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**IMPROVING THE FINANCIAL MANAGEMENT  
PROCESS**

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Once the financial management process has been defined (Chapter Two) and measured (Chapter Three), the next step is to improve the process and monitor those continuing improvements through the measurements discussed previously. Unfortunately, the FM PIT found little that Fort Campbell could change on post that would relieve the burden of financial management or improve the financial information available to decisionmakers. Most of the financial management problems at Fort Campbell are the result of Army financial management policies—policies that a single installation like Fort Campbell cannot change. So rather than improve the unit financial management process that varies from installation to installation, the focus was on changes in Army policy that would obviate the need for reconciliation at the unit level.

The discussion in this chapter suggests policy changes the Army could make to improve the financial management process, working through the problems identified in Chapter Three and using examples from Fort Campbell to illustrate key points.

**IMPROVING THE QUALITY OF PRICE INFORMATION**

We recommend two policy changes that could help stabilize prices and reduce the amount of time that unit personnel spend on their manual financial reconciliation process.

### **Lock In Price at Time of Request to Improve Ordering Process**

One of the problems uncovered in the D-M-I process is that prices for parts change throughout the year. The most direct way to stabilize prices would be to lock in the price at the time the request is placed. This price would then travel with the logistics and financial record, rather than being looked up in a catalog and reassigned each time a supply action occurred. This policy could be implemented by absorbing the price fluctuations at the MACOM level (through the stock fund). Based on the data analyzed in this research, the net of these many price fluctuations is relatively small.<sup>1</sup> Implementation would require changes to SARSS and to wholesale automated systems so that a new price is not assigned on each supply action. Alternatively, the wholesale source of supply could agree to bill the price effective in the catalog at the time the order was placed. In addition to automated system changes, this option would require coordination with non-Army sources of supply, such as DLA.

However, it also raises the question of which catalog would be used to assign the price at the time of the order. Under the current system, there can be discrepancies between the FEDLOG CD-ROM in the unit's local ULLS system, the Catalog Master File in the supporting SARSS-2AC, and the wholesale source of supply's catalog. Ideally, these systems should all be looking at one centralized catalog so they all see the same price at the same time.

### **Use Electronic Communications to Improve the Catalog Distribution Process**

Mapping the catalog distribution process identified two areas for improvement: (1) potential problems with the comparability of the

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<sup>1</sup>Most of the price discrepancies are for small amounts of money—\$5 or less. Analysis using Fort Hood STARFIARS data (July to October 1996) showed that overall the percentage of requisitions that increased almost matched the percentage that decreased. Also, the dollar value transferred per requisition was close to zero—a net increase of 81 cents per requisition. These results varied somewhat by the source of supply, with Army-managed items having the highest percentage of increases. The net dollar value of the changes for Army-managed items was an increase of about \$90,000. For the other sources of supply, the net monetary effect was negligible. Thus, it seems that a lot of financial turmoil is generated over a relatively small amount of money and the acceptable level of risk for the stock fund to absorb.

different versions of the catalog; and (2) the delay in distributing catalogs to Army unit-level supply activities.

Even though there may be “one version” of the catalog, if the unit-level automated supply systems (ULLS/SAMS) do not receive and install their catalogs by the effective date, logistics and financial managers will continue to have conflicting information and will need to rely on manual means to reconcile the reports of different automated systems.

Concerning different catalog versions, we found that the CTASC sites and the NICP item managers receive a completely new catalog each month. The CTASC site compares the current catalog and the new catalog, passing on only the changes to SARSS-2AC and SARSS-1. The ULLS and SAMS sites receive CD-ROMs with the entire catalog. Because of these differences in the catalog distribution process, the resulting catalogs may not always be the same. With most management information systems, relying on multiple copies of data results in problems with compatibility.

One way to address this problem is to change Army supply systems so that all access one centrally managed catalog. As of the writing of this document, the Army is developing a new logistics information system—the Global Combat Support System (GCSS)-Army<sup>2</sup>—that is supposed to provide this capability.

The lack of timeliness of catalog distribution to Army unit-level supply activities has several dimensions. The Army’s input to the FEDLOG catalog is one source of delay. The Army had been mailing tapes rather than sending data by electronic communications to DLIS for input into FLIS. Using mail rather than electronic transfer adds time and variability to the process. In spring 1998, DLIS and the Army agreed that the Army would start transferring data to DLIS by using electronic communications, specifically file transfer protocol (FTP). Using FTP beginning in April 1998, DLIS was able to get the data to the contractor by the 9th of each month.

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<sup>2</sup>According to the Army Web site, GCSS-Army “is the worlds [sic] first truly integrated logistics support system encompassing the functions of supply, finance, transportation, maintenance, and personnel.” See [http://www.cascom.army.mil/automation/GCSS-Army\\_Global\\_Combat\\_Support\\_System-Army/Training/](http://www.cascom.army.mil/automation/GCSS-Army_Global_Combat_Support_System-Army/Training/).

DLIS and the contractor believe that FLIS could also transfer data by FTP directly to the contractor, with the goal of reducing the turnaround time required to send the data. However, DLIS believes that it is not a good practice because DLIS Headquarters staff needs to ensure all data files have been prepared correctly for transfer to the contractor.

The earlier the contractor receives the data, the sooner the CD-ROMs can be shipped to the ultimate customer. According to DLIS, the longest part of the contractor's process revolves around the packaging and mailing. (A total of over 40,000 individual packages are required.) All the packages are mailed first class and usually take anywhere from 1 to 10 days for delivery.

Sending CD-ROMs by U.S. mail and then distributing them through normal channels for distribution of other hard-copy products causes delays in catalog distribution. Even if the U.S. mail is timely, further delays arise in the receiving mailroom where incoming correspondence is sorted and distributed. When the CD-ROM arrives during field exercises, there is more delay before the CD-ROM is installed on the ULLS/SAMS system and little chance that it will be available by the effective date.

Clearly, more work must be done to improve the catalog distribution process so units receive catalogs by their effective date. The ultimate goal of the catalog process should be a single catalog that all systems access simultaneously. Until systems can be changed to meet this goal, better synchronization is needed in the existing process.

## **IMPROVING THE QUALITY OF CREDIT INFORMATION**

Given the types of problems we have discovered, we recommend three actions to improve the quality of credit information.

### **Link Credit Rates to Army-wide NAP**

As noted above, unserviceable returns may receive more credit on average than serviceable returns, because returns are linked to an installation's NAP instead of the overall needs of the Army. The quality of credit information available to units could be greatly improved by linking credit rates to Army NAP and then publishing

that credit rate in the catalog. If the amount of credit were known with certainty (as it would be if the credit were published in the catalog), units and divisions would find it easier to monitor and forecast their spending relative to budget. They would be better able to adjust stockage levels of items on ASLs and PLLs because they could calculate the credits they would receive for items no longer needed. In addition, they would have less incentive to delay turn-ins in the hope of receiving higher credit. Linking credit rates to the Army's NAP and then keeping the credit rate the same for a specified period would require changes in the way SARSS assigns codes to turn-ins and STARFIARS assigns credits based on these codes.<sup>3</sup>

If these same credit rates were extended to the wholesale level, changes to CCSS would also be required although CCSS already assigns NSN-by-NSN credit. It is possible that linking credits to Army-wide NAP could cause credit rates to change with each execution of the Requirements Determination and Execution System (RDES).<sup>4</sup> Currently at TACOM, RDES is run quarterly. As the D-M-I methodology is applied to this area, the Army should closely monitor the frequency of credit changes and their impact on the field as well as the AWCF.

### **Set Dollar Thresholds to Improve the Turn-in Process<sup>5</sup>**

Another problem we discovered and discussed above is that the vast majority of turn-ins at Fort Campbell and Fort Hood were coded as serviceable consumables costing less than \$50 and receiving correspondingly low credit. Thus, Army personnel may be spending a lot of time and effort returning relatively low-value items for a very low or perhaps negative return. If the Army set a dollar threshold for low-value items to be retained for future use or discarded at lower levels

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<sup>3</sup>As part of the implementation of SSF, the Army will adopt a new credit policy that does not rely on installation-level NAP. See Brauner et al., *Evaluating Five Proposed Price and Credit Policies for the Army*, for a discussion of the proposed new credit policy.

<sup>4</sup>RDES produces a supply control study that calculates the wholesale requisitioning objective (RO) and the maximum retention level (RL) each time it is executed.

<sup>5</sup>The Army has a new draft policy that proposes to change regulations about what items can be retained at the unit level. In FY00, the Army began allowing retention levels on items under \$50. The proposed policy would allow a retention level to be set on any item regardless of price.

(e.g., unit or SSA) rather than turned in to the supply system for credit, this workload could be reduced dramatically throughout the retrograde process. The reduced workload would allow personnel to focus on processing the return of the high-dollar items that account for the majority (80 to 90 percent) of the credit value. The Department of the Army or the MACOMs could set these dollar thresholds and a disposition policy. However, there may also be accountability issues to consider if the dollar value of disposals at the unit or SSA level increases.

The \$50 cutoff is somewhat arbitrary. During the time this issue was being studied, the Army tried to calculate the cost of receiving, processing, transporting, and restocking a turn-in. The cost was estimated to be close to \$50. All items with prices less than this cost should be retained for future use or discarded at lower levels. This cost should be calculated periodically and policy adjusted accordingly. Alternatively, the Army could charge a flat restocking fee per item returned. However, such a policy might not be in the Army's best interest, because units would pay the same restocking fee for a circuit card as they would for a tank engine.

### **Use NSN-by-NSN Credit Rates and Reconsider an Exchange Pricing System**

Currently, the credit an OMA-funded logistics customer receives from the RSF for the return of an item depends on the condition of the item (serviceable or unserviceable),<sup>6</sup> average repair and replacement costs by MATCAT (materiel category) and whether the item is needed elsewhere on the installation.<sup>7</sup> Previous RAND Arroyo Center research has indicated that the Army's practice of using average repair and replacement costs by MATCAT to calculate credit rates can cause installations to make repair decisions that are not cost-effective from

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<sup>6</sup>A serviceable item is in working condition and can be issued to another customer. An unserviceable item must be repaired before it can be returned to inventory.

<sup>7</sup>Technically, the credit is determined by the net asset position (NAP) of the item, as recorded in SARSS by RIC-GEO (Routing Identifier Code-Geographical Area), but most installations have only one RIC-GEO. If the NAP (the number of items of that type in inventory) is below the retention limit, the customer receives a much higher credit than if the NAP is above the retention limit.

an Army-wide perspective.<sup>8</sup> As a result of such averaging, installations may sometimes repair items when their costs are higher than wholesale repair costs, or return items for wholesale repair when installation repair costs are actually lower. The Army's practice of giving very low credit for FLRs and consumables that are not needed locally makes it difficult for logistics customers to adjust local stockage levels to reflect changes in demand rates and creates incentives for customers to redistribute these items outside normal supply channels, by setting up OMA-funded retention activities, for example.

These problems can be avoided by setting credits on an NSN-by-NSN basis to reflect the actual costs to the supply system of transporting and restocking a serviceable return or of repairing, transporting, and restocking an unserviceable return. When credit rates reflect actual costs, logistics customers will have a financial incentive to repair or redistribute an item only if it is cost-effective from an Army perspective. Customers should also find it less expensive to adjust stockage levels if credits for serviceable returns are set at the purchase price minus transportation and restocking costs.

An "exchange pricing" system can combine the benefits of linking credit to Army-wide need (NAP) and NSN-by-NSN credit. Under exchange pricing, units pay only the difference between the price of a new DLR and the credit received on a carcass. If they fail to return a carcass during a fixed period of time after the new item is received (60 days, for example), they are charged a "carcass price" that is equivalent to reversing out the credit. They also receive the carcass price if they return an unmatched unserviceable DLR. Since the exchange price does not depend on installation NAP and is set on an NSN-by-NSN basis, it incorporates credit based on Army-wide need and NSN-by-NSN credit based on wholesale repair costs. In addition, it reduces the initial outlay of OMA funds for DLRs, so that units do not have to wait for credits to show up in their OMA accounts. The Army has mandated a policy of providing credits on an NSN-by-NSN basis, effective October 1, 2000. The Army will be implementing this policy to coincide with milestone 2 of its Single Stock Fund effort.

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<sup>8</sup>See Brauner et al., *ISM-X Evaluation and Policy Implications*, Santa Monica, CA: RAND, MR-829-A, 1997.

Both the Navy and the Air Force currently use exchange pricing for their DLRs. Exchange pricing is current OSD policy.<sup>9</sup> The Army annually requests a waiver from this OSD policy. The primary concern of the Army is that it lacks a system for tracking carcasses that would allow it to penalize units that fail to return carcasses within the allotted time. However, the Army is currently making efforts to add the capability to track unmatched recoverables to new automated systems, such as ILAP. This capability could be used to help implement an exchange price system.

Exchange prices (or NSN-by-NSN credit rates for serviceables and unserviceables) could be implemented by adding them to the AMDF catalog. SARSS would have to be modified to look up NSN-by-NSN exchange prices or credit rates in the AMDF.<sup>10</sup> Currently, STARFIARS looks up the percentages by MATCAT in the Standard Army Intermediate Level Supply System (SAILS) credit table, based on a return advice code assigned by SARSS.<sup>11</sup>

## IMPROVING FWT

We recommend two actions to improve FWT.

### Set Dollar Parameters to Improve Ordering Process

One source of financial delays in the requisition process, and thus of increased FWT, is the high-dollar review at the SARSS-2AD level. The value in the dollar edit parameters (discussed previously) is based on the type of equipment and mission being supported. Units that sup-

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<sup>9</sup>“For the issue of a repairable item in which the requisitioner indicates a carcass will be returned, the customer will be charged the exchange price, i.e., the established repair cost plus the appropriate cost recovery elements. . . . The exchange price shall be established before the beginning of each fiscal year for each homogeneous group and provided to customers and shall remain constant throughout the execution fiscal year.” *DoD Financial Management Regulation*, DoD 7000.14-R, Vol. 11B, p. 55-28.

<sup>10</sup>When SSF has been implemented, the dollar value of credit for serviceable and unserviceable returns will be in the AMDF catalog, and SARSS will have been modified to look up the NSN-by-NSN credit in the AMDF. This phase of SSF is currently scheduled to be implemented in FY01.

<sup>11</sup>Although most of SAILS has gone out of use at installations with SARSS, it still provides a look-up table of alternate credit rates.

port very expensive equipment should set proportionately higher thresholds. (The dollar limits can be adjusted in SARSS, but not in ULLS, where another high-dollar review occurs.) The new values would allow for the review of very-high-dollar items, while allowing most requisitions to be processed without delay.

### **Use Financial Management Tools to Improve Reconciliation Process**

Process walkthroughs and discussions with unit-level “financial management” personnel indicated that few people at the unit level were satisfied with the tools available to them to reconcile logistics system data with financial management data. At Fort Campbell, units received products from TUFMIS, dCAS, and STANFINS. There seemed to be a consensus that STANFINS and dCAS provided the most complete data; however, they are difficult for the unit-level personnel to understand and do not provide much of the information essential at their level. TUFMIS provides the information in an easy-to-understand format that is also easy to match against the unit’s supply document register, but it does not include information for charges other than supplies. With TUFMIS, units can manage their funds by class of supply, which is helpful because they construct their budgets by class of supply.

The ILAP/LOGFIN module is designed to help units reconcile logistics and financial information at the division level. To assist Fort Campbell in its VM implementation effort for financial management, the FM PIT arranged for the ILAP program manager to provide on-site assistance to set up ILAP. The commander of the 101st Airborne Division also funded a full-time ILAP administrator. The administrator now runs ILAP and ensures that data are loaded in a timely manner. The accuracy and availability of ILAP have improved.

Nevertheless, customers remained reluctant to use ILAP. TUFMIS is still the system of choice at Fort Campbell and remains the official unit-level financial management system for reconciling supply system data with financial management system data. Financial managers are using information provided by dCAS for reconciling other information, e.g., credit card purchases, local purchases, travel expenses, etc. Customers at the division level and above should be

able to make better use of ILAP. And once the foregoing improvements have been made to the quality of price and credit information and the catalog distribution process, the necessity for time-consuming reconciliation below the division level will be greatly reduced if not eliminated.<sup>12</sup>

## CONCLUSION

The Army is currently in the process of implementing some of the recommendations of the FM PIT, while others remain under consideration. As part of the initial implementation of the Single Stock Fund initiative in FY01, which will combine the operations of the current RSF and WSF, the Army will introduce a new credit policy that eliminates dependence on the installation's NAP and sets un-serviceable credits based on NSN-by-NSN repair costs. This policy should make credits more predictable and give logistics customers better financial information about the relative costs of repair at the wholesale and local levels. The FM PIT has been tasked to identify the policy and automated systems changes that will be needed to lock in prices at the time of request.

Table 4.1 summarizes the progress made on each of the recommendations to improve logistics financial management processes. As indicated, there is much that still must be done before the Army can have a financial management process that supports the warfighter and facilitates the optimal use of resources.

When process improvements have been implemented, the Army must revisit the metrics described in Chapter Three to verify whether the expected changes have occurred and repeat the D-M-I methodology to identify additional areas for improvement. There are also other logistics financial management processes for the FM PIT to address, including the Army's wholesale supply management and depot maintenance financial management processes.

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<sup>12</sup>A fundamental question for many is whether ILAP deploys with units or is just a peacetime/garrison tool. The answer is that some units currently take ILAP into the field during exercises, but currently ILAP must be tied into a local area network (LAN) in order to receive all the data feeds required to keep information up to date. The issue of how to maintain the data feeds during deployment must be addressed before ILAP can be considered a deployable tool.

Many of the foregoing recommendations can be summarized in a basic principle that the Army should adopt: **Prices and credits in place when a transaction is first undertaken should be the prices and credits used for the transaction.**

**Table 4.1**  
**Status of Progress on Recommendations to Improve Logistics Financial Management Processes**

Improvement Recommendation	Army Implemented	Implementation in Progress	No Action
Lock in price and credit at time of request			No action; FM PIT tasked to identify policy and systems changes
Use electronic communications (i.e., Web-based) for catalog distribution		May be under consideration for GCSS-Army	
Link credit rates to Army-wide NAP		Planned for SSF	
Set dollar thresholds to improve turn-ins process	Implemented in FY00		
Use NSN-by-NSN credit rates and reconsider an exchange pricing system		NSN-by-NSN credit rates planned for SSF	No action on exchange pricing; Army continues to ask DoD for waiver
Set dollar parameters to improve ordering process	Parameters changed in some SARSS boxes		Must allow for changing parameter values in ULLS
Use financial management tools to improve reconciliation process	Many division-level organizations use ILAP	Unit checkbook planned for GCSS-Army	

## FUTURE INVESTIGATION

The Army and DoD are in the process of building a new wholesale supply management system (GCSS-Army) and a new financial management system (Defense Joint Accounting System (DJAS)). To compare the Army's proposed systems with the private sector, we discussed commercial logistics financial management systems in interviews with representatives of Manugistics, SAP, and Microsoft.

The Microsoft financial management system was particularly interesting because Microsoft—a leading software developer—did not develop its own system. Microsoft partnered with SAP to build a new financial system. Microsoft's system operates worldwide in many different currencies. The complete integrated system at Microsoft is composed of three parts: (1) order entry, (2) transaction recording, and (3) reports/analysis. Separate systems perform these functions.<sup>13</sup> Microsoft uses one system (SAP R/3) for transaction recording, many diverse systems for order entry, and one combined system for analysis and reporting: a combination of commercially available products, primarily from Microsoft, and internally developed software. The systems are linked tightly in that only one record of each transaction proliferates through the systems. The records are maintained in one database that is accessed by all users. In contrast, the Army's systems create multiple copies of each transaction, generating discrepancies and the need for reconciliation.

As the Army and DoD move forward to modernize their legacy systems, they would do well to look to the leaders in industry for examples of successes and failures. The young soldier of today is accustomed to ordering books, music, computers, etc. quickly over the Internet.<sup>14</sup> Up-to-the-minute financial information is available with the click of a mouse or the punch of a phone button. Stocks and bonds are traded electronically. The gap between corporate America's

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<sup>13</sup>Comparing Microsoft's system with the Army's current system, we see that Microsoft's order entry system is the equivalent of the Army's SARSS, its transaction recording system is the equivalent of STANFINS, STARFIARS, AFMIS, IFSMIS, TAMMIS, SAACONS, etc., and its report-generating system is the equivalent of dCAS and TUFMIS.

<sup>14</sup>Before the Army invests in Web-based technology, it must ensure appropriate communication channels are available. Currently, many tactical units cannot even get a phone or radio. They must at a minimum have Internet connectivity.

automation and the Army's is widening daily. The Army should move rapidly to commercial products that would revitalize its current logistics financial management systems.<sup>15</sup> As Nathan Myhrvold<sup>16</sup> of Microsoft noted,

gains in efficiencies will not be from people becoming smarter or more intelligent, but will come through the leverage and use of technology.

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<sup>15</sup>The U.S. General Accounting Office has a report that evaluates the development and maintenance of software for information systems owned by DFAS. See *Defense Financial Management Immature Software Development Processes at Indianapolis Increase Risk*, GAO/AIMD-97-41.

<sup>16</sup>Personal communication. We learned about Microsoft's implementation of a new financial management system from the book *Safety Nets: Secrets of Effective Information Technology Controls*, by Bashein, Markus, and Finley (1997). We recommend the book as a discussion of how five companies (American Standard, BankAmerica, Microsoft, Norrell, and USAA) implemented new information technology: problems, best practices, and different solutions.