SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-Q

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended September 30, 2001, or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from NA to NA.

Commission File Number 0-16106

APA OPTICS, INC.
(Exact name of Registrant as specified in its charter)

MINNESOTA	41-1347235
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

2950 N.E. 84TH LANE, BLAINE, MINNESOTA 55449
(Address of principal executive offices and zip code)

(763) 784-4995
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to the filing requirement for the past 90 days.

Yes [X] No [_]

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Class:	Outstanding at September 30, 2001
Common stock, par value $.01	11,875,881

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

APA OPTICS, INC.
CONDENSED BALANCE SHEETS

<S>	September 30, 2001 <C>	March 31, 2001 <C>
ASSETS		
Current assets:		
Cash and cash equivalents	$ 33,884,252	$ 21,225,492
Short-term investments	-	15,759,000
Accounts receivable	170,882	370,859
Inventories:		
Raw materials	244,050	405,238
Work-in-process	74,543	10,078
Prepaid expenses	46,641	30,064
Bond reserve funds	35,000	65,000
Total current assets	34,455,368	37,865,731
Property, plant and equipment, net	3,846,209	3,248,191
Other assets	821,572	800,529
Total assets	$ 39,123,149	$ 41,914,451
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 87,714	$ 495,410

Accrued expenses	347,000	301,911
Current portion of long-term debt	2,238,958	2,337,221
Total current liabilities	2,673,672	3,134,542
Long-term debt	246,944	499,610
Shareholders' equity:		
Undesignated shares:		
Authorized shares - 4,999,500		
Issued - none	-	-
Common stock, $.01 par value:		
Authorized shares - 50,000,000		
Issued and outstanding shares:		
11,875,881 shares on September 30, 2001 and		
11,915,456 shares on March 31, 2001	118,758	119,155
Additional paid-in capital	51,547,163	51,614,972
Accumulated deficit	(15,463,388)	(13,453,828)
Total shareholders' equity	36,202,533	38,280,299
Total liabilities and shareholders' equity	$ 39,123,149	$ 41,914,451

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APA OPTICS, INC.
CONDENSED STATEMENTS OF OPERATIONS

	Three Months Ended September 30,		Six Months Ended September 30,	
	2001	2000	2001	2000
<S>	<C>	<C>	<C>	<C>
Revenues	$ 87,574	$ 123,462	$ 521,909	$ 174,979
Costs and expenses:				
Cost of sales	957,316	609,720	1,900,168	1,015,792
Research and development	236,299	293,303	418,892	573,661
Selling, general and administrative	510,217	414,092	946,832	781,978
	1,703,832	1,317,115	3,265,892	2,371,431
Loss from operations	(1,616,258)	(1,193,653)	(2,743,983)	(2,196,452)
Interest income	282,673	615,440	802,262	751,842
Interest expense	(30,527)	(18,536)	(66,452)	(61,564)
	252,146	596,904	735,810	690,278
Loss before income taxes	(1,364,112)	(596,749)	(2,008,173)	(1,506,174)
Income taxes	387	250	1,387	500
Net loss	(1,364,499)	(596,999)	(2,009,560)	(1,506,674)
Preferred stock dividend	-	(33,054)	-	(33,054)
Excess of preferred stock redemption over carrying value	-	(275,000)	-	(275,000)
Net loss applicable to common shareholders	$(1,364,499)	$ (905,053)	$(2,009,560)	$(1,814,728)
Net loss per share:				
Basic and diluted	($0.11)	($0.08)	($0.17)	($0.17)
Weighted average shares outstanding:				
Basic and diluted	11,917,465	11,694,715	11,917,378	10,451,022

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APA OPTICS, INC.
CONDENSED STATEMENTS OF CASH FLOWS

	Six Months Ended September 30	
	2001	2000
<S>	<C>	<C>
OPERATING ACTIVITIES		
Net loss	$(2,009,560)	$(1,506,674)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	302,666	192,563
Deferred compensation expense	17,184	-
Changes in operating assets and liabilities:		
Accounts receivable	199,977	122,158
Inventories and prepaid expenses	80,146	(15,723)
Accounts payable and accrued expenses	(379,791)	10,412
Other	-	86
Net cash used in operating activities	(1,789,378)	(1,197,178)
INVESTING ACTIVITIES		
Purchases of property and equipment	(859,684)	(97,685)
Investment in patents	(71,439)	(67,558)
Net cash used in investing activities	(931,123)	(165,243)
FINANCING ACTIVITIES		
Proceeds from the sale of common stock	24,433	39,810,534
Proceeds from the sale of short-term investments	15,759,000	-
Repayment of long-term debt	(350,929)	(131,537)
Repurchase of common stock	(92,639)	-
Redemption of preferred stock	-	(5,033,054)
Bond reserve funds	39,396	55,445
Net cash provided by financing activities	15,379,261	34,701,388
Increase in cash and cash equivalents	12,658,760	33,338,967
Cash and cash equivalents at beginning of period	21,225,492	5,941,906
Cash and cash equivalents at end of period	$33,884,252	$39,280,873

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NOTES TO CONDENSED FINANCIAL STATEMENTS

NOTE 1. BASIS OF PRESENTATION

The accompanying condensed financial statements have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. For further information, refer to the financial statements and footnotes thereto included in the Company's annual report on Form 10-K for the year ended March 31, 2001.

In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included. Certain reclassifications of previously reported amounts have been made to conform that presentation to the current period presentation.

NOTE 2. EARNINGS PER SHARE

The following table sets forth the computation of basic and diluted earnings per share:

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	Three Months Ended September 30,		Six Months Ended September,	
	2001	2000	2001	2000
<S>	<C>	<C>	<C>	<C>
Numerator:				
Net loss	$(1,364,499)	$ (596,999)	$(2,009,560)	$(1,506,674)
Preferred stock dividend	-	(33,054)	-	(33,054)

Excess of preferred stock redemption over carrying value	-	(275,000)	-	(275,000)
Numerator for basic and diluted earnings per share-loss available to common shareholders	$(1,364,499)	$ (905,053)	$(2,009,560)	$(1,814,728)
Denominator for basic and diluted earnings per share-weighted-average shares	11,917,465	11,694,715	11,917,378	10,451,022
Basic and diluted earnings per share	($0.11)	($0.08)	($0.17)	($0.17)

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NOTE 3. STOCK REPURCHASE PLAN

On September 19, 2001, the Board of Directors authorized the repurchase of up to the greater of $2,000,000 or 500,000 shares of our common stock. During the quarter ended September 30, 2001, we repurchased a total of 43,200 shares for $92,639 at an average price of $2.14 per share.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Statements in this Report about future sales prospects and other matters to occur in the future are forward looking statements and are subject to uncertainties due to many factors, many of which are beyond our control. These factors include, but are not limited to, the continued development of our products, acceptance of those products by potential customers, our ability to sell such products at a profitable price, and our ability to fund our operations. For further discussion regarding these factors, see "Factors That May Affect Future Results."

OVERVIEW

We are engaged in designing, manufacturing, and marketing various optoelectronic products, ultraviolet (UV) detectors and related products and optical components. For several years, we also received significant revenues from research and development services projects sponsored by various government agencies. In fiscal 1998, we shifted our emphasis from research and development to product development, with the intent to eventually manufacture and market our own proprietary products. We received no revenues from research and development activity in fiscal 2001 and do not expect any revenues from this activity in fiscal 2002.

For the last several years our goal has been to manufacture and market products/components based on our technology developments. We have focused on dense wavelength division multiplexer (DWDM) components for fiber optic communications and gallium nitride-based ultraviolet (UV) detectors (both components and integrated detector/electronic/display packages) because we believe that these two product areas have significant potential markets and because we have expertise and/or patent positions related to them.

Most companies in the communications equipment industry have been affected by the slowdown in telecommunications equipment spending. We recently received notice from a customer that it was discontinuing development of an optical system utilizing our DWDM components. As a result, the customer cancelled the majority of an outstanding purchase order for 21 of our DWDM components.

Weakness in the general economy, and the telecommunications sector in particular, continues to put downward pressure on component pricing, margins and profits. There are an increasing number of manufacturers of DWDMs pursuing this soft market bringing additional pressure to component pricing. Aggressive pricing and declining requests for quotes will likely have a negative impact on our financial performance for at least the next few fiscal quarters.

During the quarter ended September 30, 2001, we made significant improvements in the environmental performance of our DWDMs. Environmental performance is a key test factor for qualification of our products under industry standards as promulgated by Telcordia. While we made significant progress in these areas, performance issues related to environmental specifications prevented us from shipping more product during the second quarter. Also, production uniformity issues have resulted in limited production of our SunUVWatch(R). These problems were still being resolved as of the end of October 2001.

RESULTS OF OPERATIONS

REVENUES

Revenues for the quarter ended September 30, 2001, were $87,574, reflecting a 29% decrease from the comparable period in the preceding fiscal year, and were $521,909 for the six months ended September 30, 2001, an increase of 198% over the revenues for the comparable period in the preceding fiscal year. Lower demand for DWDM components and problems incurred in production resulting in delayed shipments of components were the primary factors contributing to the decline in revenues during the most recent fiscal quarter. The increase in revenues for the six months ended September 30, 2001, was largely the result of sales of our DWDM components during the first quarter of fiscal 2002.

COST OF SALES

Cost of sales increased $347,596 to $957,316 for the quarter ended September 30, 2001, reflecting a 57% increase over the comparable period in the preceding fiscal year. For the six months ended September 30, 2001, cost of sales increased $884,376 or 87% over the comparable period in the preceding fiscal year. The increases in the cost of sales were the result of operating with increased production staff and facilities, increased sales during the first quarter, expansion of quality programs and costs associated with testing products for compliance with certain industry standards. Gross margins for sales were negative in both periods. The fluctuation in cost of sales and the negative gross margins are influenced by the low unit production and sales levels relative to the capital equipment and personnel committed to production in the early phases of market penetration of our products. We expect to continue to experience negative gross margins until there is a significant increase in sales and production levels.

RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses decreased by $57,004 for the quarter ended September 30, 2001. This represents a decrease of 19% from research and development expenses in the comparable period of the preceding fiscal year. For the six months ended September 30, 2001, research and development expenses decreased $154,769 or 27% from the comparable period in the preceding fiscal year. These decreases are partially the result of classifying a portion of these expenses as cost of goods sold rather than research and development expenses, as we focused more on the production of products for sale and less on research and development activities. We expect research and development expenses to remain constant or increase slightly for the foreseeable future with a gradual expansion of our research and product development activities.

SELLING, GENERAL AND ADMINISTRATIVE

Selling, general and administrative expenses increased $96,125 for the quarter ended September 30, 2001, reflecting a 23% increase over the comparable period in the preceding fiscal year. For the six months ended September 30, 2001, selling, general and administrative expenses increased $164,854 or 21% over the comparable period in the preceding fiscal year. The increase was primarily due to an increase in personnel and other expenses as we prepare to market our products and develop expanded internal reporting and management systems.

LOSS FROM OPERATIONS

The loss from operations expanded to $1,616,258, an increase of $422,605 or 35% for the quarter ended September 30, 2001 over the comparable period in fiscal 2001. For the six months ended September 30, 2001, the loss from operations increased $547,531 or 25% over the comparable period in the preceding fiscal year. The increased loss in the quarter ended September 30, 2001, was primarily the result of the decline in revenues from the previous fiscal quarter. Soft demand for DWDM components and problems we incurred related to production of DWDM components were major factors contributing to this decline.

OTHER INCOME AND EXPENSE

Other income decreased $344,758 or 58% for the quarter ended September 30, 2001, from the comparable period in fiscal 2001. For the six months ended September 30, 2001, other income increased $45,532 or 7% over the comparable period in the preceding fiscal year. The decrease for the quarter was due to the combination of a decline in the rate of interest earned on short-term investments and a lower average cash balance, as cash was consumed to fund operations and capital investment. The increase in other income for the six months ended September 30, 2001, was primarily the result of the timing of sales of common stock in the preceding fiscal year and investment of the proceeds that began generating interest income during the second quarter of fiscal 2001. Interest rates have continued to decline and we anticipate continuing decreases in interest income as a result of these declines and as a result of the use of cash in operations and for capital expansion.

NET LOSS

The net loss for the quarter ended September 30, 2001, was $1,364,499 (or $0.11 per basic and diluted share), an increase of $767,500 or 129% from the net loss reported for the same period in fiscal 2001. For the six months ended September 30, 2001, the net loss was $2,009,560 (or $0.17 per basic and diluted share), a 33% increase over the net loss for the comparable period in the preceding fiscal year. For the quarter, the increased loss was attributable to the decline in revenues, the costs associated with increased staff and facilities, and the decline in interest income. For the six months ended September 30, 2001, the increased loss was attributable to the continued negative gross margin on product sales and the costs associated with increased staff and production facilities.

LIQUIDITY AND CAPITAL RESOURCES

APA's cash and cash equivalents primarily consist of certificates of deposits, US Government instruments or commercial paper with maturities of less than three months. The balance of cash and cash equivalents at September 30, 2001 is $33,884,252 compared to $21,225,492 at March 31, 2001. The increase in cash is primarily the result of the maturing of short-term investments.

Cash used in operating activities was $1,789,378 for the six months ended September 30, 2001, compared to $1,197,178 for the comparable period in the preceding fiscal year. The increase reflects increased sales with negative gross margins and increased costs associated with our larger staff and production facilities.

We used net cash of $931,123 in investing activities in the six months ended September 30, 2001, compared to $165,243 for the same period of the preceding fiscal year. The funds were used for the purchase of equipment, facility repairs and leasehold improvements that had been deferred in prior years and to maintain existing and pursue new patents related to our technologies.

Net cash provided from financing activities in the six months ended September 30, 2001 totaled $15,379,261. The increase was primarily the result of reclassification of $15,759,000 of short-term investments to cash and cash equivalents as the time to maturity of these investments shortened to less than three months. We used a net of $311,533 for the scheduled reduction of debt and $92,639 for the repurchase of common stock. We repurchased a total of 43,200 shares at an average cost of $2.14 per share. Additional information regarding the stock repurchase is available in the Notes to the Condensed Financial Statements under Part I and under Part II, Item 6 of this Form 10-Q. For the six months ended September 30, 2000, net cash provided by financing activities totaled $34,701,388. We raised $39,810,534 from the sale of common stock, used $5,033,054 to retire preferred stock and used a net of $76,092 for the scheduled reduction of debt.

We anticipate a total of approximately $2.5 million in capital expenditures in fiscal 2002, primarily for equipment. The majority of the capital expenditures relate to the expansion and automation of our production and research and development facilities. The expenditures will be made in phases to meet demand for our products and to allow us to respond to new business opportunities.

We believe we have sufficient funds for operations for the remainder of fiscal 2002 and beyond.

FACTORS THAT MAY INFLUENCE FUTURE RESULTS

Several factors will influence our future results including:

UNLESS WE GENERATE SIGNIFICANT REVENUE GROWTH, OUR INCREASING EXPENSES AND NEGATIVE CASH FLOW WILL SIGNIFICANTLY HARM OUR FINANCIAL POSITION.

We have not been profitable since fiscal 1990. As of September 30, 2001, we had an accumulated deficit of $15.5 million. We will incur operating losses for the foreseeable future, and these losses may be substantial. Further, we may continue to experience negative operating cash flow in the future. We have funded our operations primarily through the sale of equity securities and borrowings. We have significant fixed expenses and we expect to continue to incur significant and increasing manufacturing, sales and marketing, product development and administrative expenses. As a result, we will need to generate higher revenues while containing costs and operating expenses if we are to achieve profitability.

WE MUST INCREASE OUR MANUFACTURING CAPACITY OR WE WILL NOT BE ABLE TO DELIVER OUR PRODUCTS TO OUR CUSTOMERS IN A TIMELY MANNER.

Manufacturing of our products is a complex and precise process. We recently experienced difficulty in delivering DWDM components in line with desired environmental specifications and have not yet resolved all the problems that prevented us from delivering the product. We have limited experience in rapidly increasing our manufacturing capacity or in manufacturing products at high volumes. We will be required to hire, train and manage additional manufacturing personnel and improve our production processes in order to increase our production capacity. There are numerous risks associated with rapidly increasing capacity, including:

(i) Difficulties in achieving adequate yields from new manufacturing lines,
(ii) Difficulty maintaining the precision manufacturing processes required by our products while increasing capacity,
(iii) The inability to timely procure and install the necessary equipment, and
(iv) Lack of availability of qualified manufacturing personnel.

The expansion and automation of our manufacturing facilities and related capital expenditures are being made in anticipation of a level of customer orders that may not be realized. If anticipated levels of customer orders are not received, we will not be able to generate positive gross margins and profitability.

OUR DEPENDENCE ON OUTSIDE MANUFACTURERS MAY RESULT IN PRODUCT DELIVERY DELAYS.

We purchase components that are incorporated into our products from outside vendors. If these vendors fail to supply us with components on a timely basis, we could experience significant delays in shipping our products. Any significant interruption in the supply or support of any components could seriously harm our sales and our relationships with our customers.

OUR PRODUCTS MAY HAVE DEFECTS THAT ARE NOT DETECTED BEFORE DELIVERY TO OUR CUSTOMERS.

Some of our products are designed to be deployed in large and complex optical networks and must be compatible with other components of the system, both current and future. In addition, our products may not operate as expected over long periods of time. Our customers may discover errors or defects in our products only after they have been fully deployed. If we are unable to fix errors or other problems, we could lose customers, lose revenues, suffer damage to our brand and reputation, and lose our ability to attract new customers or achieve market acceptance. Any of these factors would negatively impact cash flow and would seriously harm our business, financial condition and results of operations.

WE WILL NEED TO INTRODUCE NEW PRODUCTS AND PRODUCT ENHANCEMENTS TO INCREASE REVENUE.

The successful operation of our business depends on our ability to anticipate market needs and to develop and introduce new products and product enhancements that respond to technological changes or evolving industry standards on a timely and cost-effective basis. Our products are complex, and new products may take longer to develop than originally anticipated. Consequently the products we develop may be made obsolete by competitive products before we generate revenue or profits from their sale. Our products may contain defects or have unacceptable manufacturing yields when first introduced or as new versions are released. We must continue to develop leading-edge products and introduce them to the commercial market quickly in order to be successful. This development activity is a lengthy process and requires significant resources. Many of our competitors have greater resources and technical staffs than we do. Our failure to produce technologically competitive products in a cost-effective manner and on a timely basis will seriously harm our business, financial condition and results of operations.

OUR MARKETS ARE NEW AND ARE CHARACTERIZED BY RAPID TECHNOLOGICAL CHANGES AND EVOLVING STANDARDS.

The markets we serve are characterized by rapid technological changes, frequent new product introductions, changes in customer requirements and evolving industry standards. In developing our products, we have made, and will continue to make, assumptions with respect to which standards will be adopted within our industry. If the standards that are actually adopted are different from those that we have chosen to support, our products may not achieve significant market acceptance.

There are several existing standards in the communications industry including the Telcordia GR1209 and GR1221 standards. Several of our existing and potential customers require or will require compliance with these standards. We continue to make progress in achieving compliance with these standards and have produced DWDM components that achieve compliance with some but not all of the requirements of these standards. During the quarter ended September 30, 2001 we made significant improvements in the environmental performance of our DWDMs, but are currently not able meet all Telcordia requirements and have not begun formal testing under Telcordia specifications. If we are unable to achieve full compliance with these and other standards, our business, financial condition and results of operations will be adversely affected.

DEMAND FOR OUR PRODUCTS IS SUBJECT TO SIGNIFICANT FLUCTUATION.

Demand for our products is dependent on several factors including capital expenditures in the communications industry. Capital expenditures can be cyclical in nature and result in protracted periods of reduced demand for component parts. Similarly, periods of slow economic expansion or recession can result in periods of reduced demand for our products. The continuing slowdown of the US economy and uncertainty related to the timing and extent of recovery have contributed to the decline in demand for components used in the communications industry. We recently received notice from a customer that it was discontinuing development of an optical system utilizing our DWDM components. As a result, the customer cancelled the majority of an outstanding purchase order for 21 of our DWDM components. Periods of reduced demand will harm our business, financial condition and results of operations.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio. We invest in short-term securities of high credit issuers with maturities ranging from overnight up to 24 months. The average maturity of the portfolio does not exceed 12 months. The portfolio includes only marketable securities with active secondary or resale markets to ensure liquidity. We have no investments denominated in foreign country currencies and, therefore, our investments are not subject to foreign exchange risk.

PART II

ITEMS 1 THROUGH 3. NOT APPLICABLE

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

(a) The Company held its Annual Shareholders' meeting on August 15, 2001.
(b) (1) The election of 5 directors to serve for one-year terms was approved. The individual results are as follows:

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Name	Affirmative Votes	Voting Authority Withheld	Abstain
<S>	<C>	<C>	<C>
Anil K. Jain	10,876,140	125,111	1,560
Kenneth A. Olsen	10,942,200	59,031	1,560
Gregory J Von Wald	10,992,501	8,750	1,560
William R. Franta	10,992,501	8,750	1,560
Michael A. Gort	10,992,501	8,750	1,560

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(2) The amendment of the 1997 Stock Compensation Plan to expand eligibility of employees to participate under the plan and to increase the number of shares reserved for issuance under the plan was approved. The vote was 9,610,993 shares in favor, 1,388,268 shares against and 3,550 abstentions. There were no broker non-votes.

ITEM 5. NOT APPLICABLE

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K.

(a) Exhibits.

10 1997 Stock Compensation Plan as amended through March 15, 2001 (filed with definitive proxy statement for 2001 Annual Meeting on July 19, 2001, and incorporated herein by reference.)

(b) Reports on Form 8-K.

A Report on Form 8-K dated September 19, 2001, reported under Items 5 and 7 the adoption of a stock repurchase plan by the Company.

Signatures

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

APA OPTICS, INC.

11/01/01	/s/ Anil K. Jain
Date	Anil K. Jain President and Chief Executive Officer
11/01/01	/s/ Robert M. Ringstad
Date	Robert M. Ringstad Chief Financial Officer