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Chief Review Services Chef - Service d'examen

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Audit of Inventory Management: Stocktaking, Adjustments & Write-offs

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Caveat

Much of the analysis in this report relies on prices recorded in the Canadian Forces Supply System (CFSS). Previous CRS audits have highlighted significant inaccuracies in this pricing. As a result, no assertion is made as to the accuracy of reported values, and caution must be exercised in using these results for management decision making without further confirmation.



Table of Contents

Acronyms and Abbreviations	i
Synopsis	ii
Results in Brief	iii
Introduction	1
Background	1
Objectives.....	1
Scope	1
Methodology	2
Findings and Recommendations	3
Stocktaking, Adjustment & Write-off Practices.....	3
Policy, Information Systems and Performance Measures	9
Annex A—Management Action Plan.....	A-1
Annex B—Audit Criteria	B-1
Annex C—Overview of the Current Process.....	C-1



Acronyms and Abbreviations

ADM(Fin CS)	Assistant Deputy Minister (Finance and Corporate Services)
ADM(IM)	Assistant Deputy Minister (Information Management)
ADM(Mat)	Assistant Deputy Minister (Materiel)
CAMMS	Computer Assisted Medical Materiel System
CF	Canadian Forces
CFSM	Canadian Forces Supply Manual
CFSS	Canadian Forces Supply System
CRS	Chief Review Services
DGMSSC	Director General Materiel Systems and Supply Chain
DMIS	Director Materiel Information Systems
DMPP	Director Materiel Policy and Procedures
DND	Department of National Defence
DSCO	Director Supply Chain Operations
FY	Fiscal Year
OAG	Office of the Auditor General
SCA	Supply Customer Account
SOH	Stock On-hand
WQT	Web Query Tool



Synopsis

As part of an ongoing effort to improve the reporting accuracy of departmental assets held in the Canadian Forces Supply System (CFSS), Chief Review Services (CRS) conducted an audit of inventory stocktaking, adjustments and write-offs.

The main objective of this audit was to assess whether the controls in place are adequate to safeguard departmental inventories, are risk appropriate, and result in accurate and timely information for materiel management and financial reporting purposes. While the inventory values stated in the report are based on best information currently available from the supply system, prior audits have highlighted inaccuracies in those values. As a result, no assertion is being made as to the accuracy of the reported inventory values.

The audit found that stocktaking, adjustment and write-off processes could be improved by clarifying policies, using better automated tools, and establishing benchmarks and performance standards. While improvements are needed to enhance inventory management, the audit did not find evidence to conclude that unwarranted losses are occurring.

Management agrees that improvements in governance and accountability for inventory management are required, and an action plan in this regard has been developed. As well, an Assistant Deputy Minister (Materiel) (ADM(Mat)) initiative will now require all Senior Executives to sign an annual attestation for materiel accountability to ensure stocktaking is completed as required, and that due diligence is enforced regarding the management of inventory.

The Department will monitor the progress made in implementing the management action plans and will undertake an audit follow-up if warranted.



Results in Brief

CRS conducted an audit of inventory stocktaking, adjustments and write-offs to assess whether the controls in these processes adequately safeguard Department of National Defence (DND) assets, are risk appropriate, and result in accurate, timely information for materiel management and financial reporting purposes.

Based on CFSS data as of 31 March 2007, more than 340 million items¹ with a reported value of approximately \$11.8 billion were held in warehouse accounts. Supply customer accounts (SCA) held a further 45 million items, with a CFSS recorded value of \$13.5 billion.²

Without proper stocktaking, adjustment and write-off processes, DND cannot ensure that departmental assets are safeguarded and that inventory reports are accurate. This has implications on the Department's ability to ensure materiel is available where and when needed. As well, it increases the risk that some losses may go undetected.

Stocktaking, adjustment and write-off processes could be improved by clarifying policies and ensuring they are risk-appropriate, by using better automated tools, and by establishing benchmarks and performance standards.

Findings and Recommendations

Stocktaking, Adjustment and Write-off Practices

The Canadian Forces Supply Manual (CFSM) provides direction on the processes to be used for stocktaking, adjustments and write-offs. However, there has been minimal oversight to ensure the policies are fully adhered to. As a result there has been inconsistent interpretation and application of the policy. Three site visits showed that

- a program has been implemented to ensure warehouse account stocktaking requirements are met; however, there is inadequate documentation to confirm that SCA verifications occur as required;
- adjustments are being incorrectly used (12 percent of the sampled transactions) to record purchases, issues, bin transfers, condition changes, etc. This distorts other materiel management information including usage and pricing data; and

¹ Includes consumable and repairable items, ammunition, and some capital assets.

² Items are held in warehouse accounts for future use, while accountable items "in use" are recorded against SCAs. A warehouse may hold particular equipment to meet future requirements; this same type of equipment may be in use and also recorded as held by a particular supply customer.

Overall Assessment

Current stocktaking, adjustment, and write-off processes do not provide accurate management information in order to ensure that:

- Materiel with a CFSS reported value of \$25 billion is properly safeguarded and can be readily located when required; and
- Reported values for materiel management and financial reporting purposes are accurate and timely.



- while adjustments requiring write-off³ had, for the most part, been forwarded to the appropriate approving authority, inaccurate information was entered in CFSS, suggesting a much higher level of write-offs was required.

A large percentage of the write-offs reported to the Public Accounts in fiscal year (FY) 2007/08 were very low dollar value. Sixty-two percent of the reported items had a unit cost under \$50, and represented only seven percent of the total reported value. In many cases, the administrative cost of processing the write-off may have exceeded the actual loss.

Stocktaking, adjustment, and write-off practices are not sufficiently risk-based and cannot be relied on to produce accurate and timely information regarding materiel holdings. This could ultimately lead to materiel shortfalls or unnecessary purchases.

It is recommended that

- monitoring of stocktaking be enhanced (potentially through electronic means);
- mechanisms be put in place to ensure adjustments are properly and consistently recorded; and
- a threshold value be established for write-offs allowing additional effort to be placed on investigating the more significant losses.

A recent ADM(Mat) initiative will require all Senior Executives to sign an annual attestation for materiel accountability. The purpose of this initiative, to be fully implemented by December 2009, is to ensure stocktaking is completed as required, and that due diligence is enforced regarding the management of inventory.

Policy, Information Systems and Performance Measures

The lack of accurate information on stocktaking, adjustments, and write-offs has several underlying causes:

- Policies are not sufficiently risk-based. Too much attention is focused on low-dollar value areas, diverting resources which should be used to investigate more material concerns.
- The adjustment and write-off processes involve many manual steps, and the associated information is entered in multiple information systems. This requires increased effort and, due to limited edit checks, the resulting information is often inconsistent.
- Key indicators and acceptable performance standards have not been implemented to allow for on-going monitoring of these processes.

These underlying issues reduce the effectiveness and efficiency of these processes. As well, they make it more difficult to identify those risk areas where additional oversight is required.

³ According to the CFSM, if the adjustment is due to normal wear and tear or to a data entry error, the adjustment does not require write-off action. Write-off action is required when an adjustment is processed for items reported as lost or missing, as well as for stocktaking surpluses and deficiencies.



It is recommended that

- policies and procedures be revisited to ensure they are streamlined and risk-appropriate;
- information system capabilities be enhanced to provide a more integrated and efficient approach; and
- key indicators and performance standards be implemented to improve monitoring of the processes.

Note: For a more detailed list of CRS recommendations and management response please refer to [Annex A](#)—Management Action Plan.



Introduction

Background

In accordance with the CRS Work Plan for FY 2007/08, an audit of inventory stocktaking, adjustment and write-off practices was completed. As at 31 March 2007, total CFSS holdings included more than 385 million items with a recorded value exceeding \$25 billion. Previous CRS reports,⁴ as well as the DND Audit Readiness Assessment Report dated March 2007 and recent Office of the Auditor General (OAG) audits, have expressed concern over the accuracy of CFSS inventory holding information. This audit examined inventory stocktaking, adjustments and write-offs as these three practices play an essential role in ensuring information regarding holdings is accurate, and that materiel is adequately safeguarded and can be readily located when needed.

Objectives

The objectives of this audit were to assess whether

- stocktaking, adjustments and write-offs of CFSS holdings are adequately controlled,
- the processes are risk-appropriate, and
- the resulting materiel and financial management information is timely and accurate.

Scope

The audit scope included all CFSS holdings in both warehouse accounts and SCAs. As at 31 March 2007:

- Warehouse account holdings⁵ comprised 340 million items with a recorded value of \$11.8 billion; and
- SCA holdings⁶ comprised 45 million items with a recorded value of \$13.5 billion.

Non-CFSS holdings, such as medical supplies recorded in the Computer Assisted Medical Materiel System (CAMMS), were excluded from the audit scope.

The audit examined inventory stocktaking, adjustment and write-off processes in place during FYs 2006/07 and 2007/08, with the exclusion of processes relating to deployed operations and to inventories held by defence contractors.⁷

The warehouse account and SCA adjustment transactions selected for detailed review occurred between 1 October 2006 and 30 September 2007. A schematic overview of the reviewed processes is included at [Annex C](#).

⁴ For previous CRS reports, see http://www.forces.gc.ca/crs/rpt/reports_e.htm.

⁵ Items held in warehouse accounts are for future use. “Stocktaking” is used to confirm these holdings.

⁶ Accountable items which are “in use” are recorded in SCAs. While the term “verification” is used for the process to confirm these holdings, in this report the terms “stocktaking” and “verification” are used interchangeably.

⁷ See CRS report *Audit of Contractor-Held Inventories* for more information <http://www.crs-csex.forces.gc.ca/reports-rapports/2008/136P0816-eng.asp>.



Methodology

The audit results are based on the following:

- Review of policies and procedures, primarily as documented in the CFSM;
- Interviews with key ADM(Mat) and Assistant Deputy Minister (Finance and Corporate Services) (ADM(Fin CS)) personnel;
- Analysis of the CFSS materiel holding information and adjusting transactions;
- Review of write-off information including: The Canadian Forces Quarterly Write-off Public Accounts database (commonly known as the CF152 database), Plates III-3c and III-4d of the Public Accounts, and write-off expenses included in the departmental financial statements; and
- Three site visits to selected bases/wings/depots which included:
 - Review of stocktaking-related activities and records,
 - Review of supporting documentation for adjustment transactions, and
 - Reconciliation of CFSS adjustment information to resulting write-offs.



Findings and Recommendations

Stocktaking, Adjustment & Write-off Practices

Current stocktaking, adjustment, and write-off processes and practices do not provide accurate information for decision making and result in increased risk that materiel will not be readily located when required and that some losses will go undetected.

Stocktaking

Periodic physical stocktaking is essential to ensure that information on inventory quantity, location, and condition is accurate and, by extension, that materiel is available and can be easily located when needed. Current policy requires that stocktaking of all warehouse account holdings be completed at least every four years,⁸ while a verification of SCA holdings must be completed when the account holder changes, there is a new commanding officer, or at a minimum every four years.⁹ This is a resource-intensive requirement that does not consider the relative risk of various types and values of holdings. In addition, there is currently no mechanism to ensure the stocktaking requirements are met.

Warehouse Account Stocktaking. While the three visited sites had established schedules to meet the warehouse account stocktaking requirements, two of them stated that their stocktaking cells had been disbanded for some time and had only recently been re-established. This renewed effort may, in part, be as a result of ADM(Mat) staff assistance visits which noted that, as of spring 2007, only one-third of 28 visited bases and wings were meeting warehouse account stocktaking requirements. While there seems to be an increased effort to meet the warehouse account stocktaking requirement, the prevalence of unsigned and undated count sheets suggests that further improvement is warranted.

SCA Verifications. Little rigour has been applied to ensuring SCA holdings are accurately recorded in part perhaps because a portion of these holdings have not been reported as assets in the departmental financial statements.¹⁰ Consequently, assurance cannot be provided that account holders are providing proper custody to assets with a recorded value of over \$13 billion.

At the visited sites:

- SCA verification paperwork was often lacking, or unsigned. The account holder sometimes verified the holdings with little independent review.

⁸ Some specific materiel including weapons and ammunition require more frequent stocktaking. Specific requirements are detailed in CFSM, Vol. 3, Ch. 8, Sec. B.

⁹ Policy requires that reserve and cadet SCAs be verified annually. CFSM, Vol. 3, Ch. 8, Sec. B para 5.

¹⁰ Standalone capital assets, valued at over \$30,000, and held in SCAs have been reported in the financial statements. Starting in FY 2007/08, additional effort has been placed on verifying and including the value of repairable items. Trackable consumable items held in SCAs are not included in the financial statements.



- Ten of 53 SCA accounts at one unit did not have an account holder. These ten accounts, with recorded holdings of \$9.9 million, had not been properly verified or reassigned when the previous holder was transferred from the position; consequently, no one was assigned stewardship for these assets.¹¹

The CFSS provides a field to record the date when each SCA was last verified; however, as shown in Table 1, this information is not consistently recorded. For 49 percent of SCA records, the field was blank, or contained inappropriate data. Dates as early as 1992 and as late as 2029 were recorded and have been included in the “other” category.

Two of the visited sites had developed a standalone database to record SCA holder and verification information. However, users had input a variety of date formats (e.g., YYYYMMDD, DDMMYYYY) and, as a result, these databases could not be used to determine if all required account verifications had been completed.

Recorded “Last Verified Date” for SCAs	
Within 0-2 yrs	38%
Within 2-4 yrs	13%
Blank	45%
Other	4%

Table 1. SCA “Last Verified Date.” Recorded verification information is not reliable.

While the level of effort could be greatly reduced by using a risk-based approach, some degree of physical stocktaking will always be required. Without a mechanism for monitoring that account verification or stocktaking is completed, little assurance can be provided that recorded holdings are accurate, that adjustments are completed as required, and that materiel will be available where and when required.

Adjustments

Level of Adjustments. The CFSS Web Query Tool (WQT) provides information on CFSS transactions, including adjustments. The WQT does not allow global reports on adjustments to be produced; rather, the information is limited to individual accounts or to districts. Consequently, the full value of adjustments of CFSS holdings during a particular time period could not be readily determined.

Using the WQT, adjustment reports were produced for 12 of the approximately 150 CFSS districts. Warehouses in these 12 districts held 81 percent of the total recorded items and 72 percent of the total recorded value. The three visited sites were selected from these 12 districts.

The total value of recorded adjustments in these 12 districts, based on WQT reports, was four times the value of their holdings (\$34.1 billion in adjustments on holdings of \$8.5 billion).

¹¹ There is no method to determine how widespread this issue is, (i.e., how many accounts are without a valid holder) as the holder is identified by name rather than by an identifying number which could more easily be related to other information sources.



Further investigation showed that four transactions¹² and several values that were erroneously duplicated by the WQT were severely skewing the results.

After removing these transactions, the gross value of adjustments was 11 percent of the value of holdings in these districts as illustrated in Table 2. It cannot be determined if this is acceptable as the Department has not established a performance standard for the level of adjustments.

Use of Adjusting Entries. While some adjustments are to be expected due to loss, wear and tear, or theft, others are being made because purchases and receipts and other movement of goods are not appropriately recorded.

	# Items (million)	\$ Value
WSA holdings at 12 selected districts, 31 March 2007	275	\$8.5B
Gross adjustments for these districts, 12 month period ending 30 September 2007	4.5	\$910M
Including: Surpluses	1.8	\$488M
Deficiencies	2.8	\$422M

Table 2. Refined CFSS Adjustments. After removing extreme transactions, the gross value of adjustments equalled 11 percent of holdings. The value of surpluses exceeded deficiencies.

During site visits to three of these 12 locations, 295 adjustments to warehouse account holdings were examined in detail. Of these, 35 (12 percent) should have been other transaction types, including purchases, issues, receipts, condition changes, and bin transfers. Using a materiel adjustment transaction rather than the correct type of CFSS entry results in inaccurate purchasing, pricing, and usage information. Relying on subsequent adjusting entries to correct CFSS holdings information reduces the likelihood that items will be found on a timely basis when needed, and diminishes the confidence that can be placed in CFSS data.

Approval of Adjusting Entries. Current policy requires that the details and rationale for each adjusting transaction be recorded on a DND 2227 supply document. If the adjustment is due to normal wear and tear (e.g., a customer returns a low-dollar-value, broken item and is issued a new functioning one) or due to a data entry error (e.g., 100 items were erroneously recorded as 1,000), the adjustment does not require write-off action. Regardless of the dollar value involved, write-off action is required when an adjustment is processed for items reported as lost or missing (including consumable items such as clothing), as well as for stocktaking surpluses and deficiencies.

During site visits, a DND 2227 or equivalent¹³ was not available for 30 percent of the sampled adjusting transactions. In some cases, the documentation may have been completed but could no longer be located; in other cases, supply personnel stated that the volume of transactions precluded meeting this requirement. Alternate documentation, such as e-mails or checklists, was available to support some transactions.

¹² The four transactions all involved the wrong unit of measure. Special purpose cabling had erroneously been recorded by the foot or metre rather than the roll or spool. The gross value of these four adjustments exceeded \$33 billion.

¹³ One visited location had established an electronic database which contained information equivalent to the DND 2227. However, in this case there was no method of recording proper approval for those adjustments requiring write-off action.



The approval required to make an adjusting entry is not based on dollar value, but rather depends on whether write-off action will result. Adjusting for a \$10 loss requires a higher level of approval than correcting a \$1 million data entry error. Less than half the sampled adjustments had been properly approved in accordance with current policy.

Using a more risk-based approach would result in more effective oversight. In such an approach, approval levels would be based on dollar value and both the rationale and approval would be integrated in the CFSS rather than paper-based.

CFSS Adjustment Reason Code. Once the required adjustment is documented and approved, an entry is made in the CFSS to correct the level of stock on hand. The CFSS entry includes a reason code (selected from a list of 30 possible entries, ten of which require write-off action to be taken) to explain the rationale for the adjustment.

There was little correlation between the rationale included on the supply document and the reason code entered in the CFSS adjusting entry. For 52 percent of the sampled warehouse account transactions, a more appropriate reason code should have been selected.¹⁴

In many of these cases, while the best reason code did not appear to have been selected, the requirement for write-off approval and action was properly reflected through the reason code selected. In other cases, as shown in Table 3, this was not the case. As a result, little confidence can be placed in the CFSS reason code, and it currently cannot be used to determine the quantity and value of adjusting entries that require write-off approval.

	% of Sampled Transactions
Write-off approval required based on DND 2227 description, not required based on CFSS reason code used.	5%
Write-off approval not required based on DND 2227 description, required based on CFSS reason code used.	20%

Write-offs

Reported Write-offs. Adjustments that require write-off approval (i.e., not due to a recording error or normal wear and tear) are recorded on a Canadian Forces (CF) 152 Write-off Report. The departmental financial delegation document¹⁵ provides the approval authorities for this report. Once approved, the information is manually entered in the Canadian Forces Quarterly Write-Off Public Accounts database, commonly known as the CF152 database.

Table 3. Requirement for Write-off Action.

DND 2227s and CFSS reason codes often did not agree regarding the requirement for write-off approval and action.

After allowing for some timing differences, the value of write-offs in the CFSS (as indicated by the reason code used) should equal the value of write-offs entered in the CF152 database. However, as shown in Table 4, there was little or no correlation between these two. Only 22 percent of the absolute value of CFSS adjustments requiring write-off had been entered in the CF152 database.

¹⁴ SCA transactions were excluded from this analysis as a large percentage of them did not have a reason code recorded in CFSS.

¹⁵ *Delegation of Authorities for Financial Administration for DND and the CF*, A-FN-100-002-/AG-006.



The variation between the CFSS and the CF152 database has several causes:

- **Requirement for Write-off.**

Inaccurate reason codes are often entered in the CFSS, and while the CFSS information suggests write-off is required, the DND 2227 information confirms that this action is not required.

- **Pricing Differences.** The CFSS write-off value is

based on the CFSS unit price for the item. This often did not match the unit price entered on the CF152 document. Previous audits have discussed the level of inaccuracy in CFSS pricing.¹⁷

- **Timing Differences.** Write-offs are not entered in the database until they have been approved. This can take six to 12 months or longer. To adjust for this (as shown in Table 4), CFSS-required write-offs for a twelve-month period ending 30 September 2007 were compared to write-offs entered in the CF152 database for a 12-month period ending 31 March 2008.

	CFSS adjustments requiring write-off, 12 months to 30 Sep 07 ¹⁶	Write-offs entered in CF152 database, FY 2007/08
Surpluses	\$106.5M	\$18.6M
Deficiencies	\$57.3M	\$18.7M
Absolute	\$163.8M	\$37.3M

Table 4. Value of Reported Write-offs. The value of write-offs in the CFSS and the CF152 database varied significantly. These figures cannot be easily reconciled.

While the cause of the discrepancies can be explained, the lack of correlation makes it impossible to determine whether all losses are being investigated and reported as required.

Public Accounts Reported Losses. Information from the CF152 database is used to produce two reports (known as plates) for the Public Accounts: Plate III-4b, *Losses of Public Property Due to an Offence or Other Illegal Act* and Plate III-4c, *Losses of Public Property Due to Accidental Destruction or Damage*.

Of the \$37.3 million in surpluses and deficiencies entered in the CF152 database for FY 2007/08, only \$3 million¹⁸ in deficiencies was due to an offence, illegal act, accidental destruction or damage and therefore required reporting in the Public Account loss plates. The vast majority of the items included in the \$3 million losses reported to the Public Accounts were low-dollar value items:

- 62 percent of the items had a unit price under \$50, and represented only 7 percent of the value;
- 91 percent had a unit price under \$200; these items represented 24 percent of the value.

¹⁶ This value was extrapolated for the whole population based on adjustments requiring write-off for 12 districts. The value of surpluses and write-offs which required write-off action (according to the reason code entered) for the 12 districts was \$76.7 million and \$41.3 million, respectively.

¹⁷ See CRS report *Audit of Inventory Pricing* <http://www.crs-csex.forces.gc.ca/reports-rapports/2007/120P0770-eng.asp>.

¹⁸ The Public Accounts report an additional \$5.1 million Accidental Loss of Public Property relating to items not included in the CFSS or the CF152 database such as trucks.



A majority of the included items (85 percent in FY 2007/08) were military kit items including towels, socks, and undershirts. There may be little value in reporting these losses, given their low value, the unreliability of the attributed unit prices,¹⁹ and the fact that, for financial statement purposes, these items have been expensed. The administrative costs of tracking, recording, authorizing, and reporting the loss may in many cases exceed the value of the loss. Consequently, it may be more cost-effective to consider minor losses of this nature as wear and tear, and a normal cost of doing business. Establishing a minimum dollar value below which write-offs are not processed would allow additional effort to be placed on investigating more significant losses.

The remaining write-offs (\$34.3 million in FY 2007/08) are as a result of stocktaking surpluses and deficiencies. These amounts are not reported in the Public Accounts as they do not meet the criteria for inclusion on the loss plates. However, the information should be used for other management purposes. Currently this is not occurring. Indeed, the overriding sentiment by supply personnel is that these items are not lost, but merely misplaced. While to some degree surpluses in one location may net deficiencies in another (as indicated by the similarity in the surplus and deficiency amounts), little effort is made to determine to what extent the surpluses and deficiencies are actually the same items, and offsetting.

Recommendations

Stocktaking. Develop a monitoring approach to ensure stocktaking requirements are met. (OPI: ADM(Mat)/DGMSSC)

Adjustments. Ensure adjustments are used properly and consistently and that information required for materiel management and financial reporting purposes is recorded:

- Revisit the design and definitions of the reason codes;
- Ensure all personnel are better informed on the proper use of adjustments and reason codes; and
- Use automated monitoring tools to highlight locations where adjustments are not being used properly. (OPI: ADM(Mat)/DGMSSC)

Write-offs. Review thresholds and criteria for processing write-offs to ensure they are risk-appropriate. (OPI: ADM(Mat)/DGMSSC)

¹⁹ Socks were priced anywhere between \$0.01 and \$55.00, while the value of a wet weather jacket varied from \$35.70 to \$250.00.



Policy, Information Systems and Performance Measures

Inventory stocktaking, adjustment and write-off processes are not efficient and the resulting information is inconsistent due to policy weaknesses and information system limitations. The early identification of risk areas is not possible as the Department has not established performance measures.

Policy

The CFSM provides comprehensive policy; however, it does not clearly specify authorities related to materiel management, nor has it been sufficiently revised to reflect risk-based approaches to stocktaking, adjustments and write-offs. In addition, the policy needs to be adequately communicated to all supply personnel and subsequently enforced.

Risk-Based Approaches. Policy requirements related to stocktaking and processing of adjustment transactions are not sufficiently risk-based. For example, to complete warehouse account stocktaking using a 100-percent, four-year cycle, 476,000 stock codes and more than 147 million items (excluding ammunition²⁰) must be counted; this is a huge undertaking. Using a more risk-based approach to stocktaking could significantly reduce the number of items counted while maintaining a high level of coverage²¹.

Table 5 shows the difference in effort required if the Department were to count only items with a unit price greater than \$100 or \$500. If only one percent of the items were counted (i.e., those with a unit cost over \$500), there would be coverage of 85 percent of holdings by value. In addition to unit price, criteria such as attractiveness (i.e., the desirability of the item for personal use) and usage rate should be considered in determining stocktaking requirements.²²

More risk-appropriate methods of documenting adjustment transactions should also be developed as the current requirement to document and authorize all adjustments (more than 67,000 in the reviewed 12-month period) on a DND 2227 is not feasible. The volume of transactions at some sites and the nature of some adjustments (e.g., recovering parts from a platform based on a detailed checklist) has resulted in the development of alternatives to the DND 2227. These alternative approaches should be reviewed to ensure

If we count:	Stock Codes	Items (Quantity)	Value
All items	476K	147M	\$9.3B
Items over \$100	165K (35%)	4.9M (3%)	\$8.7B (93%)
Items over \$500	85K (18%)	1.3M (1%)	\$7.9B (85%)

Table 5. Risk-Based Approach to Stocktaking.

Counting only items in excess of a specific unit price can greatly reduce the level of effort while maintaining significant coverage.

²⁰ Ammunition was excluded as the requirements for stocktaking vary from other types of materiel and the nature of the item (and its large quantities) would distort the analysis.

²¹ As per CFSM 3-8B-001 paragraph 2C, a risk-based approach is used at the two National Supply Depots in that stocktaking requirements for the main warehouses give consideration to unit price and usage rates.

²² The definition of “accountable” items (classification code “A”) as per the Stock Classification Code of the CFSM could be used for the purpose of setting other stocktaking parameters.



they provide sufficient oversight, and policy should be adjusted accordingly. In addition, adjustment authorization should also be based on dollar value, and the authorization should be recorded in the CFSS.

Materiel Management Authorities. Unlike financial authorities which are formally delegated in writing, no written delegation is required for materiel management authorities. In addition, individuals are permitted to further delegate their authority. As a result, it is often difficult or impossible to ensure only properly authorized individuals have approved adjustment transactions. These transactions can have significant financial implications.

An individual's ability to modify CFSS data is controlled through a user profile. Too many people, in both the districts and headquarters, have been assigned a profile which allows them to adjust stock balances. For the three visited sites, 61, 42, and 36 individuals had entered adjustments against the districts' holdings. The high number of people making these entries makes it difficult to ensure accuracy and consistency.

Policy Awareness. Reason codes, introduced in CFSS in FY 2006/07, have the potential to provide useful management information. However, they were implemented with minimal training or discussion at the staff level. This lack of guidance combined with the large number of reason codes has resulted in inconsistent application, and the resulting information is unreliable.

Streamlining the reason codes and increased promulgation of the resulting policy, as well as improved supply discipline, would result in more accurate information for decision making.

Information Systems

The CFSS does not currently provide effective tools for management reporting. As well, multiple methods of processing transactions, limited system edits, and the absence of a fully integrated process creates inconsistencies and requires increased effort.

Management Reporting. The WQT was developed to provide tailored, user-friendly information regarding CFSS holdings and transactions. However, this reporting tool has several limitations:

- Many reports are only available for a 12-month period, on a district-by-district basis. As a result, global trends and comparisons between locations are difficult to complete.
- Information is not always presented in a user-friendly fashion. Four percent (3, 221 of 73, 461) of the transactions in the original adjustment population initially appeared erroneous as the WQT-reported "SOH Before" plus the "Quantity Adjusted" was not equal to the "SOH After."²³
- The CFSS transaction reference number is truncated on the WQT report, making it difficult to relate the report to the source system transactions, and to verify its content.

²³ Upon further review it was determined that the information provided by the WQT required some summarization by transaction identification for the balances to be properly reflected.



System Edits and Processing Methods. CFSS system controls do not prevent using a SCA reason-code for a warehouse account adjustment or vice-versa. Based on the analysis of 12 districts, more than 1,500 warehouse account adjusting transactions in the reviewed period used reason codes that were only to be applied to SCA adjustments. In addition, while every adjusting transaction should include a reason code, 57 percent of the SCA adjustment transactions for the 12 districts did not include this important piece of information.²⁴

Where multiple methods are available to record a transaction, users will often use the most convenient, rather than the most appropriate. The overriding concern appears to be that the correct stock balances are recorded and not that accurate management information is gathered in the process.

Process Integration. The process from surplus/deficiency identification through to write-off, as outlined in [Annex C](#), requires that information be input into two corporate information systems, and that two documents be prepared to record authorizations. There is significant duplication of information and effort in this process. In addition, all visited locations have developed *ad hoc* systems to store additional information related to the process.²⁵ These systems are not integrated and there is no reconciliation process to ensure data consistency.

Enhancing CFSS capabilities, combined with monitoring to ensure consistent application, could eliminate or reduce the requirement for subsidiary systems and increase data reliability, resulting in more efficient use of resources overall.

Performance Measures

Establishment of Performance Standards. Some inventory surpluses and deficiencies, whether through accidental destruction or loss or data entry errors, are to be expected. However, in the absence of departmental performance standards, it is difficult to determine whether current discrepancies are within acceptable levels.

By measuring and comparing performance against standards, over time and between districts, management could identify the areas of highest risk. This would allow processes to be improved and controls enhanced as necessary. Use of such performance measures, in conjunction with an overarching monitoring program, would also help foster an environment of improved supply discipline, and promote continuous improvement.

²⁴ Reason codes are generally referred to as a mandatory field. However, one screen used for entering SCA adjustment transactions (intended for recording surpluses, but in practice used to record both surpluses and deficiencies) does not have a reason code field.

²⁵ Two visited sites had local systems to record information related to SCA administration and verification. In addition, the third visited site had developed applications to facilitate depot-level stocktaking and to replace the DND 2227.



Recommendations

Policy. Revisit policies/procedures to ensure they are streamlined and risk appropriate:

- Adopt a more risk-appropriate approach to stocktaking.
- Review the documentation and authorization requirements for adjustments to ensure they consider relative risk.
- Clarify delegated authorities for materiel management, including system access rights.
(OPI: ADM(Mat)/DGMSSC)

Information Systems. Improve CFSS capabilities to:

- Provide a global reporting function which allows trend analysis and comparative review.
- Incorporate improved edit checks.

Examine feasibility of developing a more integrated approach, possibly eliminating the use of DND 2227s for adjustments and replacing the write-off database with information directly from CFSS. (OPI: ADM(Mat)/DGMSSC)

Performance Measures. Determine key indicators and acceptable performance standards and monitor their performance. (OPI: ADM(Mat)/DGMSSC)



Annex A—Management Action Plan

Stocktaking, Adjustment & Write-off Practices

CRS Recommendation

1. **Stocktaking.** Develop a monitoring approach to ensure stocktaking requirements are met.

Management Action

DGMSSC/DMPP 7 has provided the DM with a letter on materiel accountabilities to confirm responsibilities of Level 1s to ensure that due diligence is enforced regarding the management of inventory IAW the CF Supply Manual.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: November 2008

Management Action

DMPP 6 has recently been established as the Departmental Materiel Compliance section. Once capacity has been established, they will be responsible for verifying and validating that Materiel Acquisition and Support policies and procedures are being followed, including stocktaking.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: April 2010

Management Action

DSCO 2 Strategic Asset and Inventory Oversight cell will provide oversight and monitoring of CF bases/wings and depots stocktaking schedules and activities. A stocktaking report will be produced on an annual basis in May of each year and will be used for monitoring purposes. The first report to be produced in May 2009.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: May 2009

CRS Recommendation

2. **Adjustments.** Ensure adjustments are used properly and consistently and that information required for materiel management and financial reporting purposes is recorded:
 - Revisit the design and definitions of the reason codes.
 - Ensure all personnel are better informed on the proper use of adjustments and reason codes.
 - Use automated monitoring tools to highlight locations where adjustments are not being used properly.

Management Action

DGMSSC/DMPP 7 will undertake a rationalization of existing reason codes for materiel adjustments to validate requirements and purpose, streamline definitions and reaffirm related policies.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: March 2009

Management Action

Following the modification of existing reason codes, DGMSSC/DMPP 7 will ensure changes are distributed to supply community.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: March 2009



ANNEX A

Management Action

DSCO 2 Strategic Asset and Inventory Oversight cell will provide oversight and monitoring of CF bases/wings and depot adjustments, and analyze adjustment reason codes. A report will be produced on a quarterly basis.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: February 2009

CRS Recommendation

3. **Write-offs.** Review thresholds and criteria for processing write-offs to ensure they are risk-appropriate.

Management Action

A business case analysis will be undertaken by DGMSSC/DMPP 7 to review all current stocktaking and write-off policies and processes to identify deficiencies and to develop a holistic risk-based, operationally relevant and cost-effective approach governing the policies and procedures for stocktaking, materiel adjustments and write-offs.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: December 2009

Policy, Information Systems and Performance Measures

CRS Recommendation

4. **Policy.** Revisit policies/procedures to ensure they are streamlined and risk appropriate:
- Adopt a more risk-appropriate approach to stocktaking.
 - Review the documentation and authorization requirements for adjustments to ensure they consider relative risk.
 - Clarify delegated authorities for materiel management, including system access rights.

Management Action

A business case analysis will be undertaken by DGMSSC/DMPP 7 to review all current stocktaking and write-off policies and processes to identify deficiencies and to develop a holistic risk-based and cost-effective approach governing the policies and procedures for stocktaking, materiel adjustments and write-offs.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: December 2009

Management Action

Rationalization of delegated authorities will be reviewed as part of the overall business case to develop stocktaking and write-off policies to be undertaken by DGMSSC/DMPP 7.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: December 2009

Management Action

Policies relating to the granting of access to the CFSS to be reviewed by DGMSSC/DMPP 7. Two Requests for Change (874 & 875) are currently in development with ADM(IM)/DMIS to restructure, redefine and limit CFSS user access profiles.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: December 2009



CRS Recommendation

5. **Information Systems.** Improve CFSS capabilities to:

- Provide a global reporting function which allows trend analysis and comparative review.
- Incorporate improved edit checks.

Examine feasibility of developing a more integrated approach, possibly eliminating the use of DND 2227s for adjustments and replacing the write-off database with information directly from CFSS.

Management Action

DGMSSC/DMPP 7 is currently mapping the business processes associated with stocktaking, materiel adjustments and write-offs. Following completion of this project and the rewrite of stocktaking policies, DMPP 7 will engage ADM(Fin CS) to identify requirements for a fully integrated materiel management and financial reporting system.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: March 2010

CRS Recommendation

6. **Performance Measures.** Determine key indicators and acceptable performance standards and monitor their performance.

Management Action

As a follow-up to the business case analysis on stocktaking and write-off policies and processes, DGMSSC/DMPP 7 will establish performance-based standards for stocktaking, adjustment and write-off practices.

OPI: ADM(Mat)/DGMSSC

Target Completion Date: March 2010

Annex B—Audit Criteria

Objective

1. Ensure stocktaking, adjustments and write-offs of CFSS holdings are adequately controlled.

Criteria

- Periodic stocktaking is performed; the results and subsequent investigation of any discrepancies are adequately documented.
 - Adjustments and, when applicable, subsequent write-offs are properly investigated, authorized and recorded in an accurate and timely basis.
 - Staff has the necessary knowledge, training, skills and enablers.
-

Objective

2. Ensure the related processes are risk-appropriate.

Criteria

- Policies/procedures are complete, accurate and understood to ensure consistent application. Processes consider value-added.
 - Risk-appropriate monitoring procedures exist and are applied in a consistent and timely manner.
 - Extent of any discrepancy investigations is risk-appropriate.
 - Roles/responsibilities and accountabilities are clearly defined and understood.
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Objective

3. Ensure the resulting materiel management and financial statement information is timely and accurate.

Criteria

- Information is complete, accurate and timely.
 - Available reports provide reliable, consistent information to monitor trends and measure performance.
 - Information systems provide integrated information; minimal manual intervention is required.
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Annex C—Overview of the Current Process

