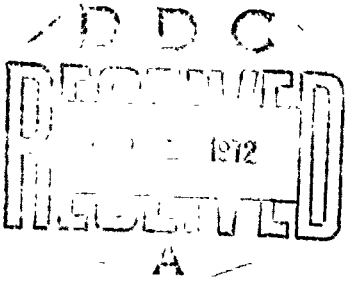
AN ARMY BANK: FIVE STEPS BEYOND JUMPS-ARMY

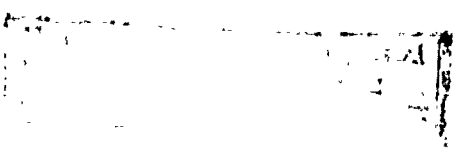
A thesis presented to the Faculty of the U.S. Army Command and General Staff College in partial fulfillment of the requirements of the degree

MASTER OF MILITARY ART AND SCIENCE



by

RAYMOND S. ALLRED, JR., MAJ, USA
A.A., Allen Military Academy, 1951
B.S., University of Nevada, 1958
M.B.A., Indiana University, 1965



Fort Leavenworth, Kansas
1972

DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY PRACTICABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

THESIS APPROVAL PAGE

Name of Candidate Raymond S. Allred, Jr.

Title of Thesis An Army Bank: Five Steps Beyond JUMPS-Army

Approved by:

John S. Flanagan LT Col, U.S.A., Research and Thesis Adviser

Stanley Stomal, Maj, CE, Member, Graduate Research Faculty

William R. Flounder LTC, MS, USA, Member, Graduate Research Faculty

Ralph C Hook Jr. LTC FA USAR, Member, Consulting Faculty

Robert L King Maj., FI, Member, Consulting Faculty

Date: 15 June 72

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

The purpose of this paper was to develop a possible Army banking system with a view toward improving finance service to the Army member and his family. This concept, which has not been tested, does not address other alternative systems and future concepts. The concept was developed by means of library research to reinforce personal on-site experience in automation techniques. The research shows that the civilian banking community has been exploiting many automated banking systems that have military applications. Further, the Army has the technical capability of completely automating a full service banking system to accommodate the financial requirements of all Army personnel to an extent that would greatly surpass what the banking community has accomplished.

ACKNOWLEDGMENTS

I wish to thank personnel of the Office of the Comptroller of the Army, the U.S. Army Finance and Information Systems Command, the Finance Center of the U.S. Army, and the U.S. Army Command and General Staff College who have helped me with valuable assistance, advice, and encouragement in the preparation of this thesis.

To Major General Ralph J. Richards, Jr., Assistant Comptroller of the Army, for whom I had the privilege of working during the period 1969-1971, I am particularly indebted. His leadership, intellectual stimulation, and energetic drive opened the eyes of many "action officers" to the Army's capability for accomplishing tasks that in the past had been considered impossible for any organization.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

Purpose

The purpose of this paper was to develop a possible Army banking system with a view toward improving finance service to Army members and their families. This concept, which has not been tested, does not address other alternative systems and future concepts.

It is now technically feasible to develop and install a salary system for military pay, total centralization of military pay administration, fully automated paydays, credit card banking, and a full service Army bank that will employ automated banking techniques.

Automated management information systems constitute a major effort in the Army today. Statistics reveal that as of 30 June 1968 Department of the Army listed an inventory of 713 computers that represent an annual investment of more than 30,000 man-years of effort and that operate at a dollar cost of close to one-half billion.[1] This is important to

---

[1]Robert B. Buckmaster, "Organization for Information Systems Management," Army Management Views, XIV, No. 1 (July

note because many of these systems can be tied into a banking complex and either furnish or obtain current data. This automated effort, including the Joint Uniform Military Pay System-Army (JUMPS-Army), benefits both commanders and their troops. By extending automatic data processing banking techniques, it can also fill an existing void that results from the lack of current banking techniques within the military establishment. This void is being partially filled by individual arrangements which go unchecked and are not readily available to personnel in the lower enlisted grades. Additionally:

> Patrick J. McGovern, publisher of a weekly newspaper and a bimonthly newsletter on the computer industry and president of International Data Corporation, a market research company which keeps continuous tabs on computer installations across the world

has predicted a

> sagging American computer industry will take off in 1972, hitting a record $9 billion in total dollar shipments worldwide, up 19 per cent over 1971.
>
> . . . . . .
>
> . . . the once go-go computer industry has been suffering from a severe case of gastric upset for the last two years when business generally was off.
>
> . . . . . .
>
> In 1971 . . . the American computer industry had worldwide sales of $7.4 billion, $4.3 billion going to

---

1969), 24-25.

U.S. users and $3.1 billion going overseas.

> Look for U.S. sales to jump to $5.2 billion in 1972 and the overseas figure to slide up to $3.8 billion.[2]

McGovern's data indicate that accompanying software and automatic data processing techniques will be experiencing rapid growth during the next few years. Consequently, the military services should remain abreast of developments so that they can communicate with and operate in this affluent environment.

Subject Area of Research

This writer developed interest in establishing an Army bank during a previous assignment with Department of the Army as a JUMPS-Army project officer. JUMPS-Army, a highly sophisticated computer military pay system, provides for pay twice a month under several options.

Members may elect to receive their pay by either cash or check, to receive all pay at the end of the month, or to receive only part of the pay due and carry balances forward to succeeding pay periods. Cash payments are made by treasury checks that are prepared by the central site, which is located at Fort Benjamin Harrison, Indiana. The checks and money for cashing them are given to agent

---

[2]"Sees a New Computer Boom," Kansas City Times, 13 February 1972, p. 12.

officers. Members simply indorse the checks and are paid in cash. If, on the other hand, a member elects check payment, the central site prepares his check and mails it to him or his designated dependent or financial institution. Further, if a member requests accrual of his pay, his funds accumulate until such time as he requests payment from the field disbursing officer.

Each of the described disbursing techniques requires the military payment system to react to other than Army establishments that employ dissimilar and independent automatic data processing systems. For example, each cash and check payment document must be processed through the Treasury Department for clearance after internal Army processing. If check payments are made to one of the 13,700 commercial banks, another processing technique must be introduced before the check can be cleared.[3] Commercial banks, in cooperation with each other and the Federal Reserve banks, clear and collect checks and other items through local clearing-houses and correspondent banks. As a result, the check is a means of payment that is cleared at par anywhere in the United States.[4]

---

[3]John L. Klein, Money and the Economy (New York: Harcourt, Brace & World, Inc., 1970), p. 166.

[4]Charles L. Prather, Money and Banking (Homewood,

If a system were developed whereby all military pay would be made first in lump-sum payments and then deposited to accounts of individual members maintained by the Army bank, with each member being issued a credit card or similar preprinted document to initiate charges, payments, and withdrawal transactions, field commanders would no longer be required to furnish agent officers to perform payday duties. All intra-Army finance activities would be cashless transactions. Once the Army developed and implemented such a system, the entire banking community would readily develop interface techniques to broaden the applications and give the Army member a complete and unlimited array of financial opportunities. This would have a favorable impact on the thwarted mobile family which is unique to the Army.

Generally speaking, each Army family must relocate at least every other year, which, in turn, requires the establishment of local credit. Whether credit will be extended is still a serious unanswered question with each relocation, because Army personnel in the lower enlisted grades are never assured credit at any price. Accordingly, if it were possible to adopt a total salary system, establish a full service Army bank, and implement credit card

---

Ill.: Richard D. Irwin, Inc., 1969), p. 194.

banking techniques, the needs of the member, the U.S. Army, and the commercial banking and retailing industries would be more effectively satisfied.

CHAPTER II

INDICATORS OF TROUBLE

As previously stated, Army personnel are currently paid either once or twice monthly in accordance with procedures of the Joint Uniform Military Pay System-Army (JUMPS-Army). They regularly use services made available by local banks, department and grocery stores, and smaller entrepreneurs such as filling stations and private clubs to fulfill their everyday requirements. The Army family, being highly mobile and almost always considered to be temporarily located or in transit, has a unique set of problems that should be addressed with special emphasis. These "uniques" relate to the use of military allotments, having large amounts of cash on hand to forego both routine and emergency expenditures, and the transmission of monies from a member to his dependents, as well as the establishment and use of checking and credit accounts and the acquisition and administration of credit and personal loans.

Cash and Checks

Of the problems identified above, that of carrying

large amounts of cash on one's person is by far the most significant and individually devastating if the cash is lost or stolen. There are many commercial means whereby one does not need to carry actual cash because it can be converted to checks that are internationally recognized. However, this system costs the individual from $3.00 to $5.00 per hundred. Additionally, it is not always easy to either procure or cash the checks.

A personal checking account provides another vehicle to prevent the loss of one's money. However, one must cash checks in order to obtain necessary cash, and this act can easily become frustrating when trying to locate a facility that will honor a personal check. This service alternative also costs the member a small fee which is usually based on either the number of checks written or the average monthly balance. This writer has experienced difficulties in cashing personal checks when traveling because some banks will not honor checks drawn on another bank or even a branch of the same bank.

Most field commanders have done what they could to ease local conditions to accommodate the members who employ either of these techniques. However, local accommodations cannot assist those who are not within the geographical area. Therefore, for the most part this serious problem does exist.

Allotments

The allotment vehicle is a unique method of transferring funds from the member's account to either a dependent or a financial institution. To exercise this option the member must apply through his servicing finance officer, who, in turn, will notify the Finance Center, U.S. Army, Fort Benjamin Harrison, Indiana, to file a check with the designee once each month.

This system also has many drawbacks that can interrupt the member's monthly financial cycle. The most serious and frequent problem that has been identified to date is what can and does occur with the submission of a change of address. The delay in changing address or forwarding an allotment is a prime source of dissatisfaction at the time of moving. This is especially troublesome because it is this point in time when additional monies are required and the need for flexibility is at its highest. A delay in receipt of an allotment by a financial institution causes a delay in posting the member's account and can cause great embarrassment if an outstanding check should be posted before the allotment.

The obvious way to avoid this problem is to continue to have the allotment sent to the same bank account; however, the bank must be universally recognized and its checks must

be readily accepted. If the checks are not readily negotiable, the problems identified earlier will occur.

Overdrafts

Overdrafts are very thorny problems for the Army. In fact, so serious was this problem that the Uniform Code of Military Justice has been strengthened to insure that field commanders have adequate authority with which to deal with offenders. Most military facilities currently maintain "black lists" of those who have issued bad checks. Additionally, when the member is notified of a returned check, a copy of the notification is forwarded to his commanding officer and to the servicing personnel officer for inclusion in the member's personnel file. Thus, a returned check can not only be extremely embarrassing but also detrimental to one's career. Unfortunately, strict compliance with harsh rules of this nature makes it possible to wrongfully punish or penalize the innocent when a mistake or error has been made.

Credit

The matter of credit must be addressed from two levels. First, the officers and, second, the enlisted men.

As a general rule, officers have very little difficulty in obtaining needed credit at reasonable rates.

Credit unions, militarily oriented banks, and insurance companies provide speedy service for those who wear their rank on their shoulders.

Such is not the case for the enlisted men of the Army, for many find it difficult to obtain needed credit at any rate. Further complicating this issue is the degree of awareness associated with the actual interest rates charged the enlisted men. Even though the Federal truth in lending law[1] now requires that actual interest rates be clearly advertised, such rates are not very meaningful to enlisted men. Too often high interest rates are the enlisted man's only means of obtaining credit.

In summary, the officers find reasonable credit readily available while the enlisted men encounter difficulties in obtaining needed credit. This serious credit problem for lower ranking military personnel helped shape the development of this thesis.

Morale

It is difficult to define morale or to identify those factors that have the greatest impact on this facet of

---

[1] "Consumer Credit Protection Act," Public Law 90-321, in United States Code Congressional and Administrative News, Vol. I: Laws, 90th Cong., 2d sess., 1968, secs. 106 (Determination of finance charge) & 107 (Determination of annual percentage rate), pp. 178-180.

military life. Funds required to support the member's dependents is without question an important factor.

Both the commander and the member are concerned with the morale of the member's family. Pay and family financial management are potential problem areas that require close attention under the most favorable conditions if the morale of the family is to be good. The requirement here is that the funds be readily available on a planned basis. Savings and credit are vital parts of a well-organized and well-executed family budget. It is through this budget that the family anticipates its monthly income and plans expenditures.

If a family has an income of $500 per month after taxes, a budget might be drawn up that would earmark certain amounts for food, rent or mortgage payments, clothing, services, recreation, savings, and other items. Such advanced planning is essential in balancing buying and spending in pursuing family objectives.[2] Uninterrupted income must be coupled with a sound family budget if morale is to be high.

---

[2]Dwight L. Gentry and Charles A. Taff, Elements of Business Enterprise: Financing the Enterprise (New York: Ronald Press Company, 1961), p. 542.

CHAPTER III

CURRENT PROCEDURES

Monthly Pay

Army personnel today are paid basic pay and basic allowances for quarters and subsistence. The Joint Uniform Military Pay System-Army (JUMPS-Army) accommodates this very detailed administration of monthly entitlements. Under this system there is a master file of all pay accounts for active Army personnel at the central site, which is Finance Center, U.S. Army (FCUSA). At post, camp, and station levels, about 20 per cent of the pay change input is received from unit personnel officers.[1] Under the Personnel Management and Accounting-Card Processors concept, the bulk of this input will be in the form of punched cards produced as a by-product of preparation of special orders. Under combat services and support systems, the input will be a by-product of the personnel update cycle.

Upon receipt of the pay change data, FCUSA updates

---

[1]Comptroller of the Army [cited hereinafter as COA], "Joint Uniform Military Pay System-Army (JUMPS-Army), Command Briefing" (Department of the Army, March 1971).

the master military pay file, determines entitlements, and computes the member's military pay. From the master military pay file, FCUSA also determines the allotment withholdings and payments, computes and deducts Federal Insurance Contributions Act and withholding taxes, and extracts budgetary data. Finally, FCUSA prepares the leave and earnings statement and forwards two copies to the servicing finance office. Each statement, as the name implies, contains a complete record of actual payments, entitlements, deductions for the entitlement month, and up-to-date leave information.

It should be pointed out here that the mails are extremely vulnerable and lack dependability. Mail strikes and slowdowns have impacted heavily on mail delivery in the past, and it is reasonable to assume that this cloud of doubt will continue in the future. The Treasury Department estimates that an average of 5,000 government checks were lost or stolen each month during 1970 and that the average is slowly increasing. Home mail boxes, particularly in apartment buildings, were the prime targets for theft.[2]

To circumvent the reality of mailing problems, Major General Ralph J. Richards, Jr., Assistant Comptroller of the Army, announced on 12 February 1971 the conceptual

---

[2] "JUMPS-Army, Have It Sent to the Bank," Army Finance Journal, July-August 1971, p. 21.

development and feasibility testing of a method of transmitting pay data electronically to a remote site. The ultimate objective was to field an Army pay system that would insure timely payment to the soldier under any circumstance. On 25 June 1971, Fort Jackson, South Carolina, was selected as the test site and AUTODIN (automatic digital network) was selected as the medium for data transmission. Although AUTODIN provides various methods of transmission between terminals, the Fort Jackson test was conducted entirely on a data conditioned telephone line system. Selected for the test site was the UNIVAC Data Communications Terminal 9000 equipment, a new communication computer that consists of input/output equipment such as magnetic tape, paper tape, and punch card. On-site computer processing at Fort Jackson was to be accomplished on the IBM 360/30, a medium size computer with 65,000 memory locations. Test procedures were developed and 1 September 1971 was designated the target date for an initial test with blank specimen (non-negotiable checks).

Personnel participating in the test concluded that it was highly successful. The Fort Jackson finance and accounting office (FAO) reported: "In summary, FAO feels that the test was a great success from every aspect." U.S. Army Strategic Communication Command reported: "The

overall JUMPS-Army operational test, from a communications standpoint, was successful." FCUSA reported: "The programs, equipment and procedures at both the FCUSA and Fort Jackson were capable of producing cash checks and pay checks to unit addresses for one disbursing station in an accurate and timely manner."[3]

When fully implemented, on-site check printing will guarantee every member of the Army that his pay will be where it should be, when it should be, and in the manner the soldier has elected. This digital transmission of pay information to Fort Jackson in the magnetic-tape-to-magnetic-tape mode may be one of the most sophisticated in use today.

> Modern business, with its increasingly complex organizations and its mountains of paperwork, has had to reach for new ways to cope with the information explosion. In recent years, computer-based systems have helped business keep abreast of business activities through the generation of more and more working paper. But this has had its drawbacks, and a way has had to be found to collapse time and distance in providing information to management and in exchanging it between decentralized company locations. Modern data communication, still in its infancy as a component of business computer systems, promises to solve these problems. Within a few years 50 per cent of the computers installed are expected to have data communications, whereas in 1967 the figure was 7 per cent. American industry will soon be sending more business data over long-distance telephone lines than the equivalent number of spoken words.

---

[3]"JUMPS-Army On-Site Check Printing at Fort Jackson, S. C.," Army Finance Journal, November-December 1971, p. 2.

And this will be only the beginning.[4]

In other words, on-site check printing benefits the service member. It will establish a framework of communications that will provide the Army with the technology of today and tomorrow. The communications capability associated with this new system will initiate the communications requirements of management information systems now being developed throughout Department of the Army.[5]

It should also be noted that under current procedures the servicing finance office retains the capability of making pay adjustments and partial payments, and it forwards notice of these transactions to FCUSA on a daily basis.

The JUMPS-Army system relieves the servicing finance offices of responsibility for reporting accounting information to Department of the Army and for retaining supporting documentation in the personal financial record. Servicing finance offices retain copies of leave and earnings statements for six months. Those copies can serve as the basis for decentralized computation and disbursement of military pay if the central site is "down" for any period of time.

---

[4]Leonard I. Krauss, Computer Based Information Systems (New York: American Management Association, 1970), p. 32.

[5]"JUMPS-Army On-Site Check Printing," p. 6.

Because the military pay system is complicated and demanding, pay errors approximating $250 million annually have been recorded. With the implementation of JUMPS-Army, 80 per cent (or $200 million) of the annual errors may be eliminated.[6] It appears the remaining $50 million should be recoupable if the pay system could be simplified. Simplification itself would reduce operating costs of JUMPS-Army by an estimated $20 million annually. This savings would result from reduction in the number of personnel required to administer a salary system, thereby permitting a total savings of about $70 million annually. This estimated $70 million is the basis for recommendations in pay simplification that are presented in Chapter IV.

Allotments

The Army now provides an elaborate and costly allotment system whereby specific sums of money can be dispatched to individuals or financial institutions monthly. The FCUSA, utilizing about 600 personnel, administers the allotment program, which has more than 2.2 million accounts. This effort establishes and controls savings deposits and allotment accounts for the Army's active duty military personnel, makes repayments of soldiers' and savings deposits to active

---

[6] COA.

duty and out-of-service military personnel, and maintains accounts to provide data for computation of pay in accordance with JUMPS-Army procedures.[7]

Currently, the JUMPS-Army system and the allotment system operate independently of each other, but both are updated by a single source allotment document which changes the status of allotments, i.e., start, stop, and change of address. Allotments are used to pay insurance premiums, to make routine monthly payments, and to dispatch funds to individuals or financial institutions. However, FCUSA is developing a master military pay file that will accommodate both the allotment and pay data.[8] This improvement will speed processing time, will eliminate the need to reconcile the two systems monthly, and will guarantee that each allotment dispatched represents a valid transaction and that the member's account will be adjusted to reflect disbursement.

Analysis of the ever-changing number of allotments currently in effect reflects that officer personnel fully utilize this program while enlisted members generally use only the required allotments for pay grades E4 and below. The overall average per Army member is now 2.2 allotments.[9]

---

[7]Paul R. Bergeron, "History of Allotments and Deposits," Army Finance Journal, July-August 1971, p. 10.

[8]COA. [9]Bergeron, p. 10.

Bank Credit Programs

The data in Table 1 depict the results of a survey that the Federal Reserve Bank of Boston conducted in 1966. Unfortunately, these data are restricted to the 30 member banks with deposits of $50 million and over that are located in that geographical area.[10]

TABLE 1.--Categories of credit programs*

Type of Plan	No. of Banks
Credit Card	6
Check Credit	10
Overdraft Check	7
Other Programs	2
None	9
Total:	34

*Some banks have more than one plan in combinations of overdraft/travelers checks/credit card; overdraft/travelers checks/check credit; credit card/check credit; and check credit/other.

Source: "Bank Credit Cards and Related Plans," New England Review, December 1966, p. 3.

The data in Table 1 support the thesis that there is a consumer demand for a variety of bank credit plans and that some banks find it attractive and/or necessary to offer more than one type of plan. Each of the four plans identified in Table 1 is discussed in the remainder of this chapter.

---

[10]"Bank Credit Cards and Related Plans," New England Review, December 1966, p. 3.

Credit Card

General.--Bank credit cards involve extending to an individual a prearranged line of credit that is available on demand. This involves a 3-party arrangement among cardholder, bank, and merchant.[11] The data in Table 2 are a summary of the bank credit card plans in the United States.

TABLE 2.--Summary of bank credit card plans in United States

Item	Credit Card Plans
Banks participating	197
Merchants participating	390,805
Accounts:	
Total	$14.4 mil
Active	$5.1 mil
Active relative to total	35%
Credit lines:	
Average size	$355
Total authorized by banks	$5,113 mil
Credit extended September 1967	$125 mil
Credit outstanding 30 September 1967:	
Total	$633 mil
Total per active account	$124
Total relative to authorized lines	12%

Source: Federal Reserve System, "Bank Credit-Card and Check-Credit Plans" (Board of Governors, July 1968), p. 1.

---

[11] Federal Reserve System, "Bank Credit-Card and Check-Credit Plans" (Board of Governors, July 1968), p. 1.

Development and growth.--Hotels, oil companies, railroads, and department stores first issued credit cards just prior to World War I. The cards served the dual purpose of identifying a customer who had been granted the privilege of charging his purchases and providing an easy means of recording pertinent information when the credit privilege was exercised. During World War II the use of credit cards almost disappeared because of governmental restraints on consumer spending and credit. When the restrictions were lifted, many who had previously issued cards reinstated their plans, and in 1947 the airlines began to issue their own travel cards. Restaurants, motels, and other retailers were also issuing credit cards at that time.[12]

The success of travel and entertainment credit cards soon attracted the attention of commercial banks. Franklin National Bank, of New York City, started the current bank credit cards in August 1951, but its program did not achieve full scale operation until April 1952.[13] Many other banks, recognizing the success of the "Franklin System," implemented similar systems. By the end of 1955 more than

---

[12] Ibid., p. 7. [13] Ibid., p. 7.

100 banks had started credit card plans.[14] They qualified and enrolled credit card customers, extended charge credit on a 30-day basis, and, for their fee, assumed the risk of any non-payment.

The development of bank credit card plans has been most rapid throughout the commercial banking industry. Not only have the plans grown very rapidly in a short period of time, 100 having been organized between 1951 and 1955, but, as the number of individual systems developed (see Table 3), each became somewhat unique in addressing both the problem and the solution.[15]

The credit card tends to be a high volume operation. For example, 23 per cent of the banks offering credit cards had a volume of more than $500,000 in September 1967, but only 4 per cent of the banks with check credit plans reached that level. In fact, two-thirds of the check credit plans had a volume of less than $25,000. The pace began to quicken in 1965 and has continued to accelerate to this date. Banks engaged in full operation of credit card plans rose from 68 in 1964-65 to 197 in the 1966-67 period and then

---

[14]Federal Reserve Bank of Kansas City, "Monthly Review," July-August 1969, p. 4.

[15]Ibid., p. 5.

increased to 508 by the end of 1968.[16]

TABLE 3.--Number of banks operating credit card plans by year of introduction and cumulative total

Year	New Entries	Cumulative Total
1955 or before	27	27
1956-57	0	27
1958-59	31	58
1960-61	3	61
1962-63	2	63
1964-65	5	68
1966-67	129	197
1968	311	508

Source: Federal Reserve System, "Bank Credit-Card and Check-Credit Plans" (Board of Governors, July 1968), p. 1.

The commercial banking industry has experienced three cycles of credit card growth since 1951. During the period 1951-1953, almost 100 banks began to offer credit card services. By 1960, additional enthusiasm bolstered the industry when the larger banks began to pursue these programs. Currently, the growth can be attributed to the entrance of the largest banks in the credit card arena and to their efforts to cross state and regional boundaries.

---

[16]Federal Reserve Bank of Kansas City, p. 5; and Federal Reserve System, p. 3.

Cycle.--The credit card plan, as previously stated, requires the bank to finance the consumer's purchases and the retailer's accounts receivable. Under this system the consumer becomes a cardholder by meeting the bank's credit requirements and having a line of credit established. Each bank establishes the maximum credit to be honored, and this is generally predicated on the individual's credit standing. The merchant, on the other hand, deposits the sales slips and receives immediate credit for that amount less the bank's discount. The bank then bills the consumer monthly for the total amount charged at the various stores participating in the plan.[17]

The bank derives income from two sources: interest and service charges on consumer loans and merchant fees and discounts. Although the consumer does not pay for the credit card and is not charged interest for any bill paid within a grace period, he does pay a service charge of 1 to 1-1/4 per cent per month on any unpaid balance. Almost without exception the cardholder is required to repay at the monthly rate of $10.00 or one-tenth of the amount borrowed, whichever is greater. The merchant pays an entrance fee

---

[17]"Bank Credit Cards and Related Plans," pp. 3-7; and "First Phase A-OK, All Systems Go," Business Review, November 1965, pp. 10-13.

upon joining the plan, an annual rental fee or sometimes an outright purchase price for the sales slip imprinter, and a discount on the sales slip deposit which may vary from 2 to 7 per cent depending on the volume of sales generated.[18]

Check Credit

General.--Check credit is a consumer loan type program. The consumer is given a revolving line of credit and a checkbook of specially numbered or otherwise identified checks. As these checks clear, the bank initiates a series of loans for which the consumer pays a service charge of 1 to 1-1/4 per cent per month on the unpaid balance. In addition, the customer may be required to pay a fixed amount for each check. Check credit plans have been in operation in the Third Federal Reserve District since 1959.[19] The data in Table 4 are a summary of the check credit plans in the United States.

Development and growth.--Check credit plans have also caught on across the nation, and their growth has closely paralled that of the credit card plans. The number of banks operating check credit plans, which some banks

---

[18]"First Phase A-OK," p. 11.

[19]"First Phase A-OK," p. 11.

TABLE 4.--Summary of check credit plans in United States

Item	Check Credit Plans
Banks participating	599
Accounts:	
Total	$1.1 mil
Active	$0.8 mil
Active relative to total	69%
Credit lines:	
Average size	$997
Total authorized by banks	$1,140 mil
Credit extended September 1967	$73 mil
Credit outstanding 30 September 1967:	$483 mil
Total	
Total per active account	$610
Total relative to authorized lines . . .	42%

Source: Federal Reserve System, "Bank Credit-Card and Check-Credit Plans" (Board of Governors, July 1968), p. 1.

offer as substitutes for or supplements to credit card plans, increased relatively slowly until 1958, rose sharply in 1958-59, and grew at a relatively slow pace through 1965 (see Table 5).[20]

Common characteristic.--As with credit card plans, most check credit plans differ in individual characteristics. The characteristic common throughout all plans is that the customer is offered a prearranged line of credit and the

---

[20]Federal Reserve Bank of Kansas City, p. 5.

system reacts to his demands.

TABLE 5.--Number of banks offering check credit plans in United States

Year	Cumulative Total
1957 or before	26
1958-59	230
1960-61	262
1962-63	283
1964-65	322
1966-67	599
1968	975

Source: Federal Reserve Bank of Kansas City, "Monthly Review," July-August 1969, p. 5.

Overdraft Check

General.--The franchise for a quite different but related type of program, the overdraft check,[21] has now been acquired by more than 130 banks. Referred to as a "marriage between check credit and the regular checking account," it features a package that sponsors regard as superior to credit card plans for competitive purposes. The consumer receives a cash reserve or line of credit up to $2,500, a set of special checks similar to travelers checks, and a special identification card.

---

[21]"Security First National Bank of L. A. [Los Angeles] Will 'Go National' through License with Other Banks," American Banker, 25 May 1966, p. 14.

Cycle.--The cash reserve is a revolving check credit system, but it entitles the consumer to overdraw his regular checking account up to the amount of his line of credit, usually $2,500, by using either his regular checks or the special checks. Accordingly, the consumer does not overdraw his account until he has exceeded his particular line of credit. This feature offers a great deal of service attractiveness. However, to use the special checks the consumer must find a facility that is willing to accept them. Consequently, the consumer who has experienced difficulty in establishing his identity for check-cashing purposes will be unimpressed by this technique.

Costs.--The costs to the consumer for this plan are threefold: fifty cents per month, the normal checking account charges of the bank, and 1 per cent interest on the loan balance. For the bank, the check or checks that initiate the overdraft status are direct obligations and must be so honored.

Other Programs

General.--Two other plans are addressed to acknowledge the benefits of all competitive plans. Because of their restricted scope and local implementation, the special loan account and the check cashing guarantee card are not

reviewed in significant detail.

Special loan account.--Under the program of the special loan account the consumer must establish a line of credit with the bank with which he does his regular banking. The loan repayment schedule is predetermined and is generally predicated on a percentage of the unpaid balance. The consumer has two accounts: the regular checking account and the special loan account. Accordingly, he receives and must use two separate kinds of checks. Any use of the special check constitutes a loan from the so-called "cash reserve" even though the consumer may have a sufficient balance in his regular account to cover the draft. On the other hand, a regular check may be drawn in an amount exceeding the checking balance and the bank will automatically transfer the required amount from the cash reserve to cover the overdraft. The consumer receives two monthly statements: one for his checking account and one for his special loan account whenever the latter is activated by use of either a special check or an overdraft on his regular account.

Check cashing guarantee card.--The check cashing guarantee card is issued only to consumers who have clearly demonstrated their ability and willingness to establish and maintain an acceptable credit base. Once issued, all of the

participating business establishments are obligated to cash checks for the bearer in amounts that usually do not exceed $100.

Findings--Credit Programs

As the foregoing demonstrates, there are now in effect several credit plans that lend themselves to the needs of the Army family. They are generally restricted to a geographical area, however, and therefore fall critically short of the Army's universal requirement.

The growth of the credit industry has been two-pronged. First, those non-financial institutions such as Diners Club, American Express, and Carte Blanche have developed their trade on financing entertainment and travel. Second, those like Master Charge, Readi-Credit, and Central Charge are locally oriented and are restricted to specific geographical locations. They cater to financing all types of retail sales and are honored by almost all major retail outlets. Although this growth has been rapid, the full potential of the credit industry has not been approached in either variety or volume. To be universally accepted and to accommodate the requirements of the Army member, these systems would require expansion through either a regional exchange program or the development of a sophisticated

communications network.

Review of the latest banking credit techniques reveal that little progress has been made in standardizing or developing a program with a base broad enough to meet requirements of the U.S. Army. What has been done suggests that credit guarantee plans would be especially helpful to the Army member during time of permanent change of station, temporary duty, or on a day-to-day basis.

CHAPTER IV

PROPOSED PROCEDURES

As the title "An Army Bank: Five Steps Beyond JUMPS-Army" implies, there are four significant internal events which must occur before the Army can adopt an effective banking system. These events, some of which may depend on successful legislative action, are adoption of a salary system, centralization of the administration of military pay, adoption of automated paydays, and implementation of a bank credit card system.

Salary System

Much background work has already been accomplished in the area of a salary system. An ad hoc committee report entitled "First Quadrennial Review of Military Compensation," dated July 1968 and commonly referred to as the Hubbell Report, addresses in detail the need for and the administration of a salary system for career force personnel.

Service members currently receive salary at rates determined by rank and length of service, monetary allowances for quarters (housing) and subsistence, various other

special allowances for performing duties that involve special hazards or special proficiencies (flight pay, for example), and allowances for living cost differentials between the United States and expensive overseas stations. Only about 60 per cent of military compensation is for work the recipient has done. The other 40 per cent varies according to family size, accident of quarters availability or place of duty, marital status, and whether the service member serves until retirement.

Both the General Accounting Office and the U.S. Army Audit Agency have determined that the Army's current pay system of basic pay and allowances is so sophisticated and overly complicated that errorless administration is impossible.[1] The most significant reason universally identified with the Army's unusually high error rate is the lack of trained personnel to administer the system. This lack of skill and experience, coupled with a pay system so complicated that the Office of the Comptroller General is constantly plagued with requests for rulings and interpretations just to determine the intent of specific pay provisions, leaves the Army with two choices. One choice is to

---

[1]Comptroller of the Army, "Joint Uniform Military Pay System-Army (JUMPS-Army), Command Briefing" (Department of the Army, March 1971).

continue with an unacceptable error rate. The alternative choice is to abort this "mess" and adopt a simple salary "lump sum" system which can be successfully administered by the caliber of pay personnel the Army has always been forced to employ. Adopting the latter option would not only reduce the paying of Army personnel to a more manageable package but would also set the stage for establishment of an Army bank with the primary mission on establishing and maintaining an individual account for each Army member. All financial transactions for a given member would flow through his account and be so recorded.

Under such a system all U.S. Army personnel would be paid a salary in lieu of today's system of basic pay and basic allowances. The six uniques of this proposal[2] are discussed below.

Variable reenlistment bonus.--The regular reenlistment bonus would be eliminated. The variable reenlistment bonus would be continued in effect and would be expanded to authorize payment each time a member with a critical military skill reenlisted or extended his enlistment. A member with a break in service up to 24 months would still be

---

[2]Ad Hoc Committee, "First Quadrennial Review of Military Compensation" [Hubbell Report] (July 1968).

entitled to the variable reenlistment bonus upon reenlisting. Finally, neither dollar nor length of service limitation would be placed on the total amount which may be paid.

Readjustment and severance pay.--Readjustment pay is extended to Regular enlisted members and to both officer and enlisted Reservists. Only Regular officers are entitled to severance pay. Readjustment and severance pay would be computed at one-twelfth of the annual salary multiplied by years of service, up to one year's salary, when the separation is for failure of promotion or reduction in force. When separation is for cause, however, the computation would be a twenty-fourth of the annual salary multiplied by years of service, up to one-half of one year's salary. Readjustment pay for enlisted members in grades E1, E2, and E3 who were eligible for it would be computed according to the appropriate formula, except that it would be based on the pay of an E4.

Deductions for retired pay.--Retirement contribution would be part of the package. Annual contributions would be less than 6 per cent until repayment or retirement, with the deductions accruing interest compounded annually. Members who were separated would be given their retirement contributions plus accrued interest. Survivors of those who die

short of retirement and those who retire but do not live long enough to receive all of their retirement contribution would be given the amount in the member's account plus interest. Once retirement contributions were paid to a member he could not use the service represented by the contributions for retirement unless he had retired for physical disability or unless he refunded the payments so as to recover the service for retirement purposes.

Mortgage insurance.--The proposed salary system eliminates payment of mortgage insurance premiums for servicemen. The rationale is that governmental payment of premiums for in-service home buyers is no longer justified since parity of military and civil service salaries has been obtained.

Personal money allowance.--The salary system proposed also eliminates personal money allowance for three- and four-star officers, the Chief of Staff, and the senior member of the Military Staff Committee of the United Nations.

Responsibility pay.--Responsibility pay would be eliminated under the proposed salary system.

Centralized Pay System

Upon implementation of the proposed salary system,

centralizing the entire pay effort, i.e., military pay data conversion, financial data records maintenance, and pay inquiry and adjustment services, in addition to those functions already centralized, will be logical follow-on actions. The feasibility of establishing and operating an effective centralized operation has been demonstrated through test.[3] This test also demonstrated that the relocation of certain pay functions to a central site will have a favorable effect upon balance of payments and will be cost effective.[4]

The most effective method of accomplishing this task would be to restructure military pay operations employed under JUMPS-Army (Joint Uniform Military Pay System-Army). Some of the functions currently performed by the Finance Center, U.S. Army (FCUSA), and the field finance offices can be incorporated into a single service center. This involves the establishment of highly sophisticated automatic data processing operations. Implicit in this concept is that the service center would not be collocated with FCUSA so that it could function as an alternate finance center when required.

---

[3]Raymond S. Allred, "A Service Center for Military Pay" (unpublished student staff study, U.S. Army Command and General Staff College, October 1971).

[4]Comptroller of the Army, "MPSCOA [Military Pay Service Center Overseas Area] Test Resumé" (Department of the Army, September 1970).

The automated operation would be equipped with computer peripheral and related automatic data processing equipment compatible with operations at FCUSA. The responsibilities of the operation would include, but need not be limited to, JUMPS-Army related operations, site operations, and other operations required to administer military pay.[5]

JUMPS-Army related operations.--A refined concept of JUMPS-Army related operations would include receipt, control, conversion, and computer edit of military pay data prior to FCUSA via AUTODIN (automatic digital network), preparation and distribution of leave and earnings statements and pay checks, pay reconciliation, military pay inquiry and adjustment service, suspense item control, quality assurance, and continuity of operations capability for the JUMPS operations by maintenance of transaction tapes used to update copies of JUMPS master files transceived from FCUSA periodically for emergency use.

Site operations.--Maincenance of an automated master file of data replacing the personal financial record and the master military pay file of FCUSA would provide an inquiry system for the field finance offices utilizing AUTODIN,

---

[5]Allred.

AUTOVON (automatic voice network), and dedicated teletype, would provide separation centers and points with timely and accurate financial data to separate personnel, would perform suspense item control, and would support the quality assurance program to satisfy General Accounting Office audit requirements. It is envisioned that such an automated system would ultimately employ random access techniques, remote terminal inquiry stations, optical character recognition equipment, and other sophisticated techniques to provide a real time inquiry system.

Other operations.--A service center of the nature explained above can provide overall continuity of operations capability for FCUSA. Moreover, advantages of the proposed fully automated data system far outweigh its disadvantages. This system would:

1. Provide an emergency backup capability to the JUMPS-Army centralized computation operation at FCUSA.

2. Relieve a logistics problem at FCUSA in decentralizing the workload: first, by printing and mailing pay checks in accordance with systems requirements; second, by printing and mailing leave and earnings statements based on data tapes or print image tapes transceived by FCUSA after the computation process.

3. Reduce FCUSA rejects and speed data recycling because of computer editing of military pay data before AUTODIN transmission to the FCUSA JUMPS-Army operation.

4. Identify probable savings.

Noted disadvantages of the proposed fully automated data system are:

1. Changes would be required in some JUMPS-Army procedures and techniques.

2. A sizable training problem would be created.

3. Department of the Army staff planning and implementing actions would be most extensive.

4. Costs to implement the proposed system would be substantial. To satisfy even the most doubtful mind in Department of Defense, the economic analysis, or cost versus risk analysis, in Table 6 is for Calendar Year 1974 and outyears. It is in order of magnitude data and reflects incremental costs only. The assumptions are:

a. There will be 90 field finance offices to serve 850,000 Army personnel--25 in overseas areas and 65 within the Continental United States.

b. Each finance office will service about 9,500 military pay accounts.

c. Residual requirements in field finance offices to process pay change documents, receive pay

inquiries, and process travel payments will be 30 per cent of the total military pay personnel requirement.

d. A population of 850,000 will require about 3,780 military pay clerks (see Table 6).

TABLE 6.--Population served, number of military pay clerks required, and cost versus risk analysis

Population		Military Pay Clerks Required: Finance Offices	Service Center	Total
Overseas:	235,000	315	730	1,045
CONUS:	615,000	820	1,915	2,735
Total:	850,000*	1,135	2,645	3,780*

Annual Costs ($000):

Personnel	($175)
Equipment	2,000
Facilities	2,000
Transportation	(1,300)
Total -	$2,525

Risk: None. A service center not collocated with the Finance Center, U.S. Army, will provide full continuity of operations for JUMPS-Army.

Cost Versus Risk:

Annual Costs . . . $2,525 million
Risk . . . . . None

*225 military pay accounts/military pay personnel (including supervisors).

Source: Raymond S. Allred, "A Service Center for Military Pay" (unpublished student staff study, U.S. Army Command and General Staff College, October 1971).

Although annual costs of the proposed service center for military pay with a fully automated data system are projected to be in excess of $2.5 million, they will be applied against the $70 million in annual savings that were identified in Chapter III (page 18), thereby reducing those annual savings to about $67 million. Under this proposal, however, no risk is involved. Every payday will be met regardless of what happens to the JUMPS-Army main computer configuration, because the alternate site will provide 100%-redundancy.

The desired degree of 100%-redundancy can be gained by configuring the proposed service center for military pay so it will be:

1. Located within a hardened site to insure security and safety of both personnel and equipment.

2. Equipped with necessary automatic data processing equipment, communications hardware, and other equipment to insure continuity of operations should the JUMPS-Army computers become inoperative.

3. Manned with a balanced work force of professional civilian and military personnel to guard against possible labor problems that could cause work stoppages.

The establishment of a service center for military pay will probably encounter numerous obstacles, and there is

no assurance the idea can gain necessary support. On one hand will be the "old guard," i.e., senior field commanders who sincerely want the best possible pay service for their troops. Such commanders believe this service now exists because they exercise control. On the other hand, zealous systems personnel firmly believe that total systems realignment and centralization can achieve both economies and improved service.

The vehicle proposed in this thesis has proved itself from a systems point of view, but not on the command side of the house. As requirements placed on the Army to reduce oversea troop strengths and to implement cost reducing systems increase, this portion of the pay package will become more fashionable.

Automatic Banking

The logical step after adoption of a manageable pay system and its centralized administration is to advance the transfer of funds from the military pay service center to the banking institution. The terms most recently applied to this technique are "moneyless banking" and "checkless, cashless society." This has been referred to as a futuristic era of superautomation and supercredit.[6]

---

[6]"Money Goes Electronic in the 1970s," Business

Here the service center would be interfaced with the banking system and would provide on line real time pay and adjustment action on a daily basis. The banking facility would draw from the service center the data necessary to establish accounts for accessions, to conduct daily business, and to transfer accounts to other banking facilities for members being released from active duty. Transferring members on and off the system is not too exciting, but the conduct of daily business can include the comprehensive coverage of all financial transactions, without the transfer of cash or other hard copy documentation, i.e., a real cashless and checkless effort.

Industry has many reasons for adopting more advanced techniques in the banking community. These reasons are generally built around the sheer volume of the ever-increasing paper workload and its threat to paralyze the banking system. Some tests have been conducted in the area of interest, and each concluded that the use of on line computers for the transfer of funds is not only practical but should be vigorously pursued. The effort of the American Bankers Association, coupled with the work being accomplished by the Special Committee on Paperless Ent.ies

---

Week, 13 January 1968, p. 54.

(SCOPE), has done much to advance this theory and its application in real world banking.

One proposal postulate that addresses this issue is the linking of various system bank computers with Federal Reserve bank computers. Under this concept bank computers report net claims against other banks to the Federal Reserve. Federal Reserve bank computers then automatically increase and decrease the reserve accounts of creditor and debtor banks. All information on payments is likewise automatically fed into each bank's equipment.[7]

Walter E. Trabbold, comptroller of the Bank of Delaware, having conducted on line tests, is of the opinion that "electro-banking" is feasible. He sees no technical reasons banks should not begin looking into an expansion of this magnitude for their customer services. The pilot project with a shoe chain clearly showed that the requirements for a small system can easily be met by equipment now available. The equipment problems posed by a large-scale system will disappear before such a system can be implemented.[8]

---

[7]John L. Klein, Money and the Economy (New York: Harcourt, Brace & World, Inc., 1970), p. 167.

[8]Walter E. Trabbold, "A New Perspective on Banking Automation," Progress in Information Systems, March 1967, p. 17.

The banking system proposed in this thesis would be required to provide a monthly statement of transactions to reflect automatic deposit of each member's salary, credit card and check transactions, and status of outstanding loans. It is envisioned that the monthly statement will be an extension of the current leave and earnings statement. Therefore, since the pay system will utilize actual time processing and decentralized printing in the field, the traditional cut-off date for posting changes to a member's account will be influenced only by the amount of printing time required to prepare the statements. Preparing the leave and earnings statements immediately after the pay period would align the pay effort with the current banking cycle.

The system employed to update a member's account to reflect earned increases would be a simple interface technique between JUMPS-Army and Army bank computers. Changes to the automated master file can be passed to the Army bank daily. The challenge comes in recording other forms of income (deposits) and the various charges that are identified with the Army's salary system, i.e., mess, quarters, and laundry costs. To accommodate the variety of changes to members' accounts which would develop, several different categories of charges and deposits need to be identified.

First, all automatic transactions would require identification. These would consist of deposits derived from monthly pay entitlements and from all dividends and other monies that are regularly earned during the year. The automatic charges would consist of quarters allowance when government quarters are furnished, insurance premiums, and laundry charges.

Another input/output transaction category may be identified as authorized. These transactions would record charges for meals and for telephone and utility bills. Local deposits to accommodate other forms of income or cash transactions would also be processed in this manner. Such transactions would be submitted to the computer complex via touch-tone telephone[9] or a similar device. Payday activities would no longer be geared to once or twice monthly under this system because funds would be made available to each member, as he needed them, through any facility with an input/output device. As this system is further developed, additional categories would be identified to accommodate emergency and other situations.

Coupling this banking technique with the credit plans identified in Chapter III (pages 20-31) provides the

---

[9]Francis F. Smulski, "Touch-Tone Project," Progress in Information Systems, March 1967, p. 57.

nucleus of the Army bank. The bank's scope may be broadened by including the mutual savings feature to insure that enough revenue is generated to cover all expenses. Under this concept the bank would receive the savings of its members and invest them, probably in tax-free government bonds. The bank would then pay its members dividends on the money they had placed in a savings account.[10]

Legislative and Political Support

The degree to which an Army bank can participate as a profit-seeking organization will depend on the enabling (charter) legislation. Legislative action will classify the banking facility by principal types of deposit, use made of deposits, affiliation with other federal agencies, type of structure, and size. It should be noted that during the past 15 years there has been a decline in the number of banks in the United States. That the major part of this decline is attributable to mergers has raised the cry of "monopoly" by some. Others, however, are more concerned over destructive competition among banks (which has been a factor in the rising costs of banking).[11]

---

[10]Dwight L. Gentry and Charles A. Taff, Elements of Business Enterprise: Financing the Enterprise (New York: Ronald Press Company, 1961), p. 124.

[11]Charles L. Prather, Money and Banking (Homewood,

This "concern" could be addressed under bank management or supervision.[12] Keeping an Army bank out of the profit-seeking arena would be of paramount importance to commercial banks because of the monetary nature of their liabilities. Those profit-seeking organizations would oppose the establishment of an Army bank because of its potential size and ability to attract customers who now rely on the commercial banking system.

To understand the impact an Army bank would have on the banking establishment, one should examine how the banks acquire needed capital funds to meet legal requirements and to assure confidence of depositors, loan customers, and the general public. Currently, owners provide only about 8 per cent of banks' total assets, depositors provide 87.5 per cent, and other sources (such as borrowing in the money and capital markets and from Federal Reserve and correspondent banks) provide about 4.5 per cent.[13] These data show why the banking community seeks depositors, the bearers of assets.

One can also see why the opposition would be universal when the full ramifications of an Army banking system

---

Ill.: Richard D. Irwin, Inc., 1969), p. 217.

[12] Ibid. [13] Ibid., p. 219.

are examined. Assuming the withdrawal of one million depositors from commercial banks, the impact becomes significant. Considerable opposition to the establishment of an Army bank may therefore be expected.

CHAPTER V

THE ARMY BANKING SYSTEM

The Bank

The commercial banking system of the United States is composed of more than 13,700 banks.[1] An examination of the types of banks will help in determining if the current system will accommodate the Army's requirement.

Six types of banks now operate in this country.[2] They are:

Member bank: a participant in the Federal Reserve System; may be classified as Reserve city or Reserve country.

Non-member bank: a non-participant in the Federal Reserve System.

National bank: chartered by the federal government; must be a member of the Federal Reserve System.

State bank: chartered by one of the fifty states of the United States; may or may not be a member of the Federal Reserve System.

---

[1] John L. Klein, Money and the Economy (New York: Harcourt, Brace & World, Inc., 1970), p. 33.

[2] Ibid.

Insured bank: a bank whose deposits must be insured by the Federal Deposit Corporation.

Non-insured bank: a bank whose deposits are not insured by the Federal Deposit Corporation.

Additionally, five types of banking systems are important to this study.[3] They are:

Unit banking: the operation of only one banking office by a commercial bank.

Branch banking: the operation of two or more banking offices by a commercial bank.

Chain banking: the association of a number of commercial banks through an interlocking directorate.

Group banking: the control of two or more banks by a holding company with a controlling interest in the stock of the banks.

Corresponding banking: commercial bank maintenance of checking deposit accounts with another bank in return for such services as bond and security purchases and check clearance.

The National Banking Acts of 1863 and 1864 were federal measures to cause bank reform. Those acts were designed to meet two broad goals: to establish a safe

---

[3] Ibid., p. 34.

currency system and to assist the Treasury in financing the Civil War.[4] They had provisions concerning chartering, capital and reserve requirements, bank lending operations, and fiscal agent authorities.

Any group of five or more persons could apply for a charter by filing a petition with the Comptroller of the Currency, Washington, D. C. Minimum capital requirements established for national banks were $50,000 in cities of under 6,000 inhabitants, $100,000 in cities from 6,000 to 50,000 inhabitants, and $200,000 in cities with still larger populations.[5]

National banks are required to keep a minimum percentage reserve against their deposits in the form of balances with their Federal Reserve banks and in the form of currency and coins held as vault cash. The Board of Governors is authorized to set the minimum required reserve ratio within limits designated by Congress.[6] Presently the limits are:

> (1) for savings and other time deposits in all member banks, a minimum of 3 per cent and a maximum of 10 per cent, and (2) for net demand deposits in country banks,

---

[4] Ibid., p. 140. [5] Ibid., p. 141.

[6] "Banking--Interest Rates, Etc.," Public Law 89-597, in United States Code Congressional and Administrative News, Vol. I: Laws, 89th Cong., 2d sess., 1966, sec. 2(c), pp. 970-71.

> a minimum of 7 per cent and a maximum of 14 per cent, and for "reserve city" banks, a minimum of 10 per cent and a maximum of 22 per cent.[7]

Loans to any one borrower cannot exceed 10 per cent of the value of the capital stock of the bank. Under the provisions of the National Banking Acts of 1863 and 1864, national banks were permitted to serve as fiscal agents of the United States Government. This regulation still applies to national banks.

Examination of the above information indicates that a national bank, employing a unit banking technique, can satisfy Army banking requirements. Criteria established for chartering, capital requirements, and lending operations can be satisfied without difficulty. Reserve requirements can be easily met by using the military personnel appropriation and earmarking 10 per cent of the annual base as the fiscal year reserve. Accordingly, an Army bank, established as a national bank, could meet United States regulatory provisions, could act as a fiscal agent of the United States Government, and could provide banking services to Army members.

Bank Card

Thus far all the ingredients of a successful banking

---

[7]Charles L. Prather, Money and Banking (Homewood,

venture have been identified. The vehicle t initiate these transactions must now be addressed.

Universal standard.--Almost all credit systems to date are based on the familiar plastic credit card with embossed characters used to imprint the customer's name and account number on the transaction documents. The Army has already followed this trend by developing a similar card for use throughout the Army medical network. In any compatible system the cards would require the same physical specifications so that the standard equipment already being employed could be used. On the other hand, one may wish to explore the possibility of developing through the World Bank a standard size, format, and card composition that can be employed throughout the world. There is no reason to restrict this dynamic system to a particular geographical location or country.

Security.--Another thorny question concerns security measures or control of the card. Here, again, a universal position is required so as not to limit the use of this particular card but, at the same time, be able to control the authenticity of its use. This suggests that peculiar

---

Ill.: Richard D. Irwin, Inc., 1969), p. 341.

items must be among the characters included on the card.

Requirements.--A successful system depends on the following factors:

1. An identification card, or cards, similar to the facsimile shown in Figures 1, 2, and 3 for each Army member.

2. Modification of all forms that require information contained on the identification card so that automatic accommodation will be facilitated.

3. Identification card replacement of the following items that are presently issued by various agencies of the United States Government:

a. Identification Card (DD Form 2A) (1 Mar 59).

b. Security Identification Card (FL Form 1177) (12 Jul 56 (R)).

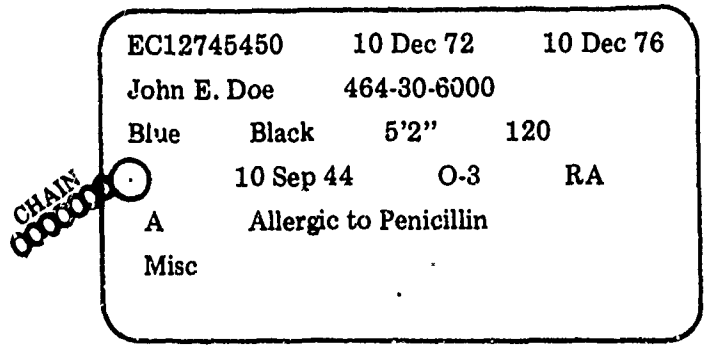
c. Individual Identification Tag (dog tag).

d. Social Security Account Card (SSAC).

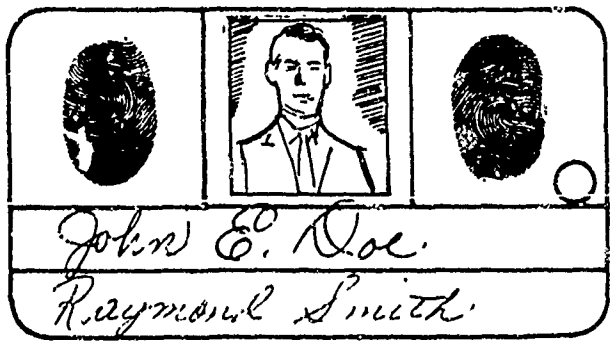
e. Patient's Recording Card (medical identification card).

f. Other cards as may be appropriate.

Justification.--A service member is required to have at least five identifying items on his person at all times. One such item, the dog tag, must be carried in duplicate and worn around the neck.

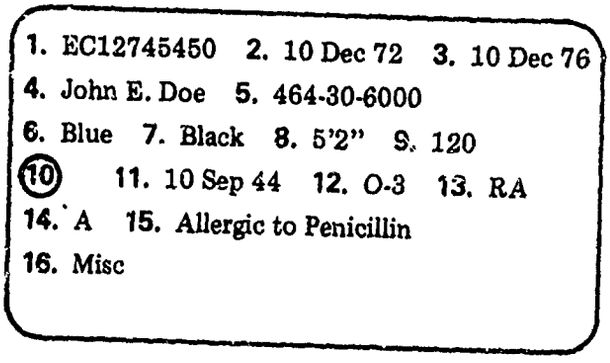


FRONT VIEW



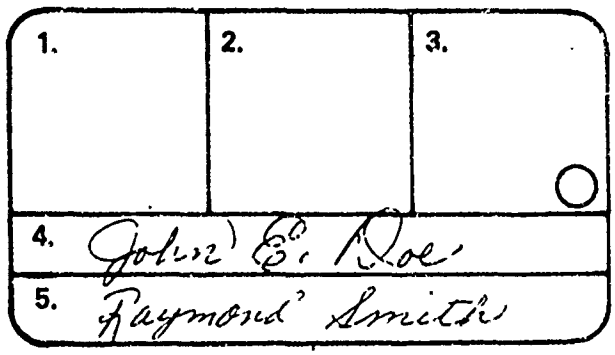
REVERSE SIDE

Figure 1. Army Credit Card: Front View and Reverse Side.



1. ID Card Number
2. Date Issued
3. Date Expires
4. Name
5. Social Security Account Number
6. Color Eyes
7. Color Hair
8. Height
9. Weight
10. Hole to Accomodate Chain
11. Date of Birth
12. Grade/Rank
13. Component
14. Blood Type
15. Medical Information
16. Miscellaneous Data (coded)

Figure 2. Army Credit Card Legend: Front View.



1. Left Index Print
2. Photograph
3. Right Index Print
4. Signature
5. Issuing Authority

Figure 3. Army Credit Card Legend: Reverse Side.

Members who require administrative action must prepare, or assist in the preparation of, various forms that require their name, grade, service component, date of birth, identification card number, date identification card was issued and expires, color of eyes and hair, height, weight, organization to which assigned, facilities the bearer is permitted to enter, social security account number, blood type, and patronage restrictions. The service member or an administrative clerk is responsible for completing the numerous required forms to complete administrative requirements when processing routine requests for sick call, leave, personnel actions, pay entitlements, transportation, and other routine recurring administrative actions. The present procedure is very time-consuming because it usually requires the time of two people (the one requesting service and the administrative clerk with the expertise necessary to complete the required forms). Also, it permits an occasion for errors while the repetitive, or constant, information is being manually recorded.

If it is desired to maintain these data in a mechanized system, part of these same constant data must be key-punched and key-verified from the basic document. Much of the key-punch and key-verification effort is expended on the items that seldom, if ever, change, i.e., name, social

security account number, date of birth, etc. If these data are transcribed in error, a costly search procedure must be followed before mechanized records can be properly identified and updated.

Suggested procedure.--It is suggested that the recommended identification card be developed for each service member and that current entrance techniques for acquiring data be revised to accept data contained in the recommended identification card. Each service member would be given two cards upon entrance into the Army. One would be carried on his person in the customary manner and the other worn around his neck, replacing the current dog tag. As the member found it necessary to repair for various administrative requirements, he would need only to present his identification card.

An administrative clerk would capture all constant data by running the card through a small data transfer machine much like the one major oil companies currently use. Each form would be designed so that it could be completed with a special pencil that permits processing by optical character recognition equipment if, as in the case of JUMPS-Army, mechanized records were desired. Otherwise, the remainder of the form could be completed by ball point, ink,

pencil, or typewriter, whichever would meet local standards.

This simplified procedure would eliminate all errors that occur during routine transcription of data and would reduce processing time considerably. Additionally, the recommended identification card would also be the Army's credit card.

Bank Operations

The indicators of trouble discussed in Chapter II (pages 7-12) highlight financial problems the mobile service member encounters as he pursues his military career. These problems become acute when addressed to the lower enlisted grades and, even more so, those with large families. To assist all Army active duty personnel, the Army bank will be given the mission of furnishing them full service banking at a minimum cost.

In fulfillment of this mission, banking services that can be furnished without cost will be so furnished. In areas where interest charges are necessary to generate income for sustaining operating costs, minimum interest will be charged. In no case will service members be charged for check cashing privileges, credit card transactions, or use of other automatic withdrawal techniques.

The writer envisions that this banking system will

be essentially a 6-party relationship since, as shown in Figure 4, one bank, a local field finance office, the JUMPS-Army pay system, a sales activity, the Army member, and the commander will be involved.

The cycle starts when the member enters service and is issued a credit card. Simultaneously, a bank account is established for him at the Army bank. As the member progresses through basic and individual training, he incurs costs that are explicit in the salary system. To meet these costs, he simply uses the credit card. The receiving agency, a mess hall for example, forwards these charges daily to the Army bank, transmission being by AUTODIN (automatic digital network). During this same time frame the member accumulates daily increments of monthly pay which the JUMPS-Army facility also forwards to the Army bank. At the end of the month, a JUMPS-Army leave and earnings statement is prepared for each member. That statement will display all financial transactions which occurred during the accounting period. The data for printing these documents will then be forwarded via AUTODIN to the local field finance office, where the leave and earnings statements will be printed and distributed to the members. Any requests for loans, changes in pay status, or other financial arrangements will be funneled through the local finance office.

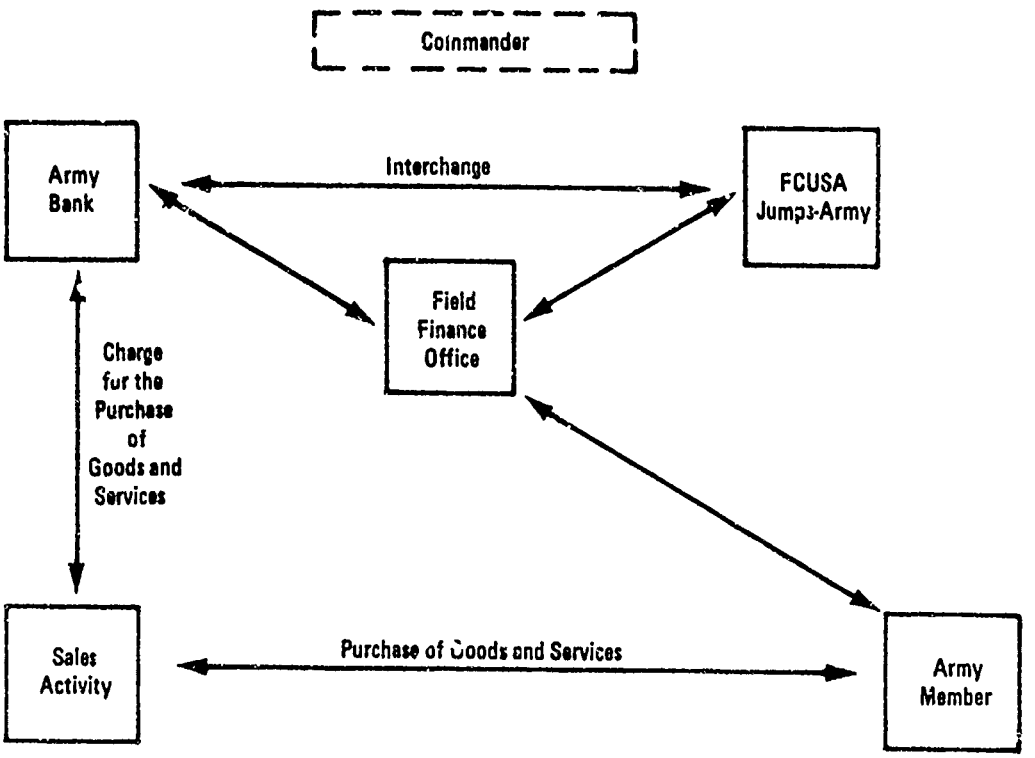


Figure 4. Army Banking Operations.

Because transportation is perhaps the largest individual expenditure most service members make and is also so vitally important to their mobility, the financing of an automobile is tracked through the model. When a member has entered into tentative agreement to buy, he goes to his local field finance office and completes an optical character recognition form to request financing. After obtaining command approval, pertinent data are immediately transceived to the Army bank, where the request is processed on the computer. Supporting computer programs compare the request with programmed loan criteria and either approve or disapprove the loan. In this illustration the loan is approved, JUMPS-Army computers are notified, and the master military pay file is updated to reflect the transaction and limit future monthly pay to the member. The Army bank then dispatches data that represents check payment for the automobile to the local finance office, which converts the raw data to a check that is dispatched to the automobile dealer. Each subsequent month, the Army bank automatically deducts the automobile payment from the member's account and credits his loan. These data are reflected on the member's monthly leave and earnings statement.

Although necessary control measures were not addressed in this example because of their complexity, it is

recognized that they are required to insure a high quality system. In this regard, the commander's role (see Figure 4, page 65) is paramount. He would be charged with the responsibility for enforcing various control measures through the command structure. Command supervision is essential to police those personnel who, regardless of the degree of control sophistication, might abuse any system.

Under the system proposed in this thesis the service member will always have a source of available funds to meet any situation. All of the financial plans addressed in Chapter III (pages 20-31) are workable under the Army bank concept.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Financial problems the military family faces, particularly the enlisted member, are caused primarily by the requirement to move and establish a financial position at each new location. This problem, which is compounded by low monetary pay scales established for the lower enlisted grades, becomes acute when the Army orders a member to a duty station that cannot accommodate his requirements for housing and other essentials. Some of the more significant areas that point out the need for the Army to take care of its own were highlighted in Chapter II. The problems identified may not seem dynamic to someone who has not faced them. Few Army officers have ever had to worry about financing an automobile at a reasonable rate, obtaining required insurance coverage at a reasonable rate, or obtaining a personal loan at this same reasonable rate. Even fewer Army officers find it difficult to establish credit or to cash a check when in a strange community.

These findings indicate that officer personnel, in

general, encounter little difficulty. When addressed to the enlisted men, however, they take on an entirely different complexion, particularly for those members in the lower pay grades who are married and have children.

The purpose of this paper was to develop a possible Army banking system with a view toward improving finance service to the Army member and his family. Since JUMPS-Army (Joint Uniform Military Pay System-Army) has proved that centralized military pay computation is possible and that computers can support such an effort, it is also technically possible to support an Army banking system.

Technically, an Army bank can be established in five steps beyond JUMPS-Army. The five steps are:

-- Adoption of a salary system,

-- Centralization of military pay administration,

-- Adoption of automated paydays,

-- Implementation of a bank credit card system, and

-- Establishment of an Army bank.

If implemented, this system will provide officer and enlisted Army families all necessary monetary support: cash, credit, essential reports, and family economic analyses.

Conclusions

It is now technically feasible to establish a

program, develop a master plan, and start compiling the detailed package for an Army bank. The research conducted for this thesis revealed that all money services which can be made available to military members through an Army bank are now either available or nearing development stage.

Reliance on the mails to move millions and millions of pieces of paper daily is no longer required, for data can now be moved more rapidly and accurately via digital data transmission techniques. The important consideration identified in this paper is that a complete Army bank will provide a solution to many money handling problems of military families. Insuring that both money and credit are readily available to the member of the Army and his dependents will greatly enhance service attractiveness.

Recommendations

It is recommended that the Army develop the proposed system on a test basis. It is also recommended that this model system and concept be used as a basis for future analysis and study of other alternatives in order to provide the best financial support to the Army member and his family.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

Books

"Banking--Interest Rates, Etc.," Public Law 80-597. United States Code Congressional and Administrative News. Vol. I: Laws. 89th Cong., 2d sess., 1966. Pp. 969-72.

"Consumer Credit Protection Act," Public Law 90-321. United States Code Congressional and Administrative News. Vol. I: Laws. 90th Cong., 2d sess., 1968. Pp. 176-201.

Dunbar, Charles F. The Theory and History of Banking. New York: G. P. Putnam's Sons, 1945.

Gentry, Dwight L., and Charles A. Taff. Elements of Business Enterprise: Financing the Enterprise. New York: Ronald Press Company, 1961.

Hart, Albert G. Defense Without Inflation. New York: Twentieth Century Fund, 1951.

Klein, John L. Money and the Economy. New York: Harcourt, Brace & World, Inc., 1970.

Krauss, Leonard I. Computer Based Information Systems. New York: American Management Association, 1970.

Prather, Charles L. Money and Banking. Homewood, Ill.: Richard D. Irwin, Inc., 1969.

Robertson, D. H. Money. Chicago: University of Chicago Press, 1962.

Articles and Periodicals

American Banker. January 1967 through January 1968.

"Association for the National Interchange of Bank Credit Cards Under Discussion." American Banker, 18 August 1966, pp. 2-6.

"Bank Credit Cards and Related Plans." New England Review, December 1966, p. 3.

Bergeron, Paul R. "History of Allotments and Deposits." Army Finance Journal, July-August 1971, pp. 8-9.

Buckmaster, Robert B. "Organization for Information Systems Management." Army Management Views, XIV, No. 1 (July 1969), 24-25.

Chicago Tribune. January 1967 through January 1968.

"Electronic Money." Forbes, 1 April 1967, pp. 42-46.

"First Phase A-OK, All Systems Go." Business Review, November 1965, pp. 10-13.

"JUMPS-Army, Have It Sent to the Bank." Army Finance Journal, July-August 1971, pp. 21-22.

"JUMPS-Army On-Site Check Printing at Fort Jackson, S. C." Army Finance Journal, November-December 1971, pp. 2-6.

"Money Goes Electronic in the 1970s." Business Week, 13 January 1968, p. 54.

"Security First National Bank of L. A. [Los Angeles] Will 'Go National' through License with Other Banks." American Banker, 25 May 1966, p. 14.

"Sees a New Computer Boom." Kansas City Times, 13 February 1972, p. 12.

Smulski, Francis F. "Touch-Tone Project." Progress in Information Systems, March 1967, p. 57.

Trabbold, Walter E. "A New Perspective on Banking Automation." Progress in Information Systems, March 1967, p. 17.

Wall Street Journal. January 1967 through February 1968.

Washington Post. January 1967 through January 1968.

Reports and Unpublished Material

Ad Hoc Committee. "First Quadrennial Review of Military Compensation" [Hubbell Report]. July 1968.

Allred, Raymond S. "A Service Center for Military Pay." Unpublished student staff study, U.S. Army Command and General Staff College, October 1971.

"Annual Report." Central Charge Service, Inc., 1969.

"Annual Report." World Bank International Development Association, 1969 and 1970.

Comptroller of the Army. "Joint Uniform Military Pay System-Army (JUMPS-Army), Command Briefing." Department of the Army, March 1971.

_____. "MPSCOA [Military Pay Service Center Overseas Area] Test Resume'." Department of the Army, September 1970.

Federal Reserve Bank of Kansas City. "Monthly Review." July-August 1969.

Federal Reserve System. "Bank Credit-Card and Check-Credit Plans." Board of Governors, July 1968.