY 27–28</i>	<i>FY 28–29</i>	<i>FY 29–30</i>	<i>FY 30–31</i>
Amortization expense on capitalized assets (X999)	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200
Non-capitalized expenses (V510)	–	–	–	–	–	–
Total expenses	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200	\$10,200
	<i>FY 31–32</i>	<i>FY 32–33</i>	<i>FY 33–34</i>	<i>FY 34–35</i>	<i>FY 35–36</i>	<i>Total Cost</i>
Amortization expense on capitalized assets (X999)	\$10,200	\$9,050	\$4,525	\$2,262.5	0	\$255,000
Non-capitalized expenses (V510)	–	–	–	–	–	45,000
Total expenses	\$10,200	\$9,050	\$4,525	\$2,262.5	0	\$300,000

Note that the full project cost of \$300 million is actually spent in the first four years, fiscal year 2007–08 to fiscal year 2010–11, but the budgetary impact of the project’s investment spending is actually spread over the subsequent twenty-five years. In effect, the Department of National Defence will have an annual budgetary amortization expense charge related to the acquisition and operation of the four strategic transport aircraft and the flight simulator, which will reduce the department’s authority by the amount of estimated amortization expense. Under evolving accrual budgeting guidelines, Treasury Board must be informed of any changes to the originally submitted accrual table.

SIMPLIFIED EXAMPLE NO. 2: ACCRUAL BUDGETED PROJECT WITH A BETTERMENT

Often military capital equipment assets are modified or improved. Under accrual accounting, it is necessary to apply generally accepted accounting principles related to the treatment of capital assets to determine if such modifications meet the definition of a betterment. Betterments to an equipment or weapon system are improvements valued at \$30,000 or more per asset that (1) significantly increase the

quality or quantity of its physical output or performance, or (2) significantly decrease its operating costs, or (3) extend its useful life by at least one year.⁹⁷ There are two types of betterments: a betterment that extends the useful life of the asset, and a betterment that does not extend the useful life. Each type requires an adjustment to the original project accrual table.

Betterment Without Extension of the Useful Life

Using Example No. 1 provided above (the purchase of four strategic transport aircraft and a flight simulator), say that in 2027 there will be a programmed major technological upgrade on the flight simulator, for an estimated total cost of \$8.5 million, that will not extend the flight simulator's expected useful life of twenty-five years. All other project assumptions remain unchanged. To calculate the change in annual amortization expense, the total cost of the betterment has to be added to the expected net book value of the flight simulator, and the investment then amortized over the remaining useful life of the flight simulator.

Net book value (NBV) of flight simulator = historical cost – accumulated amortization

Therefore, NBV of flight simulator = \$28,750,000 – (\$1,150,000 x 20 years) = \$5,750,000

NBV + betterment cost – salvage value

remaining useful life = estimated annual
amortization expense

\$5,750,000 + \$8,500,000 – 0

5 = \$2,850,000

Modified Accrual Table (in \$000s)

Note: For simplification, only the years where there are changes to the amortization expense are shown.

	<i>Accumulated Expenses FY 07–08 to</i>					
	<i>FY 26–27</i>	<i>FY 27–28</i>	<i>FY 28–29</i>	<i>FY 29–30</i>	<i>FY 30–31</i>	
Amortization expense on capitalized assets (X999)	\$188,162.5	\$11,900	\$11,900	\$11,900	\$11,900	
Non-capitalized expenses (V510)	45,000	–	–	–	–	
Total expenses	\$233,162.5	\$11,900	\$11,900	\$11,900	\$11,900	
	<i>FY 31–32</i>	<i>FY 32–33</i>	<i>FY 33–34</i>	<i>FY 34–35</i>	<i>FY 35–36</i>	<i>Total Cost</i>
Amortization expense on capitalized assets (X999)	\$11,900	\$9,050	\$4,525	\$2,262.5	0	\$263,500
Non-capitalized expenses (V510)	–	–	–	–	–	45,000
Total expenses	\$11,900	\$9,050	\$4,525	\$2,262.5	0	\$308,500

Betterment with Extension of the Useful Life

In 2027 say that there will be a programmed major technological upgrade on the flight simulator for an estimated total cost of \$8.5 million. It is expected that the useful life of the simulator will be extended by four years, from fiscal year 2031–32 to fiscal year 2035–36. All other project assumptions remain unchanged. To calculate the change in annual amortization expense, the total cost of the betterment must be added to the net book value of the flight simulator, and the investment then amortized over the extended useful life of the simulator.

Net book value (NBV) of flight simulator = historical cost – accumulated amortization

$$\text{NBV of flight simulator} = \$28,750,000 - (\$1,150,000 \times 20 \text{ years}) = \$5,750,000$$

NBV + betterment cost – salvage value

$$\text{extended useful life} = \text{estimated annual amortization expense}$$

$$\frac{\$5,750,000 + \$8,500,000 - 0}{5+4} = \$1,583,330$$

Modified Accrual Table (in \$000s)

Note: For simplification, only the years where there are changes to the amortization expense are shown.

	<i>Accumulated Expenses FY 07–08 to</i>					<i>Total Cost</i>
	<i>FY 26–27</i>	<i>FY 27–28</i>	<i>FY 28–29</i>	<i>FY 29–30</i>	<i>FY 30–31</i>	
Amortization expense on capitalized assets (X999)	\$188,162.50	\$10,633.33	\$10,633.33	\$10,633.33	\$10,633.33	
Non-capitalized expenses (V510)	45,000	-	-	-	-	
Total expenses	\$233,162.5	\$10,633.33	\$10,633.33	\$10,633.33	\$10,633.33	
	<i>FY 31–32</i>	<i>FY 32–33</i>	<i>FY 33–34</i>	<i>FY 34–35</i>	<i>FY 35–36</i>	
Amortization expense on capitalized assets (X999)	\$10,633.33	\$10,633.33	\$6,108.33	\$3,845.83	\$1,583.33	\$263,500
Non-capitalized expenses (V510)	-	-	-	-	-	45,000
Total expenses	\$10,633.33	\$10,633.33	\$6,108.33	\$3,845.83	\$1,583.33	\$308,500

Notes

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² Glassco Commission (1962), *Report of the Royal Commission on Government Organization, Volume 1* (Ottawa: Government of Canada), p. 19.

³ Treasury Board (2000), *Results for Canadians: A Management Framework for the Government of Canada* (Ottawa: Treasury Board), <www.tbs-sct.gc.ca/report/res_can/rc_e_pdf.pdf> accessed 19 March 2007.

⁴ Martin Dees and Paul Neelissen (2004), “Five Countries Pioneering Accrual Budgeting and Accounting in Central Government,” *International Journal of Government Auditing*, 31:1:11–16, <www.intosajournal.org/pdf/january2004.pdf> accessed 20 March 2007.

⁵ Deloitte (2004), *Mastering the Transformation: New Public Management, Accrual Accounting and Budgeting* (The Hague, Deloitte), p. 7, <www.deloitte.com/dtt/cda/doc/content/Masteringtransformation_oct2004.pdf> accessed 19 March 2007.

⁶ Treasury Board (1995), *The New Expenditure Management System* (Ottawa: Treasury Board).

⁷ Auditor General (2006), “Expenditure Management Report at the Government Centre,” Chapter 1 in *November 2006 Report*, <www.oag-bvg.gc.ca/domino/reports.nsf> accessed 5 March 2007.

⁸ Treasury Board (1995), *The Expenditure Management System of the Government of Canada*, <www.tbs-sct.gc.ca/pubs_pol/oepubs> accessed 6 March 2006.

⁹ Auditor General (1998), “The Financial Information Strategy: A Key Ingredient in Getting Government Right,” Chapter 18 in *1998 Report of the Auditor General of Canada* (Ottawa: Auditor General), pp. 18–28, <www.oag-bvg.gc.ca/domino/reports.nsf> accessed 25 April 2007.

¹⁰ *Ibid.*, pp. 18–29.

¹¹ Generally accepted accounting principles for government are based on guidelines of the Public Sector Accounting Board.

¹² Jean Dupuis (2004), *Appropriations and the Business of Supply* (Ottawa: Library of Parliament, Parliamentary Research Branch), p. 11, <www.parl.gc.ca/information/library/PRBpubs/prb0405-e.pdf> accessed 6 March 2007.

¹³ Privy Council Office (2006), *2006–2007 Report on Plans and Priorities* (Ottawa: Privy Council Office), <www.tbs-sct.gc.ca/rpp/0607/pco-bcp/pco-bcp_e.pdf> accessed 6 March 2007.

¹⁴ Department of Finance (2006), *2006–2007 Report on Plans and Priorities* (Ottawa: Department of Finance), <www.tbs-sct.gc.ca/rpp/0607/fin-fin/fin-fin_e.pdf> accessed 7 March 2007.

¹⁵ Treasury Board (2006), *2006–07 Report on Plans and Priorities* (Ottawa: Treasury Board Secretariat), <www.tbs-sct.gc.ca/rpp/0607/tbs-sct/tbs-sct_e.pdf> accessed 20 March 2007.

¹⁶ Department of National Defence (2007), *Departmental Financial Statements 2006–07* (Ottawa: Department of National Defence), p. 16.

¹⁷ The 2006–07 net book value of all Department of National Defence assets is \$25.9 billion. Department of National Defence (2007), *Departmental Financial Statements 2006–07* (Ottawa: Department of National Defence), p. 17.

¹⁸ Edward G. Keating and Matthew Dixon (2003), *Investigating Optimal Replacement of Aging Air Force Systems* (Santa Monica: RAND); and Congressional Budget Office (2001), *The Effects of Aging on the Costs of Operating and Maintaining Military Equipment* (Washington, DC: Congressional Budget Office).

¹⁹ Lawrence J. Korb, Max A. Bergmann and Loren B. Thompson (2006), *Marine Corps Equipment After Iraq* (Arlington: Center for American Progress, Washington and Lexington Institute), <www.americanprogress.org/issues/2006/08/marine_equipment.pdf> accessed 19 June 2001.

²⁰ United States Congressional Research Service (2005), *Defense Budget: Long-Term Challenges for FY2006 and Beyond* (Washington, DC: Congressional Research Service); and United States Congressional Budget Office (2005), *The Long-term Implications of Current Defense Plans and Alternatives: Summary Update for FY2006* (Washington, DC: Congressional Budget Office).

²¹ For a detailed discussion of the origins, evolution and future prospects of the capital program, see Elinor Sloan (2006), *The Strategic Capability Investment Plan: Origins, Evolution and Future Prospects* (Calgary: Canadian Defence & Foreign Affairs Institute), <www.cdfai.org> accessed 27 March 2007.

²² Auditor General of Canada (1998), “Buying Major Capital Equipment,” Chapter 4 in *1998 Report of the Auditor General of Canada*, paragraph 4.11 (Ottawa: Auditor General) <www.oag-bvg.gc.ca/domino/reports.nsf> accessed 27 March 2007.

²³ Douglas Bland (2003), “A Summary of Major Findings” in *Claxton Paper 4 – Canada Without Armed Forces?*, ed. Douglas Bland (Kingston: Queen’s University School of Policy Studies), pp. 105–110.

²⁴ Department of National Defence (2006), *2005–2006 Department of National Defence Performance Report* (Ottawa: Public Works and Government Services Canada), p. 16 <www.tbs-sct.gc.ca/dpr-rmr/0506/ND-DN/nd-dn03_e.asp> accessed 27 March 2007.

²⁵ John M. Treddenick (1998), “Distributing the Defence Budget: Choosing between Capital and Manpower,” in *Issues in Defence Management*, ed. Douglas L. Bland (Kingston: Queen’s University School of Policy Studies).

²⁶ It should be noted that the definition of capital has undergone some moderate changes in the past four decades. For example, capital no longer includes the procurement of ammunition or the federal sales tax or, starting in Budget 2005, investment cash. Investment cash funds are provided to the Department as a separate allotment specifically for the acquisition of major capital assets.

²⁷ Alan Williams (2007), *Reinventing Canadian Defence Procurement: A View from the Inside* (Kingston: Queen’s School of Policy Studies).

²⁸ Congressional Budget Office (2001), *The Effects of Aging on the Costs of Operating and Maintaining Military Equipment* (Washington, DC: Congressional Budget Office) <www.cbo.gov/ftpdocs/29xx/doc2982/AgingCostsO&M.pdf> accessed 12 April 2007.

²⁹ Department of Finance (2003), *The Fiscal Monitor*, August 2003 <www.fin.gc.ca/FISCMON/pdf/2003-04e.pdf> accessed 20 March 2007.

³⁰ The complexity is well documented in the following Chief of Review Services Report: Department of National Defence (2002), *Best Practices and Lessons Learned in Surveyed Defence Organizations Implementing Accrual Accounting* (Report no. 7050-8-21-2 [CRS] dated February 2002), (Ottawa: Chief of Review Services).

³¹ The *2006–2007 DND Cost Factors Manual* defines amortization: Recognizing that some assets are acquired to provide benefits over an extended

period of time, amortization is a measure of the value of a capital asset used in providing the output or service over the projected useful life of the asset. Department of National Defence (2006) *2006–2007 DND Cost Factors Manual* (Ottawa: Department of National Defence).

³² The parliamentary process of appropriations is still done on a cash basis, and therefore the budget, appropriations and financial statements of government do not all align.

³³ Tyrone M. Carlin (2005), “Debating the Impact of Accrual Accounting and Reporting in the Public Sector,” *Financial Accountability & Management*, 21:3:309–336.

³⁴ The source of Chart 6 is Tyrone M. Carlin (2005), “Debating the Impact of Accrual Accounting and Reporting in the Public Sector,” *Financial Accountability & Management*, 21:3:309–336.

³⁵ Vicente Pina and Lourdes Torres (2003), “Reshaping Public Sector Accounting: An International Comparative View,” *Canadian Journal of Administrative Sciences*, 20:4:334–350.

³⁶ Presently there are two financial reporting methodologies being implemented by the Government of Canada. The first is the Program Activity Architecture (PAA), a cost-accounting approach to reporting departmental expenditures by authorized program activities, in an effort to improve links between the dollars spent and the program output. The lead agency for directing the implementation of the PAA financial reporting process is the Treasury Board Secretariat of Canada. The PAA is a reporting activity distinct from financial reporting through departmental financial statements. Departmental financial statements show a department’s financial position, including the financial disposition of all assets, expenses, revenues and liabilities at a specific point in time (normally the end of the government’s fiscal year). The lead agency for implementing audited financial statements within the Government of Canada is the Comptroller General of Canada. The key priorities of the Comptroller General of Canada can be found at <www.tbs-sct.gc.ca/organisation> accessed 15 November 2007. The challenge for affected government departments is that the two financial reporting methodologies have a different focus, making the financial information difficult to both capture and reconcile. Furthermore, departments have a difficult task of reconciling these two approaches in their business processes and supporting financial systems.

³⁷ An attest audit is an audit of financial statements in accordance with generally accepted accounting principles.

³⁸ PricewaterhouseCoopers (2007), *Department of National Defence Audit Readiness Assessment* (Ottawa: PricewaterhouseCoopers LLP).

³⁹ Office of the Auditor General (2001), “Financial Information Strategy: Infrastructure Readiness,” Chapter 1 in *2001 Report of the Auditor General*, <www.oag-bvg.gc.ca/domino/reports.nsf> accessed 5 March 2007.

⁴⁰ Treasury Board (2001), *Treasury Board Accounting Standard 3.1, Capital Assets* <www.tbs-sct.gc.ca/pubs_pol/dcgpubs> accessed 5 March 2007.

⁴¹ Ibid.

⁴² Treasury Board (2001), *Treasury Board President Announces the Successful Implementation of the Financial Information Strategy Across Government*, <www.tbs-sct.gc.ca/media/nr-cp/2001/0402_e.asp> accessed 5 March 2007.

⁴³ Office of the Auditor General (2004), *Opening Statement to the Standing Committee on Public Accounts on 28 October 2004: Report and Observations of the Auditor General on the 2003–2004 Financial Statements of the Government of Canada*, <www.oag-bvg.gc.ca/domino/other.nsf/html/04pac05e.html> accessed 8 March 2007.

⁴⁴ The Department of National Defence has produced a handbook that describes its policies and procedures for the valuation, recording, amortization, betterment and disposal of capital assets, including assets acquired through a capital lease. Department of National Defence (2006), *Handbook 201: Accrual Accounting for Capital Assets in DND* (Ottawa: Assistant Deputy Minister [Finance and Corporate Services]).

⁴⁵ Ken Warren and Cheryl Barnes (2003), “The Impact of GAAP on Fiscal Decision Making: A Review of Twelve Years’ Experience with Accrual and Output-based Budgets in New Zealand,” *OECD Journal on Budgeting*, 3:4:7–40, p. 39 <www.oecd.org/dataoecd> accessed 20 March 2007.

⁴⁶ Jack Diamond (2002), “Performance Budgeting: Is Accrual Accounting Required,” in *International Monetary Fund Working Paper (WP/02/240)*, pp. 9–10 <www.imf.org/external/pubs> accessed 20 March 2007.

⁴⁷ An excellent summary of the debate concerning the impact of accrual accounting in the public sector can be found in Tyrone M. Carlin (2005), “Debating the Impact of Accrual Accounting and Reporting in the Public Sector,” *Financial Accountability & Management*, 21:3:309–336.

⁴⁸ Commonwealth of Australia (1999), *Fiscal Policy Under Accrual Accounting* (Canberra: Legislative Services), p. 2 <www.treasury.gov.au/documents/277/PDF/fpuab.pdf>.

⁴⁹ Mark Champoux (2006), “Accrual Accounting in New Zealand and Australia: Issues and Solutions,” in *Harvard Law School Federal Budget Policy Seminar: Briefing Paper No. 27* <www.law.harvard.edu/faculty/hjackson> accessed 21 March 2007.

⁵⁰ Auditor General (2001), “Financial Information Strategy: Infrastructure Readiness,” Chapter 1 in *2001 Report of the Auditor General* (Ottawa: Public Works and Government Services Canada), p. 5 <www.oag-bvg.gc.ca/domino/reports.nsf> accessed 23 April 2007.

⁵¹ Treasury Board (2000), *Results for Canadians: A Management Framework for the Government of Canada* (Ottawa: Treasury Board), p. 1 <www.tbs-sct.gc.ca/report/res_can/rc_e_pdf.pdf> accessed 19 March 2007.

⁵² International Federation of Accountants (2003), *Transition to the Accrual Basis of Accounting: Guidance for Governments and Government Entities*, second edition (New York: International Federation of Accountants Public Sector Committee), p. 7 <www.ifac.org/Members/DownLoads/PSC-Study14_2nd_Ed.pdf> accessed 24 April 2007.

⁵³ Government of Canada (2006), *Accrual Budgeting and Appropriations in the Federal Government* (Ottawa: Standing Committee on Government Operations and Estimates), p. 13 <<http://cmte.parl.gc.ca/Content/HOC/committee/391/oggo/reports>> accessed 24 April 2007.

⁵⁴ Despite the decentralization that will occur as a result of the Financial Information Strategy, the importance of capital expenditures to the department will dictate that major investment decisions remain centrally controlled.

⁵⁵ Accrual accounting standards within the Canadian public sector are governed primarily by the Public Sector Accounting Board. According to the Board, “accounting standards specify how transactions and other events are to be recognized, measured, presented and disclosed in government financial statements,” <www.psab-ccsp.ca/index.cfm> accessed 6 November 2007.

⁵⁶ Department of National Defence (2000), from a 27 April 2000 PowerPoint presentation by the Director of Managerial Accounting and Comptrollership entitled *Implementing the FIS in DND*.

⁵⁷ The issues in this paragraph were outlined in a PowerPoint presentation entitled *Capital Asset Valuation* to the Post-Daily Executive Meeting on 31 May 2001.

⁵⁸ Department of National Defence (1999), *Survey Report: Asset Valuation for Accrual Accounting*, December 1999 (7050-8-21 [CRS]), (Ottawa: Chief of Review Services), p. iv. This survey considers the relevance and reliability of existing management systems, the valuation of tangible assets, the status of contaminated sites and the costs associated with them, the complex data collection task, and finally training of personnel.

⁵⁹ Department of National Defence (1999), a PowerPoint presentation entitled *Accrual Accounting*, made on 20 May 1999 to the Financial Information Strategy Working Group by the Accrual Accounting Implementation Team Leader.

⁶⁰ For a more detailed description of the classification of accounts see <www.collectionscanada.ca/information-management> accessed 9 July 2007. A standard object is defined at the above Web site as “a complex set of objective categories that define the nature of the goods or services acquired, or source, revenue, cause of increase or decrease in financial claims and obligations.”

⁶¹ Treasury Board (2007), “The Government Expense Plan” and “The Main Estimates,” Parts I and II in *2007–2008 Estimates*, pp. 1–41 <www.tbs-sct.gc.ca/est-pre> accessed 19 March 2007.

⁶² Ibid.

⁶³ Department of National Defence (2007), *2006–2007 Departmental Financial Statements* (Ottawa: Department of National Defence), p. 9.

⁶⁴ Within the Department of National Defence, assets valued at less than \$30,000 are treated as consumable items and are not capitalized but are expensed in the year they are acquired. The only exception to this rule is motorized vehicles that are issued a Canadian Forces vehicle licence registration.

⁶⁵ One of the potential limitations of the whole-asset approach to asset valuation is that it may understate the true life cycles of certain military equipment, such as aircraft, that are subject to frequent capability upgrades in order to keep them in operation well beyond their designated useful lives. In such instances, the component approach has been judged by auditors to be superior by capturing the different life-cycle assumptions of major components of military equipment, thereby better aligning the associated accounting information.

⁶⁶ Department of Finance (2004), *The Budget Plan 2004* (Ottawa: Department of Finance), p. 200 <www.fin.gc.ca/budget04/pdf/bp2004e.pdf> accessed 8 March 2007.

⁶⁷ The costs include design and engineering fees, salaries and benefits of the in-house staff dedicated to making the asset operational, construction, directly attributed overhead, feasibility studies, costs to obtain approvals, finder’s fees, broker’s commissions, survey costs, legal fees, testing fees, freight, duties and air rights.

⁶⁸ Department of National Defence (2006), *Handbook 201: Accrual Accounting for Capital assets in DND* (Ottawa: Assistant Deputy Minister [Finance and Corporate Services]), p. 5.

⁶⁹ The exception is commercial pattern vehicles, particularly cars and trucks, which are recorded in the Material Acquisition and Support Information System even if they are under \$30,000. Similar to the Department of National Defence’s Financial and Managerial Accounting System, the Material Acquisition and Support Information System also carries a list of work-in-progress assets.

⁷⁰ Department of National Defence (2005), *Internal Audit: Overview Report – Material Acquisition and Support Information System (MASIS)*, June 2005 7053-31-2 (CRS), (Ottawa: Chief of Review Services), p. 7 <www.forces.gc.ca/crs/pdfs/masin_e.pdf> accessed 23 April 2007.

⁷¹ Department of National Defence (2001), “Overview of Aladdin in RA AA,” Section 6.2 in *Realty Asset Accrual Accounting Guidelines* (Ottawa: Assistant Deputy Minister [Infrastructure and Environment]).

⁷² Other associated costs can include installation and set-up costs, design and engineering costs, architectural fees, legal fees, survey costs, site preparation costs, freight charges as well as any other significant costs incurred to make that particular asset operational.

⁷³ Department of Finance (2005), *The Budget Plan 2005* (Ottawa: Department of Finance), p. 221 <www.fin.gc.ca/budget05/pdf/bp2005e.pdf> accessed 5 June 2007.

⁷⁴ Department of National Defence (2007), *Defence Budget: Net Expenditures & Total Planned Spending (Current and Constant FY 1990–91 Dollars)*, May 2007 (Ottawa: Director Strategic Finance and Costing).

⁷⁵ Department of Finance (2006), *The Budget Plan 2006* (Ottawa: Department of Finance), p. 136 <www.fin.gc.ca/budget06/pdf/bp2006e.pdf> accessed 5 June 2007.

⁷⁶ Reprofitting is shifting of approved investment dollars from the current fiscal year to the subsequent fiscal year.

⁷⁷ This includes financial statements, public accounts, reports on plans and priorities, and departmental performance reports.

⁷⁸ A Chief of Review Services report published in 2002 cited that ensuring the compatibility of accrual accounting policy with departmental business processes and practices was essential for the successful implementation of accrual accounting in defence organizations. Department of National Defence (2002), *Best Practices and Lessons Learned in Surveyed Defence Organizations Implementing Accrual Accounting* (Report no. 7050-8-21-2 [CRS] dated February 2002), (Ottawa: Chief of Review Services).

⁷⁹ These asset data records show accumulated amortization expense and work-in-progress sub-ledger items that are the source record for the department’s financial statements. Although work-in-progress is recorded in both the Material Acquisition and Support Information System and the Financial and Managerial Accounting System, the latter is considered the official source system for work-in-progress, primarily because it is the most current, it reflects Assistant Deputy Minister (Infrastructure and Environment) work-in-progress, and the Material Acquisition and Support Information System does not yet show work-in-progress for all projects.

⁸⁰ PricewaterhouseCoopers (2007), *Department of National Defence Audit Readiness Assessment* (Ottawa: PricewaterhouseCoopers LLP).

⁸¹ United States Department of Defense (1997), *Glossary: Defence Acquisition Acronyms and Terms* (Fort Belvoir, Virginia: Department of Defense, Defense Systems Management College, Acquisition Policy Department).

⁸² Office of the Auditor General of Canada (2004), *2003–04 Public Accounts Management Letter – DND*, November 2004.

⁸³ PricewaterhouseCoopers (2007), *Department of National Defence Audit Readiness Assessment* (Ottawa: PricewaterhouseCoopers LLP).

⁸⁴ Treasury Board of Canada, *Policy on Accounting for Inventories*, <www.tbs-sct.gc.ca/Pubs_pol/dcgpubs> accessed 22 June 2007

⁸⁵ If an item held in the Canadian Forces Supply System is flagged as a consumable, the system records each subsequent buy price, and a moving weighted average is automatically calculated within the system for valuation purposes. If the item is flagged as a repairable, the automatic calculation function is not “turned on,” and the inventory price defaults to the Global Price field, which does not change unless it is manually updated. Currently this is achieved by annually reviewing those items with purchases in the reporting period, so that the moving weighted price can be manually calculated and then updated.

⁸⁶ PricewaterhouseCoopers (2007), *Department of National Defence Audit Readiness Assessment* (Ottawa: PricewaterhouseCoopers LLP).

⁸⁷ If the asset is completely destroyed, the write-down process is bypassed and a straight write-off is done. A write-down is a reduction (partial or complete) of net book value by increasing amortization. A write-off is a reduction (partial or complete) of historical cost.

⁸⁸ The subject of reduced estimated life expectancy of equipment in a combat environment is well described in Lawrence J. Korb, Max A. Bergmann and Loren B. Thompson (2006), *Marine Corps Equipment After Iraq* (Arlington, Virginia: Center for American Progress, Washington and Lexington Institute), <www.americanprogress.org/issues> accessed 19 June 2001.

⁸⁹ David L. Kirkpatrick (2004), “Trends in the Costs of Weapon Systems and the Consequences,” *Defence and Peace Economics*, 15:3:259–273.

⁹⁰ Douglas L. Bland (ed.) (2003), *Canada Without Armed Forces* (Kingston, Ontario: School of Policy Studies, Queen’s University).

⁹¹ Michael Alexander and Timothy Garden (2001), “The Arithmetic of Defence Policy,” *International Affairs*, 77:3:509–529.

⁹² Capability-based planning provides the tools through which the Defence Services Program can be linked to government policy and expectations.

Capability-based planning is employed through a process that creates scenario-specific, force-wide capability goals. The process begins with a forecast of the future security environment and consideration of a strategic operating concept. Capability-based planning then examines each scenario under the lens of the future security environment and determines which capabilities and capacities will be required in the future. Capability-based planning encourages innovation by moving away from equipment solutions early in the process and linking strategic goals to capability decisions. Indeed, by focusing on forecasted future capabilities and the effects that must be created, one can avoid the tendency to simply upgrade existing systems and/or to replace platforms with newer versions.

⁹³ The objective of developing a strategic cost model is to provide an estimate of the total cost of producing military capabilities over the long term. The strategic cost model developed by the Chief of Force Development and the Director General Financial Management details the full capability demand by all Canadian Forces and Department of National Defence organizations, and subsequently compares these demands with the supply of funds in order to create a thirty-year view of the fiscal framework that the department faces as it undergoes a period of unprecedented transformation. The objective of this model is to assist in shaping defence planning as well as informing program and budget decisions, while contributing to the national objectives of greater strategic coherence and transparency across government.

⁹⁴ Ross Fetterly (2005), "The Influence of the Environment on the 1964 Defence White Paper," *Canadian Military Journal*, 5:4:47–54, <www.journal.forces.gc.ca/engraph> accessed 19 June 2007.

⁹⁵ Gerald I. White, Ashwinpaul C. Sondhi and Dov Fried (2003), *The Analysis and Use of Financial Statements*, 3rd edition (Hoboken, N.J.: John Wiley & Sons), p. 173; italics in the original.

⁹⁶ John M. Treddenick (1998), "Distributing the Defence Budget: Choosing Between Capital and Manpower," in *Issues in Defence Management*, ed. Douglas L. Bland (Kingston, Ontario: School of Policy Studies, Queen's University).

⁹⁷ Department of National Defence (2007), "Equipment and Weapon Systems," Chapter 1020-4-6 in *Financial Administration Manual* (Ottawa: Department of National Defence).

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