UNITED STATES
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 ________ to ________

Commission File Number 0-9992

KLA-TENCOR CORPORATION
(Exact name of registrant as specified in its charter)

DELAWARE	04-2564110
(STATE OR OTHER JURISDICTION OF INCORPORATION OR ORGANIZATION)	(I.R.S. EMPLOYER IDENTIFICATION NO.)

160 Rio Robles
San Jose, California, 95134

(Address of principal executive offices)
(Zip Code)

(408) 875-3000
(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 such filing requirements for the past 90 days.

Yes [X] No [ ]

The Registrant had 185,319,172 shares of common stock outstanding as of October 31, 2001.

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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

KLA-TENCOR CORPORATION
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited)

<TABLE>
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(in thousands)	September 30, 2001	June 30, 2001
<S>	<C>	<C>
ASSETS		
Current assets:		
Cash and cash equivalents	$ 339,171	$ 529,674
Marketable securities	245,870	167,421
Accounts receivable, net	368,543	402,013
Inventories	361,181	394,406
Other current assets	387,463	403,432
Total current assets	1,702,228	1,896,946
Land, property and equipment, net	306,003	290,254
Marketable securities	501,949	446,765
Other assets	116,702	110,586
Total assets	$ 2,626,882	$ 2,744,551
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 54,811	$ 60,740
Deferred profit	348,564	422,054
Other current liabilities	425,895	501,291
Total current liabilities	829,270	984,085
Stockholders' equity:		
Common stock and capital in excess of par value	664,148	714,333
Retained earnings	1,129,994	1,043,529
Accumulated other comprehensive income	3,470	2,604
Total stockholders' equity	1,797,612	1,760,466
Total liabilities and stockholders' equity	$ 2,626,882	$ 2,744,551

</TABLE>

See accompanying notes to condensed consolidated financial statements.

KLA-TENCOR CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

<TABLE>
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(in thousands, except per share data)	Three months ended September 30, 2001	2000
<S>	<C>	<C>
Revenues	$ 502,832	$ 382,715
Costs and operating expenses:		
Costs of goods sold	244,368	183,009
Engineering, research and development	72,923	80,648
Selling, general and administrative	81,248	90,897
Total costs and operating expenses	398,539	354,554

Income from operations	104,293	28,161
Interest income and other, net	12,552	12,002
Income before income taxes	116,845	40,163
Provision for income taxes	30,380	11,246
Income before cumulative effect of change in accounting principle	86,465	28,917
Cumulative effect of change in accounting principle, net of tax benefit	--	(306,375)
Net income (loss)	$ 86,465	$(277,458)
Earnings per basic share:		
Income before cumulative effect of change in accounting principle	$ 0.46	$ 0.15
Cumulative effect of change in accounting principle	$ --	$ (1.63)
Net income (loss)	$ 0.46	$ (1.48)
Earnings per diluted share:		
Income before cumulative effect of change in accounting principle	$ 0.44	$ 0.15
Cumulative effect of change in accounting principle	$ --	$ (1.56)
Net income (loss)	$ 0.44	$ (1.41)
Weighted average number of shares:		
Basic	187,717	187,282
Diluted	195,079	195,975

</TABLE>

See accompanying notes to condensed consolidated financial statements.

KLA-TENCOR CORPORATION
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

<TABLE>
<CAPTION>

(in thousands)	Three Months Ended September 30, 2001	2000
<S>	<C>	<C>
Cash flows from operating activities:		
Net income (loss)	$ 86,465	$(277,458)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Cumulative effect of accounting change, net of tax benefit	--	306,375
Depreciation and amortization	17,889	14,310
Deferred income taxes	(2,645)	(27,593)
Net gain (loss) on sale of marketable securities	(642)	432
Changes in assets and liabilities:		
Accounts receivable, net	33,463	(66,820)
Inventories	33,313	(46,624)
Other assets	8,084	(16,304)
Accounts payable	(5,928)	4,392
Deferred profit	(73,490)	104,912
Other current liabilities	(77,115)	27,989
Net cash provided by operating activities	19,394	23,611
Cash flows from investing activities:		
Purchase of property and equipment, net	(31,169)	(41,359)
Purchase of marketable securities	(381,608)	(266,884)

Proceeds from sale or maturity of marketable securities	252,211	188,482
Net cash used in investing activities	(160,566)	(119,761)
Cash flows from financing activities:		
Issuance of common stock, net	2,162	6,474
Stock repurchases	(53,484)	(18,745)
Net borrowings under short term debt obligations	409	2,615
Net cash used in financing activities	(50,913)	(9,656)
Effect of exchange rate changes on cash and cash equivalents	1,582	4,947
Net decrease in cash and cash equivalents	(190,503)	(100,859)
Cash and cash equivalents at beginning of period	529,674	478,212
Cash and cash equivalents at end of period	$ 339,171	$ 377,353
Supplemental cash flow disclosures:		
Income taxes paid, net of refunds	$ 3,630	$ 13,921
Interest paid	$ 320	$ 178

</TABLE>

See accompanying notes to condensed consolidated financial statements.

KLA-TENCOR CORPORATION
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

NOTE 1 - BASIS OF PRESENTATION

The condensed consolidated financial statements have been prepared by KLA-Tencor Corporation ("KLA-Tencor" or the "Company") pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to such rules and regulations. In the opinion of management, the unaudited interim financial statements reflect all adjustments (consisting only of normal recurring adjustments) necessary for a fair presentation of the financial position, results of operations and cash flows for the periods indicated. These financial statements and notes, however, should be read in conjunction with the Company's audited consolidated financial statements and notes included in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2001, filed with the SEC on September 21, 2001.

The results for the three-month period ended September 30, 2000 have been adjusted to reflect the adoption of Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" (SAB 101).

The results of operations for the three-month period ended September 30, 2001 are not necessarily indicative of the results that may be expected for any other interim period or for the full fiscal year ending June 30, 2002.

NOTE 2 - INVENTORIES

Inventories are stated at the lower of cost (on a first-in, first-out basis) or market. The components of inventories were as follows:

<TABLE>
<CAPTION>

(in thousands)	September 30, 2001	June 30, 2001
<S>	<C>	<C>
Inventories		
Customer service parts	$ 106,578	$ 99,099
Raw materials	114,315	140,765
Work-in-process	64,599	61,453
Demonstration equipment	50,674	60,228
Finished goods	25,015	32,861
	$ 361,181	$ 394,406

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</TABLE>

NOTE 3 - STOCK REPURCHASE PROGRAM

The Company has adopted a plan to repurchase shares of its common stock on the open market for the purpose of partially offsetting dilution created by employee stock options and stock purchase plans. During the three-month period ended September 30, 2001, the Company repurchased 2,068,000 shares of its common stock at a cost of approximately $74 million, of which $53 million was paid.

NOTE 4 - COMPREHENSIVE INCOME

The components of comprehensive income, net of tax, are as follows:

<TABLE>
<CAPTION>

(in thousands)	Three months ended September 30 2001	2000
<S>	<C>	<C>
Net income (loss)	$ 86,465	$(277,458)
Other comprehensive income (loss)		
Currency translation adjustments	3,927	(1,861)
Gain on cash flow hedging instruments	(2,742)	--
Unrealized losses on investment, net of tax benefits of $201 in 2001 and $2,211 in 2000	(319)	(3,502)
Other comprehensive income (loss)	866	(5,363)
Total comprehensive income (loss)	$ 87,331	$(282,821)

</TABLE>

NOTE 5 - EARNINGS PER SHARE

Basic earnings per share ("EPS") is calculated using the weighted average number of shares of common stock outstanding during the period. Diluted earnings per share is computed in the same manner and also gives effect to all dilutive common equivalent shares outstanding during the period. Dilutive common equivalent shares consist of stock options.

During the three-month period ended September 30, 2000, options to purchase approximately 696,000 shares at prices ranging from $56.31 to $68.00 were not included in the computation of diluted EPS because the exercise price was greater than the average market price of common shares for the period. During the three-month period ended September 30, 2001, options to purchase approximately 866,000 shares at prices ranging from $49.58 to $68.00 were not included in the computation of diluted EPS because the exercise price was greater than the average market price of common shares for the period.

The reconciling difference between the computation of basic and diluted earnings per share for the periods presented is the inclusion of the dilutive effect of stock options issued to employees under employee stock option plans.

NOTE 6 - RESTRUCTURING AND OTHER COSTS

In the fourth quarter of fiscal 2001 KLA-Tencor entered into a restructuring plan to address the downturn in the semiconductor industry. The plan included consolidation of facilities, writedown of assets associated with affected programs and a reduction in the Company's global workforce, resulting in a restructuring charge of $8 million. As of September 30, 2001, the remaining balance of the restructuring reserve was $2 million.

NOTE 7 - COMMITMENTS AND CONTINGENCIES

The Company is currently a party to various legal proceedings. While management currently believes the ultimate outcome of these proceedings, both individually and in the aggregate, will not have a material adverse effect on the Company's financial position or operating results, the results of complex legal proceedings are difficult to predict. However, the Company believes that it has defenses in each of the pending claims and is vigorously contesting each of these matters.

NOTE 8 - GOODWILL AND OTHER INTANGIBLE ASSETS

In July 2001, the Financial Accounting Standards Board (FASB) issued

FASB Statements Nos. 141 and 142 (SFAS 141 and SFAS 142), "Business Combinations" and "Goodwill and Other Intangible Assets," respectively. SFAS 141 replaces APB 16 and eliminates pooling-of-interests accounting prospectively. It also provides guidance on purchase accounting related to the recognition of intangible assets and accounting for negative goodwill. SFAS 142 changes the accounting for goodwill from an amortization method to an impairment-only approach. Under SFAS 142, goodwill will be tested annually and whenever events or circumstances occur indicating that goodwill might be impaired. SFAS 141 and SFAS 142 are required to be adopted for fiscal years beginning after December 15, 2001 but must be applied to all business combinations completed after June 30, 2001. Upon adoption of SFAS 142, amortization of goodwill recorded for business combinations consummated prior to July 1, 2001 will cease, and intangible assets acquired prior to July 1, 2001 that do not meet the criteria for recognition under SFAS 141 will be reclassified to goodwill. The provisions of SFAS 141 and SFAS 142 will be effective for fiscal years beginning after December 15, 2001; however, KLA-Tencor has elected to early adopt the provisions of SFAS 142 effective July 1, 2001.

The net carrying value of goodwill recorded through acquisitions is $12.7 million as at September 30, 2001. The amounts will be assessed for impairment at least annually or upon an adverse change in operations. KLA-Tencor will complete a transitional impairment test required under SFAS 142 during the second quarter of fiscal 2002. The following table reflects consolidated results adjusted as though the adoption of SFAS 141 and SFAS 142 occurred as of the beginning of the three-month period ended September 30, 2000:

<TABLE>
<CAPTION>

	Three months ended September 30,		
	2001	2000	
	As Reported	As Reported	As Adjusted
	(in thousands, except per share amounts)		
<S>	<C>	<C>	<C>
Operating income	$ 104,293	$ 28,161	$ 28,454
Net income	86,465	(277,458)	(277,247)
Basic earning per share..................	0.46	(1.48)	(1.48)
Diluted earning per share................	0.44	(1.41)	(1.41)

</TABLE>

The following table reflects the components of other intangible assets as of September 30, 2001 (in thousands):

<TABLE>
<CAPTION>

	Gross Carrying Amount	Accumulated Amortization
<S>	<C>	<C>
Existing technology.........................	$6,062	$1,544
Trademark	625	73
Favorable leases............................	270	81

</TABLE>

Other intangible assets are amortized on a straight-line basis over their estimated useful lives of five years. For the three months ended September 30, 2001 and 2000, amortization expense for other intangible assets was $0.3 million. Estimated amortization expense for each of the five succeeding fiscal years is as follows:

<TABLE>
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Fiscal year ended June 30:	Amount
<S>	<C>
2002	$ 1,391
2003	1,391
2004	1,391
2005	1,132
2006	296

</TABLE>

NOTE 9 - SUBSEQUENT EVENTS

In September 2001, KLA-Tencor entered into a definitive merger agreement to acquire QC Optics, Inc., a publicly traded company (AMEX: OPC), for consideration of approximately $3 million in cash. QC Optics, Inc. is a manufacturer of laser-based inspection systems for the semiconductor, flat panel and computer hard disk manufacturing industries. The transaction is expected to close in the second quarter of fiscal 2002. The closing of the transaction is subject to the approval of the stockholders of QC Optics in addition to customary closing conditions. The purchase price will be allocated to the estimated fair value of assets acquired and liabilities assumed based on management estimates.

NOTE 10 - RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

In August 2001, the FASB issued Statement No. 143 ("SFAS 143"), "Accounting for Asset Retirement Obligations," which is effective for fiscal years beginning after June 15, 2002. SFAS 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. SFAS 143 applies to all entities. It applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development, and/or the normal operation of a long-lived asset, except for certain obligations of lessees. KLA-Tencor does not expect the adoption of SFAS 143 to have a significant impact on its financial position and results of operations.

In October 2001, the FASB issued Statement No. 144 ("SFAS 144"), "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 addresses financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed. SFAS 144 will be effective for fiscal years beginning after December 15, 2001. KLA-Tencor is currently evaluating the impact of SFAS 144, but does not expect that its adoption on July 1, 2002 will have a material effect on its financial statements.

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

FORWARD-LOOKING STATEMENTS

This report contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements included in or incorporated by reference in this Quarterly Report on Form 10-Q, other than statements of historical fact, are forward-looking statements. Such forward-looking statements include, among others, those statements regarding the future results of our operations; technological trends in the semiconductor industry; our future product offerings and product features, as well as market acceptance of new products; anticipated revenue from various domestic and international regions; international sales and operations; maintenance of competitive advantage; success of our product offerings; completion of backlog; creation of programs for research and development; attraction and retention of employees; management of risks involved in acquisitions of third parties, or the technology or assets thereof; benefits received from any acquisitions and development of acquired technologies; the outcome of any litigation to which we are a party; results of our investment in leading edge technologies and strategic acquisitions; our future income tax rate; sufficiency of our existing cash balance, investments and cash generated from operations to meet our operating and working capital requirements; and the effects of hedging transactions.

Our actual results may differ significantly from those projected in the forward-looking statements in this report. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in this section and those set forth in the Company's most recent Annual Report on Form 10-K. You should carefully review these risks and also review the risks described in other documents we file from time to time with the Securities and Exchange Commission. You are cautioned not to place undue reliance on these forward-looking statements. We undertake no obligation to update forward-looking statements.

RESULTS OF OPERATIONS

KLA-Tencor Corporation ("KLA-Tencor") is the world's leading supplier of process control and yield management solutions for the semiconductor and related microelectronics industries. Our comprehensive portfolio of products, software, analysis, services and expertise is designed to help integrated circuit manufacturers manage yield throughout the entire wafer fabrication process - from research and development to final mass production yield analysis.

Currently we continue to face a significant downturn in the semiconductor industry. For several quarters, there has been a worldwide softening in demand for semiconductors resulting in excess capacity and reduced demand for semiconductor manufacturing equipment. Consequently we experienced declines in both revenue and bookings in the first fiscal quarter compared to the prior quarter.

Despite the market fluctuations, our financial position has remained strong and we continue to have no long-term debt. In response to the downturn in the semiconductor industry, we have implemented initiatives to reduce costs and control spending. However, we continued our new product development by investing in leading edge technologies and by strategic acquisitions and alliances. These investments, acquisitions and alliances should position our extensive product line to address the critical initiatives that are key to our customers.

Effective July 1, 2000 KLA-Tencor changed its revenue recognition policy, based on guidance provided in SEC Staff Accounting Bulletin No. 101 ("SAB 101"). KLA-Tencor changed its method of accounting for system sales to generally recognize revenue upon a positive affirmation by the customer that the system has been installed and is operating according to pre-determined specification. The

deferred profit balance at of September 30, 2001 was $349 million which included deferred revenue of $531 million and deferred cost of good sold of $182 million. The balance decreased from $422 million at June 30, 2001 primarily due to lower shipments than acceptances.

Revenues were $503 million for the three-month period ended September 30, 2001, compared to $383 million for the same period of the prior fiscal year, representing an increase of 31%. Improved customer acceptance under SAB 101 resulted in higher revenues across virtually all product lines although shipments declined approximately 32% versus the same period of the prior fiscal year.

Gross margins as a percentage of revenues were 51% for the three-month period ended September 30, 2001, compared to 52% for the same period in the prior fiscal year. Gross margins declined slightly due to unfavorable overhead absorption in our system gross margin as shipment volume decreased. Higher warranty and installation costs also contributed due to higher complexity of recently introduced products. We continue to focus on the productivity and efficiency of our manufacturing and service operations as we ramp our new products in the face of lower overall volumes due to the downturn.

Engineering, research and development ("R&D") expenses were $73 million for the three-month period ended September 30, 2001, compared to $81 million for the same period in the prior fiscal year. As a percentage of revenues, R&D expenses decreased to 15% for the three-month period ended September 30, 2001, compared to 21% for the same period in the prior fiscal year. The decrease is primarily attributable to temporary shutdowns, management paycuts, reductions in temporary labor and discretionary spending as well as other cost saving measures implemented over the last two quarters, and a lower level of non-recurring engineering expenses due to products reaching Beta stage. Our investment in R&D represents a continued commitment to product development in new and emerging market segments and enhancements to existing products for 0.18 micron, copper development and 300mm wafers.

Selling, general and administrative expenses were $81 million for the three-month period ended September 30, 2001, compared to $91 million for the same period in the prior fiscal year. As a percentage of revenues, selling, general and administrative expenses were 16% for the three-month period ended September 30, 2001, compared to 24% for the same period in the prior fiscal year. Selling, general and administrative expenses decreased primarily due to temporary shutdowns, management paycuts, reductions in temporary labor and discretionary spending as well as other cost saving measures implemented over the last two quarters in response to the industry slowdown.

In the fourth quarter of fiscal 2001 we entered into a restructuring plan to address the downturn in the semiconductor industry. The plan included consolidation of facilities, writedown of assets associated with affected programs and a reduction in our global workforce, resulting in a restructuring charge of $8 million. As of September 30, 2001, the remaining balance of the restructuring reserve was $2 million.

Interest income and other, net, was $13 million for the three-month period ended September 30, 2001, compared to $12 million in the same period in the prior fiscal year. The increase was due to increased interest income resulting from higher average investment balances.

During the three-month period ended September 30, 2001, we realized an effective 26% tax rate. This is lower than the effective 28% tax rate realized in the same period of the prior fiscal year which is due primarily to the greater relative benefits expected to be realized from Tax Exempt Interest and from benefits related to sales and operations overseas.

LIQUIDITY AND CAPITAL RESOURCES

During the three-month period ended September 30, 2001, cash, cash equivalents, short-term investments and marketable securities balances decreased to $1.09 billion from $1.14 billion at June 30, 2001. Net cash provided by operating activities for the three-month period ended September 30, 2001 was $19 million, compared to $24 million of net cash provided by operating activities for the same period of the prior fiscal year. Capital expenditures for the three-month period ended September 30, 2001 of $31 million were for manufacturing and engineering equipment and leasehold improvements necessary for our operations. We received $2 million from sales of common stock issued through our employee stock purchase program and through stock option exercises during the three-month period ended September 30, 2001 and paid $53 million for the repurchase of our common stock under our stock repurchase program during the same period.

Working capital was $873 million as of September 30, 2001, compared to $913 million at June 30, 2001. We believe that existing liquid capital resources and funds generated from operations combined with the ability, if necessary, to borrow funds will be adequate to meet our operating and capital requirements through the foreseeable future. However, we can give no assurances that we will continue to generate sufficient funds from operations or that we will be able to borrow funds on reasonable terms in the future, if necessary.

FACTORS AFFECTING RESULTS, INCLUDING RISKS AND UNCERTAINTIES

Fluctuations in Operating Results and Stock Price

Our operating results have varied widely in the past and our future operating results will continue to be subject to quarterly variations based upon a wide variety of factors including those listed in this section and throughout this Quarterly Report on Form 10-Q for the period ending September 30, 2001. In addition, future operating results may not follow any past trends. The factors we believe make our results fluctuate and difficult to predict include:

- the cyclical nature of the semiconductor industry;

- the fluctuating demand for semiconductors impacts the need for our customers to order our products

- the change in the price and the profitability of our products;

- our timing of new product introductions;

- our ability to develop and implement new technologies;

- the change in customers' schedules for fulfillment of orders;

- the cancellation of contracts by major customers;

- the shortage of qualified workers in the areas we operate; and

- our ability to manage our manufacturing requirements.

Operating results also could be affected by sudden changes in customer requirements, currency exchange rate fluctuations and other economic conditions affecting customer demand and the cost of operations in one or more of the global markets in which we do business. As a result of these or other factors, we could fail to achieve our expectations as to future revenues, gross profit and income from operations. Our failure to meet the performance expectations set and published by external sources could result in a sudden and significant drop in the price of our stock, particularly on a short-term basis, and could negatively affect the value of any investment in our stock.

Semiconductor Equipment Industry Volatility

The semiconductor equipment industry is highly cyclical. The purchasing decisions of our customers are highly dependent on the economies of both the local markets in which they are located and the semiconductor industry worldwide. The timing, length and severity of the up-and-down cycles in the semiconductor equipment industry are difficult to predict. This cyclical nature of the industry in which we operate affects our ability to accurately predict future revenues and, thus, future expense levels. When cyclical fluctuations result in lower than expected revenue levels, operating results may be adversely affected and cost reduction measures may be necessary in order for us to remain competitive and financially sound. During a down cycle, we must be in a position to adjust our cost and expense structure to prevailing market conditions and to continue to motivate and retain our key employees. In addition, during periods of rapid growth, we must be able to increase manufacturing capacity and personnel to meet customer demand. We can provide no assurance that these objectives can be met in a timely manner in response to industry cycles. If we fail to respond to industry cycles, our business could be seriously harmed.

Currently we are in a significant industry down cycle. We are not able to predict when the semiconductor industry will recover. During a down cycle, the semiconductor industry typically experiences excess production capacity that causes semiconductor manufacturers to decrease capital spending. We generally do not have long-term volume production contracts with our customers, and we do not control the timing or volume of orders placed by our customers. Whether and to what extent our customers place orders for any specific products, as well as the mix and quantities of products included in those orders, are factors beyond our control. Insufficient orders, especially in our down cycles, will result in under-utilization of our manufacturing facilities and infrastructure and will negatively affect our operating results and financial condition.

International Trade and Economic Conditions

Ours is an increasingly global market. A majority of our annual revenues are derived from outside the United States, and we expect that international revenues will continue to represent a substantial percentage of our revenues. Our international revenues and operations are affected by economic conditions specific to each country and region. Because of our significant dependence on international revenues, a decline in the economies of any of the countries or regions in which we do business could negatively affect our operating results.

Managing global operations and sites located throughout the world presents challenges associated with, among other things, cultural diversity and organizational alignment. Moreover, each region in the global semiconductor equipment market exhibits unique characteristics that can cause capital equipment investment patterns to vary significantly from period to period. Periodic local or international economic downturns, trade balance issues, political instability and fluctuations in interest and currency exchange rates could negatively affect our business and results of operations. Although we attempt to manage near-term currency risks through the use of hedging instruments, there can be no assurance that such efforts will be adequate.

Competition

Our industry includes large manufacturers with substantial resources to support customers worldwide. Our future performance depends, in part, upon our ability to continue to compete successfully worldwide. Some of our competitors are diversified companies with greater financial resources and more extensive research, engineering, manufacturing, marketing and customer service and support capabilities than we can provide. We face competition from companies whose strategy is to provide a broad array of products and services, some of which compete with the products and services

that we offer. These competitors may bundle their products in a manner that may discourage customers from purchasing our products. In addition, we face competition from smaller emerging semiconductor equipment companies whose strategy is to provide a portion of the products and services, which we offer, using innovative technology to sell products into specialized markets. Loss of competitive position could negatively impact our prices, customer orders, revenues, gross margins, and market share, any of which would negatively affect our operating results and financial condition. Our failure to compete successfully with these other companies would seriously harm our business.

Technological Change and Customer Requirements

Success in the semiconductor equipment industry depends, in part, on continual improvement of existing technologies and rapid innovation of new solutions. For example, the semiconductor industry continues to shrink the size of semiconductor devices and has begun to commercialize the process of copper-based interconnects. These and other evolving customer needs require us to respond with continued development programs and to cut back or discontinue older programs, which may no longer have industry-wide support. Technical innovations are inherently complex and require long development cycles and appropriate professional staffing. Our competitive advantage and future business success depend on our ability to accurately predict evolving industry standards, to develop and introduce new products which successfully address changing customer needs, to win market acceptance of these new products and to manufacture these new products in a timely and cost-effective manner. If we do not develop and introduce new products and technologies in a timely manner in response to changing market conditions or customer requirements, our business could be seriously harmed.

In this environment, we must continue to make significant investments in research and development in order to enhance the performance and functionality of our products, to keep pace with competitive products and to satisfy customer demands for improved performance, features and functionality. There can be no assurance that revenues from future products or product enhancements will be sufficient to recover the development costs associated with such products or enhancements or that we will be able to secure the financial resources necessary to fund future development. Substantial research and development costs typically are incurred before we confirm the technical feasibility and commercial viability of a product, and not all development activities result in commercially viable products. In addition, we cannot ensure that these products or enhancements will receive market acceptance or that we will be able to sell these products at prices that are favorable to us. Our business will be seriously harmed if we are unable to sell our products at favorable prices or if our products are not accepted by the market in which we operate.

Key Suppliers

We use a wide range of materials in the production of our products, including custom electronic and mechanical components, and we use numerous suppliers to supply materials. We generally do not have guaranteed supply arrangements with our suppliers. Because of the variability and uniqueness of customers' orders, we do not maintain an extensive inventory of materials for manufacturing. We seek to minimize the risk of production and service interruptions and/or shortages of key parts by selecting and qualifying alternative suppliers for key parts, monitoring the financial stability of key suppliers and maintaining appropriate inventories of key parts. Although we make reasonable efforts to ensure that parts are available from multiple suppliers, key parts may be available only from a single supplier or a limited group of suppliers. There can be no assurance that our business will not be harmed if we do not receive sufficient parts to meet our production requirements in a timely and cost-effective manner.

Manufacturing Disruption

Operations at our primary manufacturing facilities and our assembly subcontractors are subject to disruption for a variety of reasons, including work stoppages, fire, earthquake, flooding or other natural disasters. In addition, this year, California suffered from a severe energy shortage, causing rolling blackouts through the state. Such disruption could cause delays in shipments of products to our customers. We cannot ensure that alternate production capacity would be available if a major disruption were to occur or that, if it were available, it could be obtained on favorable terms. Such a disruption could result in cancellation of orders or loss of customers and could seriously harm our business.

Intellectual Property Obsolescence and Infringement

Our success is dependent in part on our technology and other proprietary rights. We own various United States and international patents and have additional pending patent applications relating to some of our products and technologies. The process of seeking patent protection is lengthy and expensive, and we cannot be certain that pending or future applications will actually result in issued patents or that issued patents will be of sufficient scope or strength to provide meaningful protection or commercial advantage to us. Other companies and individuals, including our larger competitors, may develop technologies that are similar or superior to our technology or may design around the patents we own.

We also maintain trademarks on certain of our products and services and claim copyright protection for certain proprietary software and documentation. However, we can give no assurance that our trademarks and copyrights will be upheld or successfully deter infringement by third parties.

While patent, copyright and trademark protection for our intellectual property is important, we believe our future success in highly dynamic markets is most dependent upon the technical competence and creative skills of our personnel. We attempt to protect our trade secrets and other proprietary information through agreements with our customers, suppliers, employees and consultants and through other security measures. We also rely on trade secret protection for our technology, in part through confidentiality agreements with our employees, consultants and third parties. We also maintain exclusive and non-exclusive licenses with third parties for strategic technology used in certain products. However, these employees, consultants and third parties may breach these agreements, and we may not have adequate remedies for wrongdoing. In addition, the laws of certain territories in which we develop, manufacture or sell our products may not protect our intellectual property rights to the same extent, as do the laws of the United States.

As is typical in the semiconductor equipment industry, from time to time we have received communications from other parties asserting the existence of patent rights, copyrights, trademark rights or other intellectual property rights which they believe cover certain of our products, processes, technologies or information. Our customary practice is to evaluate such assertions and to consider whether to seek licenses where appropriate. However, we cannot ensure that licenses can be obtained or, if obtained, will be on acceptable terms or that litigation or other administrative proceedings will not occur. The inability to obtain necessary licenses or other rights on reasonable terms could seriously harm our operating results and financial condition.

Key Employees

Our employees are vital to our success, and our key management, engineering and other employees are difficult to replace. We generally do not have employment contracts with our key employees. Further, we do not maintain key person life insurance on any of our employees. The expansion of high technology companies worldwide has increased demand and competition for qualified personnel. We may not be able to attract, assimilate or retain additional highly qualified employees in the future. These factors could seriously harm our business.

Acquisitions

We seek to develop new technologies from both internal and external sources. As part of this effort, we may make acquisitions of, or significant investments in, businesses with complementary products, services and/or technologies. Acquisitions involve numerous risks, including management issues and costs in connection with the integration of the operations and personnel, technologies and products of the acquired companies, the possible write-downs of impaired assets, and the potential loss of key employees of the acquired companies. The inability to manage these risks effectively could seriously harm our business.

Litigation

From time to time we are involved in litigation of various types, including litigation that alleges infringement of intellectual property rights and other claims. Litigation tends to be expensive and requires significant management time and attention. If we lose in a dispute concerning intellectual property, a court could require us to pay substantial damages and/or royalties or could issue an injunction prohibiting us from using essential technologies. For these and other reasons, this type of litigation could have a material adverse effect on our business, financial condition and results of operations. Also, although we may seek to obtain a license under a third party's intellectual property rights in order to bring an end to certain claims or actions asserted against us, we may not be able to obtain such a license on reasonable terms or at all.

Euro Conversion

A new European currency was implemented commencing in January 1999 to replace the separate currencies of eleven western European countries. This requires changes in our operations as we modify systems and commercial arrangements to deal with the new currency. Modifications are necessary in operations such as payroll, benefits and pension systems, contracts with suppliers and customers, and internal financial reporting systems. During the three-year transition period in which transactions may also be made in the old currencies, we must maintain dual currency processes for our operations. We have identified the issues created by this problem, and the cost of this effort is not expected to have a material effect on our business or results of operations. We cannot be certain, however, that all problems will be foreseen and corrected or that no material disruption of our business will occur as a result of this currency change.

Terrorist Attacks

The terrorist attacks that occurred on September 11, 2001 increased the uncertainty in our markets and may delay a recovery. It is too early to determine the direct or indirect impacts of these events on our business.

EFFECTS OF RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

In August 2001, the FASB issued Statement No. 143 ("SFAS 143"), "Accounting for Asset Retirement Obligations," which is effective for fiscal years beginning after June 15, 2002. SFAS 143 addresses financial accounting and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. SFAS 143 applies to all entities. It applies to legal obligations associated with the retirement of long-lived assets that result from the acquisition, construction, development, and/or the normal operation of a long-lived asset, except for certain

obligations of lessees. We do not expect the adoption of SFAS 143 will have a significant impact on our financial position and results of operations.

In October 2001, the FASB issued Statement No. 144 ("SFAS 144), "Accounting for the Impairment or Disposal of Long-Lived Assets." SFAS 144 addresses financial accounting and reporting for the impairment of long-lived assets and for long-lived assets to be disposed. SFAS 144 will be effective for fiscal years beginning after December 15, 2001. We are currently evaluating the impact of SFAS 144, but do not expect that our adoption on July 1, 2002 will have a material effect on our financial statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to financial market risks, including changes in interest rates, foreign currency exchange rates and marketable equity security prices. To mitigate these risks, we utilize derivative financial instruments. We do not use derivative financial instruments for speculative or trading purposes. All of the potential changes noted below are based on sensitivity analyses performed on our financial position at June 30, 2001 and at September 30, 2001. Actual results may differ materially.

As of June 30, 2001 and September 30, 2001, we had an investment portfolio of fixed income securities of $575 million and $722 million, respectively, excluding those classified as cash and cash equivalents. These securities, as with all fixed income instruments, are subject to interest rate risk and will fall in value if market interest rates increase. If market interest rates were to increase immediately and uniformly by 10% from levels as of June 30, 2001 and September 30, 2001, the fair value of each portfolio would decline by $5 million.

As of June 30, 2001 and September 30, 2001, we had net forward contracts to sell $159 million and $214 million, respectively, in foreign currency in order to hedge currency. If we had entered into these contracts on June 30, 2001 and September 30, 2001, the U.S. dollar equivalent would be $151 million and $215 million, respectively. The fair market value we would have received if we had sold the contracts on June 30, 2001 and September 30, 2001, would have been $8 million and $1 million, respectively. A 10% adverse move in currency exchange rates affecting the contracts from their June 30, 2001 and September 30, 2001 levels would decrease the fair value of the contracts by $19 million and $26 million, respectively. However, if this occurred, the fair value of the underlying exposures hedged by the contracts would increase by a similar amount. Accordingly, we believe that the hedging of our foreign currency exposure should have no material impact to income or cash flows.

PART II. OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

A discussion regarding certain pending legal proceedings is included in Part I, Item 3, "Legal Proceedings," included in our Annual Report on Form 10-K for the fiscal year ended June 30, 2001. Since the fiscal year ended June 30, 2001, certain material developments have occurred with respect to the legal proceedings described in our Annual Report and we have been named as a party in certain additional matters as follows:

ADE Corporation

On October 11, 2000, ADE Corporation ("ADE"), a competitor, filed a patent infringement lawsuit against KLA-Tencor in the U.S. District Court in Delaware. ADE claimed damages and sought an injunction under U.S. Patent No. 6,118,525. We filed a counterclaim in the same court alleging that ADE has infringed four of our patents. We claimed damages and are seeking a permanent injunction against ADE. In addition, we are seeking a declaration from the District Court that ADE's patent is invalid and not infringed by KLA-Tencor. While these matters are in a preliminary stage and we cannot predict the outcome, we believe that we have valid defenses and further believe that our counterclaims have merit.

Schlumberger, Inc. and Rigg Systems, Inc.

On August 30, 1999, we were named as a defendant in a lawsuit in which Schlumberger, Inc. alleges trade secret misappropriation, unfair competition and trade slander. On July 21, 2000, the court granted our motion for summary judgment dismissing the case. Schlumberger subsequently filed a motion for reconsideration of that dismissal and its request for reconsideration was denied. Schlumberger has now appealed. Although the outcome of these claims cannot be predicted with certainty, we do not believe that this legal matter will have a material adverse effect on our financial condition even if plaintiff prevails. On January 26, 2000, we filed a complaint against Philip Rigg, RIGG Systems and Schlumberger for misappropriation of trade secrets, breach of contract, breach of fiduciary duty, interference with contract, and unfair competition. The defendants filed cross-complaints on June 5, 2000 asserting various statutory and common law theories. Although the outcome of these claims cannot be predicted with certainty, we do not believe that these legal matters will have a material adverse effect on our financial condition or results of operations even if the plaintiff prevails.

Although we cannot predict the outcome of these claims, management does not believe that any of these legal matters will have a material adverse effect on KLA-Tencor. Were an unfavorable ruling to occur in one or more of the pending claims, there exists the possibility of a material impact on our operating results for the period in which the ruling occurred.

ITEM 6. EXHIBITS AND REPORTS ON FORM 8-K

(a) Exhibits

None

(b) Form 8-K

None

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.

KLA-TENCOR CORPORATION
(Registrant)

November 14, 2001	/s/ JOHN H. KISPERT
(Date)	John H. Kispert Executive Vice President and Chief Financial Officer