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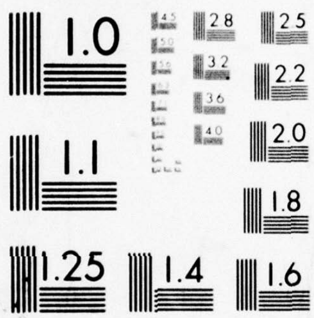

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DEFENSE SYSTEMS MANAGEMENT COLLEGE

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PROGRAM MANAGEMENT COURSE
INDIVIDUAL STUDY PROGRAM

FUNDS FLOW MANAGEMENT
FACTORS AND IMPACTS

STUDY PROJECT REPORT
PMC 76-2

Richard M Scofield
Major USAF

FORT BELVOIR, VIRGINIA 22060

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DEFENSE SYSTEMS MANAGEMENT COLLEGE

STUDY TITLE: FUNDS FLOW MANAGEMENT: FACTORS AND IMPACTS

STUDY PROJECT GOALS: To develop a teaching case that identifies and illustrates those factors, internal and external to a company, that can impact funds flow management in a "typical" government contractor.

STUDY REPORT ABSTRACT:

The purpose of this report is to develop a teaching case that would illustrate the complexity and criticality of proper funds flow management. The best way to do this is to take an actual company and look at those factors that contributed to a funds shortage. One such situation did exist and the actual circumstances have formed the basis for this project, only the company's identity has been changed.

This project presents the series of events and circumstances that actually contributed to a funds flow problem, an analysis of those factors and teaching notes that highlight the significant teaching points to be made about the case. The case illustrates to Program Managers, and their staffs, how management decisions, particularly those outside of their individual programs, can have sigificant impact on the successful completion of their programs.

SUBJECT DESCRIPTORS: Financial Management, Contract Management

NAME, RANK, SERVICE	CLASS	DATE
RICHARD M SCOFIELD, Major, USAF	PMC 76-2	November 1976

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FUNDS FLOW MANAGEMENT:
FACTORS AND IMPACTS

Study Project Report

Individual Study Program

Defense Systems Management College

Program Management Course

Class 76-2

by

Richard M Scofield
Major USAF

NOVEMBER 1976

Study Project Advisor
Dr. Ben C. Rush

EXECUTIVE SUMMARY

Purpose of the Study Project

The purpose of this study project is to develop a case study that illustrates the relationship between corporate funds flow management and its impact on Department of Defense system acquisition contracts. Progress payments by the government represent a substantial source of funds to DOD contractors and loss or exhaustion of these payments can cause a problem for the contractor. Because of this relationship it was felt that a case study illustrating what can happen when a contractor needs additional funds would benefit future Program Managers.

Scope of Study Project

This case is an actual case and this, in turn, lends reality to the entire study. The case situation evolves from a request by a contractor seeking unusual progress payments because of an inability to secure private financing. An analysis is performed to determine if the contractor has a funds flow problem, what has caused the problem and what the government's role should be responding to the request. Teaching notes are provided to highlight those aspects of the case that a Program Manager should be concerned with.

TABLE OF CONTENTS

SECTION I

INTRODUCTION

Purpose of the Study Project

The purpose of this study project is to develop a case study that illustrates the problem of managing the funds flow aspect of the financial management function of a corporation. The management of funds flow is important to the Program Manager because of the nature of government progress payments in the funding of contracts supporting government programs. Proper funds flow management is also essential to the individual firm because of the importance of maintaining adequate cash balances and meeting business obligations.

Definitions

The concept of "funds" and "funds flow" should be clarified for the purpose of establishing a common understanding throughout the report. The term "funds" has in the past had several different definitions. "Probably, the most common usage is to define funds as being equal to working capital (current assets less current liabilities)...However, funds are sometimes thought of as cash, current assets, or even total assets." (3;4-2)[1] Because of the different

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[1] This notation will be used throughout the report for sources of quotations and major references. The first number is the source listed in the bibliography. The second number is the page in the reference.

usage of the term "funds", the management of funds flow can take on different meanings and have various managerial implications.

While business managers are concerned with the management of cash and the term "funds" is often used synonymously with cash or money, a more accurate and complete definition of "funds" would be "the means of payment". (5:7) This broader definition of "funds" will also allow us to look at some additional aspects of this case that would not fall in either the working capital or cash definitions.

Scope of the Project

This project will take an actual instance involving an electronics firm that is both a prime and sub contractor on government contracts for all three services. This particular case offers a number of issues to illustrate those internal and external factors, as well as the results of management decisions, that influence funds flow. This project will address the subject of government progress payments, the circumstances that created the funds flow problem for the company, the techniques of performing funds flow analysis, and the options that the government has in assisting the contractor.

Limitations of the Report

This report does not contain all of the possible factors or circumstances that influence funds flow decisions. Nor does it attempt to illustrate a "school solution" to the analysis of contractor situations that result because of business operations. This report is designed only to illustrate the circumstances that can confront a Program Manager and some of the techniques that he can use in responding to financial programs. Each and every contractual relationship has it's own implications and should be addressed on an individual basis.

Organization of the Report

The basic report contains three sections: Section II - CASE MATERIALS, Section III - CASE ANALYSIS, and Section IV - TEACHING NOTES. Section II - CASE MATERIALS contains the information that would normally be given to students for analysis. This material contains the case circumstances, financial data, and a summary of some regulatory materials that students may not have been previously exposed to. Section III - CASE ANALYSIS contains a suggested solution to the questions raised in the basic case. The material covers the application of this Ratio Analysis, Sources and Uses Analysis Technique, Pro Forma Statement and qualitative factors that should be addressed in the students' analyses. Section IV - TEACHING NOTES contains the material that would assist an instructor in utilizing this case in a Financial Management course. In addition to the areas addressed in the previous two sections, this section offers topics that can be pursued in the classroom depending on class interests and discussions.

SECTION II

CASE MATERIALS

Introduction

This section contains the materials that depict the facts, circumstances and financial data that comprise the case materials. These materials provide sufficient data to acquaint the students with the various financial implications of dealing with contractors that can confront a Program Manager. This case is a true case and, while the name of the company and the financial data have all been changed, the basic facts and circumstances remain unchanged. Wherever possible, materials have been extracted from an official file in their entirety so that the student can (1) see the type of documents that will play a part in his management task and (2) have the opportunity to sort out those facts that are pertinent and those that are not.

All of the case materials are contained in this section to facilitate their removal and reproduction for class distribution. In order to maintain realism in the case materials, footnotes have been omitted. However, in those areas where data was extracted from a publication, the material will reference the source document.

MARLTON CORPORATION

As a recent graduate of Defense Systems Management School, Class 74-2, you have assumed your responsibilities as Director of Program Control, Product Improvement Programs System Program Office, Aeronautical Systems Division, Wright-Patterson Air Force Base, Ohio. You have been on the job for a couple of weeks now and things have been humming along just fine. One of the contracts that the PIP SPO has is with the Marlton Corporation, to modify and upgrade the C-130 aircraft with a Heads-Up Display System.

While attending the weekly Director's meeting, the boss gave you a copy of a letter that Procurement had received from Marlton Corporation requesting an increase in their progress payment rate from 80% to 95%. The PIP Office was not the only SPO to have a contract with Marlton. This was the first request that had been received and Procurement had decided to use this particular request as a test case. At the time he gave you the letter, the boss asked you to formulate a recommendation on Marlton's request, keeping in mind that General Phillips, the Commander of Air Force Systems Command, or higher would probably be the ultimate decision maker. This certainly would broaden the scope of consideration that would have to go into any recommendation. The boss felt that the analysis would have to consider whether Marlton does, in fact, have a funds flow problem, and if they do, what caused the problem and what should the Government's role be in working the solution to the problem. He also mentioned that Marlton had recently changed some of its accounting practices and he was interested in knowing if this had any impact on Marlton's current situation.

At the completion of the Director's meeting, you had asked the bright young Major who ran the Program Evaluation Division for some background information on Marlton's financial condition, the status of the current contract and those Armed Services Procurement Regulation clauses that deal with Progress Payments. By the end of the week, he had put together a package that summarized the financial data for Marlton over the past years, as well as their debt retirement schedule, the status of the referenced contract and the appropriate ASPR clauses. Since it was a three day week-end and you wanted to practice what you had learned in VISM, you volunteered to pull the Saturday duty yourself and give the rest of the troops an opportunity to relax.

So here you have your first big "opportunity to excell", asking yourself such questions as: Does Marlton have a funds flow problem? What caused the problem? What should the SPO recommend that Air Force do about it?

January 15, 1975
Serial 463-75-AF0012

Headquarters
Aeronautical Systems Division
Air Force Systems Command
Wright-Patterson Air Force Base
Ohio 45433

Attention: Colonel Orlando A Ball
Deputy for Procurement and Production

Via: Defense Contract Administration Services District
605 Stewart Avenue, Garden City, New York 11530
Attention: DCQP-DCGN, Mr. Jerome Silverstein
Administrative Contracting Officer

Subject: Request for Increased Progress Payments
(ASPR E-505) on Contract F25654-70-C-0717HUDS
Equipment for C-130 Aircraft

S I R S :

Marlton Corporation, having determined that it is qualified to receive unusual progress payments under the provisions of Appendix E to the Armed Services Procurement Regulations (ASPR), hereby, requests that the progress payment percentage (now 80% in accordance with ASPR E-511.2) be increased to 95% in accordance with Part 5 of ASPR Appendix E, specifically E-505, for the duration of the above-mentioned contract between Aeronautical Systems Division and Marlton Corporation. The purpose of the contract is to supply the Air Force with Heads-Up Display Systems (HUDS) which provide essential electro-optical display capability and improved radar performance for the C-130 Aircraft.

Appendix E of ASPR provides for higher progress payment percentages as a method of providing contractor financing "as a useful working tool that may be used to the benefit of the Government, for aiding procurement by expediting performance of defense contracts and subcontracts" (ASPR E-205). Financing such as requested hereby, is to be provided "only if, and to the extent, reasonably required for prompt and efficient performance of Government and subcontracts" (ASPR E-207). Administration is to be such as " to aid, not impede, essential procurement" and to "avoid risk of monetary loss to the Government" and progress payments "will not be used to finance fixed asset acquisitions for contractor ownership" or where there is available "private financing on reasonable terms" (ASPR E-206, 208, 209).

The subject contract, which is described further below represents an essential Air Force procurement and it will be shown that Marlton meets all requirements and qualifies for the authorization of unusual progress payments under the applicable regulations.

1. Brief History of Marlton Financing

A. Beginning in 1966 Marlton had a line of credit from Franklin National Bank, most recently totaling $6 million, under a Revolving Loan Agreement secured basically by assignment of accounts receivable to that bank. Consistant with Marlton's position as a well-established, financially reliable New York Stock Exchange Corporation, over the period of that loan to June 30, 1974, interest was payable at rates varying from three-quarters of one percent to one percent over prime rates without any compensation balance requirement.

It should be noted that this loan arrangment was originally entered into in 1966 when Marlton Corporation had outstanding against it a $26 million judgment in favor of Zeus Radio Corporation, in connection with litigation which has since been fully settled. Under that circumstance Marlton's credit was still judged good enough to justify initiating this revolving loan at an interest rate of three-quarters of one percent above the prime rate.

B. At the end of May 1974, during final negotiation for what was considered to be a routine one-year extension of the Revolving Loan Agreement to follow the prior one-year extension expiring June 30, 1974 in the pattern of precedent established since 1966, the now well-publicized financial difficulties of Franklin National Bank began to be disclosed in the press and the Bank advised that it's cash needs required that it not extend the loan for the customary additional year, but that it was forced to request that Marlton obtain substitute financing from some other source. Officers of the Bank stated that it was the Bank's financial condition, and not any problem with Marlton's credit position that led to the Bank's decision not to renew the loan.

Recognizing the difficulty of obtaining financing at that time, especially on such short notice, the Franklin National Bank at the end of June 1974, agreed to extend the loan in its existing form for one month at a time, dependent on the Bank's continuing condition and increased the interest rate first to two percent and then to three percent over the prime rate and imposed a 10% compensating balance requirement.

C. As is well-known, due to world and national conditions and intentional actions by the Federal Government to restrict and control the supply of money and force high interest rates, the period from June 1974 to present has been one of the most difficult periods in the recent history of the United States in which to establish new sources of financing for private corporate purposes.

Marlton was thrown into this difficult money market by the Franklin National Bank with an additional, substantially unique handicap. Marlton soon discovered that as a customer of Franklin National bank seeking financing from other banks it was faced with the handicap that other banks were initially reluctant to take any action which might be interpreted as attempting to steal customers from Franklin while it was in financial trouble.

2. Current Status of Franklin Loan Replacement

As a result of the above circumstances, Marlton has to date not entered into a satisfactory financing arrangement in replacement of the Franklin loan. The European-American Bank and Trust Company, as a successor with the Federal Deposit Insurance Corporation to an interest in assets of the bankrupt Franklin National Bank, on October 31, 1974, granted an additional one-month extension of the old Franklin Revolving Loan to November 30, 1974, continuing the interest rate at 3% over the prime rate and continuing the 20% compensating balance requirement. This is equivalent to a current effective interest rate for this loan of over 18.5% per year based on a prime rate of 11.5%, which is drastically higher than the rate of 5.5% which Marlton was paying to Franklin at the inception of the MUDS program.

Thus, as a result of circumstances clearly beyond its' control (specifically including national and international financial conditions, monetary policy and controls implemented by agencies of the United States Government, and financial difficulties and ultimate bankruptcy of Franklin National Bank) Marlton has been forced into a difficult financing situation and burdened by significantly increased costs of borrowing to support the performance of Department of Defense contracts and subcontracts.

In addition, Marlton has found that in today's money market, banks appear to be universally of the opinion that accounts receivable under Department of Defense contracts and subcontracts are very poor collateral for loans and this is compounding Marlton's problems in obtaining suitable financing.

3. The Subject HUDS Contract

In April 1970, Marlton Corporation was awarded the subject fixed price contract to supply equipment that would provide essential electro-optical display capability and improved radar performance for the C-130 Aircraft. Marlton Corporation's bid of approximately $5,410,200, less than 50% than that of the only other qualified bidder in the second step of a two step IFB, reflected Marlton Corporation's plan of meeting the contract's design requirements by performing minor modifications to existant design. This plan could not be implemented because of several causes beyond Marlton's control including what Marlton contends is a defective contract specification and schedule which necessitated an expensive and time consuming research and development program of enormous magnitude that advanced the state-of-the-arts, including the reduction to practice of several inventions of which the Air Force has been given formal notice. Marlton further contends that this defective contract specification and schedule resulted in Marlton's costs more than doubling the present contract value. Marlton has presently delivered 201 of the 385 required production equipment and plans to complete deliveries in 1975. For a more detailed presentation of the above, see Marlton's letter to ASD, Serial 463-74-AF1274, dated November 15, 1974.

4. Inflation and Cost of Capital

While current cost increases and inflationary trends are so well-known as to require no substantiation, it may be noted that within the last twelve months and on the basis of U.S. Bureau of Labor Statistics Reports, the industrial commodities index has increased by 27.9% and the hourly earnings index has increased by 12.1%.

Marlton's Government Products Division business consists mostly of long-term fixed price type contracts. Since the national economy as noted above has been subject to an unprecedented and unpredictable rate of increase in both material and labor, the effect on Marlton's capital employed, a major part of which is accounted by inventory net of progress payments, has been to maintain the requirements for such capital at very high lebels. The cash to carry this large amount of capital employed is borrowed from commercial banks and the cost of this additional borrowing, which is not only because of the additional debt required to finance the existing business, but also because of the increase in interest rates to historically high levels.

These inflationary increases were not and could not have been anticipated by the Government or Marlton Corporation when subject Contract was awarded in April 1970.

5. Entitlement to Requested Progress Payment Percentage Increase

As has been detailed above, Marlton has been forced into a most difficult financing market by failure of the Franklin National Bank and subjected to drastically increased costs and a historically difficult money market at a time when cash utilization by the HUDS contract has increased beyond any predictable levels.

It should be noted that the provisions of ASPR Appendix E, as referred to above, difinitely do not require a contractor to have an absolute requirement for additional Government financing in order to qualify for such financing. Instead, these provisions refer to such financing being available where "reasonably required" and refer to the absence of private financing on "reasonable terms."

Marlton, as a result of the bank failure and increased cash demands under the HUDS contract, is being adversely affected by unreasonable financing requirements and clearly unreasonable interest terms.

It should be noted further that granting to Marlton the requested increase in progress payment percentage will provide significant immediate relief to its current cash needs and this can be expected to aid Marlton in its current activities directed toward providing adequate continuing private financing. Thus, the requested action is entirely consistent with the Government's preference that its contractors and subcontractors secure private financing.

Marlton clearly qualifies for the increase in progress payment percentage to 95% according to both the overall intent and the letter of the provisions of ASPR Appendix E. Marlton hereby requests such increase and further requests that timely action as required by Paragraph E-202 of Appendix E be taken to implement such increased payments as soon as possible.

This letter is being submitted via DCASD, Garden City in accordance with a telephone conversation on January 8, 1974 between Col. Orlando a Ball of ASD and Mr. Robert Gothie of Marlton. It is understood that the Administrative Contracting Officer will forward this letter to the addressee.

Please refer any questions with regard to the foregoing to the undersigned at (201) 612-8000, Extension 822.

Very truly yours,
Marlton Corporation

by: RG Gothie
Robert G. Gothie
Contracts Manager

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RGG:ces

MARLTON CORPORATION

Comparative Balance Sheets
(thousands of dollars)

	1974	1973	1972
CURRENT ASSETS			
Cash	402	460	257
Marketable Securties	229	392	246
Accounts Receivable	12527	11428	10424
Government Products Inventory	6341	7567	8454
Industrial Products Inventory	7852	8519	4274
Prepaid Expenses & Other Current Assets	643	506	682
Marketable Securities to ZEUS (Note 1)	---	---	1825
TOTAL CURRENT ASSETS	27994	28872	26162
INCOME PRODUCING RENTAL EQUIPMENT (At cost-Accumulated Depreciation)	4717	2375	1754
COMPUTER PERIPHERAL EQUIPMENT (At cost)	1148	992	673
PROPERTY, PLANT & EQUIPMENT (At cost-Accumulated Depreciation)	8779	9483	9284
DEFERRED INCOME TAXES	559	768	819
OTHER ASSETS (Note 2)	565	1106	947
TOTAL ASSETS	43762	43596	39639
CURRENT LIABILITIES			
Notes Payable	6096	6287	5334
Current Long-Term Debt	1447	490	229
Accounts Payable	8845	6752	6544
Accrued Liabilities	4377	2325	2719
Liability to ZEUS (Note 1)	---	---	1825
TOTAL CURRENT LIABILITIES	20765	15854	16651
LONG-TERM LIABILITIES			
Liability to ZEUS (Note 1)	---	---	416
Long-Term Debt	5534	5799	1805
DEFERRED COMPENSATION	557	612	681
DEFERRED REVENUE (Note 3)	0	2627	2619
STOCKHOLDER'S EQUITY			
Common Stock	10681	10681	10681
Retained Earnings	6233	8031	6794
Treasury Stock	(8)	(8)	(8)
TOTAL LIABILITIES & EQUITY	43762	43596	39639

Notes for Balance Sheet

1. As a result of litigation in 1971, Marlton incurred a legal obligation in the amount of $3,500,000 of which $2,241,100 was outstanding on January 1, 1973. The debt was satisfied during 1973.
2. In connection with an October 1974 Statement of the Financial Accounting Standards Board, the company elected to adopt the expensing, as incurred, of computer software costs and preproduction costs with respect to computer peripheral equipments, in lieu of capitalizing them. The effect of the change in 1974 was to include an expense of $340,000 or 17¢ per share. In addition, 1974 income has been charged with $518,200 or approximately 26¢ per share for the cumulative effect to December 31, 1973, of making this accounting change.
3. Rental equipment owned by Marlton on December 31, 1974, consists of a portfolio of computer peripheal equipment rented directly to customers. Prior to December 31, 1973, the equipment was sold to an "independent leasing company". Marlton was obligated under a warranty agreement to support the equipments. The company reacquired the equipments during 1974, and the deferred revenue item was eliminated.

MARLTON CORPORATION

Consolidated Statement of Operations and Retained Earnings
(thousands of dollars)

	1974	1973	1972
REVENUES			
Sales	$68966	$57624	$45705
Rentals	2767	224	158
Patent Income	1878	2640	3201
	73611	60488	49064
COST AND EXPENSES			
Cost of Sales	61206	48904	40847
Industrial Products-Engineering, Maintenance & Sellng Expense	7239	5389	3419
Patent Expense	623	430	480
General & Administrative Expense	4214	3577	3230
Interest Expense	1424	831	201
INCOME BEFORE TAXES	(1095)	1357	887
INCOME TAXES (Note 1)	185	448	367
INCOME (LOSS) BEFORE EXTRAORDINARY CREDIT & CUMULATIVE EFFECT OF ACCOUNTING CHANGE	(1280)	909	520
TAX LOSS CARRYOVERS	---	328	1577
CUMULATIVE EFFECT OF ACCOUNTING CHANGE (Note 2)	(512)	---	---
NET INCOME (LOSS)	(1798)	1237	3849
RETAINED EARNINGS-BEGINNING OF YEAR	8031	6794	2945
RETAINED EARNINGS-END OF YEAR	6233	8031	6794
PER SHARE OF COMMON STOCK			
Income (Loss) before extraordinary credit & accounting change	(.64)	.45	.26
Tax Loss Carryovers	---	.16	.79
Cumulative Effect of Accounting Change	(.26)	---	---
Gain on Sale of Property	---	---	.87
Net Income (Loss)	(.90)	.61	1.92

Notes on Income Statement

1. In 1974, income tax expense amounted to $185,200. This represents deferred taxes with respect to income recognized for financial reporting purposes in 1974.

2. In connection with an October 1974 Statement of the Financial Accounting Standards Board, the company elected to adopt the expensing, as incurred, of computer software costs and preproduction costs with respect to computer peripheral equipments, in lieu of capitalizing them. The effect of the change in 1974 was to include an expense of $340,000 or 17¢ per share. In addition, 1974 income has been charged with $518,200 or approximately 26¢ per share for the cumulative effect to December 31, 1973, of making this accounting change.

MARLTON CORPORATION
SALES (Pre-Tax Profits)
(millions of dollars)

	1974 Actual	1975	1976	1977
Government Products Division	$44.8	$42.0(1.25)	$41.0(1.82)	$42.5(1.90)
Industrial Products Division and Rental Income	26.9	22.0(-1.0)	27.0(1.20)	32.5(4.0)
Patent Income	1.9	0.7(0.28)	0.5(0.25)	0.5(0.25)
TOTAL SALES(Pre-Tax Profit)	73.6	64.7(0.46)	68.5(3.27)	75.5(6.15)

MARLTON CORPORATION

DEBT RETIREMENT SCHEDULE

1) The existing $6.0 million loan (Revolving Loan Agreement) between Marlton and FDIC will be repaid as follows:

May 1975	675,000
October 1975	375,000
March 1976	575,000
September 1976	575,000
March 1977	950,000
September 1977	950,000
March 1978	950,000
September 1978	950,000

2) The balance of Marlton's existing debt currently amounts to $7.0 million. After making the payments required by the terms of the debt, the outstanding balances at the end of each quarter in 1975 and 1976 and at the end of 1977, 1978 and 1979 will be as follows:

At March 31, 1975	$6.6 million
June 30, 1975	6.2
September 30, 1975	5.9
December 31, 1975	5.6
March 31, 1976	5.3
June 30, 1976	5.0
September 30, 1976	4.8
December 31, 1976	4.6
December 31, 1977	4.2
December 31, 1978	3.7
December 31, 1979	3.5

3) Marlton plans to finance the growth of its own rental portfolio of computer peripheral equipment by using unexpired 12-month lease "paper" as collateral for a "Rental Portfolio

Loan". The estimated value of such collateral and the portions used and unused at the end of each quarter in 1975 and 1976 and at the end of 1977, 1978 and 1979 are as follows:

Date	Unexpired 12 month Lease Paper Discounted to 80%	Rental Portfolio Loan Outstanding	Unused Collateral
3/31/75	1.5	—	1.5
6/30/75	1.5	1.2	.3
9/30/75	1.5	1.2	.3
12/31/75	1.7	1.4	.4
3/31/76	1.8	1.5	.3
6/30/76	1.8	1.5	.3
9/30/76	1.7	1.5	.2
12/31/76	1.8	1.5	.3
12/31/77	1.9	1.9	—
12/31/78	2.1	1.5	.6
12/31/79	2.2	—	2.2

Fact Sheet

Contract History and Status

1. CONTRACT NUMBER: F25654-70-C-0717
Marlton Corp., Hoboken, New Jersey

2. TYPE CONTRACT: Firm-Fixed Price contract awarded by the two-step advertised procurement procedures to Marlton Corporation.

3. COMMODITY: 417 Heads-Up Display Systems (HUDS), C-130 Class II MOD, Spare LRU's and AGE; this quantity was subsequently reduced to 385 SCDS's.

4. CONTRACT PRICE: $8,424,811 - This amount includes spare parts which have been provisioned by Warner-Robbins ALC since the initial contract award.

5. DELIVERY SCHEDULE: The original period of performance based on contract award was September 1971 through September 1973, with a total of 417 SCDS's. In September 1972, the contract schedule was revised because the contractor failed to successfully pass the reliability demonstration test. The new delivery schedule called for shipments to begin January 1973 and be completed by June 1974. In June 1974, the contract schedule was again amended to establish a new completion date of September 1975. Marlton requested this change to cope with problems in reliability sample testing which indicated that additional burn-in was necessary. As of 1 June, 1974, Marlton had shipped

159 HUDS's. Current Assessment - September, 1975, completion date will not be met. Preliminary estimates are for a six to nine month slip. Marlton has shipped 239 systems as of this date.

6. COMMENTS: Marlton reported as of 27 December, 1974, that they have incurred $15,099,804 of cost, with a forecast estimate of $486,499 to complete the contract performance. The ACO is utilizing ASPR E-524.5 Fair Value of Undelivered Work to compute Progress payments. The 80% total cost under the progress payment clause presently equates to a maximum payable of $6,739,849 of which the contractor has received $6,293,250 to date. The balance of $446,599 is the maximum amount Marlton is eligible to receive under the present Progress Payment clause.

Staff Summary Sheet

1. Reference Marlton Corporation's letter 463-75-AF0012 of 15 January, 1975, Request for Increased Progress Payments; the following information is a summary of the cited Armed Services Procurement Regulation (ASPR) clauses.

2. ASPR E-511.2 and E-505 deal with the subject of progress payments. E-511.2 establishes the standard percentage for non-small business firms at 80% and this rate is to be used on all contracts regardless of method of award. E-505 defines Unusual Progress Payment as one that is based on costs. It also emphasizes that requests for unusual progress payments must be fully documented by the contractor with respect to need and, in order to maintain uniformity within Departments, must be approved only under exceptional circumstances by the Head of a Procuring Activity or a general officer designated for that purpose.

3. ASPR E-202,205-209 deal with Contract Financing. The term "financing", as applied in the ASPR, covers "Government guaranteed loans, advance payments, and progress payments necessary for both performance and termination purposes, to the extent authorized by law." The ASPR recognizes the importance of providing funds for payment of expenses in the performance of Defense contracts. E-207 states that funds should be provided "only if, to the extent, reasonably required for prompt and efficient performance of Government contracts and subcontracts." However, E-206 states the financing "must

support procurement and should be designed to aid, not impede, essential procurement, but should be so administered as to avoid the risk of monetary loss to the Government to the extent compatible with aiding essential procurement." At the same time, E-208 emphasizes that Government financing will not be used for facility expansion or fixed asset acquisitions for Contractor ownership. E-209 lays out the order of preference in determining the form of financing to be made available to suppliers. With valid exceptions in specific cases, the order should be (1) private financing on reasonable terms, (2) customary progress payments, (3) guaranteed loans, (4) unusual progress payments and (5) advance payments. E-202 simply states that decisions and contractual actions should be implemented in a timely fashion.

4. One additional ASPR paragraph, E-524.5, referenced in the Contract History and Fact Sheet, addresses the factors that should be considered for establishing the amount of unliquidated progress payments in relation to the fair value of the work accomplished on the undelivered portion of the contract. Factors to be considered include degree of completion of contract performance, the quality and amount of work performed on the undelivered portion of the contract, the amount of work remaining to be done and the estimated costs of completion of performance, and the amount remaining unpaid under the contract.

SECTION III

CASE ANALYSIS

Introduction

This section will provide an example of the analysis that could be performed in the making of the decision to grant Marlton Corporation's request for the increased progress payments. The section will be limited to the financial techniques, and the appropriate results, that the student would be expected to utilize in working the case. A discussion of the various teaching points to be made and a discussion of suggested topics in connection with the analysis are contained in the Teaching Notes section of this report. Basic to any funds flow analysis is an analysis of why the company requires additional funds and how it is currently managing its' funds, or rather, those attributes of the firm currently expressed in dollars in the firms' accounting records. Ratio Analysis, Sources and Uses Analysis, and Per Cent of Sales Forecasts are three analytical techniques that provide insight in answering these fundamental questions.

Ratio Analysis

Table 3-1 contains the results of a ratio analysis performed on the Marlton Corporation utilizing the ratios contained in Essentials of Managerial Finance, (3rd edition), Chapter 3, table 3 - 4.

Table III-1
Summary of Financial Ratio Analysis
Marlton Corp.

Ratio	1974	1973	1972
Current	1.35	1.82	1.57
Quick	.66	.81	.70
Debt to Total Assets	.60	.50	.47
Times Interest Earned	.23	2.63	5.41
Inventory Turnover	5.0	3.6	3.6
Average Collection Period	65 days	71 days	82 days
Fixed Asset Turnover	5.03	4.71	4.19
Total Asset Turnover	1.68	1.39	1.24
Profit Margin on Sales	-1.8%	1.5%	1.0%
Return on Total Assets	-2.9%	2.1%	1.3%
Return on Net Worth	-7.9%	4.3%	4.4%

The key results that would be of interest to the decision maker in this case are:

a) The Current and Quick Ratios are both low and deteriorating. This could be the result of excessive current liabilities or inadequate current assets.

b) Debt as a percentage of total assets has grown significantly over the past three years. However, the nature of the debt, short term or long term is still unknown.

c) Times Interest Earned has decreased significantly. This could be the result of lower profits or higher interest charges.

d) Fixed Asset Turnover and Total Asset Turnover are favorable and indicate that the company still has a viable business base in terms of sales.

e) Profit Margin is negative in the current year and was low in the previous two years. Return on Total Assets is low while Return on Net Worth exhibits wider swings either side of the zero profit or break even point.

Combining the results of the above ratio analysis, one can conclude that debt has become a problem in this company. The fact Current Assets have remained somewhat constant while the ratio is falling points to the Current Liabilities as the driver. This is affirmed with a rising Debt to Total Asset ratio and a falling Times Interest Earned ratio. Additional proof is evidenced in the larger swings of the Return on Net Worth Ratio, an attribute of the highly leveraged firm that is demonstrated in break-even analysis.

This analysis confirms the assertions made in Marlton Corporation's letter and verifies that they probably do have a need for additional funds. The question now becomes: Why are they incurring the additional debt?

Sources and Uses Analysis

Table III-2 contains the results of a "rough and ready" Sources and Uses of Funds Analysis on the Marlton Corporation.

	YEAR		DOLLARS		PERCENT	
	1973	1974	Sources	Uses	Sources	Uses
CURRENT ASSETS						
Cash	460	402	58		1	
Marketable Securities	392	229	163		2	
Accounts Receivable	11428	12527		1101		12
Government Products Inventory	7567	6341	1226		14	
Industrial Products Inventory	8519	7852	667		8	
Other Current Assets	506	642		136		2
INCOME PRODUCING RENTAL EQUIPMENT	2367	4716		2341		27
COMPUTER PERIPHERAL EQUIPMENT	992	1148		156		2
PROPERTY, PLANT & EQUIPMENT	9483	8779	704		8	
DEFERRED TAXES	768	559	209		2	
OTHER ASSETS	1106	565	541		6	
TOTAL ASSETS	43596	43762				
CURRENT LIABILITIES						
Notes Payable	6287	6096		190		2
Current Long-Term Debt	490	1447	957		11	
Accounts Payable	6752	8845	2093		24	
Accrued Liabilities	2325	4377	2052		24	
LONG-TERM DEBT	5799	5534		265		3
DEFERRED COMPENSATION	612	557		55		1
DEFERRED REVENUE	2627	0		2627		30
COMMON STOCK	10681	10681				
RETAINED EARNINGS	8031	6233		1798		21
TREASURY STOCK	(8)	(8)				
TOTAL LIABILITIES	43596	43762	$8670	$8669	100%	100%

TABLE III-2
MARLTON CORPORATION
Comparative Balance Sheets and Sources and Uses of Funds
(thousands of dollars)

The purpose of this analysis is to determine how the company has used its funds in the past and what the sources of funds have been prior to the current request.

The analysis shows that the big user of funds (30%) between 1973 and 1974 was the loss of Deferred Revenues. At the same time, the increase in Income Producing Rental Equipment was a large (27%) user of funds. These two uses of funds are tied together and, in essence, represent a change in marketing strategy. The Reduction in Retained Earnings is not really a use of funds but rather becomes the resultant balancing figure of all the other sources and uses.

The analysis also shows that the big sources of funds is Accounts Payable (24%) and Accrued Liabilities (24%). Both of these are in the debt figure that we used in the Ratio Analysis and, therefore, contribute to the unfavorable debt position. Decreases in the Government Products and Industrial Products Inventories also provided sources of funds, with the Government portion providing almost 60% more than the Industrials. The decrease in Property, Plant and Equipment, almost all through depreciation, did provide 8% of the funds required in 1974. The growth in the Current Long Term Debt obligations accounted for 11% of required funds and reinforces our ratio analysis finding concerning the growth in debt.

Based on this analysis, one can conclude that Marlton has added a new product to its' portfolio, Rental Equipment, and is financing these long term assets with short term obligations: Accounts Payable, Accrued Liabilities, and Current Long Term Debt obligations. This is not a sound business philosophy, but Marlton has explained the difficulty in obtaining long term financing in their letter, so there appears to be little choice for the time being. However, it does now appear that Marlton needs the increased Progress Payments for uses other than the applicable contract.

Impact of Rental Equipment Acquisition

Before jumping to the conclusion that Marlton needs the Government funds for commercial products, one could assess the change in the current situation by doing a Ratio Analysis and Sources and Uses utilizing a Pro Forma Balance Sheet and Income Statement based on the assumption that Marlton had continued to sell their equipment to the independent leasing firm as they had in the past. While a complete analysis would be more conclusive, it is not required. Examination and discussion of the current accounting documents and the corresponding analysis can illustrate the effect of continuing as in the past. A gradual growth in Income Producing Rental Equipment along with a constant or growing level of Sales in Rental Equipment would have the dual impact of reducing the immediate uses of funds and at the same time produce immediate sources of funds through profits on sales. A disadvantage of renting equipment is that one does not realize the profit until later, after the costs of the equipment have been recovered. Without working it out in great detail, one can see that a reduction of only $1.28 million prior to extraordinary impacts in uses of funds would have restored Marlton to the break-even point. The total use of funds associated with the change in the Rental Equipment marketing strategy was $1.7 million allowing for a $ .6 million normal growth in the Rental Equipment account. At the same time, Marlton would not have required $2.6 million to liquidate the Deferred Revenue account in conjunction with buying back the Rental Equipment. Income before taxes would have been approximately $3.0 million, other factors being equal, if Marlton had continued selling the equipment to the independent leasing firm.

Pro Forma Statement

Pro Forma Balance Sheets provide a projected view of what the company's financial position will be at some point in time and provide an indication of the source of funds, internal or external, that will be required in the next accounting period. This is useful in this case because it provides some insight into whether the current funds flow problem is a short term or long term situation.

Table III-3 shows a Pro Forma Balance Sheet based on the Per Cent of Sales Forecast technique and the debt retirement schedule that Marlton has projected. In the case of Government Products Inventory, Industrial Products Inventory and Income Producing Rental Equipment, the percentages shown with a * are against sales of those particular items. The

TABLE III-3
MARLTON CORPORATION
Pro Forma Balance Sheet
(thousands of dollars)

	1974 Per Cent of Sales	1975 Pro Forma
CURRENT ASSETS		
Cash	0.5	324
Marketable Securties	0.25	162
Accounts Receivable	17.0	11000
Government Products Inventory	14.0*	5880
Industrial Products Inventory	32.0*	5440
Prepaid Expenses & Other Current Assets	0.75	485
TOTAL CURRENT ASSETS		23291
INCOME PRODUCING RENTAL EQUIPMENT (At cost-Accumulated Depreciation)	59.0*	8470
COMPUTER PERIPHERAL EQUIPMENT (At cost)	2.0	1294
PROPERTY, PLANT & EQUIPMENT (At cost-Accumulated Depreciation)	12.0	7764
DEFERRED INCOME TAXES		500
OTHER ASSETS		500
TOTAL ASSETS		41819
CURRENT LIABILITIES		
Notes Payable	8.0	5600
Current Long-Term Debt		2450
Accounts Payable	12.0	7764
Accrued Liabilities	6.0	3882
TOTAL CURRENT LIABILITIES		19696
LONG-TERM LIABILITIES		
Long-Term Debt		6350
DEFERRED COMPENSATION		500
DEFERRED REVENUE		0
STOCKHOLDER'S EQUITY		
Common Stock		10681
Retained Earnings		4600
Treasury Stock		(8)
TOTAL LIABILITIES & EQUITY		41819

Notes Payable, Current Long-Term Debt and Long-Term Debt are projections based on the Debt Retirement schedules with the Rental Portfolio Loan being folded into Long-Term Debt.

An analysis of the 1975 projection on Table III-3 indicates a net loss of $1.633 million in 1975. This is significantly different from the Sales and Profit forecast provided by Marlton for 1975. The question of reconciliation is difficult without additional detailed data, but it is safe to say at this point that Marlton is either overly optimistic on sales and profits or they are going to have to make some radical changes in the way they do business in 1975. The fact that they plan to increase debt through the "portfolio Loan" is a further indication that they have a funds flow problem and coupled with the further decrease in Retained Earnings in 1975 indicates that it is not just a short-term situation.

Impact of Accounting Change

An analysis of the 1974 Consolidated Statement of Operations and Retained Earnings provides the necessary data to evaluate the impact of the change in the method of accounting for computer software and preproduction costs in the manufacture of computer peripheral equipments. Marlton had to absorb an additional $518,000 in current period expenses that further contributed to the funds problem. While this transaction represents a one-time adjustment and it has contributed to the current situation, the continued charging of these expenses in the current period, instead of depreciating them, could continue to hurt profits in each succeeding year, thereby prolonging Marlton's recovery. The benefits associated with these costs will probably be realized over the long run, but will probably not help the current situation.

Analysis Conclusion

Based on the Ratio Analysis, the Sources and Uses Analysis, and the Per Cent of Sales Forecast Balance Sheet it should be concluded that Marlton Corporation does have a short-term funds flow problem of approximately $2 -$3 million. Their rapid increase in Long Term Debt in 1973 and the additional increase in Total Debt through the growth in the Current Liabilities have created a severe requirement for funds to meet maturing obligations. This is compounded by the delaying of revenues through the change in the rental equipment marketing strategy and the change in accounting practices. On the basis of the above analysis, the conclusion is that Marlton does have a funds flow problem.

The question of what has caused the problem then centers around the two changes mentioned above. Marlton is definitely taking steps to improve their commercial position over the long run. They have exhausted their long term sources of capital, at least for the present and have turned to using short-term sources. This is not an acceptable financial management practice, but Marlton appears to have little choice. The request for unusual progress payments is just one step in this short-term management activity.

The question then becomes whether the Government should finance them over the short term so they can improve their commercial position. There are numerous considerations here, and many will come out in class discussion, but the key point is that Marlton has considerable Government backlog and default on Marlton's part could have serious impact to several major defense programs. Marlton has put considerable sums of their own money into Government contracts and has always shown a positive attitude toward completing contracts in spite of their losses. The increased payment rate is really an acceleration of unliquidated obligations and in no way increases the Government's liability.

On the other hand, this case will be a precedent and approval could have major impact on numerous programs throughout DOD. All companies operating in this same time period were subjected to the same economic conditions and to approve this request could provide basis for payment to many companies. The increase in progress payment rate would have two major impacts within DOD: (1) It would put a large demand on immediate program funding requirements and (2) it would put DOD essentially in the position of fully funding every program.

Based on the above analyses and the potential precedent setting factor, the recommendation should be to disapprove the request for unusual progress payments. Consideration could be given to Marlton's claim on a defective specification and relief could be provided without setting any harmful precedents.

Comment

The actual case was resolved in this manner. The decision maker in the final instance was the Secretary of Defense and he directed that the progress payment rate should not be increased. He further directed that the Air Force and the contractor settle the issue of a deficient specification and possible inventions. In the end, this settlement provided sufficient funds that allowed the contractor to begin putting his financial arrangement in proper order.

SECTION IV

TEACHING NOTES

Introduction

This section will address the key points that an instructor using this case should be aware of and will offer some additional topics for classroom discussion. This section will be structured so as to address the individual documents and analyses that make up the Case Materials and Case Analysis sections of this report. It is assumed that an instructor utilizing this case already has a significant background in finance and the key teaching points addressed are those that would be of interest to Program Managers or are peculiar to the DOD system acquisition environment.

Case Materials

The case materials represent a sample of the types of information that a Program Manager may be exposed to in the management of his program. The documents have been retained in their original state or closely approximate the format one could expect to see in an actual circumstance. It was felt that this was as important to the case as the content of the materials themselves. The following sections will address the documents individually, highlighting those teaching points that could be discussed further in class.

The Case Circumstances were created to reflect the actual manner in which an individual may find himself asked to do a job in the Program Management Office. The aspect of impacting other programs is very real, especially when no precedent for the decision exists.

The Contract Letter is a copy of an actual letter and illustrates how a contractor goes about establishing his position on an issue with the government. There are numerous teaching points in the letter that one may pursue and they are addressed, in sequence, in the following paragraphs.

1. The routing of the letter illustrates how the Administrative Contracting Officer and the Headquarter Staff are actively involved in the management of a particular program.

2. Marlton Corporation has already determined that they are entitled to the increased payments and there is no need to ask for the government's judgement, but only their concurrence.

3. The appropriate ASPR clauses are cited by the contractor to reinforce their determination that they are entitled to the increased payments.

4. The brief history of Marlton financing provides the background and establishes the circumstances that have caused Marlton to seek the unusual payments. It offers an excellent illustration of how economic conditions and financing arrangements have a substantial impact on the firm and the program.

5. The current status of the Franklin Loan Replacement illustrates what can happen when a firm relies on substantial

short-term financing and has to continually refund the debt. Additionally, it is asserted that DOD contracts are poor collateral for loans; a factor that can influence contractor risk and be used against the government in negotiating future settlements.

6. The factors surrounding the subject HUDS contract illustrate what can happen when the government and the contractor rush into a contract without adequate preparation and understanding, as was the real world case in this instance. This point is emphasized in the Contract Management course, but the impact is financial, as are most hasty decisions.

7. Inflation and cost of capital are addressed to further substantiate Marlton's determination. This is an example of two selected statistics to support their claim. The question becomes: Are they the correct indices? In this case, the answer is probably yes.

8. The final section summarizes their entitlement to the progress payment increase and points out that the ASPR requires that the government act in a "timely manner".

All in all, a very direct and positive letter that is designed to make it very easy for a government official to agree with them. Marlton has tried to supply all the data any Program Manager would require to support a recommendation for increased payments.

<u>The Financial Reports</u> are typical of the data that are

readily availble in corporate annual reports and in Security Exchange Commision reports that provide the basis for financial analysis. These documents are broken into more detail and use some different terminology in order to illustrate that real world statements do require careful examination for common understanding of how they control their funds.

The Fact Sheet and Staff Summary Sheet typify documents that could be developed by the Procurement or Program Control people in the PMO or they could be developed by an ACO within a DCAS or a Plant Representatives Office. The information provides an additional viewpoint on Marlton's performance in one case and summarizes the ASPR clauses in another case. Both have a bearing on the recommendation and should be part of the evaluation process.

Case Analysis

The case analysis section illustrates an example of the type of analysis that can be performed in making a determination as to what to recommend. The techniques used in this analysis are pretty straight forward and are adequately discussed in any of the texts mentioned in the bibliography. Much of the conclusive results coming from the analyses are addressed in the Case Analysis section. Following are suggested topics that individual instructors or classes may want to pursue.

Ratio Analysis and Sources and Uses of Funds Analysis should be covered through assigned readings and in class discussion prior to assigning the case. The key point to emphasize here is that Ratio Analysis may not answer specific questions about the funds flow problem, but rather identifies areas that require additional probing. In this case it affirmed the assertions made in the contractor's letter. The sources and uses analysis reveals the change in market strategy through the shifting in balance sheet accounts and substantiates our ratio analysis conclusions. For the purpose of this analysis, certain assumptions about particular Balance Sheet and Income Statement Items had to be made. The following is an explanation of those items that require amplification to support the analysis.

a. Fixed Assets includes Property, Plant and Equipment, Computer Peripheral Equipment, and Income Producing Rental Equipment. The Computer Peripherals and Rental Equipment were included because they contribute to revenues, are not considered as part of the normal product inventory and have the characteristic of depreciation, normally associated with fixed assets.

b. Debt includes Accounts Payable, Notes Payable, Current Long Term Debt, and Long Term Debt. This was done to provide a consistent relationship for the three years. While the liability to Zeus was in fact a debt obligation to the company in 1973; the effect of deleting that item produces results that are related to the normal course of business and those that were peculiar up through 1972 , but have little impact on the problem at hand.

c. Net Profit for the purposes of the profitability ratios was assumed to be the Income before Extraordinary Credit and Cumulative Effect of a Change in Accounting Principle. Using this income figure gave a figure that was representative of current period operations while accounting for the impact of interest and taxes.

The Pro Forma Balance Sheet provides insight into the duration of the problem and gives the student the opportunity to apply the percent of sales forecasting technique. as well as the debt retirement schedule. The key point here is that some accounts are measured against total sales while some should be measured against discrete accounts or measured against a known payment schedule. The source of the data is the key to the effectiveness of the forecast.

Assessing the Impact of the Rental Equipment Acquisition and the Accounting Change are designed to illustrate how apparently non-related decisions can end up impacting program success. An additional teaching point to be made in this regard is that Program Managers need to be aware of changing corporate philosophies and professional guidelines or rulings and their potential impacts.

Section V

SUMMARY

Conclusion

This case illustrates the potential problem a Program Manager can be faced with as a result of funds flow management. It also illustrates the broad spectrum of financial and contractual factors that a Program Manager must concern himself with if he is to stay on top of his program. All decisions become financial decisions in the end and the effective Program Manager must be aware of all the potential factors that can influence his program.

Recommendation

It is recommended that this case be adopted for use by the Defense System Management College. The case should be adapted to fit in the Essentials of Corporate Finance and the Contract Management Courses.

It is further recommended that the College give consideration to conducting a joint class in these two courses when using this case.

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9. __________ Corporation Annual Report, 1973.*

* These two documents were used for compiling the financial data necessary to the case analysis. The bibliographical information is omitted so as not to reveal the true name of the corporation.