



NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
November 3, 2011

To the Stockholders:

YOUR VOTE IS IMPORTANT

NOTICE IS HEREBY GIVEN that the Annual Meeting of Stockholders of KLA-Tencor Corporation (“we” or the “Company”), a Delaware corporation, will be held on Thursday, November 3, 2011 at 12:00 p.m., local time, in Building Three of our Milpitas facility, located at Three Technology Drive, Milpitas, California 95035, for the following purposes:

1. To elect as Class I Directors the three candidates nominated by our Board of Directors to each serve for a three-year term, each until his successor is duly elected.
2. To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2012.
3. To conduct an advisory vote on our executive compensation.
4. To conduct an advisory vote on the frequency of holding future advisory votes on executive compensation.
5. To transact such other business as may properly come before the Annual Meeting or any adjournment thereof.

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice.

Only stockholders of record at the close of business on September 13, 2011 are entitled to notice of, and to vote at, the Annual Meeting and any adjournment or postponement thereof.

Sincerely,

A handwritten signature in black ink that reads "R P Wallace".

Richard P. Wallace
President and Chief Executive Officer
Milpitas, California

This Notice of Annual Meeting of Stockholders, Proxy Statement and form of proxy are being distributed and made available on or about September 22, 2011.

All stockholders are cordially invited to attend the Annual Meeting in person; however, regardless of whether you expect to attend the Annual Meeting in person, we encourage you to vote as soon as possible. You may vote by proxy over the Internet or by telephone, or, if you received paper copies of the proxy materials by mail, you can also vote by mail by following the instructions on the proxy card or voting instruction card. Voting over the Internet, by telephone or by written proxy or voting instruction card will ensure your representation at the Annual Meeting regardless of whether you attend in person.

KLA-TENCOR CORPORATION
2011 ANNUAL MEETING OF STOCKHOLDERS – PROXY STATEMENT
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**ANNUAL MEETING OF STOCKHOLDERS
OF
KLA-TENCOR CORPORATION
To be held on November 3, 2011**

PROXY STATEMENT

QUESTIONS AND ANSWERS REGARDING PROXY MATERIALS

1. Why am I receiving these materials?

The Board of Directors (the “Board”) of KLA-Tencor Corporation (“KLA-Tencor,” the “Company” or “we”) is providing these proxy materials to you in connection with KLA-Tencor’s Annual Meeting of Stockholders to be held on Thursday, November 3, 2011 at 12:00 p.m., local time (the “Annual Meeting”). As a stockholder of record, you are invited to attend the Annual Meeting, which will be held in Building Three of our Milpitas facility, located at Three Technology Drive, Milpitas, California 95035. The purposes of the Annual Meeting are set forth in the accompanying Notice of Annual Meeting of Stockholders and this Proxy Statement.

These proxy solicitation materials, together with our Annual Report for fiscal year 2011, were first made available on or about September 22, 2011 to all stockholders entitled to vote at the Annual Meeting. KLA-Tencor’s principal executive offices are located at One Technology Drive, Milpitas, California 95035, and our telephone number is (408) 875-3000.

2. How may I obtain KLA-Tencor’s Annual Report on Form 10-K?

A copy of our Annual Report on Form 10-K for fiscal year 2011 is available free of charge on the Internet from the website of the Securities and Exchange Commission (the “SEC”) at <http://www.sec.gov>, as well as on our website at <http://ir.kla-tencor.com>.

3. Why did I receive a notice in the mail regarding the Internet availability of the proxy materials instead of a paper copy of the proxy materials?

This year, relying on the SEC rule that allows companies to furnish their proxy materials over the Internet, we are again mailing to our stockholders a notice regarding the Internet availability of the proxy materials instead of a paper copy of the proxy materials. All stockholders will have the ability to access the proxy materials over the Internet and request to receive a paper copy of the proxy materials by mail. Instructions on how to access the proxy materials over the Internet or to request a paper copy may be found in the notice. In addition, the notice contains instructions on how you may request to access proxy materials in printed form by mail or electronically on an ongoing basis.

4. How can I access the proxy materials over the Internet?

Your notice regarding the Internet availability of the proxy materials, proxy card or voting instruction card will contain instructions on how to:

- Access and view our proxy materials for the Annual Meeting on the Internet; and
- Instruct us to send our future proxy materials to you electronically by e-mail.

Our proxy materials are also available on our website at the following address:
<http://www.kla-tencor.com/annualmeeting>.

Your notice regarding the Internet availability of proxy materials, proxy card or voting instruction card will contain instructions on how you may request to access proxy materials electronically on an ongoing basis. Choosing to access your future proxy materials electronically will help us conserve natural resources and reduce the costs of printing and distributing our proxy materials. If you choose to access future proxy materials electronically, you will receive an e-mail with instructions containing a link to the website where those materials are available and a link to the proxy voting website. Your election to access proxy materials by e-mail will remain in effect until you terminate it.

5. How may I obtain a paper copy of the proxy materials?

Stockholders receiving a notice regarding the Internet availability of the proxy materials will find instructions in that notice about how to obtain a paper copy of the proxy materials. Stockholders receiving notice of the availability of the proxy materials by e-mail will find instructions in that e-mail about how to obtain a paper copy of the proxy materials. Stockholders who have previously submitted a standing request to receive paper copies of our proxy materials will receive a paper copy of the proxy materials by mail.

6. What should I do if I receive more than one set of voting materials?

You may request delivery of a single copy of our future proxy statements and annual reports by writing to the address provided in the answer to Question 7 below or calling our Investor Relations department at the telephone number below. Stockholders may also request electronic delivery of future proxy statements by writing to the address below, by calling our Investor Relations department at (408) 875-3600 or via our website at <http://ir.kla-tencor.com>.

7. I received one copy of these materials. May I get additional copies?

Certain stockholders who share an address are being delivered only one copy of this Proxy Statement. You may receive additional copies of this Proxy Statement without charge by sending a written request to KLA-Tencor Corporation, Attention: Investor Relations, One Technology Drive, Milpitas, California 95035. Requests may also be made by calling our Investor Relations department at (408) 875-3600.

QUESTIONS AND ANSWERS REGARDING THE ANNUAL MEETING

8. Who may vote at the Annual Meeting?

You may vote at the Annual Meeting if our records showed that you owned shares of KLA-Tencor Common Stock as of the close of business on September 13, 2011 (the "Record Date"). At the close of business on that date, we had a total of 166,543,044 shares of Common Stock issued and outstanding, which were held of record by approximately 575 stockholders. As of the Record Date, we had no shares of Preferred Stock outstanding. You are entitled to one vote for each share that you own.

The Annual Meeting will be held if a majority of the outstanding Common Stock entitled to vote is represented at the Annual Meeting. If you have returned valid proxy instructions or attend the Annual Meeting in person, your Common Stock will be counted for the purpose of

determining whether there is a quorum, even if you wish to abstain from voting on some or all matters at the Annual Meeting.

9. What proposals are being voted on at the Annual Meeting?

In addition to such other business as may properly come before the Annual Meeting or any adjournment thereof, the following four proposals will be presented at the Annual Meeting:

- A. Election as Class I Directors of three candidates nominated by our Board to each serve for a three-year term;
- B. Ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2012;
- C. An advisory vote on executive compensation; and
- D. An advisory vote on the frequency of holding future advisory votes on executive compensation.

QUESTIONS AND ANSWERS REGARDING PROXY SOLICITATION AND VOTING

10. How can I vote if I own shares directly?

Most stockholders do not own shares registered directly in their name, but rather are “beneficial holders” of shares held in a stock brokerage account or by a bank or other nominee (that is, shares held “in street name”). Those stockholders should refer to Question 11 below for instructions regarding how to vote their shares.

If, however, your shares are registered directly in your name with our transfer agent, you are considered, with respect to those shares, the stockholder of record, and these proxy materials are being sent directly to you. You may vote in the following ways:

- A. **By Telephone:** Votes may be cast by telephone prior to 11:59 p.m. EDT on November 2, 2011. Stockholders of record who have received notice of the availability of the proxy materials by mail must have the control number that appears on their notice available when voting. Stockholders of record who received notice of the availability of the proxy materials by e-mail must have the control number included in the e-mail available when voting. Stockholders of record who have received a proxy card by mail must have the control number that appears on their proxy card available when voting;
- B. **By Internet:** Votes may be cast through the Internet voting site prior to 11:59 p.m. EDT on November 2, 2011. Stockholders who have received notice of the availability of the proxy materials by mail may submit proxies over the Internet by following the instructions on the notice. Stockholders who have received notice of the availability of the proxy materials by e-mail may submit proxies over the Internet by following the instructions included in the e-mail. Stockholders who have received a paper copy of a proxy card or voting instruction card by mail may submit proxies over the Internet by following the instructions on the proxy card or voting instruction card;
- C. **By Mail:** Votes may also be cast by mail, as long as the proxy card or voting instruction card is delivered to the Company prior to 11:59 p.m. EDT on

November 2, 2011. Stockholders who have received a paper copy of a proxy card or voting instruction card by mail may submit proxies by completing, signing and dating their proxy card or voting instruction card and mailing it in the accompanying pre-addressed envelope; or

D. **In Person**: Attend the Annual Meeting and vote your shares in person.

Whichever of these methods you select to transmit your instructions, the proxy holders will vote your shares in accordance with those instructions.

If you vote by mail, telephone or Internet without giving specific voting instructions, your shares will be voted FOR Proposal One (the election of the three nominees listed herein for the Board), FOR Proposal Two (the ratification of the appointment of our independent registered public accounting firm), FOR Proposal Three (the approval of the compensation of our Named Executive Officers (as that term is defined on page 43)) and, with respect to Proposal Four, for the approval of an ANNUAL advisory vote on executive compensation. When proxies are properly dated, executed and returned (whether by returned proxy card, telephone or Internet), the shares represented by such proxies will be voted at the Annual Meeting in accordance with the instructions of the stockholder. However, if no specific instructions are given, the shares will be voted in accordance with the recommendations of our Board and as the proxy holders may determine in their discretion with respect to any other matters that properly come before the meeting.

11. How may I vote if my shares are held in a stock brokerage account, or by a bank or other nominee?

If your shares are held in a stock brokerage account or by a bank or other nominee, you are considered the *beneficial* owner of shares held “in street name,” and your broker or nominee is considered the *stockholder of record* with respect to those shares. Your broker or nominee should be forwarding these proxy materials to you. As the beneficial owner, you have the right to direct your broker how to vote, and you are also invited to attend the Annual Meeting. However, since you are not the stockholder of record, you may not vote these shares in person at the Annual Meeting. If a broker, bank or other nominee holds your shares, you will receive instructions from them that you must follow in order to have your shares voted.

12. Can I change my vote?

You may change your vote at any time prior to the vote at the Annual Meeting. To change your proxy instructions if you are a stockholder of record, you must:

- Advise our General Counsel in writing at our principal executive offices, before the proxy holders vote your shares, that you wish to revoke your proxy instructions; or
- Deliver proxy instructions dated after your earlier proxy instructions, in any of the voting methods described in the response to Question 10 above.

If you are the beneficial owner of shares held in street name, you should contact the broker, bank or other nominee that holds your shares for instructions regarding how to change your vote.

13. Who will bear the cost of this proxy solicitation?

KLA-Tencor is making this proxy solicitation, and we will pay the entire cost of this solicitation, including preparing, assembling, printing, mailing and distributing the notices and

these proxy materials and soliciting votes. We have retained the services of D.F. King & Company to aid in the solicitation of proxies from brokers, bank nominees and other institutional owners. We estimate that we will pay D.F. King fees of approximately \$7,500 (plus reimbursement of out-of-pocket expenses) for this solicitation activity, forwarding solicitation material to beneficial and registered stockholders and processing the results. Certain of our Directors, officers and regular employees, without additional compensation, may solicit proxies personally or by telephone.

14. Can my broker vote my shares if I do not instruct him or her how I would like my shares voted?

Yes, but only on a limited range of proposals. If your shares are held in a stock brokerage account or by a bank or other nominee, you are considered the “beneficial” owner of shares held “in street name,” and these proxy materials are being forwarded to you by your broker or nominee (the “record holder”) along with a voting card. As the beneficial owner, you have the right to direct your record holder how to vote your shares, and your record holder is required to vote your shares in accordance with your instructions. Record holders do not have discretion to vote your shares on the election of directors, on the advisory vote on executive compensation or on the advisory vote on the frequency of future advisory votes on executive compensation, in each case in the absence of specific instructions from you (the beneficial owner). Therefore, if you do not give instructions to your record holder, the record holder will only be entitled to vote your shares in its discretion on Proposal Two (the ratification of the appointment of our independent registered public accounting firm).

15. Are abstentions and broker non-votes counted?

Shares that are voted “FOR,” “AGAINST,” “WITHHELD” or “ABSTAIN” are treated as being present for purposes of determining the presence of a quorum and are also treated as shares entitled to vote at the Annual Meeting (“Votes Cast”).

For Proposal One (the election of Directors), you are only able to vote your shares as either “FOR” or “WITHHELD.” Shares that are voted without giving specific voting instructions will be voted as described in the answers to Questions 10 and 14. Accordingly, abstentions will not be relevant to or impact the election of Directors.

For Proposal Two (the ratification of the appointment of our independent registered public accounting firm) and Proposal Three (the advisory vote on executive compensation), you are able to vote your shares as “FOR,” “AGAINST” or “ABSTAIN.” Since abstentions will be counted for Proposals Two and Three for purposes of determining both (i) the presence or absence of a quorum for the transaction of business and (ii) the total number of Votes Cast with respect to the proposal, abstentions on Proposal Two or Proposal Three will have the same effect as a vote against that proposal. Proposals Two and Three are non-binding advisory votes, for which our Board and its committees will give careful consideration to the voting results.

For Proposal Four (the advisory vote on the frequency of holding future advisory votes on executive compensation), you are able to vote your shares for “ONE YEAR,” “TWO YEARS,” “THREE YEARS” or “ABSTAIN.” Proposal Four is a non-binding advisory vote, for which our Board and Compensation Committee will give careful consideration to the frequency that receives the highest number of votes from our stockholders. If you abstain from voting on this proposal, the abstention will not impact the outcome of this vote.

For all proposals, shares that are subject to a broker non-vote are counted for purposes of determining whether a quorum exists but not for purposes of determining whether a proposal has passed.

16. How does the Board recommend that I vote?

The Board recommends that stockholders vote as follows:

- A. “FOR” the election of the three Class I Director candidates nominated by our Board: Robert M. Calderoni, John T. Dickson and Kevin J. Kennedy;
- B. “FOR” the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2012;
- C. “FOR” the approval of the compensation of our Named Executive Officers; and
- D. For the approval of an ANNUAL advisory vote on executive compensation (that is, a vote for the “ONE YEAR” alternative).

17. Will any other business be transacted at the Annual Meeting?

We are not aware of any matters to be presented other than those described in this Proxy Statement. In the unlikely event that any matters not described in this Proxy Statement are properly presented at the Annual Meeting, the proxy holders will use their own judgment to determine how to vote.

18. What happens if the Annual Meeting is adjourned or postponed?

If the Annual Meeting is adjourned or postponed, the proxy holders can vote your shares on the new meeting date as well, unless you have properly revoked your proxy instructions.

19. Where can I find the voting results of the Annual Meeting?

We intend to announce preliminary voting results at the Annual Meeting and publish final results in a Current Report on Form 8-K to be filed with the SEC within four business days of the Annual Meeting.

QUESTIONS AND ANSWERS REGARDING STOCKHOLDER PROPOSALS, DIRECTOR NOMINATIONS BY STOCKHOLDERS AND RELATED BYLAW PROVISIONS

20. Can I present other business to be transacted from the floor at the Annual Meeting?

A stockholder may only present a matter from the floor of a meeting of stockholders for consideration at that meeting if certain procedures set forth in our bylaws are followed, including delivery of advance notice by such stockholder to us. We have not received any timely notices with respect to the Annual Meeting regarding the presentation by any stockholders of business from the floor of the meeting. Accordingly, we do not expect to acknowledge any business presented from the floor at the Annual Meeting.

21. What is the deadline to propose actions for consideration at next year’s annual meeting of stockholders?

You may submit proposals for consideration at future stockholder meetings. For a stockholder proposal to be considered for inclusion in our proxy statement for the annual meeting next year

(which is expected to be held in November 2012), our Corporate Secretary must receive the written proposal at our principal executive offices no later than May 25, 2012. Such proposals also must comply with SEC regulations under Rule 14a-8 regarding the inclusion of stockholder proposals in company-sponsored proxy materials. Proposals should be addressed to:

Corporate Secretary
KLA-Tencor Corporation
One Technology Drive
Milpitas, California 95035
Fax: (408) 875-4144

For a stockholder proposal that is not intended to be included in our proxy statement under Rule 14a-8, the stockholder must provide the information required by our bylaws and give timely notice to our Corporate Secretary in accordance with our bylaws, which, in general, require that the notice be received by our Corporate Secretary:

- No earlier than the close of business on July 6, 2012, and
- No later than the close of business on August 5, 2012.

If the date of the stockholders' meeting is moved more than 30 days before or 60 days after November 3, 2012, then notice of a stockholder proposal that is not intended to be included in our proxy statement under Rule 14a-8 must be received no earlier than the close of business 120 days prior to the meeting and no later than the close of business on the later of the following two dates:

- 90 days prior to the meeting; and
- 10 days after public announcement of the meeting date.

22. How may I recommend or nominate individuals to serve as directors?

You may propose director candidates for consideration by the Board's Nominating and Governance Committee. Any such recommendations should include the nominee's name and qualifications for Board membership and should be directed to our Corporate Secretary at the address of our principal executive offices set forth in Question 21 above.

In addition, our bylaws permit stockholders to nominate directors for election at an annual stockholders' meeting. To nominate a director, the stockholder must deliver the information required by our bylaws and a statement by the nominee acknowledging that he or she will owe a fiduciary obligation to KLA-Tencor and its stockholders. Also, in 2010 the SEC adopted rules aimed at providing certain stockholders with the right to nominate candidates to a company's Board of Directors in the company's proxy materials (referred to as "proxy access"). However, earlier this year, the U.S. Court of Appeals for the District of Columbia Circuit vacated the SEC's "proxy access" rules, so it is unclear whether those rules will ever come into effect (and, if so, when).

23. What is the deadline to propose or nominate individuals to serve as directors?

A stockholder may send a proposed director candidate's name and information to the Board at any time. Generally, such proposed candidates are considered at the first or second Board meeting prior to the annual meeting.

To nominate an individual for election at an annual stockholders' meeting, the stockholder must give timely notice to our Corporate Secretary in accordance with our bylaws, which, for our annual meeting next year, will generally require that the notice be received by our Corporate Secretary between the close of business on July 6, 2012 and the close of business on August 5, 2012, unless the annual meeting is moved by more than 30 days before or 60 days after November 3, 2012, in which case the deadline will be as described in Question 21 above.

As noted in Question 22 above, it is possible that the "proxy access" rules (which are aimed at providing certain stockholders with the right to nominate candidates to a company's Board of Directors in the company's proxy materials) may be in effect for future annual meetings of stockholders. If those rules are in effect for next year's meeting, then, for a director nominee to be considered for inclusion in our proxy statement for the annual meeting, the nominating stockholder will have to make certain filings with the SEC and deliver certain notices in accordance with the requirements of the SEC's final rules.

24. How may I obtain a copy of KLA-Tencor's bylaws?

For a free copy of our bylaws, please contact our Investor Relations department at (408) 875-3600. A copy of our bylaws is also available free of charge on the Internet on our website at <http://ir.kla-tencor.com> and from the SEC's website at <http://www.sec.gov>.

PROPOSAL ONE: ELECTION OF DIRECTORS

Background

We have a classified Board with three classes. At each annual meeting, a class of Directors is elected for a full term of three years to succeed those Directors whose terms expire at the annual meeting. At this Annual Meeting, the terms of the Class I Directors are expiring.

The three incumbent Class I Directors are Robert M. Calderoni, John T. Dickson and Kevin J. Kennedy. These Directors are up for re-election at the Annual Meeting.

The four incumbent Class II Directors are Robert P. Akins, Robert T. Bond, Kiran M. Patel and David C. Wang. The Class II Directors will serve until the annual meeting of stockholders to be held in 2012 or until their respective successors are duly elected and qualified.

The four incumbent Class III Directors are Edward W. Barnholt, Emiko Higashi, Stephen P. Kaufman and Richard P. Wallace. The Class III Directors will serve until the annual meeting of stockholders to be held in 2013 or until their respective successors are duly elected and qualified.

Nominees

The term of the three current Class I Directors will expire on the date of the Annual Meeting. The three incumbent Class I Directors are nominated for election at the Annual Meeting. The Nominating and Governance Committee, consisting solely of independent Directors as determined under the rules of the NASDAQ Stock Market, recommended the Class I Director nominees as set forth in this Proposal One. Based on that recommendation, the members of the Board resolved to nominate such individuals for election.

The three candidates nominated by the Board for election as Class I Directors by the stockholders are:

- Robert M. Calderoni;
- John T. Dickson; and
- Kevin J. Kennedy.

If elected, the nominees for Class I Directors will serve as Directors until our annual meeting of stockholders in 2014, each until his successor is duly elected and qualified. If any nominee declines to serve or becomes unavailable for any reason, or a vacancy occurs before the election, the proxies may be voted for such substitute nominees as the Board may designate. As of the date of this Proxy Statement, the Board is not aware of any nominee who is unable or who will decline to serve as a Director.

Vote Required and Recommendation

If a quorum is present and voting, the three nominees for Class I Directors receiving the highest number of affirmative votes will be elected as Class I Directors. Votes withheld from any Director and broker non-votes are counted for purposes of determining the presence or absence of a quorum but have no other legal effect on the selection of nominees for Directors.

In accordance with our corporate governance policies, anyone who is elected as a Director in any uncontested election by a plurality and not a majority of votes cast will promptly tender his or her resignation to the Board, subject to acceptance by the Board, after certification of the election results. The Nominating and Governance Committee will make a recommendation to the Board whether to accept or reject the resignation or take some other appropriate action, taking into account any stated reasons why stockholders withheld votes and any other factors that the Nominating and Governance Committee determines in its sole discretion are relevant to such decision. The Board will in its sole discretion act on the recommendation of the Nominating and Governance Committee within 90 days after the date of certification of the election results. The Director who tenders his or her resignation will not participate in the decisions of the Nominating and Governance Committee or the Board regarding his or her resignation.

The Board unanimously recommends a vote “FOR” each of the Class I Director nominees, with the Directors who are nominees abstaining.

INFORMATION ABOUT THE BOARD OF DIRECTORS AND ITS COMMITTEES

The Board of Directors

Our Board held a total of eight meetings during the fiscal year ended June 30, 2011.

All Directors other than Mr. Wallace meet the definition of independence within the meaning of the NASDAQ Stock Market director independence standards.

The Board has three standing committees: the Audit Committee; the Compensation Committee; and the Nominating and Governance Committee. The Board has determined that each of the members of each of the Committees has no material relationship with the Company (including any relationship that, in the opinion of the Board, would interfere with the exercise of independent judgment as a Director) and is independent within the meaning of the NASDAQ Stock Market director independence standards, including, in the case of the Audit Committee, the heightened “independence” standard required for such Committee members.

Each Committee meets regularly and has a written charter approved by the Board, all of which are available on our website at <http://ir.kla-tencor.com>. The Board and each Committee regularly review the Committee charters. In addition, at each quarterly Board meeting, a member of each Committee reports on any significant matters addressed by the Committee.

During the fiscal year ended June 30, 2011, each of the incumbent Directors attended at least 80% of the aggregate of (a) the total number of meetings of the Board held during the period for which such person served as a Director and (b) the total number of meetings held by all Committees of the Board on which such Director served (during the periods that such Director served).

Although we do not have a formal policy mandating attendance by members of the Board at our annual meetings of stockholders, we do have a formal policy encouraging their attendance at our annual stockholders’ meetings. Ten of the eleven members of our Board (including Ms. Higashi, who was first elected to our Board at last year’s annual meeting) attended our annual stockholders’ meeting held on November 3, 2010.

For more information regarding the responsibilities of our Board Committees, please refer to the various charters which can be found, along with our Standards of Business Conduct, Corporate Governance Standards and other governance-related information, on our corporate governance website located at <http://ir.kla-tencor.com>.

Board Leadership Structure

KLA-Tencor currently separates the positions of Chief Executive Officer and Chairman of the Board. Since October 2006, Mr. Barnholt, one of our independent Directors, has served as our Chairman of the Board. The responsibilities of the Chairman of the Board include: setting the agenda for each Board meeting, in consultation with the Chief Executive Officer; presiding at executive sessions; facilitating and conducting, with the Nominating and Governance Committee, the annual self-assessments by the Board and each standing committee of the Board; and conducting, with the Compensation Committee, a formal evaluation of the Chief Executive Officer in the context of the annual compensation review.

Separating the positions of Chief Executive Officer and Chairman of the Board allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of the Board to lead the Board in its fundamental role of providing advice to and independent

oversight of management. The Board believes that having an independent Director serve as Chairman of the Board is the appropriate leadership structure for the Company at this time.

However, our Corporate Governance Standards permit the roles of the Chairman of the Board and the Chief Executive Officer to be filled by the same or different individuals. This provides the Board with flexibility to determine whether the two roles should be combined in the future based on KLA-Tencor's needs and the Board's assessment of the Company's leadership from time to time. Our Corporate Governance Standards provide that, in the event that the Chairman of the Board is not an independent Director, the independent members of the Board will designate a "lead independent director."

Board's Role in Oversight of Risk

Our Board, as a whole and through its committees, has responsibility for the oversight of risk management. In its oversight role, our Board has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed. The involvement of the Board in working with management to establish our business strategy at least annually is a key part of its oversight of risk management, its assessment of management's appetite for risk and its determination of what constitutes an appropriate level of risk for KLA-Tencor. In addition, the Board conducts a comprehensive review of the Company's overall risk environment and its risk management efforts at least once per year. The Board and its committees also regularly receive updates from management (including representatives of our legal and internal audit teams) regarding certain risks that we face, including industry, business, macroeconomic, litigation and other operating risks.

While our Board is ultimately responsible for risk oversight at KLA-Tencor, our Board has delegated to the Audit Committee the primary responsibility for the active oversight of our enterprise risk management activities. Our Audit Committee is not only responsible for overseeing risk management of financial matters, the adequacy of our risk-related internal controls, financial reporting and internal investigations, but its charter also provides that the Committee will discuss at least annually KLA-Tencor's risk assessment, enterprise risk management processes and major financial exposures, as well as the steps our management has taken to monitor and control those exposures. Our Audit Committee reports its findings and activities to the Board at each quarterly Board meeting.

In addition, our other Board committees each oversee certain aspects of risk management. Our Compensation Committee oversees risks related to our compensation policies and practices, and our Nominating and Governance Committee oversees governance related risks, such as Board independence and conflicts of interest, as well as management and director succession planning. The Committees report their findings and activities to the Board.

While the Board is responsible for risk oversight, management is responsible for risk management. KLA-Tencor maintains an effective internal controls environment and has processes to identify and manage risk, including an Executive Risk Council comprised of representatives from our legal, human resources, finance, internal audit, compliance and operational teams. This council reports to our Chief Executive Officer and has oversight of the various risk assessment, monitoring and controls processes across the Company.

Audit Committee

At the beginning of fiscal year 2011, the Audit Committee consisted of Messrs. Calderoni, Kaufman, Patel and Wang, with Mr. Calderoni serving as the Chairman of the Committee. Effective November 3, 2010 (the date of last year's annual stockholders' meeting), in connection with a periodic rotation of committee memberships, Mr. Kaufman ceased to serve as a member of the Audit Committee, and Mr. Bond was appointed as a member of the Audit Committee. In addition, on November 4, 2010, the Board appointed Ms. Higashi as a member of the Audit Committee. From November 4, 2010 through the date of this Proxy Statement, the Audit Committee has consisted of Messrs. Calderoni, Bond, Patel and Wang and Ms. Higashi, with Mr. Calderoni serving as the Chairman of the Committee.

The Board has determined that, of the current members of the Audit Committee, each of Mr. Calderoni, Ms. Higashi and Mr. Patel is an "audit committee financial expert" within the meaning of the rules and regulations promulgated by the SEC.

The Audit Committee is responsible for appointing and overseeing the work of our independent registered public accounting firm, approving the services performed by our independent registered public accounting firm, and reviewing and evaluating our accounting principles and system of internal accounting controls. In addition, our Vice President of Internal Audit, who is supervised by our Chief Financial Officer, formally reports into the Audit Committee and provides updates at each quarterly meeting. The Audit Committee held eight meetings during the fiscal year ended June 30, 2011.

The Board has determined that each of the members of the Audit Committee: (1) meets the definition of independence within the meaning of NASDAQ's director independence standards, (2) meets the definition of audit committee member independence within the meaning of Rule 10A-3 under the Securities Exchange Act of 1934 and (3) has no material relationship with KLA-Tencor (including any relationship that, in the opinion of the Board, would interfere with the exercise of independent judgment as a Director).

Compensation Committee

At the beginning of fiscal year 2011, the Compensation Committee consisted of Messrs. Akins, Barnholt, Bond, Dickson and Kennedy, with Mr. Kennedy serving as the Chairman of the Committee. Effective November 3, 2010 (the date of last year's annual stockholders' meeting), in connection with a periodic rotation of committee memberships, Mr. Bond ceased to serve as a member of the Compensation Committee, and Mr. Kaufman was appointed as a member of the Compensation Committee. From November 3, 2010 through the date of this Proxy Statement, the Compensation Committee has consisted of Messrs. Akins, Barnholt, Dickson, Kaufman and Kennedy, with Mr. Kennedy serving as the Chairman of the Committee.

The Compensation Committee reviews and either approves or recommends to the full Board (depending upon the compensation plan and the executive involved) our executive compensation policy and administers our employee equity award plans. The Compensation Committee also reviews and, except with respect to our Chief Executive Officer and Chairman of the Board, has the authority to approve the cash and equity compensation for our executive officers and for members of the Board. See "Compensation Discussion and Analysis – Compensation Approval Procedures" for more information concerning the procedures and processes the Compensation Committee follows in setting such compensation and implementing the various cash and equity compensation programs in effect for such

individuals, including the retention of an independent compensation consultant to provide relevant market data and advice. The Compensation Committee held eight meetings during the fiscal year ended June 30, 2011.

Risk Considerations in Our Compensation Programs

Our management conducted an extensive review and analysis of the design and operation of KLA-Tencor's compensation practices, policies and programs for all employees, including the Named Executive Officers, to assess the risks associated with such practices, policies and programs. Our Compensation Committee has reviewed the results of that analysis, including underlying plan data and a risk assessment of significant elements of our compensation program. Based on this review and assessment, we and our Compensation Committee do not believe our compensation program encourages excessive or inappropriate risk-taking for the following reasons:

- Our use of different types of compensation provides a balance of short-term and long-term incentives with fixed and variable components;
- Our equity awards (including performance share awards, to the extent earned) typically vest over a four-year period, encouraging participants to look to long-term appreciation in equity values;
- The metrics used to determine the amount of a participant's bonus under our incentive bonus plans (and, with respect to executives, the number of shares earnable under their performance share awards) focus on Company-wide measures such as operating margin percentage, which the Compensation Committee believes encourages the generation of profitable revenue and drives long-term stockholder value;
- Our bonus plans impose caps on bonus awards to limit windfalls;
- Our system of internal control over financial reporting, Standards of Business Conduct and whistleblower processes, among other things, are intended to reduce the likelihood of manipulation of our financial performance to enhance payments under our performance-based compensation plans; and
- Our insider trading policy provides that our employees may not enter into hedging transactions involving our Common Stock, in an effort to prevent our employees from insulating themselves from the effects of our stock price performance.

Nominating and Governance Committee

From the beginning of fiscal year 2011 through the date of this Proxy Statement, the Nominating and Governance Committee has consisted of Messrs. Barnholt, Bond, Dickson and Kaufman, with Mr. Barnholt serving as the Chairman of the Committee.

The Nominating and Governance Committee is primarily responsible for identifying and evaluating the qualifications of all candidates for election to the Board, as well as reviewing corporate governance policies and procedures. The Nominating and Governance Committee held four meetings during the fiscal year ended June 30, 2011.

The Nominating and Governance Committee assesses the appropriate size and composition of the Board, the effectiveness of its leadership structure, and whether any vacancies on the

Board are expected. In the event that vacancies are anticipated, or otherwise arise, the Nominating and Governance Committee considers potential candidates that may come to its attention through current members of the Board, professional search firms, management, stockholders or other persons. In evaluating properly submitted stockholder recommendations, the Nominating and Governance Committee uses the evaluation standards discussed in further detail below and seeks to achieve a balance of knowledge, experience and capability on the Board.

It is the Nominating and Governance Committee's policy to consider candidates for the Board recommended by, among other persons, stockholders who have owned one percent (1%) or more of our outstanding shares for at least one year and who state that they have an intent to continue as a substantial stockholder for the long term. Stockholders wishing to nominate candidates for the Board must notify our General Counsel in writing of their intent to do so and provide us with certain information set forth in Article II, Section 11 of our bylaws and all other information regarding nominees that is required to be provided pursuant to Regulation 14A of the Securities Exchange Act of 1934, or as otherwise requested by the Nominating and Governance Committee. In addition, the SEC has adopted rules (referred to as "proxy access" rules) aimed at enabling stockholders that satisfy applicable ownership requirements to nominate candidates for a company's Board of Directors for inclusion in the company's proxy materials. However, earlier this year, the U.S. Court of Appeals for the District of Columbia Circuit vacated the SEC's "proxy access" rules, so it is unclear whether these rules will be in effect for our 2012 annual stockholders' meeting.

Several years ago, we instituted a governance policy applicable to uncontested Director elections, which policy currently remains in effect. Under this policy, anyone who is elected as a Director in any uncontested election by a plurality and not a majority of votes cast will promptly tender his or her resignation to the Board, subject to acceptance by the Board, after certification of the election results. The Nominating and Governance Committee will make a recommendation to the Board whether to accept or reject the resignation or take some other appropriate action, taking into account any stated reasons why stockholders withheld votes and any other factors which the Nominating and Governance Committee determines in its sole discretion are relevant to such decision. The Board will in its sole discretion act on the recommendation of the Nominating and Governance Committee within 90 days after the date of certification of the election results. The Director who tenders his or her resignation will not participate in the decisions of the Nominating and Governance Committee or the Board regarding his or her resignation.

Director Qualifications and Diversity

The Board believes that the skill set, backgrounds and qualifications of our Directors, considered as a group, should provide a significant composite mix of diversity in experience, knowledge and abilities that will allow the Board to fulfill its responsibilities. In addition, the Board believes that there are certain attributes that every Director should possess, such as demonstrated business or academic achievements, the highest ethical standards and a strong sense of professionalism. Accordingly, the Board and the Nominating and Governance Committee consider the qualifications of Directors and Director candidates individually and in the broader context of the Board's overall composition and KLA-Tencor's current and future needs.

In considering candidates for Director nomination, including evaluating any recommendations from stockholders as set forth above, the Nominating and Governance Committee only considers candidates who have demonstrated executive experience or significant high level experience in accounting, legal or a technical field or industry applicable to KLA-Tencor. In addition, as set forth in our Corporate Governance Standards, the Nominating and Governance Committee takes into account all factors it considers appropriate when evaluating Director candidates, which may include strength of character, mature judgment, career specialization, diversity and the extent to which the candidate would fill a present need on the Board. With respect to new Board members, it is the standard practice of the Nominating and Governance Committee to engage a third-party recruiting firm to identify a slate of individuals for consideration as Board candidates based on the above-mentioned criteria.

In addition, the Nominating and Governance Committee annually reviews with the Board the appropriate skills and characteristics required of Directors in the context of the current composition of the Board. In seeking a diversity of background, the Nominating and Governance Committee seeks a variety of occupational and personal backgrounds on the Board in order to obtain a range of viewpoints and perspectives. This annual assessment enables the Board to update the skills and experience it seeks in the Board as a whole, and in individual Directors, as KLA-Tencor's needs evolve and change over time.

In evaluating Director candidates, including incumbent Directors for renomination to the Board, the Nominating and Governance Committee has considered all of the criteria described above. When assessing an incumbent Director, Nominating and Governance Committee also considers the Director's past performance on and contributions to the Board. Among other things, the Nominating and Governance Committee has determined that it is important to have individuals with the following skills and experiences on the Board:

- Current or former executives who demonstrate strong leadership qualities and possess significant operating experience that together enable them to contribute practical business advice to the Board and management, strategies regarding change and risk management, and valuable insight into developing, implementing and assessing our operating plan and business strategy;
- A deep understanding of the key issues relevant to technology companies, including specific knowledge regarding the semiconductor industry, which is vital in understanding and reviewing our business goals and challenges, as well as our product development and acquisition strategies;
- Substantial international experience, which is particularly important given our global presence and the international nature of our customer base;
- An understanding of finance and related reporting processes. In the case of members of our Audit Committee, we seek individuals with demonstrated financial expertise with which to evaluate our financial statements and capital structure; and
- Corporate governance experience obtained from service as Board members and/or executives for other publicly traded companies, which we believe results in a greater sense of accountability for management and the Board and enhanced protection of stockholder interests.

INFORMATION ABOUT THE DIRECTORS AND THE NOMINEES

Our Board and its Nominating and Governance Committee believe that all of the Directors and nominees listed below are highly qualified and have the skills and experience required for service on our Board. The following table sets forth certain information with respect to our Directors and nominees as of the date of this Proxy Statement, including biographies that reflect their significant experiences, qualifications and skills:

<i>Nominees for Election as Class I Directors</i>	Principal Occupation of Board Members	Age
Robert M. Calderoni	<p>Robert M. Calderoni has been a Director of KLA-Tencor since March 2007. Mr. Calderoni currently serves as Chief Executive Officer and a Board member of Ariba, Inc., a leading provider of collaborative business commerce software solutions, positions he has held since October 2001, and he has also served as Ariba’s Chairman of the Board of Directors since July 2003. From 2001 to 2004, Mr. Calderoni also served as Ariba’s President and, before that, as Ariba’s Executive Vice President and Chief Financial Officer. From 1997 to 2001, he served as Chief Financial Officer at Avery Dennison Corporation, a global manufacturer of labeling, imaging and adhesive materials. He is also a member of the Board of Directors of Juniper Networks, Inc.</p> <p>As the Chief Executive Officer and Chairman of the Board of Directors of Ariba, Mr. Calderoni provides our Board with extensive and relevant leadership and international operations experience in the technology industry. In addition, Mr. Calderoni is well-qualified to serve as a Board member and as the Chairman of our Audit Committee as a result of his over 20 years of experience as a finance executive, including his past service as the Chief Financial Officer of two publicly traded technology companies. As a Board member of two other public companies, Mr. Calderoni also has familiarity with a range of corporate governance issues.</p>	51
John T. Dickson	<p>John T. Dickson has been a Director of KLA-Tencor since May 2007. Mr. Dickson currently serves as Executive Vice President and head of Operations of Alcatel-Lucent, a global telecommunications corporation, a position he has held since May 2010. In addition, Mr. Dickson is a member of Alcatel-Lucent’s Management Committee and, since July 2010, has also served as a member of the Board of Directors and Audit Committee of Alcatel-Lucent Shanghai Bell, a joint venture between Alcatel-Lucent and the Chinese government’s State-Owned Assets Supervision and Administration Commission. Mr. Dickson is the former President and Chief Executive Officer of Agere Systems, Inc., a leader in semiconductors and software solutions for storage, mobility and networking markets, a position he held from August 2000 until October 2005, and he also served as a Board member of Agere from March 2001 until October 2005. Prior to joining Agere, Mr. Dickson held positions as the</p>	65

*Nominees for
Election as Class I
Directors*

	Principal Occupation of Board Members	Age
<p>John T. Dickson (Continued)</p>	<p>Executive Vice President and Chief Executive Officer of Lucent’s Microelectronics and Communications Technologies Group; Vice President of AT&T Corporation’s integrated circuit business unit; and Chairman and Chief Executive Officer of SHOgraphics, Inc., a developer of three-dimensional graphics systems, as well as senior roles with ICL, plc, a computer hardware, software and service company, in the United Kingdom and Texas Instruments, Inc. in Europe. Mr. Dickson is currently a member of the Board of Directors of privately held Frontier Silicon, Ltd. Within the past five fiscal years, he has also served on the Boards of Directors of National Semiconductor Corporation (April 2006 to September 2010) and Mettler-Toledo International Inc. (March 2001 to April 2009).</p> <p>As a result of his current executive position at Alcatel-Lucent, as well as his former positions as a senior executive at global technology organizations such as Agere, Lucent and AT&T, Mr. Dickson provides the Board with significant leadership, operations and technology experience, including extensive knowledge of the semiconductor industry. Also, from his current and past service as a Board member with other companies, including other semiconductor companies, Mr. Dickson offers a broad understanding of the role and responsibilities of the Board and valuable insight on a variety of significant industry issues.</p>	
<p>Kevin J. Kennedy</p>	<p>Kevin J. Kennedy has been a Director of KLA-Tencor since May 2007. Mr. Kennedy currently serves as President, Chief Executive Officer and member of the Board of Directors of Avaya Inc., a leading global provider of business communications applications, systems and services, positions he has held since January 2009. Prior to joining Avaya, Mr. Kennedy was Chief Executive Officer of JDS Uniphase Corporation, a provider of optical products and test and measurement solutions for the communications industry, from September 2003 to December 2008, also serving as JDS Uniphase’s President from March 2004 to December 2008. From 2001 to 2003, he served as Chief Operating Officer of Openwave Systems, Inc., a provider of software solutions for the communication and media industries. Previously, Mr. Kennedy spent nearly eight years at Cisco Systems, Inc. and 17 years at Bell Laboratories. In 1987, Mr. Kennedy was a Congressional Fellow to the U.S. House of Representatives Committee on Science, Space and Technology. In January 2011, Mr. Kennedy was appointed to the President’s National Security Telecommunications Advisory Committee by President Barack Obama. Mr. Kennedy is also a member of the Board of Directors of JDS Uniphase. Within the past five fiscal years, he has also served on the Boards of Directors of Polycom, Inc. (May 2008 to January 2009), Rambus, Inc. (April 2003 to May 2008) and Freescale Semiconductor, Inc. (July 2004 to November 2006).</p>	<p>55</p>

*Nominees for
Election as Class I
Directors*

	Principal Occupation of Board Members	Age
Kevin J. Kennedy (Continued)	<p>As the current President and Chief Executive Officer of Avaya and a former senior executive at JDS Uniphase and Openwave, Mr. Kennedy possesses a vast amount of leadership and operational experience with companies in high technology industries. Also, as the holder of a Ph.D. degree in engineering from Rutgers University, a recent appointee to President Obama’s National Security Telecommunications Advisory Committee, a former Congressional Fellow to the U.S. House of Representatives Committee on Science, Space and Technology, and the author of more than 30 papers on computational methods, data networking and technology management, Mr. Kennedy offers relevant expertise in a broad range of technology issues. In addition, as a result of his experience on the Boards of Directors of several public companies, Mr. Kennedy offers our Board a deep understanding of corporate governance matters.</p>	
<i>Class II Directors</i>		
Robert P. Akins	<p>Robert P. Akins has been a Director of KLA-Tencor since May 2008. Mr. Akins is a co-founder of Cymer, Inc., a leading supplier of excimer light sources for deep ultraviolet photolithography systems used in the semiconductor manufacturing process, and has served as Cymer’s Chairman and Chief Executive Officer since its inception in 1986. Mr. Akins also served as Cymer’s President from its inception until May 2000. He is also an ex-officio member of the Board of Directors of SEMI (Semiconductor Equipment and Materials International), a prominent industry organization, and has previously served as SEMI’s Chairman of the Board and its Vice-Chairman.</p> <p>As a co-founder of Cymer and the Chairman and Chief Executive Officer of that company for 25 years, Mr. Akins offers our Board vast executive leadership, operations, entrepreneurial and semiconductor industry experience. In addition, through his role with SEMI, he also offers our Board a broad perspective on key industry issues and challenges.</p>	60
Robert T. Bond	<p>Robert T. Bond has been a Director of KLA-Tencor since August 2000. From April 1996 to January 1998, Mr. Bond served as Chief Operating Officer of Rational Software Corporation, a provider of integrated solutions to automate the software development process. Prior to that, he held various executive positions at Rational Software. Mr. Bond was employed by Hewlett-Packard Company from 1967 to 1983 and held various management positions during his tenure there. Within the past five fiscal years, Mr. Bond has also served as a member of the Board of Directors of Portal Software, Inc. (August 2004 to July 2006).</p> <p>As the former Chief Operating Officer of Rational Software and a member of management at Hewlett-Packard, Mr. Bond has significant operations and corporate management experience dealing with</p>	68

<i>Class II Directors</i>	Principal Occupation of Board Members	Age
Robert T. Bond (Continued)	complex issues faced by global technology companies, including managing international operations, mergers and acquisitions, marketing, sales, product development and finance. In addition, as the former Chief Financial Officer of Rational Software, Mr. Bond possesses an extensive understanding of finance matters and corporate capital structure.	
Kiran M. Patel	<p>Kiran M. Patel has been a Director of KLA-Tencor since May 2008. Mr. Patel currently serves as Executive Vice President and General Manager, Small Business Group of Intuit Inc., a provider of personal finance and small business software, a position he has held since December 2008. Mr. Patel previously served as Intuit’s Senior Vice President and General Manager, Consumer Tax Group and as its Senior Vice President and Chief Financial Officer. Before joining Intuit in September 2005, he was Executive Vice President and Chief Financial Officer of Solectron Corporation from August 2001 to September 2005. He previously worked for Cummins Inc. for 27 years in a variety of finance and business positions, most recently as Chief Financial Officer and Executive Vice President. Mr. Patel currently serves as a Trustee of the Charles Schwab Funds. In addition, within the past five fiscal years, Mr. Patel has also served as a member of the Board of Directors of BEA Systems, Inc. (February 2007 to April 2008).</p> <p>As a current senior officer of Intuit and a former executive at several other companies, Mr. Patel possesses significant international operating and leadership skills, including extensive experience in global sourcing, sales and other business management aspects within manufacturing and technology industries, often involving living and managing businesses overseas. In addition, as a result of his past service as the Chief Financial Officer of several global organizations, including Intuit, Solectron and Cummins, Mr. Patel offers a vast understanding of critical finance matters, which enables him to make significant contributions as a member of our Board and its Audit Committee.</p>	63
David C. Wang	<p>David C. Wang has been a Director of KLA-Tencor since May 2006. Mr. Wang recently retired from his position as Vice President of International Relations of The Boeing Company (a position he held from November 2002 to July 2011), and he also served as the President of Boeing-China from November 2002 to March 2011. Prior to joining Boeing, he spent 22 years at General Electric Company (“GE”), where he worked in various capacities, including most recently as Chairman and Chief Executive Officer of GE China. In addition, Mr. Wang served in executive positions with GE in Singapore, Malaysia and Mexico. Prior to joining GE, Mr. Wang held various engineering positions at Emerson Electric Co. He also currently serves on the Board of Directors of Terex Corporation, as well as a number of non-profit boards. Within the past five fiscal years, Mr. Wang has also served as a member of the Board of Directors of Linktone Ltd. (February 2004 to May 2007).</p>	67

Class II Directors**Principal Occupation of Board Members****Age****David C. Wang
(Continued)**

Due to his former positions as the Vice President of International Relations of The Boeing Company, the President of Boeing-China and an executive in several international locations for GE, Mr. Wang offers significant leadership experience, as well as an extensive knowledge of key business issues in the international locations of some of our most significant customers. With over 30 years of operational experience, primarily in Asia, Mr. Wang offers our Board a deep understanding of growth and competitive issues within changing markets, as well as the challenges involved in building competitive businesses in multi-cultural environments.

Edward W. Barnholt

Edward W. Barnholt has been a Director of KLA-Tencor since 1995 and was named Chairman of the Board of KLA-Tencor in October 2006. From March 1999 to March 2005, Mr. Barnholt was President and Chief Executive Officer of Agilent Technologies, Inc., and he was Chairman of the Board of Directors of Agilent from November 2002 to March 2005. In March 2005, Mr. Barnholt retired as the Chairman, President and Chief Executive Officer of Agilent. Before being named Agilent's Chief Executive Officer, Mr. Barnholt served as Executive Vice President and General Manager of Hewlett-Packard Company's Measurement Organization from 1998 to 1999. From 1990 to 1998, he served as General Manager of Hewlett-Packard's Test and Measurement Organization. He was elected Senior Vice President of Hewlett-Packard in 1993 and Executive Vice President in 1996. Mr. Barnholt also currently serves on the Boards of Directors of Adobe Systems Incorporated and eBay Inc., as well as on the Board of Trustees of the Packard Foundation.

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As the former President, Chief Executive Officer and Chairman of Agilent, as well as a former senior executive with Hewlett-Packard, Mr. Barnholt possesses significant leadership experience, including on matters particularly relevant to companies with complex technology and international issues. Mr. Barnholt's experience as a Board member of KLA-Tencor provides him with an extensive knowledge of our business and industry, and, as a Board member of two other public companies, Mr. Barnholt also has strong corporate governance expertise.

Emiko Higashi

Emiko Higashi has been a Director of KLA-Tencor since November 2010. Ms. Higashi is a founder of Tomon Partners, LLC, a mergers and acquisitions (M&A) and strategy consulting firm, and has served as a managing director of Tomon Partners since its inception in 2003. Prior to Tomon Partners, she was a co-founder and Chief Executive Officer of Gilo Ventures, a technology-focused venture capital firm, from 2000 to 2002. Prior to that, Ms. Higashi spent 15 years in investment banking. After beginning her investment banking

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**Emiko Higashi
(Continued)**

career at Lehman Brothers from 1985 to 1988, Ms. Higashi was a founding member of Wasserstein Parella and the head of that firm's technology M&A business from 1988 until 1994, and subsequently served as a managing director in Merrill Lynch's global technology investment banking M&A practice from 1994 until 2000. Prior to her investment banking career, Ms. Higashi spent two years as a consultant at McKinsey & Co. in Tokyo, Japan.

As a result of her extensive career in technology-focused investment banking and finance, Ms. Higashi brings to the Board significant strategic, business development, M&A and financial experience related to the business and financial issues facing large global technology corporations, as well as a comprehensive understanding of international business matters, particularly in Asia. In addition, as a founder of a consulting firm and a founding member of an investment banking firm, Ms. Higashi also possesses significant leadership and entrepreneurial experience.

Stephen P. Kaufman

Stephen P. Kaufman has been a Director of KLA-Tencor since November 2002. Mr. Kaufman is currently a Senior Lecturer at the Harvard Business School, a position he has held since January 2001. From 1986 to June 2000, he was Chief Executive Officer of Arrow Electronics, Inc., a distributor of semiconductors, electronic components and computer-related peripherals. He also served as Arrow's President from 1985 to June 1999. He was a member of Arrow's Board of Directors from 1984 to May 2003, including serving as Arrow's Chairman of the Board of Directors from 1994 to June 2002. Prior to joining Arrow, Mr. Kaufman served in executive capacities with Midland-Ross Corporation, a manufacturer of electrical, electronic and aerospace products and thermal systems, and, before that, was a partner at McKinsey & Co. Mr. Kaufman also serves on the Board of Directors of Harris Corporation. Within the past five fiscal years, he has also served on the Boards of Directors of Thermo Fisher Scientific Inc. (July 2007 to May 2010) and Freescale Holdings GP, Ltd., the parent company of Freescale Semiconductor, Inc. (July 2004 to December 2006 and July 2007 to November 2009).

As the former President, Chief Executive Officer and Chairman of Arrow Electronics and a former executive and partner with other prominent business entities, Mr. Kaufman has extensive leadership experience, as well as familiarity with operational and strategic issues relating to global technology-focused companies, and he also possesses significant experience analyzing and addressing business issues as a result of his former executive and partner roles and his current position as a respected lecturer at Harvard Business School. In addition, Mr. Kaufman's service as a Board member of several other public companies in recent years and as a lecturer on issues of Board governance provides Mr. Kaufman with valuable corporate governance expertise.

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*Class III Directors***Principal Occupation of Board Members****Age****Richard P. Wallace**

Richard (Rick) P. Wallace currently serves as our President and Chief Executive Officer. Mr. Wallace has been a Director and our Chief Executive Officer since January 2006 and has also served as our President since November 2008. He began at KLA Instruments in 1988 as an applications engineer and has held various general management positions throughout his 23 years with us, including positions as President and Chief Operating Officer from July 2005 to December 2005, Executive Vice President of the Customer Group from May 2004 to July 2005, and Executive Vice President of the Wafer Inspection Group from July 2000 to May 2004. Earlier in his career, he held positions with Ultratech Stepper and Cypress Semiconductor. Mr. Wallace also currently serves as a member of the Boards of Directors of NetApp, Inc. and SEMI (having served as SEMI's Chairman of the Board from July 2010 to July 2011 and its Vice-Chairman from July 2009 to July 2010). He also served on the Board of Directors of Beckman Coulter, Inc. from October 2009 until the company was acquired in June 2011. He earned his bachelor's degree in electrical engineering from the University of Michigan and his master's degree in engineering management from Santa Clara University, where he also taught strategic marketing and global competitiveness courses after his graduation.

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As our President and Chief Executive Officer and a KLA-Tencor employee for over two decades, Mr. Wallace brings to the Board extensive leadership and semiconductor industry experience, including a deep knowledge and understanding of our business, operations and employees, the opportunities and risks faced by KLA-Tencor, and management's strategy and plans for accomplishing our goals. In addition, Mr. Wallace's service as a member of the Boards of Directors of KLA-Tencor, NetApp, Beckman Coulter and a significant industry organization has given him a strong understanding of his role as a Director and a broad perspective on key industry issues and corporate governance matters.

PROPOSAL TWO:
RATIFICATION OF APPOINTMENT OF
PRICEWATERHOUSECOOPERS LLP AS OUR
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM
FOR THE FISCAL YEAR ENDING JUNE 30, 2012

Audit Committee Recommendation

The Audit Committee has the sole authority to retain or dismiss our independent auditors. The Audit Committee has selected PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our consolidated financial statements for our fiscal year ending June 30, 2012. Before making its determination, the Audit Committee carefully considered that firm's qualifications as independent auditors.

The Board, following the Audit Committee's determination, unanimously recommends that the stockholders vote for ratification of such appointment.

Although ratification by stockholders is not required by law, the Board has determined that it is desirable to request approval of this selection by the stockholders. If the stockholders do not ratify the appointment of PricewaterhouseCoopers LLP, the Audit Committee may reconsider its selection.

Attendance at the Annual Meeting

Representatives of PricewaterhouseCoopers LLP are expected to be present at the Annual Meeting with the opportunity to make a statement if they desire to do so, and are expected to be available to respond to appropriate questions.

Fees

The aggregate fees billed by PricewaterhouseCoopers LLP, KLA-Tencor's independent registered public accounting firm, in fiscal years 2011 and 2010 were as follows:

Services Rendered/Fees	2011	2010
Audit Fees ⁽¹⁾	\$2,387,267	\$1,882,691
Audit-Related Fees	—	—
Total Audit and Audit-Related Fees	\$2,387,267	\$1,882,691
Tax Compliance	\$639,803	\$510,878
Tax Planning and Consulting	\$21,058	\$85,875
Total Tax Fees ⁽²⁾	\$660,861	\$596,753
All Other Fees ⁽³⁾	\$2,600	\$4,260

(1) Represents professional services rendered for the audits of annual financial statements set forth in our Annual Reports on Form 10-K for fiscal years 2011 and 2010, the review of quarterly financial statements included in our Quarterly Reports on Form 10-Q for fiscal years 2011 and 2010, and fees for services related to statutory and regulatory filings or engagements.

(2) Represents tax services for U.S. and foreign tax compliance, planning and consulting.

(3) Represents fees for services other than those described above, such as software license fees.

Pre-Approval Policies and Procedures

The Audit Committee has adopted a policy regarding non-audit services provided by PricewaterhouseCoopers LLP, our independent registered public accounting firm. First, the policy ensures the independence of our auditors by expressly naming all services that the auditors may not perform and reinforcing the principle of independence regardless of the type of service. Second, certain non-audit services such as tax-related services and acquisition advisory services are permitted but limited in proportion to the audit fees paid. Third, the Chair of the Audit Committee pre-approves non-audit services not specifically permitted under this policy, and the Audit Committee reviews the annual plan and any subsequent engagements. All non-audit fees were approved by the Audit Committee pursuant to its pre-approval policies and procedures.

On a quarterly basis, management provides written updates to the Audit Committee with regard to audit and non-audit services, the amount of audit and non-audit service fees incurred to date, and the estimated cost to complete such services.

Independence Assessment by Audit Committee

Our Audit Committee considered and determined that the provision of the services provided by PricewaterhouseCoopers LLP as set forth herein is compatible with maintaining PricewaterhouseCoopers LLP's independence and approved all non-audit related fees and services.

Vote Required and Recommendation

If a quorum is present and voting, the affirmative vote of the majority of Votes Cast is needed to ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm, to audit our consolidated financial statements for our fiscal year ending June 30, 2012.

The Board unanimously recommends a vote “FOR” the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending June 30, 2012.

PROPOSAL THREE:
ADVISORY VOTE ON EXECUTIVE COMPENSATION

Background

Beginning this year, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, enables KLA-Tencor's stockholders to vote to approve, on a non-binding advisory basis, the compensation of our Named Executive Officers (as that term is defined on page 43 of this Proxy Statement) as disclosed in the "Compensation Discussion and Analysis" section, the Summary Compensation Table and the other related tables and disclosure in this Proxy Statement.

As described in greater detail under the heading "Compensation Discussion and Analysis," we seek to closely align the interests of our Named Executive Officers with the interests of our stockholders by focusing on a philosophy of "pay-for-performance." Our compensation programs are designed to support our business goals and to promote both short-term and long-term financial and strategic achievement.

We urge stockholders to read the "Compensation Discussion and Analysis" section of this Proxy Statement, which describes in more detail how our executive compensation policies and procedures operate and are designed to achieve our compensation objectives, as well as the Summary Compensation Table and other related compensation tables and disclosure in this Proxy Statement, which provide detailed information on the compensation of our Named Executive Officers. The Compensation Committee and the Board believe that the policies and procedures articulated in the "Compensation Discussion and Analysis" are effective in achieving our goals and that the compensation of our Named Executive Officers as reported in this Proxy Statement has supported and contributed to our recent and long-term success.

Nature of Vote; Recommendation

This vote is advisory and therefore not binding on KLA-Tencor, our Board of Directors or the Compensation Committee. The vote on this resolution is not intended to address any specific element of compensation, but rather relates to the overall compensation of our Named Executive Officers, as described in this Proxy Statement in accordance with the compensation disclosure rules of the SEC.

Accordingly, we ask our stockholders to approve the following resolution at the Annual Meeting:

"RESOLVED, that KLA-Tencor Corporation's stockholders approve, on an advisory basis, the compensation of the Named Executive Officers, as disclosed in the Company's Proxy Statement for the 2011 Annual Meeting of Stockholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, the Summary Compensation Table and the other related tables and disclosure."

While this advisory vote on executive compensation is non-binding, the Board and the Compensation Committee value the opinion of KLA-Tencor's stockholders and will carefully assess the voting results and consider the impact of such vote on our compensation policies and decisions.

Vote Required

The affirmative vote of a majority of the shares of KLA-Tencor Common Stock present in person or represented by proxy and entitled to be voted on the proposal at the Annual Meeting is required for advisory approval of this proposal.

The Board unanimously recommends a vote “FOR” the approval, on an advisory basis, of the compensation of our Named Executive Officers, as disclosed in this Proxy Statement.

PROPOSAL FOUR:
ADVISORY VOTE ON THE FREQUENCY OF HOLDING FUTURE
ADVISORY VOTES ON EXECUTIVE COMPENSATION

Background

The Dodd-Frank Act also enables KLA-Tencor's stockholders to vote to approve, on a non-binding advisory basis, the frequency of votes on the compensation of our Named Executive Officers. Pursuant to this new law, we are asking stockholders to vote on whether future votes on the compensation of our Named Executive Officers, such as the advisory vote in Proposal Three above, should occur every year, every two years, or every three years.

Our Board is recommending that you vote for an annual advisory vote on executive compensation. Our Board and Compensation Committee have a long-term view of executive compensation, which is particularly appropriate in a cyclical industry such as the semiconductor industry, where business cycles typically cover multiple years. However, for this initial vote on the frequency of future advisory votes on executive compensation, we are recommending that an advisory vote on the compensation of our Named Executive Officers be held every year.

Nature of Vote; Recommendation

This vote is advisory and therefore not binding on KLA-Tencor, our Board of Directors or the Compensation Committee. When voting, stockholders are able to specify one of four choices for this proposal on the proxy card: One year, Two years, Three years, or Abstain. Unless otherwise instructed, the proxy holders will vote the proxies they receive for the option of once every ONE year as the preferred frequency for advisory votes on executive compensation.

Accordingly, we ask our stockholders to vote on the preferred voting frequency by selecting the option of one year, two years or three years, or by abstaining from the vote, when voting in response to the following resolution at the Annual Meeting:

“**RESOLVED**, that KLA-Tencor Corporation's stockholders determine, on an advisory basis, whether the preferred frequency of an advisory vote on the executive compensation of the Company's Named Executive Officers, as disclosed in the Company's Proxy Statement, pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, the Summary Compensation Table and the other related tables and disclosure, should be every one year, every two years, or every three years.”

Vote Required

The affirmative vote of a plurality of the shares of KLA-Tencor Common Stock present in person or represented by proxy and entitled to be voted on the proposal at the Annual Meeting is required for advisory approval of this proposal. While this advisory vote on the frequency of holding future votes on executive compensation is non-binding, the Board and the Compensation Committee will carefully consider the voting results in making its final decision regarding the frequency with which such votes will be held in the future. However, because this vote is advisory and not binding, the Board may decide that it is in the best interests of KLA-Tencor and its stockholders to hold an advisory vote more or less frequently than the

alternative that has been selected by our stockholders. The option of every one year, every two years, or every three years that receives the highest number of votes cast by stockholders will be the frequency for the advisory vote on executive compensation that has been selected by stockholders.

The Board unanimously recommends a vote for the option of ONCE EVERY YEAR as the preferred frequency for advisory votes on executive compensation.

OUR CORPORATE GOVERNANCE PRACTICES

At KLA-Tencor, we believe that strong and effective corporate governance procedures and practices are an extremely important part of our corporate culture. In that spirit, we have summarized several of our corporate governance practices below.

Adopting and Maintaining Governance Standards

The Board has adopted, and regularly reviews and updates as necessary, a set of Corporate Governance Standards to establish a framework within which it will conduct its business and to guide management in its running of the Company. The governance standards, portions of which are summarized below, can be found on our website at <http://ir.kla-tencor.com>.

Changes to Our Corporate Governance Practices During Fiscal Year 2011

As part of their regular review of our corporate governance practices, the Board periodically approves changes to our governance documentation, including our Standards of Business Conduct, Corporate Governance Standards, Board Committee charters and bylaws, designed to clarify their terms and promote consistency with prevailing best governance practices. During fiscal year 2011, the Board approved several such changes, the most notable of which was an amendment to our Corporate Governance Standards in February 2011 to increase the mandatory retirement age of our Board members from 70 to 72 years old, in an effort to align our practice to recent governance trends. Directors are now expected to tender their resignation from the Board at the August Board meeting following their 72nd birthday.

Monitoring Board Effectiveness

It is important that our Board and its Committees are performing effectively and in the best interests of KLA-Tencor and our stockholders. The Board is responsible for annually assessing its effectiveness and the effectiveness of each of its Committees in fulfilling their respective obligations, and each Committee is responsible for reviewing the Board's assessment of that Committee's effectiveness. In addition, our Nominating and Governance Committee is charged with overseeing an annual review of the Board and its membership.

Conducting Formal Independent Director Sessions

At the conclusion of each regularly scheduled Board meeting, the independent Directors meet in executive session without KLA-Tencor management or any non-independent Directors.

Hiring Outside Advisors

The Board and each of its Committees may retain outside advisors and consultants of their choosing at our expense, without management's consent.

Avoiding Conflicts of Interest

We expect our Directors, executives and employees to conduct themselves with the highest degree of integrity, ethics and honesty. Our credibility and reputation depend upon the good judgment, ethical standards and personal integrity of each Director, executive and employee.

In order to provide assurances internally and to our stockholders, we have implemented Standards of Business Conduct which provide clear conflict of interest guidelines to our employees, as well as an explanation of reporting and investigatory procedures.

Providing Transparency

We believe it is important that stockholders understand our governance practices. In order to help ensure transparency of our practices, we have posted information regarding our corporate governance procedures on our website at <http://ir.kla-tencor.com>.

Communications with the Board

Although we do not have a formal policy regarding communications with the Board, stockholders may communicate with the Board by writing to us at KLA-Tencor Corporation, Attention: Investor Relations, One Technology Drive, Milpitas, California 95035. Stockholders who would like their submission directed to a member of the Board may so specify, and the communication will be forwarded, as appropriate.

Standards of Business Conduct; Whistleblower Hotline and Website

The Board has adopted Standards of Business Conduct for all of our employees and Directors, including our principal executive and senior financial officers, and we have prepared and made available versions of our Standards of Business Conduct translated into French, German, Hebrew, Japanese, Korean and Chinese (Simplified and Traditional) in an effort to maximize the accessibility and understandability of these important guidelines to our employees. You can obtain a copy of our Standards of Business Conduct via our website at <http://ir.kla-tencor.com>, or by making a written request to us at KLA-Tencor Corporation, Attention: Investor Relations, One Technology Drive, Milpitas, California 95035. We will disclose any amendments to the Standards of Business Conduct, or waiver of a provision therefrom, on our website at the same address.

In addition, we have established a hotline and website for use by employees, as well as third parties such as vendors and customers, to report actual or suspected wrongdoing and to answer questions about business conduct. The hotline and website are both operated by an independent third party, which provides tools to enable individuals to submit reports in a number of different languages and, where permitted by law, on an anonymous basis.

Ensuring Auditor Independence

KLA-Tencor has taken a number of steps to ensure the continued independence of our outside auditors. Our independent auditors report directly to the Audit Committee, which also has the ability to pre-approve or reject any non-audit services proposed to be conducted by our outside auditors.

Compensation Committee Interlocks and Insider Participation

The Compensation Committee currently consists of Messrs. Kennedy (Chair), Akins, Barnholt, Dickson and Kaufman. Mr. Bond also served as a member of the Compensation Committee during a portion of fiscal year 2011 (from the beginning of the fiscal year through November 3, 2010). None of these individuals was an officer or employee of KLA-Tencor at

any time during fiscal year 2011 or at any other time. During fiscal year 2011, there was no instance where an executive officer of KLA-Tencor served as a member of the Board or compensation committee of any entity and an executive officer of that entity served on our Board or Compensation Committee.

Stockholder Nominations to the Board

Please see “INFORMATION ABOUT THE BOARD OF DIRECTORS AND ITS COMMITTEES – Nominating and Governance Committee.”

Majority Voting Policy

Please see “PROPOSAL ONE: ELECTION OF DIRECTORS – Vote Required and Recommendation.”

DIRECTOR COMPENSATION

Employee Directors

Members of the Board who are employees of the Company do not receive any additional compensation for their services as Directors.

Outside Directors

Non-employee members of the Board (“Outside Directors”) receive a combination of equity and cash compensation as approved by the Compensation Committee (or, in the case of the compensation of the Chairman of the Board, as recommended by the Compensation Committee and approved by the Board). Equity compensation to Outside Directors is provided under our 2004 Equity Incentive Plan and, to the extent consisting of stock options, may also be provided under our 1998 Outside Director Option Plan, both of which were approved by our stockholders.

Outside Director Restricted Stock Unit Awards

In accordance with our then-current practice, each Outside Director was awarded restricted stock units at the November 3, 2010 annual stockholders’ meeting covering shares of our Common Stock with an aggregate fair market value of \$100,000 based on the market closing price of our Common Stock on the date of the award (\$36.08 per share). Accordingly, each Outside Director at that time received a restricted stock unit award covering 2,772 shares of Common Stock (other than the Chairman of the Board, who received 1.5 times that number as described below). The restricted stock units awarded to the Outside Directors at the November 3, 2010 annual stockholders’ meeting were made with respect to their Board service for fiscal year 2011. The restricted stock units will vest upon completion of one year of Board service measured from the date of grant, and the underlying shares will be issued immediately at that time.

In August 2011, based on a review of market data regarding director compensation, the Compensation Committee approved an increase of \$20,000 to the fair market value of the Directors’ annual restricted stock unit award (and the Board approved the change with respect to its impact on the Chairman of the Board’s compensation). This updated policy will be in effect for the Annual Meeting. Accordingly, each Outside Director as of the date of the November 2011 Annual Meeting will be awarded restricted stock units at the Annual Meeting covering shares of our Common Stock with an aggregate fair market value of \$120,000 based on the market closing price of our Common Stock on that date (other than the Chairman of the Board, who will receive shares with a fair market value of 1.5 times that amount as described below). The restricted stock units will vest upon completion of one year of Board service measured from the date of grant, and the underlying shares will be issued immediately at that time.

If a new Outside Director joins the Board after the date of an annual stockholders’ meeting, his or her first restricted stock unit award will be granted promptly after he or she joins the Board and will be prorated to take into account the period of time from the last annual stockholders’ meeting to the date the new Outside Director joined the Board.

Cash Compensation

For fiscal year 2011, each Outside Director received an annual retainer fee of \$75,000 (other than the Chairman of the Board, who received two times that amount as described below), paid quarterly, and meeting fees of \$2,500 for each Board meeting attended in person, \$1,250 for each Board meeting attended by telephone conference call, \$1,500 for each Committee meeting attended in person, and \$750 for each Committee meeting attended by telephone conference call. Each Committee Chair also received an additional annual retainer. For fiscal year 2011, the additional annual retainer paid to the Chairman of the Audit Committee was \$30,000, the additional annual retainer paid to the Chairman of the Compensation Committee was \$20,000, and the additional annual retainer paid to the Chairman of the Nominating and Governance Committee was \$10,000. Outside Directors also are reimbursed for their reasonable expenses incurred in attending Board and Committee meetings.

The cash compensation component of the Outside Director compensation program will continue to remain in effect unchanged for fiscal year 2012.

Outside Director Stock Options

Effective November 15, 2007, Outside Directors no longer receive stock options as a component of their compensation. Accordingly, we did not issue any stock options to the Outside Directors during fiscal year 2011.

Non-Executive Chairman

For fiscal year 2011, our policy was that, if the Chairman of the Board was not an executive of the Company (as was the case, with Mr. Barnholt serving as Chairman), the Chairman's annual retainer fee would be two times the regular level for Outside Directors, and the Chairman's equity awards would be 1.5 times the regular level for Outside Directors. This policy will continue to remain in effect for fiscal year 2012.

Deferred Compensation

Each Outside Director is entitled to defer all or a portion of his or her director fees, pursuant to our Executive Deferred Savings Plan, a nonqualified deferred compensation plan. Amounts credited to the plan may be allocated by the participant among 23 investment funds. Of the current Outside Directors, only Messrs. Barnholt, Bond, Patel and Wang participated in this plan during fiscal year 2011 (with only Mr. Wang making new contributions during the fiscal year).

Stock Ownership Guidelines

We have adopted a policy, approved by the Board, pursuant to which each Outside Director is expected to own a specified minimum number of shares of our Common Stock. By the later of (a) November 13, 2012 or (b) the fourth anniversary of the date on which an individual becomes an Outside Director, each Outside Director is expected to own at least a number of shares of our Common Stock with a market value of at least three (3) times the standard annual cash retainer paid to the Outside Directors, as that retainer may be changed from time to time. Shares of Common Stock underlying unvested restricted stock units held by the Directors will count toward this ownership requirement. As of the Record Date, each of our current Outside

Directors was in compliance with this stock ownership requirement, other than Ms. Higashi, who joined the Board in November 2010 and is therefore not required to comply with our stock ownership guidelines until November 2014.

Director Compensation Table

The following table sets forth certain information regarding the compensation earned by or awarded to each Outside Director during fiscal year 2011 who served on our Board during the year.

Name	Fees Earned or Paid in Cash (\$) ⁽¹⁾	Stock Awards (\$) ⁽²⁾	Option Awards (\$) ⁽³⁾	Change in Pension Value and Nonqualified Deferred Compensation Earnings (\$)	Total (\$)
Robert P. Akins	96,750	100,014	—	—	196,764
Edward W. Barnholt	186,250	149,985	—	— ⁽⁴⁾	336,235
Robert T. Bond	103,750	100,014	—	— ⁽⁴⁾	203,764
Robert M. Calderoni	126,750	100,014	—	—	226,764
John T. Dickson	102,250	100,014	—	—	202,264
Emiko Higashi	68,250	100,014	—	—	168,264
Stephen P. Kaufman	102,500	100,014	—	—	202,514
Kevin J. Kennedy	116,250	100,014	—	—	216,264
Kiran M. Patel	97,000	100,014	—	— ⁽⁴⁾	197,014
David C. Wang	94,250	100,014	—	— ⁽⁴⁾	194,264

- (1) The amounts set forth in this column represent fees earned by each Outside Director during fiscal year 2011, regardless of whether the fees were actually paid during the fiscal year. The aggregate payment amounts include the following categories of payments:

Name	Annual Retainer (\$)	Board Meeting Fees (\$)	Committee Meeting Fees (\$)	Non-Executive Chairman of the Board – Additional Retainer (\$)	Committee Chairperson – Additional Retainer (\$)	Total (\$)
Robert P. Akins	75,000	15,000	6,750	—	—	96,750
Edward W. Barnholt	75,000	15,000	11,250	75,000	10,000	186,250
Robert T. Bond	75,000	13,750	15,000 ^(*)	—	—	103,750
Robert M. Calderoni	75,000	13,750	8,000	—	30,000	126,750
John T. Dickson	75,000	13,750	13,500	—	—	102,250
Emiko Higashi	56,250 ⁽⁺⁾	7,500	4,500	—	—	68,250
Stephen P. Kaufman	75,000	15,000	12,500	—	—	102,500
Kevin J. Kennedy	75,000	13,750	7,500	—	20,000	116,250
Kiran M. Patel	75,000	12,500	9,500	—	—	97,000
David C. Wang	75,000	11,250	8,000	—	—	94,250

- (*) Mr. Bond earned Committee meeting fees of \$15,000 during fiscal year 2011. However, the actual amount paid to him was \$13,500, reflecting a correction of a \$1,500 overpayment that had inadvertently been made to Mr. Bond for his service during fiscal year 2010.

- (+) Ms. Higashi joined the Board on November 3, 2010, upon her election at the 2010 Annual Meeting of Stockholders. Accordingly, she received a prorated portion of the annual \$75,000 retainer fee during fiscal year 2011, reflecting the portion of the fiscal year that she served as a Director.

- (2) The amounts shown represent the aggregate grant date fair value of restricted stock units (“RSUs”) awarded to each Outside Director during fiscal year 2011, computed in accordance with the provisions of Financial Accounting Standards Board (“FASB”) Accounting Standards Codification Topic 718, referred to in this Proxy Statement as ASC 718 (except that the fair values set forth above have not been reduced by the Company’s estimated forfeiture rate). The ASC 718 grant date fair value of each RSU award was calculated based on the fair market value of our Common Stock on the award date. On November 3, 2010, each Outside Director was granted an RSU award covering 2,772 shares of our Common Stock (other than Mr. Barnholt who, as Chairman of the Board, received an RSU award covering 1.5 times that number of shares, or 4,157 shares, as described above under the heading “Non- Executive Chairman”). The closing market price of our Common Stock on November 3, 2010 was \$36.08 per share. The following table shows, for each Outside Director, the aggregate number of unvested shares of our Common Stock underlying all outstanding RSUs held by that Outside Director as of June 30, 2011:

Name	Aggregate Number of Unvested Shares of Common Stock Underlying All of Director’s RSU Awards as of June 30, 2011 (#)
Robert P. Akins	2,772
Edward W. Barnholt	4,157
Robert T. Bond	2,772
Robert M. Calderoni	2,772
John T. Dickson	2,772
Emiko Higashi	2,772
Stephen P. Kaufman	2,772
Kevin J. Kennedy	2,772
Kiran M. Patel	2,772
David C. Wang	2,772

- (3) No stock options were granted to any of the Outside Directors during fiscal year 2011. The following table shows, for each Outside Director, the aggregate number of shares subject to all outstanding options held by that Outside Director as of June 30, 2011:

Name	Number of Shares Subject to All Outstanding Options Held as of June 30, 2011 (#)
Robert P. Akins	—
Edward W. Barnholt	53,750
Robert T. Bond	41,250
Robert M. Calderoni	3,750
John T. Dickson	2,500
Emiko Higashi	—
Stephen P. Kaufman	41,250
Kevin J. Kennedy	2,500
Kiran M. Patel	—
David C. Wang	6,250

- (4) As noted above, of the current Outside Directors, only Messrs. Barnholt, Bond, Patel and Wang participated in our Executive Deferred Savings Plan (“EDSP”). In our Proxy Statements for fiscal year 2010 and prior years, we have historically reported the total earnings under the EDSP for each of our participating Outside Directors under this column of the Director Compensation Table, with a note that we were electing to report the entire amount of such earnings and were making no determination as to whether any portion of such earnings was “above market” or “preferential.” However, upon further analysis, we have concluded that, because the Outside Directors’ EDSP earnings correspond to the actual market earnings on a select group of investment funds available under the EDSP, no portion of the Outside Directors’ earnings under the EDSP is “above market” or “preferential.” Accordingly, beginning with this Proxy Statement, we are no longer reporting any portion of the Outside Directors’ earnings under the EDSP in the Director Compensation Table. The investment earnings under the EDSP during fiscal year 2011 for the Outside Directors who participated in such plan were as follows: (a) Mr. Barnholt: \$200,199; (b) Mr. Bond: \$62,149; (c) Mr. Patel: \$29,224; and (d) Mr. Wang: \$55.

INFORMATION ABOUT EXECUTIVE OFFICERS

Set forth below are the names, ages and positions of the executive officers of KLA-Tencor as of the date of this Proxy Statement.

Name and Position	Principal Occupation of the Executive Officers	Age
Richard P. Wallace President & Chief Executive Officer	Please see “ INFORMATION ABOUT THE DIRECTORS AND THE NOMINEES – <i>Class III Directors.</i> ”	51
Mark P. Dentinger Executive Vice President & Chief Financial Officer	Mark P. Dentinger joined KLA-Tencor in September 2008 as the Company’s Executive Vice President and Chief Financial Officer. Prior to joining KLA-Tencor, from February 2005 to April 2008, Mr. Dentinger most recently served as Executive Vice President and Chief Financial Officer for BEA Systems, Inc., until the company was acquired by Oracle Corporation. Mr. Dentinger was with BEA Systems for a total of nine years, during which he held various senior financial and managerial roles within the company. Prior to joining BEA Systems, Mr. Dentinger served in various financial management positions at Compaq Computer Corporation (now Hewlett-Packard) for six years, culminating in his appointment as Director of Finance, High Performance Systems Manufacturing in 1996. Mr. Dentinger received his bachelor’s degree in economics from St. Mary’s College of California and his M.B.A. in finance from the University of California at Berkeley.	53
Bobby R. Bell Executive Vice President, Global Customer Organization	Bobby R. Bell currently serves as KLA-Tencor’s Executive Vice President, Global Customer Organization, a title he has held since September 2008. In that role, Mr. Bell oversees the Company’s global field operations, corporate sales, corporate marketing and service business. Mr. Bell joined KLA Instruments in 1994 as a Senior Engineer in applications development and has held a number of strategic management positions throughout his 17 years with the Company. He has been a key member of the Company’s Customer Group since 2004, including his current position and prior roles leading Asia and then worldwide sales and field operations. Before that, he served as a Vice President in the Company’s Wafer Inspection group from 2000 to 2004 and in various marketing roles from 1995 to 2000. Prior to joining the Company, Mr. Bell spent 10 years with AT&T Technology Systems and AT&T Microelectronics (including 18 months as AT&T’s assignee at SEMATECH, a prominent semiconductor industry consortium) in the area of yield, defect reduction, process integration, product engineering and management. Mr. Bell earned his bachelor’s degree in electrical engineering from the University of Arkansas and his master’s degree in electrical engineering from the University of Missouri.	49

Name and Position	Principal Occupation of the Executive Officers	Age
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	Brian M. Martin joined KLA-Tencor in April 2007 as the Company's Executive Vice President, General Counsel and Corporate Secretary. Prior to joining KLA-Tencor, Mr. Martin served in senior legal positions at Sun Microsystems, Inc. for ten years, most recently as Vice President, Corporate Law Group, responsible for legal requirements associated with Sun's corporate securities, mergers, acquisitions and alliances, corporate governance and Sarbanes-Oxley compliance, and litigation management. Mr. Martin also supported Sun's worldwide sales activities and for several years served as its chief antitrust counsel. Prior to joining Sun, Mr. Martin was in private practice where he had extensive experience in antitrust and intellectual property litigation. Mr. Martin also currently serves on the Board of Directors of several non-profit organizations. Mr. Martin earned his bachelor's degree in economics from the University of Rochester and his J.D. from the State University of New York at Buffalo Law School. Mr. Martin serves as an adjunct professor of law at SUNY Buffalo Law School where he designed and teaches a course on ethics.	49
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	Virendra A. Kirloskar has served as the Company's Senior Vice President and Chief Accounting Officer since March 2008. Mr. Kirloskar rejoined the Company as Vice President and Corporate Controller in May 2003 and served in that role until March 2008, other than the period from August 2006 to August 2007 during which he held management responsibilities within KLA-Tencor India. Prior to that, from June 2002 to April 2003, Mr. Kirloskar served as Corporate Controller of Atmel Corporation, a designer and manufacturer of semiconductor integrated circuits. Mr. Kirloskar also held various finance positions within KLA-Tencor from 1993 to 1999. Mr. Kirloskar received his bachelor's degree in commerce from the University of Pune, India and his master's degree in business administration from the University of Massachusetts Amherst.	47

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

Principal Stockholders

As of September 13, 2011, based on our review of filings made with the SEC, we are aware of the following entities being beneficial owners of more than 5% of our Common Stock:

Name and Address	Number of Shares Beneficially Owned	Percent of Shares Beneficially Owned ⁽¹⁾
Capital World Investors ⁽²⁾ 333 South Hope Street Los Angeles, CA 90071	20,457,418	12.3%
Capital Research Global Investors ⁽³⁾ 333 South Hope Street Los Angeles, CA 90071	16,850,550	10.1%
The Growth Fund of America, Inc. ⁽⁴⁾ 333 South Hope Street Los Angeles, CA 90071	10,940,000	6.6%
FMR LLC ⁽⁵⁾ 82 Devonshire Street Boston, MA 02109	8,385,673	5.0%
BlackRock, Inc. ⁽⁶⁾ 40 East 52 nd Street New York, NY 10022	8,370,532	5.0%

- (1) Based on 166,543,044 outstanding shares of our Common Stock as of September 13, 2011.
- (2) All information regarding Capital World Investors (“Capital World”) is based solely on information disclosed in an Amendment to Schedule 13G filed by Capital World with the SEC on February 14, 2011. Capital World, a division of Capital Research and Management Company, is deemed to beneficially own 20,457,418 shares of our Common Stock as a result of Capital Research and Management Company acting as investment adviser to various investment companies. According to the Schedule 13G/A filing, Capital World had sole voting power and sole dispositive power with respect to all 20,457,418 shares of our Common Stock reported as beneficially owned by Capital World as of December 31, 2010.
- (3) All information regarding Capital Research Global Investors (“CRGI”) is based solely on information disclosed in an Amendment to Schedule 13G filed by CRGI with the SEC on February 11, 2011. CRGI, a division of Capital Research and Management Company, is deemed to beneficially own 16,850,550 shares of our Common Stock as a result of Capital Research and Management Company acting as investment adviser to various investment companies. According to the Schedule 13G/A filing, CRGI had sole voting power and sole dispositive power with respect to all 16,850,550 shares of our Common Stock reported as beneficially owned by CRGI as of December 31, 2010.
- (4) All information regarding The Growth Fund of America, Inc. (“The Growth Fund”) is based solely on information disclosed in an Amendment to Schedule 13G filed by The Growth Fund with the SEC on February 14, 2011. The Growth Fund, an investment company registered under the Investment Company Act of 1940 that is advised by Capital Research and Management Company, is the beneficial owner of 10,940,000 shares of our Common Stock. According to the Schedule 13G/A filing, of the 10,940,000 shares of our Common Stock reported as beneficially owned by The Growth Fund as of December 31, 2010, The Growth Fund had sole voting power with respect to all 10,940,000 shares but did not have sole or shared dispositive power with respect to any of the shares of our Common Stock reported as beneficially owned by The Growth Fund as of that date. In addition, the Schedule 13G/A filing notes that the shares reported as beneficially owned by The Growth Fund may also be reflected in a Schedule 13G/A filing made by CRGI and/or Capital World.
- (5) All information regarding FMR LLC (“FMR”) is based solely on information disclosed in an Amendment to Schedule 13G filed by FMR LLC and Edward C. Johnson 3d, Chairman of FMR, with the SEC on February 14, 2011. According to the Schedule 13G/A, the 8,385,673 shares of our Common Stock reported by FMR were owned, or may be deemed to have been owned, by FMR as of December 31, 2010. Fidelity

Management & Research Company (“Fidelity”), a wholly owned subsidiary of FMR, is the beneficial owner of 4,829,606 shares as a result of acting as investment adviser to various investment companies. Edward C. Johnson 3d and FMR, through its control of Fidelity and the Fidelity funds (“Funds”), each has sole dispositive power over the 4,829,606 shares owned by the Funds. Neither FMR nor Edward C. Johnson 3d has sole voting power over the shares owned directly by the Funds, which power resides with the Funds’ Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds’ Boards of Trustees. Strategic Advisers, Inc., a wholly owned subsidiary of FMR, is the beneficial owner of 2,344 shares as a result of providing investment advisory services to individuals. Pyramis Global Advisors, LLC (“PGALLC”), an indirect wholly owned subsidiary of FMR and an investment adviser, is the beneficial owner of 101,200 shares as a result of serving as an investment adviser to institutional accounts, non-U.S. mutual funds or investment companies registered under the Investment Company Act of 1940 owning such shares. Edward C. Johnson 3d and FMR, through its control of PGALLC, each has sole dispositive power and sole voting power over the 101,200 shares owned by the institutional accounts or funds advised by PGALLC. Pyramis Global Advisors Trust Company (“PGATC”), an indirect wholly owned subsidiary of FMR and a bank, is the beneficial owner of 78,886 shares as a result of serving as investment manager of institutional accounts owning such shares. Edward C. Johnson 3d and FMR, through its control of PGATC, each has sole dispositive power and sole voting power over the 78,886 shares owned by the institutional accounts managed by PGATC. FIL Limited (“FIL”) provides investment advisory and management services to non-U.S. investment companies and institutional investors. Partnerships controlled predominantly by the family of Edward C. Johnson 3d, Chairman of FMR and FIL, or trusts for their benefit, own approximately 39% of the voting stock of FIL. As such, though FMR states in the Schedule 13G/A that they are of the view that FMR and FIL are not acting as a “group” under the Securities Exchange Act of 1934 and that the shares held by the other therefore do not need to be aggregated, FMR’s beneficial ownership includes 3,373,637 shares beneficially owned through FIL (with respect to which FIL has sole dispositive power over all such shares, sole voting power over 3,304,437 of such shares, and no voting power over 69,200 of such shares).

- (6) All information regarding BlackRock, Inc. (“BlackRock”) is based solely on information disclosed in an Amendment to Schedule 13G filed by BlackRock with the SEC on February 7, 2011. According to the Schedule 13G/A filing, BlackRock had sole voting power and sole dispositive power with respect to all 8,370,532 shares of our Common Stock reported as beneficially owned by BlackRock as of December 31, 2010.

Management

The following table sets forth the beneficial ownership of our Common Stock as of September 13, 2011 by all current Directors, each of the Named Executive Officers set forth in the Summary Compensation Table, and all current Directors and executive officers as a group. Except for shares held in brokerage accounts which may from time to time, together with other securities held in those accounts, serve as collateral for margin loans made from those accounts, none of the shares reported as beneficially owned are currently pledged as security for any outstanding loan or indebtedness. Shares that, as of September 13, 2011, have not yet been issued under outstanding restricted stock units (and that are not scheduled to vest within 60 days after September 13, 2011) due to applicable performance or service-vesting requirements that have not yet been satisfied are not included in the table below but are indicated in footnote 13 to such table:

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percent of Outstanding Class ⁽¹⁾
Richard P. Wallace ⁽²⁾⁽¹³⁾	472,897	*
Robert P. Akins ⁽³⁾	12,395	*
Edward W. Barnholt ⁽⁴⁾	92,917	*
Robert T. Bond ⁽⁵⁾	52,474	*
Robert M. Calderoni ⁽⁶⁾	18,227	*
John T. Dickson ⁽⁷⁾	17,378	*
Emiko Higashi ⁽⁸⁾	2,772	*
Stephen P. Kaufman ⁽⁹⁾	57,474	*
Kevin J. Kennedy ⁽¹⁰⁾	16,228	*
Kiran M. Patel ⁽¹¹⁾	7,395	*
David C. Wang ⁽¹²⁾	20,970	*
Mark P. Dentinger ⁽¹³⁾	25,968	*
Bobby R. Bell ⁽¹³⁾⁽¹⁴⁾	97,730	*
Brian M. Martin ⁽¹³⁾	14,899	*
Virendra A. Kirloskar ⁽¹³⁾⁽¹⁵⁾	31,060	*
All current Directors and executive officers as a group (15 persons) ⁽¹⁶⁾	940,784	*

* Less than 1%.

- (1) Based on 166,543,044 outstanding shares of our Common Stock as of September 13, 2011. In addition, shares of our Common Stock subject to options that are presently exercisable or will become exercisable within 60 days after September 13, 2011 are deemed to be outstanding for the purpose of computing the percentage ownership of a person or entity in this table, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person or entity.
- (2) Includes 338,500 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011.
- (3) Includes 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (4) Includes 53,750 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011 (note that options covering 10,000 of such shares are scheduled to expire during such 60-day period), and 4,157 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.

- (5) Includes 41,250 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011 (note that options covering 10,000 of such shares are scheduled to expire during such 60-day period), and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (6) Includes 3,750 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011, and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (7) Includes 2,500 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011, and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (8) Includes 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (9) Includes 41,250 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011, and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (10) Includes 2,500 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011, and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (11) Includes 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (12) Includes 6,250 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011, and 2,772 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.
- (13) As of September 13, 2011, the Named Executive Officers listed below each held unvested restricted stock units and performance share awards (which units were not scheduled to vest within 60 days after September 13, 2011 and therefore are not included in the beneficial ownership table above). Each restricted stock unit (including any portion of the currently unearned performance share awards that is ultimately determined to have been earned) will entitle that officer to one share of our Common Stock upon satisfaction of the applicable service vesting (and, where applicable, performance vesting) requirement in effect for that unit.

<u>Name</u>	<u>Number of Shares Subject to Unvested Restricted Stock Units (Including Earned but Unvested Performance Share Awards)</u>	<u>Number of Shares Subject to Unvested Performance Share Awards That Were Unearned as of Sept. 13, 2011 (Stated at Maximum Number of Shares That May Yet Be Earned)</u>
Richard P. Wallace	201,400	106,900
Mark P. Dentinger	92,900	31,400
Bobby R. Bell	96,158	331,500
Brian M. Martin	45,350	17,100
Virendra A. Kirloskar	30,650	8,550

- (14) Includes 70,892 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011.
- (15) Includes 19,327 shares subject to options which are presently exercisable or will become exercisable within 60 days after September 13, 2011.
- (16) Includes options to purchase an aggregate of 579,969 shares of our Common Stock held by the current officers and Directors which are presently exercisable or will become exercisable within 60 days of September 13, 2011, and 29,105 shares subject to restricted stock units that will vest and become deliverable within 60 days after September 13, 2011.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our executive officers, Board members, and persons who own more than ten percent of a registered class of our equity securities to file reports of ownership and changes in ownership with the SEC, and such persons are also required by SEC regulations to furnish us with copies of all Section 16(a) forms they file. Based solely on our review of the copies of such forms received by us, we believe that during fiscal year 2011 all of our executive officers, Board members and greater than ten percent stockholders complied with all applicable filing requirements, except that

Board member Robert M. Calderoni failed to report approximately 41 shares of our Common Stock on a Form 5 for fiscal year 2010, which shares had been acquired by Mr. Calderoni on June 1, 2010 pursuant to an automatic dividend reinvestment election in Mr. Calderoni's personal brokerage account. An amended Form 4 reporting these shares as part of Mr. Calderoni's holdings of our Common Stock as of November 3, 2010 (as well as approximately 72 additional shares purchased pursuant to such reinvestment election on September 1, 2010) was filed with the SEC on March 29, 2011.

EXECUTIVE COMPENSATION AND OTHER MATTERS
COMPENSATION DISCUSSION AND ANALYSIS

Compensation Philosophy and Design Principles

The philosophy of the Compensation Committee on executive compensation is that it should be designed to:

- Attract, retain and reward executives who contribute to the overall success of the Company by offering compensation packages that are competitive with those offered by other employers with which we compete for talent; and
- Achieve a balance and alignment between performance-based compensation and compensation that supports our long-term employee retention efforts.

The Compensation Committee’s philosophy is reflected in the following executive compensation design principles:

- In addition to a competitive base salary, a substantial portion of the executives’ potential cash compensation should be tied to a short-term incentive bonus plan that rewards corporate and individual achievement of challenging performance goals; and
- The program should typically provide two types of long-term compensation: (i) service-based awards with vesting conditioned only upon continued service, supporting our employee retention efforts, and (ii) performance-based awards, which provide additional long-term compensation as a reward for achievement of corporate goals and which, if earned, also include service-vesting requirements. For the Company, this compensation has historically been in the form of equity awards to incentivize the creation of stockholder value.

Compensation Element	Objective
Base salary	Provide a competitive fixed component of cash compensation.
Short-term incentive bonus plan	Offer a variable cash compensation opportunity earned based upon the level of achievement of challenging corporate goals, with adjustments based on individual and corporate performance.
Long-term incentives	Align long-term management and stockholder interests and strengthen retention with four-year vesting provisions. Service-based awards offer certainty and long-term retention. Performance-based awards provide opportunity based upon the level of achievement of challenging corporate goals.
Benefit plans	Provide competitive employee benefits. We do not view this as a significant component of our executive compensation program.

Named Executive Officers

This Compensation Discussion and Analysis section provides a comprehensive review of our executive compensation philosophy and program, including our program design for fiscal year 2011. The discussion in this section focuses on the compensation of our “Named Executive Officers” for fiscal year 2011, who were:

- Richard P. Wallace (President and Chief Executive Officer);

- Mark P. Dentinger (Executive Vice President and Chief Financial Officer);
- Bobby R. Bell (Executive Vice President, Global Customer Organization);
- Brian M. Martin (Executive Vice President, General Counsel and Corporate Secretary);
and
- Virendra A. Kirloskar (Senior Vice President and Chief Accounting Officer).

Overview: Our Commitment to Pay-for-Performance

The Compensation Committee and the Independent Board Members¹ have structured our executive compensation program to pay for performance and, over the long term, to provide compensation for our executive officers that is market competitive and supports our retention efforts.

When the fiscal year 2011 executive compensation program was being designed in July and August 2010, signs indicated that the strong demand for semiconductor capital equipment in the prior year was continuing into fiscal year 2011. Our executive compensation structure for fiscal year 2011 featured significant performance-based components tied to objectives that were considered challenging in light of anticipated market conditions.

Fiscal Year 2011 Highlights

Fiscal year 2011 was an extremely strong year for our industry and a record year for KLA-Tencor.

Demand for our products was extremely robust. While our positive operating results were partly driven by an up-cycle in our industry, the Company also performed very well by relative measures, including growth rate and operating effectiveness. Our strong relative performance is largely attributable to factors specific to the Company, such as our ability to anticipate customer demands, our market leadership driven by significant investment in technology development and our focus on maintaining strict cost discipline.

Our fiscal year 2011 performance is highlighted by the following achievements:

- The Company recorded the highest level of revenues (\$3.2 billion) for any fiscal year in its history, representing a year-over-year growth rate (74.4%) that exceeded the average growth rate of the companies in the Company's direct peer group (as identified under "Compensation Committee Decision Making – Process Overview and Market Data" below) for the equivalent period by more than 16 percentage points;
- New orders exceeded \$3.2 billion, representing significant growth over the prior year and a Company fiscal year record, and the Company ended fiscal year 2011 with nearly \$1.4 billion in shipment and revenue backlog;
- The Company sustained its market leadership in its core semiconductor markets and extended its penetration of new growth areas, such as back-end packaging inspection, LED, photovoltaic and hard disk drives;

¹ The "Independent Board Members" refers to all of the members of our Board other than our Chief Executive Officer and is the group that makes all determinations regarding our Chief Executive Officer's compensation. For purposes of this Compensation Discussion and Analysis section, references to the Compensation Committee include the Independent Board Members when discussing determinations of Chief Executive Officer compensation.

- The Company posted record levels of non-GAAP operating margin percentage² (“Operating Margin Percentage”) (37.8%) and non-GAAP gross margin percentage (61.1%) for the year, reflecting the strong market acceptance of the Company’s products and its ongoing focus on cost discipline;
- The Company introduced ten new products and five upgrades to existing platforms – the result of customer focus and continuing successful product development;
- The Company generated over \$823 million in operating cash flow, demonstrating the strong cash generating power of its business; and
- The Company returned over \$400 million to its stockholders during fiscal year 2011 in the form of:
 - Dividend payments of \$167 million, reflecting a 67% increase in the Company’s quarterly dividend level that was implemented in early fiscal year 2011 (from \$0.15 to \$0.25 per share). The Company further increased its quarterly dividend to \$0.35 per share after the end of fiscal year 2011; and
 - Stock repurchases, as the Company used \$235 million to repurchase nearly 6.2 million shares of its common stock.

Pay-for-Performance

We structure our executive compensation program so that a meaningful percentage of compensation is tied to the achievement of challenging levels of Company performance. The payouts under our fiscal year 2011 compensation program reflect the Company’s strong financial and strategic performance. We use Operating Margin Percentage as a key performance metric in our compensation program, as we believe that it reflects a number of important competitive and business elements such as product acceptance, market share and cost discipline and is therefore an excellent barometer of our overall performance. Our fiscal year 2011 Operating Margin Percentage was 37.8%, considerably higher than the target of 30.0% we had set for the year, which itself would have been a Company record.

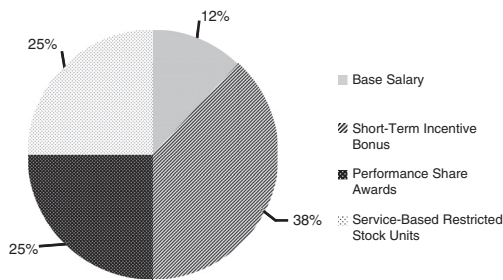
Our fiscal year 2011 annual short-term incentive bonus plan was structured to pay out 100% of the executives’ target bonus amounts if the Company were to successfully achieve its target level of performance. Based on the Company’s fiscal year 2011 Operating Margin Percentage and its overall performance as measured by our balanced scorecard of key corporate goals (as further described under “Elements of Executive Compensation – Short-Term Incentive Bonus Plan” below), our fiscal year 2011 short-term incentive bonus plan paid bonuses equal to 245% of each executive’s target bonus amount. The Named Executive Officers’ performance share awards granted during fiscal year 2011 are tied to the Company’s two-year weighted-average target Operating Margin Percentage over fiscal years 2011 and 2012, so a determination will not be made as to the extent to which they are earned until after the end of fiscal year 2012.

To illustrate our pay-for-performance philosophy, the following charts reflect the portion of our executive officers’ actual compensation for fiscal year 2011 represented by each of the major elements of our compensation program – base salary paid, fiscal year 2011 short-term incentive bonus (at actual amount earned), performance share awards with both performance-

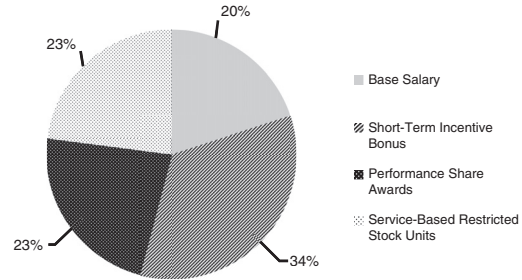
² For purposes of our fiscal year 2011 short-term incentive bonus and equity incentive plans, “operating margin percentage” is calculated for the applicable fiscal year as (a) the Company’s total revenues less total costs and operating expenses, including stock-based compensation charges but excluding expenses related to acquisitions (such as deal-related amortization), restatement and restructuring related items and certain discrete tax items, divided by (b) the Company’s total revenues.

based and service-based vesting criteria³, and restricted stock units with only service-based vesting criteria (valued at their grant date fair value):

CEO Pay Mix – Fiscal Year 2011 (Actual)



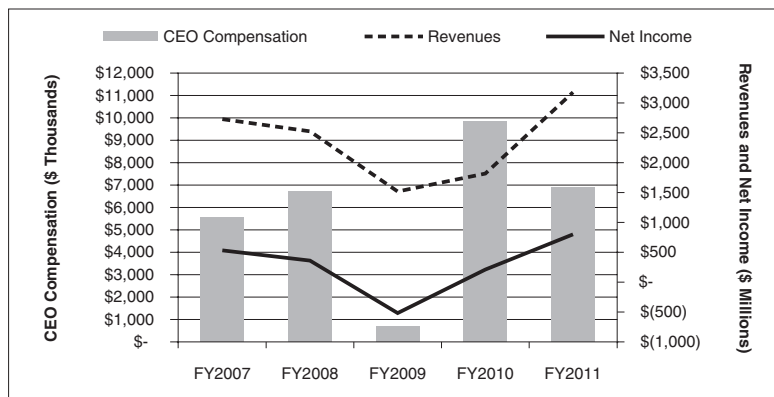
All Other NEOs Pay Mix – Fiscal Year 2011 (Actual)



In each case, a significant majority of the executives' overall compensation is derived from the performance-based components of our program.

Our Chief Executive Officer's compensation over the past five fiscal years further reflects the effectiveness of our pay-for-performance structure. The Company's strong operating results in four of the past five years have resulted in corresponding levels of CEO compensation. Conversely, in fiscal year 2009, when the global economic downturn significantly impaired our financial results, Mr. Wallace received only his base salary for that year, as no bonuses or performance shares were deemed to have been earned based on the Company's results, notwithstanding management's effectiveness during that challenging period in controlling expenses and keeping project development on track so that we were well-positioned to take advantage of the subsequent industry recovery. The following table demonstrates our pay-for-performance model by tracking Mr. Wallace's actual compensation⁴ in each of the last five fiscal years against Company revenues and net income:

CEO Pay-for-Performance (Fiscal Years 2007-2011)



³ For purposes of the charts below, the fiscal year 2011 performance share awards are included at their target grant date fair value (i.e., their maximum earnable amount), assuming that such awards will be fully earned.

⁴This includes base salary paid, short-term incentive bonuses earned, the grant date fair value of any service-based restricted stock units granted and, for performance share awards, the grant date fair value of the number of shares actually earned (if any). As above, for this chart, the fiscal year 2011 performance share awards are again included at their target grant date fair value based on an assumption that they will be fully earned following the completion of fiscal year 2012.

Compensation Committee Decision Making – Process Overview and Market Data

Overview

The Compensation Committee utilizes a broad-based approach to the determination of executive compensation packages. The Compensation Committee has full authority for determining the compensation of our executive officers, other than the Chief Executive Officer, for whom the Committee makes compensation recommendations to the Independent Board Members for approval.

Over the course of several meetings (in closed sessions as well as with our Chief Executive Officer and Senior Vice President of Human Resources) and with the assistance of Semler Brossy Consulting Group, LLC, the Compensation Committee's independent compensation consultant (the "Independent Consultant"), the Compensation Committee engaged in extensive deliberation in developing the fiscal year 2011 executive compensation program. The Committee sought to establish compensation packages and target performance levels aimed at rewarding strong financial performance and long-term success of the Company.

The Compensation Committee took into account many factors, including a broad range of market data (as more fully described in the following paragraphs) and the cyclical nature of the industries in which we operate. In addition, the Compensation Committee conducted an individual analysis for each executive officer that incorporated a review of each officer's performance and individualized total compensation report.

Market Data

Our ability to continue to attract and retain outstanding contributors, including our core executive team, is essential to our continuing success. Therefore, the Compensation Committee reviewed a number of different data sources (including peer group and broader market data) to ensure we were offering compensation packages that were competitive with those offered by other employers seeking to attract the same talented individuals. The Compensation Committee used, in addition to the data described below in this section, a single list of peer group companies, representing a spectrum of companies within our industry. Our fiscal year 2011 peer group was comprised of Applied Materials, Inc., ASML Holdings, Lam Research Corporation, Novellus Systems, Inc., Teradyne, Inc. and Varian Semiconductor Equipment, Inc.

The Compensation Committee reviewed the compensation programs and practices of our peer group to obtain comparative data and identify compensation trends and practices. Data regarding our peer group was primarily obtained through searches of publicly available information, such as the proxy filings of the relevant companies. In addition, the Compensation Committee reviewed data from the Radford Global Technology Survey, with a focus on high technology companies with revenue between \$1 billion to \$3 billion (and, to a lesser extent, \$3 billion and above, as our revenue in fiscal year 2011 exceeded \$3 billion for the first time in Company history).

The Compensation Committee reviewed the market data to understand the spectrum of compensation packages offered by our peer group, as well as companies included in the Radford surveys referenced above. Though the Compensation Committee referred to percentile data in its analysis, as well as allocations between annual and long-term compensation, the Compensation Committee did not employ specific equations for determining compensation

amounts based on such data. Rather, the Compensation Committee’s emphasis was on establishing compensation packages for the executive officers that would be competitive with those offered by other employers, appropriately reflect each officer’s skill set and experience, and encourage retention of top performers.

Elements of Executive Compensation

The primary elements of our compensation packages are base salary, an annual short-term incentive bonus plan and long-term incentives.

Base Salary:

The Compensation Committee annually reviews the base salaries of the executive officers as part of the overall review and determination of our executive compensation program for the relevant fiscal year. With respect to base salary, the Compensation Committee’s objective is to offer a level of fixed cash compensation, determined with reference to applicable market data and consideration of other factors described under “Compensation Committee Decision Making – Process Overview and Market Data” above, that will enable us to attract and retain top talent.

For fiscal year 2011, the Compensation Committee determined that, with one exception, the existing base salaries of the Named Executive Officers were market-competitive for equivalent positions at other companies. Accordingly, except in one case involving the expansion of a Named Executive Officer’s responsibilities, the Compensation Committee did not approve fiscal year 2011 salary increases for any of the Named Executive Officers. The following table presents the changes (if any) in the base salaries of our Named Executive Officers approved during fiscal year 2011:

Name and Principal Position	Annual Base Salary Rate as of June 30, 2010 (\$)	Annual Base Salary Rate Approved in August 2010 for Fiscal Year 2011 (\$)	Year-Over-Year Percentage Increase Represented by the Fiscal Year 2011 Base Salary
Richard P. Wallace President & Chief Executive Officer	800,000	800,000	0%
Mark P. Dentinger Executive Vice President & Chief Financial Officer	400,000	400,000	0%
Bobby R. Bell Executive Vice President, Global Customer Organization	360,000	375,000	4.2%
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	340,000	340,000	0%
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	280,800	280,800	0%

Short-Term Incentive Bonus Plan:

Fiscal Year 2011 Executive Incentive Plan:

Our Executive Incentive Plan (the “Bonus Plan”) is administered in conformity with Section 162(m) of the Internal Revenue Code and provides the Named Executive Officers with an opportunity to earn annual performance-based cash compensation based on the Company’s achievement of key financial and strategic Company goals as well as individual performance.

In August 2010, the Compensation Committee established each executive officer’s target bonus payout (stated as a percentage of the officer’s base salary), as well as the Company performance targets and bonus potentials (including threshold, target and maximum payout levels) in effect for fiscal year 2011 under the Bonus Plan. In establishing the executive officers’ target awards for fiscal year 2011, the Compensation Committee considered a wide range of market data (described under “Compensation Committee Decision Making–Process Overview and Market Data” above). The officers’ target bonus percentages were established at levels that generated total target cash compensation opportunities that were determined to be competitive with the market for comparable positions at other companies and internally appropriate relative to each executive officer’s role.

Under the fiscal year 2011 Bonus Plan, the Company was required to achieve a threshold level of Operating Margin Percentage in order for the plan to be funded.⁵ Upon achievement of that threshold level of Operating Margin Percentage, a participant’s actual bonus amount would then be determined based upon the Company’s Operating Margin Percentage and the assessment by the Compensation Committee of the Company’s performance as measured against a defined “balanced scorecard.”

The balanced scorecard takes into account our strategic objectives of operational excellence, customer focus, growth and talent (each of which is addressed in more detail below), and applies scores for the Company’s performance against a variety of specific goals within each of those variables. The use of the balanced scorecard is designed to ensure that the quality of the Company’s operating results is high and that those results support the sustainability of the Company’s business model. The scorecard is tracked throughout the year and is reviewed every quarter, then formally presented to the Compensation Committee following the conclusion of the fiscal year for assessment as to the Company’s success in achieving the pre-established annual goals.

For fiscal year 2011, the pre-established quantitative goals and objectives were set at levels that, based on a number of factors including the Company’s prior year performance and the then-prevailing macro-economic conditions, the Compensation Committee believed would be very challenging to achieve. While many of the metrics are quantitative in nature, some are qualitative and therefore introduce a degree of discretion and subjective judgment into the bonus determination process. We believe that the use of the expanded measures of financial and strategic success, as represented by the balanced scorecard framework, serves to closely align the interests of our executive officers with those of our stockholders.

⁵ The satisfaction of this pre-determined threshold level of Operating Margin Percentage would trigger full funding of the Bonus Plan, and of each participant’s maximum potential bonus opportunity, for purposes of Section 162(m) of the Internal Revenue Code.

Specifically, the fiscal year 2011 Bonus Plan terms were structured as follows:

- No payouts would be made under the plan unless the Company achieved an Operating Margin Percentage of at least 8%;
- For Company achievement of Operating Margin Percentage of 8% or more, the executive officers' bonus award amount would be determined based upon a bonus payout grid, with Operating Margin Percentage as the variable along one axis, and, on the other axis, the score awarded to the Company by the Compensation Committee based upon their assessment of the Company's performance as measured against the balanced scorecard. For example, if the Company had achieved an Operating Margin Percentage of exactly 8% in fiscal year 2011, the bonus payouts could have ranged from 6% to 25% of the executive officers' target bonus amounts, depending on the score awarded based on the Company's performance as measured against the balanced scorecard (potentially ranging from 1 ("needs improvement") to 5 ("exceptional"));
- At the start of fiscal year 2011, the Company's target level of Operating Margin Percentage for the year was set at 30%, which would have been a Company record for any fiscal year in its history and was therefore considered very challenging. If the Company had achieved exactly its target Operating Margin Percentage of 30%, the fiscal year 2011 bonus payouts could have ranged from 30% to 125% of the executive officers' target bonus amounts, again depending on the score awarded based on the Company's performance as measured against the balanced scorecard. A payout of 100% of the officers' target bonuses would have been payable at the target level of Operating Margin Percentage if the Company's balanced scorecard score had been measured as a 4 on the scale of 1 to 5 described above. This structure was intended to ensure that participants would only receive their full target bonus payment, even upon the Company's achievement of its target Operating Margin Percentage, if market and Company-specific data showed that management had performed extremely well to achieve those results; and
- The plan would pay out at the maximum level of 300% of the executive officers' target bonus amounts if, for example, the Company's Operating Margin Percentage equaled 40% and the Compensation Committee determined that the Company had earned a score of 4 or higher based upon their assessment of the balanced scorecard.

In addition, the Compensation Committee had the discretion to adjust the actual bonus amount otherwise payable to an executive based on their assessment of the executive's performance for fiscal year 2011.

Following the completion of fiscal year 2011, the Compensation Committee reviewed the Company's performance against the primary strategic objectives set forth in the fiscal year 2011 balanced scorecard, which were assessed as follows:

Operational Excellence

A primary measure of the Company's operational effectiveness, particularly during a period of increasing revenues, is incremental operating margin percentage, which is equal to the period-to-period change in non-GAAP operating margin divided by the

change in revenues over the same period. In such a business environment, this metric is an indicator of the efficiency with which the Company generates additional revenue. The Company strives to achieve an incremental operating margin percentage of 50-60% during business upturns. In fiscal year 2011, the Company exceeded that target range, generating a year-over-year incremental operating margin percentage of 60.5%. In addition, the Company delivered results consistent with its operating plan, including successfully transitioning manufacturing of various products to its facilities in Singapore and Israel, as well as introducing ten new products and five upgrades to existing platforms during the year, all of which achieved market acceptance prior to launch.

Customer Focus

The Company's primary measure of success in customer focus is market share. The Company maintained its market leadership positions in the areas of foundry and logic and improved its market share in memory, as evidenced by strong bookings across all markets (the best indication that the Company is successfully differentiating its products versus competitors and that customers are satisfied with the Company's offerings). Another measure of success for the Company in this area is how effectively we collaborate with our customers. The Company achieved its collaboration objectives through product and advanced technology development efforts with several key customers and industry organizations on key issues such as customer product roadmaps and anticipated future transitions to 450 millimeter (mm) wafers, sub-30 nanometer (nm) manufacturing processes and extreme ultra-violet (EUV) lithography.

Growth

The Company aimed to achieve a year-over-year growth rate at least five (5) percentage points higher than its peer group (as identified under "Compensation Committee Decision Making – Process Overview and Market Data" above). The Company exceeded its goal by achieving year-over-year revenue growth in excess of 74%, which was more than 16 percentage points higher than the average growth rate of the companies in the peer group for the equivalent period. In addition, the Company's fiscal year-over-year revenue from the sale of systems increased by more than 97%, considerably outpacing the overall industry's systems revenue growth rate of 77.3%⁶. The Company also achieved its goal of growth outside of its core semiconductor markets, as evidenced by a year-over-year increase of nearly 46% in revenues derived from the Company's Growth and Emerging Markets (GEM) division. The Company's GEM division, which houses most of the products targeted outside of the Company's core semiconductor capital equipment market, represented 7% of the Company's worldwide revenue in fiscal year 2011. This represents steady growth from only 1% in fiscal year 2007, with that growth largely attributable to products that the Company has acquired through acquisitions.

⁶ Growth in semiconductor capital equipment revenue in the twelve months ended June 30, 2011 compared to the prior year, as determined by Gartner.

Talent

The Company achieved its employee retention goals for fiscal year 2011, as the overall level of voluntary employee turnover (4.9%) was better than the forecasted rate of 6.0%, and turnover among top talent was even lower at 3.5%. Early career hiring objectives were also met, with early career hires (including new college graduates) representing 65% of the Company's global new hires during the year, surpassing the 50% target.

The Company's fiscal year 2011 Operating Margin Percentage equaled 37.8%, and the Compensation Committee awarded the Company a balanced scorecard score of 4, based on their assessment of the factors discussed above. As a result, the payouts under the fiscal year 2011 Bonus Plan were equal to 245% of the participants' target bonus amounts.

As noted above, the Bonus Plan gives the Compensation Committee the discretion to increase or decrease each executive officer's bonus amount based on the officer's individual performance. Following discussion regarding the use of this discretion and whether its application would be appropriate for fiscal year 2011, the Compensation Committee established the individual multiplier for each of the Named Executive Officers at 1.0 (that is, there was no reduction or increase of the bonus amount payable to any Named Executive Officer based on individual performance).

The following table sets forth each Named Executive Officer's target bonus (as a percentage of base salary and in dollars, based on actual salary paid during the year) and the actual bonus amount paid to the officer:

Name and Principal Position	Officer's Target Bonus Award Under Bonus Plan (as a Percentage of Base Salary Paid During FY11)⁽¹⁾	Officer's Target Bonus Award Under Bonus Plan (\$)	Actual Bonus Payout Under Fiscal Year 2011 Bonus Plan (\$)
Richard P. Wallace President & Chief Executive Officer	135%	1,080,000	2,646,000
Mark P. Dentinger Executive Vice President & Chief Financial Officer	75%	300,000	735,000
Bobby R. Bell Executive Vice President, Global Customer Organization	75%	279,086	683,761
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	70%	238,000	583,100
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	65%	182,520	447,174

- (1) The amounts in this column represent the applicable officer's fiscal year 2011 full target bonus (stated as a percentage of the officer's base salary). Under the fiscal year 2011 Bonus Plan, this percentage, when multiplied by the payout percentage determined by the Company's actual performance relative to pre-determined targets, generated the officer's actual bonus payment amount (stated as a percentage of the officer's base salary).

Long-Term Incentives:

The purpose of the long-term incentive component of our executive compensation program is to align long-term management and stockholder interests and strengthen retention through service-based and performance-based awards with four-year vesting provisions. The long-term incentives offered by the Company have historically been in the form of equity awards.

Since the beginning of fiscal year 2007, the long-term incentive awards to our executive officers have been comprised entirely of performance shares and restricted stock units. The Compensation Committee believes that equity awards in the form of performance shares and restricted stock units are aligned with stockholder interests, provide a major incentive for employees to build stockholder value and significantly strengthen our retention efforts.

Annual Equity Grants for Fiscal Year 2011:

The size of each executive officer's annual equity award represents the target equity value that the Compensation Committee aims to deliver to each executive officer as part of his annual compensation. That target value is established with reference to market data from the Radford Global Technology Survey and our peer group provided by the Independent Consultant regarding the dollar value of annual grants made to similarly situated executives, as well as the officer's role and responsibilities within the Company, contributions to the Company over time and criticality to the Company's ongoing success.

Each executive officer's fiscal year 2011 annual award was divided into two equally sized grants: one of which was a performance share award, and the other of which was a restricted stock unit award with vesting tied solely to continued service with us. Over the past several years, the structure of the Company's performance share awards has transitioned from a one-year performance period with the ability to fully earn the shares after the first year to a multi-year performance period with no ability to earn any shares until the end of the performance period. The Compensation Committee is continuously evaluating different ways to structure long-term incentives in a manner that will properly account for the cyclical nature of our primary industries.

The shares covered by the fiscal year 2011 performance share awards are subject to a two-year performance period based on the Company's two-year weighted average Operating Margin Percentage over fiscal years 2011 and 2012 and therefore can only be earned following the completion of fiscal year 2012. The target two-year weighted average Operating Margin Percentage that the Compensation Committee set for the fiscal year 2011 performance share awards was set at a level that would require very strong operational performance and was considered difficult to achieve at the time, given anticipated market conditions.

All of the executive officers' fiscal year 2011 annual equity awards (the restricted stock unit awards and any performance share awards that may be earned) are subject to a four-year service-based vesting period. Fifty percent (50%) of the shares subject to these awards will vest two years from the date of the award (or, for performance shares, the first fifty percent (50%) of the shares will vest on the date that such shares are determined to have been earned, if that date is later than the two-year anniversary of the award date), and the remaining fifty percent (50%) will vest four years from the date of the award, in each case subject to the individual's continued employment with us on the applicable vesting date.

The following table sets forth the minimum and target/maximum shares achievable by each Named Executive Officer, as well as the actual number of shares awarded to the officer (to the extent known at this time), with respect to the performance share and restricted stock unit awards comprising such officer's annual equity award for fiscal year 2011:

Name and Principal Position	Type of Grant	Minimum Shares	Target Shares ⁽¹⁾	Actual Shares Awarded
Richard P. Wallace President & Chief Executive Officer	Annual Grant (Performance)	0	52,800	TBD ⁽²⁾
	Annual Grant (Service-Based Only)	52,800	52,800	52,800
Mark P. Dentinger Executive Vice President & Chief Financial Officer	Annual Grant (Performance)	0	18,150	TBD ⁽²⁾
	Annual Grant (Service-Based Only)	18,150	18,150	18,150
Bobby R. Bell Executive Vice President, Global Customer Organization	Annual Grant (Performance)	0	16,500	TBD ⁽²⁾
	Annual Grant (Service-Based Only)	16,500	16,500	16,500
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	Annual Grant (Performance)	0	9,900	TBD ⁽²⁾
	Annual Grant (Service-Based Only)	9,900	9,900	9,900
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	Annual Grant (Performance)	0	4,950	TBD ⁽²⁾
	Annual Grant (Service-Based Only)	4,950	4,950	4,950

- (1) For each performance award, the maximum number of shares earnable under the award was equal to the target number of shares subject to the award (that is, no additional shares above the target level of the award were earnable for above-target Company performance). For each award with only service-based vesting criteria, the minimum, target and maximum number of shares earnable under the award are all equal to the total number of shares subject to the service-based award.
- (2) As explained above, the shares covered by the fiscal year 2011 performance share awards are subject to a two-year performance period, based on the Company's two-year weighted average Operating Margin Percentage over fiscal years 2011 and 2012. Accordingly, they were not capable of being earned following the completion of fiscal year 2011. The determination regarding the extent to which the fiscal year 2011 performance share awards are earned will be made by the Compensation Committee following the completion of fiscal year 2012.

Compensation Approval Procedures

Pursuant to the charter of the Compensation Committee, the Compensation Committee has the authority to approve the compensation packages for our executive officers, other than our Chief Executive Officer, whose compensation package must be approved by the Independent Board Members.

In structuring the fiscal year 2011 compensation packages for the Named Executive Officers, the Compensation Committee received comprehensive industry compensation data and analysis from the Independent Consultant (as described under the section entitled "Compensation Committee Decision Making – Process Overview and Market Data" above), as well as performance reviews and initial package recommendations for each of the executive officers from our Chief Executive Officer and Senior Vice President of Human Resources. With regard to our Bonus Plan and performance shares, the proposed financial metrics and payout percentages were developed by Company management, with the assistance of the Independent Consultant. The Compensation Committee reviewed the data provided by the Independent Consultant and the Company's recommendations and engaged in detailed discussions over the course of multiple meetings, with and without Company management present, to determine the final executive compensation packages, which were approved in August 2010.

In the case of our Chief Executive Officer's compensation, the Compensation Committee developed a proposed compensation package for fiscal year 2011 using the process described above (except that Mr. Wallace was not involved in the process) and recommended it to the Independent Board Members. The Independent Board Members then discussed and, in August 2010, approved the Compensation Committee's recommendation with respect to the fiscal year 2011 compensation for our Chief Executive Officer, who was not present and did not participate in the discussion.

In each case, when establishing each element of compensation and the overall packages for the officers, the Compensation Committee and the Independent Board Members exercised their discretion and judgment based upon the data provided, and no specific formula was applied to determine the weight of each data point.

Perquisites and Other Compensation

We make only nominal use of perquisites in compensating our executive officers. All of our executive officers are entitled to be reimbursed for the cost of professional financial services. These services include tax planning, preparation and filing, as well as financial and estate planning services, up to a maximum of \$20,000 per calendar year.

In addition, our executive officers are eligible to participate in our 401(k) plan (including a Company match on employee 401(k) plan contributions) and the other employee benefit plans sponsored by us on the same terms and conditions that apply to all other employees.

Severance Benefits and Change of Control Agreements

We currently have two plans that provide certain compensation and benefits in the event that a participant's employment with the Company terminates under certain defined circumstances: our Executive Severance Plan, adopted in 2006 (the "Original Severance Plan"), and our 2010 Executive Severance Plan (the "2010 Severance Plan"). Each of the Named Executive Officers is a participant under one of these two plans: Messrs. Wallace, Dentinger and Martin are participants under the Original Severance Plan, and Messrs. Bell and Kirloskar are participants under the 2010 Severance Plan.

A key difference between the two plans is that the 2010 Severance Plan, unlike the Original Severance Plan, does not contain tax gross-up provisions related to excise taxes that may be imposed by Section 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), in connection with a participant's receipt of a change-of-control "parachute payment" within the meaning of Code Section 280G. For further information, please see the section of this Proxy Statement entitled "Potential Payments Upon Termination or Change of Control."

We believe that the Original Severance Plan and the 2010 Severance Plan are important for the long-term retention of our senior executives and enhance their commitment to the attainment of our strategic objectives. The benefits provided under our severance plans will allow the participating executives to continue to focus their attention on our business operations and strategic plans without undue concern over their own financial situation during periods when substantial disruptions and distractions might otherwise prevail. We believe that the severance benefits provided under our severance plans are fair and reasonable in light of the level of dedication and commitment the participating executive officers have rendered the Company, the contribution they have made to our growth and financial success and the value that we

expect to receive from retaining their services, including during challenging transition periods following a change of control.

Deferred Compensation

We maintain an Executive Deferred Savings Plan, a nonqualified deferred compensation plan, which enables eligible employees to defer all or a portion of certain components of their compensation, with no Company match. For further information, please see the section of this Proxy Statement entitled “Nonqualified Deferred Compensation.” We do not provide any defined benefit pension benefits or any other retirement benefits to Named Executive Officers, other than the 401(k) Savings Plan available to all of our employees.

Executive Retiree Medical Plan

KLA-Tencor has established a retiree medical program to offer continued health benefits to certain current senior executive officers, although none are eligible to participate at this time. To be eligible, an executive must be at least 55 years old with ten years of service with the Company, and must be in good standing with us at the time of retirement. Eligible executives are entitled to participate until age 65 and must pay the full cost of the premium. In February 2011, our Board of Directors amended this program to limit the participants to the Company’s then-current Section 16 executive officers; that is, no future participants are allowed into the plan.

Stock Ownership Guidelines; Policy Regarding Hedging

In November 2008, our Board of Directors adopted revised stock ownership guidelines applicable to our executive officers. Under that policy, our executives are expected to own Company common stock having a minimum value, denominated as a multiple of their annual base salaries, as follows:

<u>Title</u>	<u>Shares</u>
CEO	Value of at least four times annual base salary
EVP/SVP	Value of at least two times annual base salary

Unexercised options and unearned performance shares or units do not count for purposes of measuring compliance with the ownership guidelines. The value of unvested restricted stock or stock units is included in measuring compliance. The recommended time period for reaching the guidelines is the later of (a) November 13, 2012 or (b) the fourth anniversary from when the individual becomes subject to these guidelines. With respect to our Chief Executive Officer, the Compensation Committee will conduct an annual review to assess compliance with the guidelines, once they become effective. Vice Presidents’ compliance will be evaluated by the Chief Executive Officer. As of the Record Date, each of our Named Executive Officers was in compliance with this stock ownership requirement.

Under our Policy on Insider Trading and Unauthorized Disclosures, our Directors and employees (including our Named Executive Officers) are not permitted to engage in short sales of the Company’s securities or any hedging or derivative securities transactions relating to the Company’s securities.

Advisor to the Compensation Committee

The Compensation Committee retains an independent compensation consultant to provide the Committee with independent, objective analysis and advice on executive compensation matters. The Compensation Committee's Independent Consultant, Semler Brossy Consulting Group, LLC, reports directly to the Chair of the Compensation Committee and performs no other work for the Company.

The Independent Consultant generally attends all meetings of the Compensation Committee in which evaluations of the effectiveness of overall executive compensation programs are conducted or in which compensation for executive officers is analyzed or approved. During fiscal year 2011, the Independent Consultant's duties included providing the Compensation Committee with relevant market and industry data and analysis, reviewing all materials and participating in the meetings in which the Compensation Committee made decisions regarding changes to executive compensation for fiscal year 2011. In fulfilling these duties, the Independent Consultant met, as needed and with the knowledge of the Chairman of the Compensation Committee, with our Chief Executive Officer, Senior Vice President of Human Resources and other members of our Human Resources department.

Accounting and Tax Considerations

Section 162(m) of the Internal Revenue Code disallows an income tax deduction to publicly-traded companies for compensation paid to the Chief Executive Officer and the three other highest paid executive officers (other than the Chief Financial Officer), to the extent that compensation exceeds \$1 million per officer in any taxable year and does not otherwise qualify as performance-based compensation. Our existing equity compensation plans, including the 2004 Equity Incentive Plan, are structured so that the compensation deemed paid to an executive officer in connection with the vesting of performance share awards and the exercise of stock options granted under those plans should qualify as performance-based compensation. However, awards made under those plans may or may not qualify as performance-based compensation. For example, the service-based restricted stock units (as differentiated from the performance share awards) granted to our executive officers in August 2010 will not qualify as performance-based compensation because the vesting of those awards is tied solely to continued service over a four-year period, whereas the performance shares granted to the executive officers in August 2010 are expected to qualify as performance-based compensation (to the extent they are earned). All equity awards to our employees, including the Named Executive Officers, and to our Directors have been granted and reflected in our consolidated financial statements, based upon the applicable accounting guidance.

Our annual Executive Incentive Plan is a cash bonus plan structured in a manner that will allow us to qualify all or part of the compensation earned under that plan as performance-based compensation. As a result, it is anticipated that the incentive compensation earned by the executive officers under that plan for fiscal year 2011 should qualify as performance-based compensation and should therefore not be subject to the \$1 million limitation.

The Compensation Committee continues to consider steps that might be in our best interests to comply with Section 162(m). However, in establishing the cash and equity incentive compensation programs for the executive officers, the Compensation Committee believes that the potential deductibility of the compensation payable under those programs should be only one of a number of relevant factors taken into consideration, and not the sole or primary factor.

The Compensation Committee believes that cash and equity incentive compensation must be maintained at the requisite level to attract and retain the executive officers essential to the Company's financial success, even if all or part of that compensation may not be deductible by reason of the Section 162(m) limitation.

Clawback Policy

We maintain a clawback policy, set forth in the Compensation Committee's charter, which provides that in the event of a significant restatement of financial results resulting from fraud, misconduct, material non-compliance or material errors, the Compensation Committee may (in its sole discretion, but acting in good faith and in compliance with applicable laws) direct that the Company recover all or a portion of performance-based compensation, including bonuses and long-term incentive awards, made to executive officers during the restatement period. The amount to be recovered from an executive officer will be the amount by which the performance-based compensation exceeded the amount that would have been payable to the executive officer had the financial statements been initially filed as restated, or any greater or lesser amount (including, but not limited to, the entire award) that the Compensation Committee determines. The Compensation Committee may determine to recover different amounts from different executive officers on such basis it deems appropriate. The Compensation Committee will determine whether the Company is to effect any such recovery: (i) by seeking repayment from the applicable executive officer, (ii) by reducing (subject to applicable law and the terms and conditions of the applicable plan, program or arrangement) the amount that would otherwise be payable to the executive officer under any compensatory plan, program or arrangement maintained by us, (iii) by withholding (subject to applicable law and the terms and conditions of the applicable plan, program or arrangement) payment of future increases in compensation (including the payment of any discretionary bonus amount) or grants of compensatory awards that would otherwise have been made in accordance with our otherwise applicable compensation practices, or (iv) by any combination of the foregoing or otherwise.

COMPENSATION COMMITTEE REPORT

The information contained in this report shall not be deemed to be “soliciting material” or “filed” with the SEC or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that KLA-Tencor specifically incorporates it by reference into a document filed under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended.

The Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis. Based on that review and its discussions, the Compensation Committee recommended to the Board that the Compensation Discussion and Analysis be included in this Proxy Statement.

Kevin J. Kennedy, Chairman
Robert P. Akins
Edward W. Barnholt
John T. Dickson
Stephen P. Kaufman

EXECUTIVE COMPENSATION TABLES

Summary Compensation Table

The following table sets forth certain summary information concerning the compensation earned for services rendered in all capacities to the Company and its subsidiaries for the fiscal years ended June 30, 2011, 2010 and 2009 by our Chief Executive Officer, our Chief Financial Officer and each of the other executive officers whose total compensation for that fiscal year exceeded \$100,000 and who were serving as executive officers as of June 30, 2011. No other executive officers who would have otherwise been includable in such table on the basis of their compensation for the fiscal year ended June 30, 2011 have been excluded by reason of their termination of employment or change in executive status during that year. Mr. Bell did not serve as an executive officer of the Company during any part of the fiscal years ended June 30, 2010 or 2009; therefore, his compensation information for those fiscal years is not included in the following table. The individuals named in the table below will be referred to as our “Named Executive Officers.”

Name and Principal Position	Year	Salary (\$) ⁽¹⁾	Stock Awards (\$) ⁽²⁾	Non-Equity Incentive Plan Compensation (\$) ⁽¹⁾⁽³⁾	Change in Pension Value and Nonqualified Deferred Compensation Earnings (\$) ⁽⁴⁾	All Other Compensation (\$) ⁽⁵⁾	Total (\$)
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
Richard P. Wallace President & Chief Executive Officer	2011	800,000	3,434,112 ⁽⁶⁾	2,646,000	—	23,119	6,903,231
	2010	780,769	5,898,690 ⁽⁷⁾	3,130,494	— ⁽⁸⁾	21,684	9,831,637
	2009	700,000	3,696,000 ⁽⁹⁾	—	—	21,246	4,417,246
Mark P. Dentinger Executive Vice President & Chief Financial Officer	2011	400,000	1,180,476 ⁽⁶⁾	735,000	—	19,921	2,335,397
	2010	400,000	2,674,260 ⁽⁷⁾	891,000	—	21,211	3,986,471
	2009	320,000	763,200	—	—	3,234	1,086,434
Bobby R. Bell Executive Vice President, Global Customer Organization	2011	372,115	1,073,160 ⁽⁶⁾	683,761	—	22,787	2,151,823
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	2011	340,000	643,896 ⁽⁶⁾	583,100	—	22,380	1,589,376
	2010	337,115	1,337,130 ⁽⁷⁾	700,863	— ⁽⁸⁾	10,862	2,385,970
	2009	325,000	1,096,800 ⁽⁹⁾	—	—	21,114	1,442,914
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	2011	280,800	321,948 ⁽⁶⁾	447,174	—	8,653	1,058,575
	2010	278,723	715,284 ⁽⁷⁾	538,075	—	6,343	1,538,425
	2009	270,000	584,960 ⁽⁹⁾	—	—	15,848	870,808

(1) Includes amounts deferred under our 401(k) Plan, a tax-qualified deferred compensation plan under Section 401(k) of the Internal Revenue Code, and our Executive Deferred Savings Plan (“EDSP”), a nonqualified deferred compensation program available to the executive officers and certain other employees.

(2) The amounts shown in column (d) represent the aggregate grant date fair value, calculated in accordance with the SEC’s applicable requirements, of all restricted stock units (“RSUs”) and performance shares awarded to the particular executive officer during the applicable fiscal year. The SEC’s disclosure rules, as in effect for our fiscal year 2009 Proxy Statement and prior years’ proxy statements, previously required that we present stock award information in the Summary Compensation Table based on the amount recognized during the corresponding year for financial statement reporting purposes with respect to all stock awards outstanding during

that year (regardless of when they had been granted). However, the SEC's disclosure rules now require that we present the stock award amounts in this column (d) using the grant date fair value of the awards granted during the applicable year, not only for fiscal years 2011 and 2010 but also for fiscal year 2009. Since this requirement differs from the SEC's past disclosure rules, the amounts reported in the table above for stock awards in fiscal year 2009 differ from the amounts previously reported in the Summary Compensation Table in our fiscal year 2009 Proxy Statement. As a result, each Named Executive Officer's total compensation amount for fiscal year 2009 also differs from the amount previously reported for such officer in the Summary Compensation Table in our fiscal year 2009 Proxy Statement.

With respect to RSUs (i.e., awards issued with only service-based vesting criteria and no performance-based vesting criteria), the grant date fair value of each such RSU has been computed in accordance with the provisions of Financial Accounting Standards Board ("FASB") Accounting Standards Codification Topic 718, referred to in this Proxy Statement as ASC 718 (except that the fair values set forth above have not been reduced by the Company's estimated forfeiture rate). The ASC 718 grant date fair value of each RSU award was calculated based on the fair market value of our Common Stock on the award date.

With respect to performance shares (i.e., awards issued with both service-based and performance-based vesting criteria), the grant date fair value of each such award has been computed in accordance with ASC 718 based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards and the fair market value of our Common Stock on the award date. For more information regarding specific awards, please refer to footnotes (6), (7) and (9) to this Summary Compensation Table.

We did not grant any stock options to any of the Named Executive Officers during fiscal years 2011, 2010 or 2009.

- (3) The amounts shown in column (e) for fiscal years 2011 and 2010 reflect the payments earned by each Named Executive Officer under our fiscal year 2011 Executive Incentive Plan and our fiscal year 2010 Executive Incentive Plan, respectively.

The amounts shown in column (e) for fiscal year 2009 reflect the fact that, due to the Company's financial performance during fiscal year 2009, no payments were made to any of the Named Executive Officers under our fiscal year 2009 Executive Incentive Plan.

- (4) Of the Named Executive Officers, only Messrs. Wallace, Bell and Martin participated in our EDSP. No portion of the applicable Named Executive Officer's investment earnings (or losses, as applicable) during fiscal years 2009, 2010 or 2011 on his nonqualified deferred compensation account under the EDSP was "above market" or "preferential." Each Named Executive Officer's earnings (or losses, as applicable) corresponded to the actual market earnings (or losses, as applicable) on a select group of investment funds utilized to track the notional investment return on the officer's account balance for the applicable fiscal year. The investment earnings (or losses, as applicable) under the EDSP for the Named Executive Officers who participated in such plan during the fiscal years listed in the Summary Compensation Table above were as follows:

Name	Year	Earnings (Losses) on Named Executive Officer's EDSP Account (\$)
Richard P. Wallace	2011	239,248
	2010	131,120
	2009	(256,572)
Bobby R. Bell	2011	304,295
Brian M. Martin	2011	4,534
	2010	2,948
	2009	(1,797)

For more information regarding the participation of the Named Executive Officers in the EDSP, please refer to footnote (8) to this Summary Compensation Table and the section of this Proxy Statement below entitled "Nonqualified Deferred Compensation."

- (5) The amounts presented in column (g) consist of the following:

For the fiscal year ended June 30, 2011:

Name	Company Matching Contribution to 401(k) Plan (\$)	Reimbursement of Financial Planning and Tax Preparation Costs (\$)	Term Life Insurance Premiums (\$)	Total (\$)
Richard P. Wallace	4,000	18,620	499	23,119
Mark P. Dentinger	4,000	15,671	250	19,921
Bobby R. Bell	4,000	18,560	227	22,787
Brian M. Martin	4,000	18,205	175	22,380
Virendra A. Kirloskar	4,000	4,426	227	8,653

For the fiscal year ended June 30, 2010:

Name	Company Matching Contribution to 401(k) Plan (\$)	Reimbursement of (or Imputed Income for) Financial Planning and Tax Preparation Costs (\$)	Term Life Insurance Premiums (\$)	Tax Payments and Tax Gross-Up Amounts Related to Foreign Assignment (\$)	Total (\$)
Richard P. Wallace	3,000	18,135	549	—	21,684
Mark P. Dentinger	3,000	17,930	281	—	21,211
Brian M. Martin	1,700	8,925	237	—	10,862
Virendra A. Kirloskar	3,000	600	195	2,548	6,343

For the fiscal year ended June 30, 2009:

Name	Company Matching Contribution to 401(k) Plan (\$)	Reimbursement of (or Imputed Income for) Financial Planning and Tax Preparation Costs (\$)	Term Life Insurance Premiums (\$)	Tax Payments and Tax Gross-Up Amounts Related to Foreign Assignment (\$)	Total (\$)
Richard P. Wallace	3,000	17,700	546	—	21,246
Mark P. Dentinger	3,000	—	234	—	3,234
Brian M. Martin	3,000	17,860	254	—	21,114
Virendra A. Kirloskar	3,000	600	211	12,037	15,848

- (6) A portion of this amount reflects the estimated fair value of performance shares based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards and the fair market value of our Common Stock on the award date. Because the performance awards granted during fiscal year 2011 were structured so that they would be fully earned upon achievement by KLA-Tencor of its target level of weighted average operating margin percentage over fiscal years 2011 and 2012 (a target that was considered difficult to achieve at the time of grant), the probable outcome of the performance-based conditions applicable to the awards as of the grant date, for purposes of the calculations set forth in this table, has been determined to be equal to the maximum number of shares potentially issuable under the applicable award. The amounts included in the table above attributable to performance awards granted during fiscal year 2011 are as follows: (a) for Mr. Wallace, \$1,717,056; (b) for Mr. Dentinger, \$590,238; (c) for Mr. Bell, \$536,580; (d) for Mr. Martin, \$321,948; and (e) for Mr. Kirloskar, \$160,974. The Company's achievement of the performance-based conditions applicable to the fiscal year 2011 performance shares (and therefore the number of shares issuable under the fiscal year 2011 performance shares) will be determined by the Compensation Committee (and, with respect to Mr. Wallace, the independent members of the Board) following the completion of fiscal year 2012.
- (7) A portion of this amount reflects the estimated fair value of performance shares based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards and the fair market value of our Common Stock on the award date. Because the performance awards granted during fiscal year 2010 were structured so that they would be fully earned upon achievement by KLA-Tencor of its target level of operating margin percentage for that fiscal year (a target that was considered difficult to achieve at the time of grant), the probable outcome of the performance-based conditions applicable to the awards as of the grant date, for purposes of the calculations set forth in this table, has been determined to be equal to the maximum number of shares potentially issuable under the applicable award. The amounts included in the table above attributable to performance awards granted during fiscal year 2010 are as follows: (a) for Mr. Wallace, \$1,794,575; (b) for Mr. Dentinger, \$644,400; (c) for Mr. Martin, \$356,031; and (d) for Mr. Kirloskar, \$190,098. Following the completion of fiscal year 2010, the Compensation Committee (and, with respect to Mr. Wallace, the independent members of the Board) determined that the Company had fully achieved the performance-based conditions applicable to the fiscal year 2010 performance shares and that the maximum number of shares issuable under the fiscal year 2010 performance shares had been earned.
- (8) In our fiscal year 2010 Proxy Statement, we reported the fiscal year 2010 total earnings under the EDSP for Messrs. Wallace and Martin (the only two officers named in such proxy statement who participated in the EDSP during that year) under this column (f) of the Summary Compensation Table, and we noted in that document that we were electing to report the entire amount of such earnings and were making no determination as to whether any portion of such earnings was "above market" or "preferential." However, upon further analysis, we have concluded that, because the officers' EDSP earnings correspond to the actual market earnings on a select group of investment funds available under the EDSP, no portion of the Named Executive Officers' earnings under the EDSP is "above market" or "preferential." Accordingly, beginning with this Proxy Statement, we are no longer reporting any portion of the Named Executive Officers' earnings under the EDSP in the Summary Compensation Table, not only for fiscal year 2011 but also for fiscal year 2010 (note that none of the Named Executive Officers realized a gain on his EDSP account during fiscal year 2009, so no EDSP earnings were reported in the Summary Compensation Table for such fiscal year in previous proxy statements). Since the disclosure approach in this Proxy Statement for EDSP earnings during fiscal year 2010 differs from our past approach, the amounts reported in the table above for nonqualified deferred compensation earnings in fiscal year 2010 differ from the amounts previously reported in the Summary Compensation Table in our fiscal year 2010 Proxy Statement. As a result, the total compensation amounts for Messrs. Wallace and Martin for fiscal year 2010 also differ from the amounts previously reported for such officers in the Summary Compensation Table in our fiscal year 2010 Proxy Statement. For more information regarding the participation of the Named Executive Officers in the EDSP, please refer to footnote (4) to this Summary Compensation Table and the section of this Proxy Statement below entitled "Nonqualified Deferred Compensation."
- (9) A portion of this amount reflects the estimated fair value of performance shares based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards and the fair market value of our Common Stock on the award date. Because the performance awards granted during fiscal year 2009 were structured so that they would be fully earned upon achievement by KLA-Tencor of its target level of operating margin for that fiscal year (a target that was considered difficult to achieve at the time of grant), the probable outcome of the performance-based conditions applicable to the awards as of the grant date, for purposes of the calculations set forth in this table, has been determined to be equal to the maximum number of shares potentially issuable under the applicable award. The amounts included in the table above attributable to performance awards granted during fiscal year 2009 are as follows: (a) for Mr. Wallace, \$3,696,000 (i.e., all stock awards issued to Mr. Wallace during fiscal year 2009 were performance awards); (b) for Mr. Martin, \$548,400; and (c) for Mr. Kirloskar, \$292,480. However, following the completion of fiscal year 2009, the Compensation Committee (and, with respect to Mr. Wallace, the independent members of the Board) determined that the Company had not achieved the threshold performance-based conditions applicable to the fiscal year 2009 performance shares and that none of the shares issuable under the fiscal year 2009 performance shares had been earned.

Grants of Plan-Based Awards

The following table provides certain summary information concerning each grant of an award made to a Named Executive Officer during the fiscal year ended June 30, 2011 under a compensation plan. No stock appreciation rights were granted to any of the Named Executive Officers during the fiscal year ended June 30, 2011.

Name and Principal Position (a)	Grant Date (b)	Potential Payouts Under Non-Equity			Potential Future Payouts Under Equity			Grant Date Fair Value of Equity Awards (\$) ⁽⁶⁾ (i)
		Threshold (\$) ⁽²⁾ (c)	Target (\$) ⁽³⁾ (d)	Maximum (\$) (e)	Threshold (#) ⁽⁴⁾ (f)	Target (#) ⁽⁵⁾ (g)	Maximum (#) (h)	
Richard P. Wallace President & Chief Executive Officer	—	64,800	1,080,000	3,240,000				
	8/5/2010 ⁽⁷⁾ 8/5/2010 ⁽⁸⁾				26,400 52,800	52,800 52,800	52,800 52,800	1,717,056 1,717,056
Mark P. Dentinger Executive Vice President & Chief Financial Officer	—	18,000	300,000	900,000				
	8/5/2010 ⁽⁷⁾ 8/5/2010 ⁽⁸⁾				9,075 18,150	18,150 18,150	18,150 18,150	590,238 590,238
Bobby R. Bell Executive Vice President, Global Customer Organization	—	16,745	279,086	837,259				
	8/5/2010 ⁽⁷⁾ 8/5/2010 ⁽⁸⁾				8,250 16,500	16,500 16,500	16,500 16,500	536,580 536,580
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	—	14,280	238,000	714,000				
	8/5/2010 ⁽⁷⁾ 8/5/2010 ⁽⁸⁾				4,950 9,900	9,900 9,900	9,900 9,900	321,948 321,948
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	—	10,951	182,520	547,560				
	8/5/2010 ⁽⁷⁾ 8/5/2010 ⁽⁸⁾				2,475 4,950	4,950 4,950	4,950 4,950	160,974 160,974

- (1) The amounts set forth in the table as “Potential Payouts Under Non-Equity Incentive Plan Awards” reflect the potential cash payouts (threshold, target and maximum) that could have been earned under our Executive Incentive Plan (the “Bonus Plan”) based on the Company’s performance for fiscal year 2011. In August 2011, following the completion of fiscal year 2011, the Company’s actual performance was measured against the pre-established performance targets. Based on that measurement, the actual bonus amount under the fiscal year 2011 Bonus Plan was calculated for each Named Executive Officer. That bonus amount is reflected in the Summary Compensation Table in the column “Non-Equity Incentive Plan Compensation.”
- (2) The threshold amount is calculated as the minimum amount that would have been payable under the fiscal year 2011 Bonus Plan to the applicable Named Executive Officer assuming satisfaction of the initial performance threshold required to fund the Bonus Plan. Under the structure of the fiscal year 2011 Bonus Plan, the actual percentage of the executive’s target bonus payable under the plan was determined by a combination of (a) the Company’s achieved level of operating margin percentage and (b) an assessment by the Compensation Committee (or the independent members of the Board, as applicable) of the extent to which the Company’s balanced scorecard goals for the fiscal year had been achieved. If the Company had achieved exactly the threshold level of operating margin percentage required to fund the 2011 Bonus Plan (and no higher), the Compensation Committee and the independent members of the Board had the discretion to set such percentage as low as six percent (6%) of the executives’ target bonus amounts based on such assessment of the Company’s balanced scorecard achievement.
- (3) The amount in column (d) reflects the amount that would have been payable under the fiscal year 2011 Bonus Plan to the applicable Named Executive Officer assuming payment of the officer’s full target bonus. Under the structure of the fiscal year 2011 Bonus Plan, a payout of 100% of a participant’s target bonus was payable upon Company achievement of its target level of operating results (in terms of both the Company’s operating margin percentage and the Company’s achievement of its balanced scorecard goals).
- (4) The threshold amount is calculated as the minimum number of shares that would be potentially earnable under the fiscal year 2011 RSUs (i.e., awards issued with only service-based vesting criteria and no performance-based vesting criteria) and performance shares

(i.e., awards issued with both service-based and performance-based vesting criteria) granted to the applicable Named Executive Officer assuming satisfaction of the initial performance threshold, if any, required to earn any shares under the applicable award. With respect to the fiscal year 2011 RSUs, they contain no performance-based vesting criteria (and therefore no initial performance threshold), so the total number of shares subject to such RSU is reported in column (f). With respect to the fiscal year 2011 performance shares, under the structure of such awards, the actual number of shares that will be potentially issuable under such award will be determined by the Company's achieved level of weighted average operating margin percentage over fiscal years 2011 and 2012. If the Company were to achieve exactly the threshold level of weighted average operating margin percentage set forth in the terms of the fiscal year 2011 performance share awards (and no higher), then fifty percent (50%) of the maximum number of shares subject to such awards would be potentially earnable by each Named Executive Officer, subject to such officer's satisfaction of the service-based vesting criteria applicable to such awards.

- (5) The target amount is calculated as the number of shares that would be potentially earnable under the fiscal year 2011 RSUs and performance shares granted to the applicable Named Executive Officer assuming Company performance at plan. With respect to the fiscal year 2011 RSUs, they contain no performance-based vesting criteria, so the total number of shares subject to such RSU is reported in column (g). With respect to the fiscal year 2011 performance shares, under the structure of such awards, the actual number of shares that will be potentially issuable under such award will be determined by the Company's achieved level of weighted average operating margin percentage over fiscal years 2011 and 2012. If the Company were to achieve exactly its plan level of weighted average operating margin percentage set forth in the terms of the fiscal year 2011 performance share awards (and no higher or lower), then one hundred percent (100%) of the maximum number of shares subject to such awards would be potentially earnable by each Named Executive Officer, subject to such officer's satisfaction of the service-based vesting criteria applicable to such awards.

- (6) The dollar value reported in column (i) represents the grant date fair value of the applicable RSU or performance share award calculated in accordance with the SEC's applicable requirements.

With respect to RSUs, the grant date fair value of each such RSU has been computed in accordance with ASC 718 (except that the fair values set forth above have not been reduced by the Company's estimated forfeiture rate). The ASC 718 grant date fair value of each RSU award was calculated based on the fair market value of our Common Stock on the award date.

With respect to performance shares, the grant date fair value of each such award has been computed in accordance with ASC 718 based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards and the fair market value of our Common Stock on the award date. Because the performance shares granted during fiscal year 2011 were structured so that they would be fully earned upon achievement by KLA-Tencor of its target level of weighted average operating margin percentage over fiscal years 2011 and 2012 (a target that was considered difficult to achieve at the time of grant), the probable outcome of the performance-based conditions applicable to the awards as of the grant date, for purposes of the calculations set forth in this table, has been determined to be equal to the maximum number of shares potentially issuable under the applicable award.

- (7) Reflects an award of performance shares (equal to one-half of the executive officer's annual equity award for fiscal year 2011) that have both a performance-vesting component tied to the Company's weighted average operating margin percentage over fiscal years 2011 and 2012 and a service-vesting component tied to continued service. The achievement of the performance-vesting component of these performance shares (i.e., the number of shares that will be issuable to each of the Named Executive Officers under his performance share award, if he satisfies the applicable service-vesting requirements) will be determined following the completion of fiscal year 2012 based on the Company's weighted average operating margin percentage over fiscal years 2011 and 2012. Fifty percent (50%) of the earned shares will vest on the two-year anniversary of the grant date (or the first fifty percent (50%) of the shares will vest on the date that such shares are determined to have been earned, if that date is later than the two-year anniversary of the grant date), and the remaining fifty percent (50%) will vest on the four-year anniversary of the grant date, provided the Named Executive Officer continues in our employ through each applicable vesting date. The underlying shares may also vest on an accelerated basis in the event the officer's employment terminates under certain circumstances, as described in the section "Potential Payments Upon Termination or Change of Control."
- (8) Reflects an award of RSUs (equal to one-half of the executive officer's annual equity award for fiscal year 2011) that only has a service-vesting component tied to continued service beyond fiscal year 2011. Fifty percent (50%) of the shares will vest on the two-year anniversary of the grant date, and the remaining fifty percent (50%) will vest on the four-year anniversary of the grant date, provided the Named Executive Officer continues in our employ through each applicable vesting date. The underlying shares may also vest on an accelerated basis in the event the officer's employment terminates under certain circumstances, as described in the section "Potential Payments Upon Termination or Change of Control."

Outstanding Equity Awards at Fiscal Year End

The following table provides certain summary information concerning outstanding equity awards held by the Named Executive Officers as of June 30, 2011.

Name and Principal Position	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$/Sh)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$) ⁽¹⁾
Richard P. Wallace President & Chief Executive Officer	125,000 ⁽²⁾	—	47.95	9/26/2012		
	50,000 ⁽²⁾	—	52.53	2/17/2013		
	1,000 ⁽²⁾	—	40.14	5/22/2013		
	12,500 ⁽²⁾	—	51.23	7/30/2013		
	30,000 ⁽²⁾	—	53.86	10/27/2013		
	15,000 ⁽²⁾	—	58.10	1/27/2014		
	18,750 ⁽²⁾	—	45.16	4/26/2014		
	11,250 ⁽²⁾	—	40.66	8/2/2014		
	75,000 ⁽²⁾	—	41.79	9/21/2014		
					52,800 ⁽³⁾	2,137,344
					52,800 ⁽⁴⁾	2,137,344
					57,500 ⁽⁴⁾	2,327,600
					57,500 ⁽⁴⁾	2,327,600
					74,000 ⁽⁴⁾	2,995,520
					12,500 ⁽⁴⁾	506,000
					26,145 ⁽⁴⁾	1,058,350
Mark P. Dentinger Executive Vice President & Chief Financial Officer					18,150 ⁽³⁾	734,712
					18,150 ⁽⁴⁾	734,712
					20,000 ⁽⁴⁾	809,600
					20,000 ⁽⁴⁾	809,600
					43,000 ⁽⁴⁾	1,740,640
					20,000 ⁽⁴⁾	809,600
Bobby R. Bell Executive Vice President, Global Customer Organization	27,540 ⁽²⁾	—	46.67	7/10/2011		
	2,460 ⁽²⁾	—	53.35	7/10/2011		
	600 ⁽²⁾	—	45.25	10/2/2011		
	17,000 ⁽²⁾	—	47.95	9/26/2012		
	1,354 ⁽²⁾	—	37.05	11/8/2012		
	1,896 ⁽²⁾	—	37.43	11/8/2012		
	542 ⁽²⁾	—	34.67	1/28/2013		
	3,250 ⁽²⁾	—	51.23	7/30/2013		
	6,200 ⁽²⁾	—	53.86	10/27/2013		
	3,100 ⁽²⁾	—	58.10	1/27/2014		
	3,875 ⁽²⁾	—	45.16	4/26/2014		
	2,325 ⁽²⁾	—	40.66	8/2/2014		
	30,750 ⁽²⁾	—	39.89	9/16/2014		
					16,500 ⁽³⁾	667,920
					16,500 ⁽⁴⁾	667,920
					18,450 ⁽⁴⁾	746,856
					18,450 ⁽⁴⁾	746,856
					41,500 ⁽⁴⁾	1,679,920
					15,000 ⁽⁴⁾	607,200
					10,458 ⁽⁴⁾	423,340
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary					9,900 ⁽³⁾	400,752
					9,900 ⁽⁴⁾	400,752
					11,050 ⁽⁴⁾	447,304
					11,050 ⁽⁴⁾	447,304
					19,400 ⁽⁴⁾	785,312
					7,500 ⁽⁴⁾	303,600
					1,961 ⁽⁴⁾	79,381

Name and Principal Position	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$/Sh)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$) ⁽¹⁾
Virendra A. Kirloskar	10,000 ⁽²⁾	—	47.95	9/26/2012		
Senior Vice President & Chief Accounting Officer	2,500 ⁽²⁾	—	39.35	5/21/2013		
	3,200 ⁽²⁾	—	53.86	10/27/2013		
	1,600 ⁽²⁾	—	58.10	1/27/2014		
	1,267 ⁽²⁾	—	45.16	4/26/2014		
	760 ⁽²⁾	—	40.66	8/2/2014		
					4,950 ⁽³⁾	200,376
					4,950 ⁽⁴⁾	200,376
					5,900 ⁽⁴⁾	238,832
					5,900 ⁽⁴⁾	238,832
					10,400 ⁽⁴⁾	420,992
					4,000 ⁽⁴⁾	161,920
					3,000 ⁽⁴⁾	121,440
					4,000 ⁽⁴⁾	161,920

(1) Calculated based on the \$40.48 closing price per share of our Common Stock on June 30, 2011.

(2) These options are fully vested and exercisable.

(3) These grants represent the maximum number of shares of our Common Stock that could be earned under performance share awards that were granted to the applicable executive officer in August 2010 in connection with their service during fiscal year 2011. The achievement of the performance-vesting component of these performance shares (i.e., the number of shares that will be issuable to each of the Named Executive Officers under his performance share award, if he satisfies the applicable service-vesting requirements) will be determined following the completion of fiscal year 2012 based on the Company's weighted average operating margin percentage over fiscal years 2011 and 2012. Fifty percent (50%) of the earned shares will vest on the two-year anniversary of the grant date (or the first fifty percent (50%) of the shares will vest on the date that such shares are determined to have been earned, if that date is later than the two-year anniversary of the grant date), and the remaining fifty percent (50%) will vest on the four-year anniversary of the grant date, provided the Named Executive Officer continues in our employment through each applicable vesting date. The underlying shares may also vest on an accelerated basis in the event the officer's employment terminates under certain circumstances, as described in the section "Potential Payments Upon Termination or Change of Control."

(4) These particular RSUs are part of an award (either an RSU award granted with only service-based vesting criteria or a performance share award that, as of June 30, 2011, had been earned in part or in full) that vests over a four-year period of service with the Company measured from the award date. Each RSU represents the right to receive one share of our Common Stock upon the vesting of that unit. Information concerning these RSU awards is set forth below. Fifty percent (50%) of the total number of shares underlying these awards will vest and become issuable upon completion of two years of service measured from the award date, and the remaining fifty percent (50%) will vest and become issuable upon completion of four years of service measured from the award date. The RSUs will vest on an accelerated basis in the event the officer's employment terminates under certain circumstances, as described in the section "Potential Payments Upon Termination or Change of Control."

Name	RSU Award Date	Total Number of Shares Subject to Award	Number of Shares Vested and Issued Before July 1, 2011
Richard P. Wallace	8/5/2010	52,800	—
	8/6/2009	57,500	—
	8/6/2009	57,500	—
	8/6/2009	74,000	—
	8/13/2007	25,000	12,500
	8/8/2007	52,291	26,146
Mark P. Dentinger	8/5/2010	18,150	—
	8/3/2009	20,000	—
	8/3/2009	20,000	—
	8/3/2009	43,000	—
	11/11/2008	40,000	20,000

Name	RSU Award Date	Total Number of Shares Subject to Award	Number of Shares Vested and Issued Before July 1, 2011
Bobby R. Bell	8/5/2010	16,500	—
	8/3/2009	18,450	—
	8/3/2009	18,450	—
	8/3/2009	41,500	—
	8/5/2008	30,000	15,000
	11/15/2007	20,917	10,459
Brian M. Martin	8/5/2010	9,900	—
	8/3/2009	11,050	—
	8/3/2009	11,050	—
	8/3/2009	19,400	—
	8/5/2008	15,000	7,500
	8/8/2007	3,922	1,961
Virendra A. Kirloskar	8/5/2010	4,950	—
	8/3/2009	5,900	—
	8/3/2009	5,900	—
	8/3/2009	10,400	—
	8/5/2008	8,000	4,000
	5/5/2008	8,000	4,000
	11/15/2007	6,000	3,000

Option Exercises and Stock Vested

The following table sets forth information with respect to shares of our Common Stock subject to restricted stock, RSU or performance share awards held by the Named Executive Officers that vested, and stock options that were exercised, during the fiscal year ended June 30, 2011. No stock appreciation rights were held or exercised by the Named Executive Officers during the fiscal year ended June 30, 2011.

Name and Principal Position	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$) ⁽¹⁾	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$) ⁽²⁾
Richard P. Wallace President & Chief Executive Officer	66,292	529,415	81,250 ⁽³⁾	3,245,813
Mark P. Dentinger Executive Vice President & Chief Financial Officer	—	—	20,000 ⁽³⁾	739,200
Bobby R. Bell Executive Vice President, Global Customer Organization	—	—	24,375 ⁽³⁾	778,894
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	—	—	21,500 ⁽³⁾	873,340
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	10,184	52,040	11,050 ⁽³⁾	363,013

- (1) Based on the closing market price of the purchased shares on the exercise date (or, if the acquired shares were sold on the exercise date, the sale price of the shares) less the option exercise price paid for the shares.
- (2) Based on the closing market price of the vested shares on the vesting date.
- (3) Our 2004 Equity Incentive Plan allows us to withhold shares issuable upon a vesting event to pay for the applicable withholding tax with respect to such vesting event. The gross number of shares acquired on vesting, which is set forth in the table above, was reduced by the withheld shares, and the net remaining shares were issued to each officer. The following reflects the net number of shares that were issued to each officer, after giving effect to such withholding, during the fiscal year ended June 30, 2011: Mr. Wallace: 44,497 shares; Mr. Dentinger: 10,955 shares; Mr. Bell: 14,495 shares; Mr. Martin: 13,612 shares; and Mr. Kirloskar: 6,898 shares.

Nonqualified Deferred Compensation

We have established the Executive Deferred Savings Plan (the “EDSP”) in order to provide our executive officers and other key employees with the opportunity to defer all or a portion of their cash compensation each year. Pursuant to the plan, each participant can elect to defer between 5 to 100% of his or her salary, commissions and bonuses for the fiscal year. The deferred amount is credited to an account maintained in his or her name on our books. The portion of the account attributable to the participant’s deferral is fully vested at all times but is not matched with any Company funds. The account is periodically adjusted to reflect earnings (or losses) based on the participant’s investment elections among a select group of investment funds utilized to track the notional investment return on the account balance. There are a total of 23 investment funds available for selection under the EDSP, and the participant may periodically change his or her investment elections. The participant may elect to receive his or her vested account balance upon termination of employment or at an earlier designated date. The distribution may, at the participant’s election, be made in a lump sum or in quarterly installments over a period ranging from five years to fifteen years, depending on the circumstances triggering the distribution event. A participant can receive an early distribution of a portion of his or her vested account balance in the event of a financial hardship or in the event he or she agrees to forfeit a designated percentage of his or her remaining account balance. We maintain life insurance policies on the plan participants as a funding vehicle for a portion of our obligations under the plan.

The following table shows the deferred compensation activity for each Named Executive Officer during the fiscal year ended June 30, 2011.

Name and Principal Position	Executive Contributions in Fiscal Year 2011 (\$)	Company Contributions in Fiscal Year 2011 (\$)	Aggregate Earnings in Fiscal Year 2011 (\$) ⁽¹⁾⁽²⁾	Aggregate Withdrawals/ Distributions (\$)	Aggregate Balance as of June 30, 2011 (\$)
(a)	(b)	(c)	(d)	(e)	(f)
Richard P. Wallace President & Chief Executive Officer	—	—	239,248	—	1,022,052
Mark P. Dentinger Executive Vice President & Chief Financial Officer	—	—	—	—	—
Bobby R. Bell Executive Vice President, Global Customer Organization	—	—	304,295	—	1,470,230
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	8,500	—	4,534	29,450	28,770
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	—	—	—	—	—

- (1) The reported amount corresponds to a composite of the actual market earnings on a group of investment funds selected by the applicable executive officer for purposes of tracking the notional investment return on his account balance for fiscal year 2011. No portion of the reported amount was “above market” or “preferential.” Accordingly, amounts reported in this column (d) for each

Named Executive Officer are not reported in the “Change in Pension Value and Nonqualified Deferred Compensation Earnings” column of the Summary Compensation Table.

- (2) The 23 investment funds named below were available for selection under the EDSP for fiscal year 2011. The rate of return for each such fund for fiscal year 2011 was as follows:

Name of Fund	% Rate of Return for Fiscal Year 2011
American Funds Growth Fund	33.06%
DWS Dreman Small-Midcap Value	33.75%
DWS Small Cap Index	37.11%
Invesco V.I. Global Health Care Fund	30.47%
Invesco V.I. Technology Fund	39.42%
Invesco V.I. Utilities	27.81%
Janus Aspen Series Worldwide Growth	24.89%
PIMCO Total Return Fund	5.63%
Royce Micro-Cap	35.87%
Royce Small-Cap	27.01%
Rydex Energy	48.78%
Transamerica WMC Diversified Equity	31.89%
T. Rowe Price Blue Chip Growth	35.37%
T. Rowe Price Equity Income Fund	27.88%
T. Rowe Price International Stock	32.68%
T. Rowe Price Mid Cap Growth	38.39%
Vanguard VIF Balanced Index Fund	20.96%
Vanguard Equity Index	30.48%
Vanguard High-Yield Bond	13.47%
Vanguard International Growth	34.51%
Vanguard REIT Index Fund	34.03%
Vanguard Total Bond Index	3.57%
Wells Fargo Cash Investment Money Market	0.13%

Potential Payments Upon Termination or Change of Control

In January 2006, our Board adopted an Executive Severance Plan (the “Original Severance Plan”). In November 2010, our Compensation Committee adopted a 2010 Executive Severance Plan (the “2010 Severance Plan”). The 2010 Severance Plan is intended to exist in parallel with the Original Severance Plan, which remains in full force and effect for existing participants under that plan until terminated or modified in accordance with its terms. No participant under the 2010 Severance Plan is eligible to simultaneously participate under the Original Severance Plan, and no participant under the Original Severance Plan is eligible to simultaneously participate under the 2010 Severance Plan.

The Original Severance Plan and the 2010 Severance Plan each provide certain compensation and benefits in the event that a participant’s employment with us terminates under certain defined circumstances. In exchange for receiving severance benefits under either plan, the participant will be subject to a non-compete covenant and non-solicitation restrictions for the period of time co-terminous with the period for which he or she will receive continued compensation and benefits under the applicable severance plan. Each severance plan also contains a mitigation provision in which the benefits payable are subject to reduction to the extent the participant earns post-termination compensation from sources other than the Company. All of our Named Executive Officers participate in either the Original Severance Plan or the 2010 Severance Plan, as described in more detail below.

The terms of and benefits payable under our two severance plans are in many ways similar to one another. However, unlike the Original Severance Plan, the 2010 Severance Plan does not contain tax gross-up provisions related to excise taxes that may be imposed by Section 4999 of the Internal Revenue Code of 1986, as amended (the “Code”), as the result of a participant receiving a payment that would constitute a “parachute payment” within the meaning of Code Section 280G upon or in connection with a change of control of the Company. Instead, the 2010 Severance Plan contains a “best results” provision, which is described in more detail below.

Original Severance Plan:

Messrs. Wallace, Dentinger and Martin participate in the Original Severance Plan.

If Mr. Wallace, Mr. Dentinger or Mr. Martin is terminated other than for cause, or voluntarily resigns for good reason, prior to a change of control, then such officer will receive (i) salary continuation payments for two years, (ii) a pro-rated annual incentive payment for the fiscal year of his termination or resignation (calculated based on such officer’s annual incentive bonus for the then-most recently completed fiscal year and the proportion of the then-current fiscal year served through the date of termination or resignation), (iii) pro-rated vesting of all of his outstanding equity awards through the date of his termination or resignation (rounded up to the next whole month and disregarding any “cliff-vesting” provisions applicable to the award), and (iv) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of termination or resignation, but in no event beyond the original term of the award. The calculation in clause (iii) of this paragraph with respect to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant’s termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum number of shares issuable under the applicable award) has been finally determined.

If Mr. Wallace is terminated other than for cause, or voluntarily resigns for good reason, within two years following a change of control, he will receive (i) salary continuation payments for three years, (ii) an amount equal to three times his average annual bonus for the preceding three completed fiscal years, payable in equal installments over the salary continuation period, (iii) a pro-rated annual incentive payment for the fiscal year of his termination or resignation (calculated as described in clause (ii) of the preceding paragraph), (iv) 100% vesting acceleration of all of his outstanding equity awards, (v) an additional \$2,000 per month for the three-year severance period and (vi) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of termination or resignation, but in no event beyond the original term of the award. The calculation in clause (iv) of this paragraph with respect to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum number of shares issuable under the applicable award) has been finally determined.

If Mr. Dentinger or Mr. Martin is terminated other than for cause, or voluntarily resigns for good reason, within two years following a change of control, then such officer will receive (i) salary continuation payments for two years, (ii) an amount equal to two times his average annual bonus for the preceding three completed fiscal years (or, if an officer has not been employed by us for at least three full fiscal years, two times the annualized average of (A) the bonuses earned by such officer for each of the preceding completed fiscal years that the officer has been with us and (B) a pro-rated amount of the actual bonus that would have been earned by such officer for the fiscal year of his termination or resignation), payable in equal installments over the salary continuation period, (iii) a pro-rated annual incentive payment for the fiscal year of his termination or resignation (calculated as described in clause (ii) two paragraphs above), (iv) 100% vesting acceleration of all of his outstanding equity awards, (v) an additional \$2,000 per month for the two-year severance period and (vi) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of termination or resignation, but in no event beyond the original term of the award. The calculations in clauses (ii) (with respect to an officer who has been with us for less than three full fiscal years) and (iv) of this paragraph with respect to any performance-based equity or bonus awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum amounts that would have been issuable with respect to such awards) has been finally determined.

In addition, Messrs. Wallace, Dentinger and Martin will each be entitled under certain circumstances to a full tax gross-up payment to cover any excise tax liability they may incur under Code Section 4999 and the resulting income and employment tax liability attributable to that payment, should the benefits to which they become entitled in connection with a change of control constitute parachute payments that exceed by more than \$50,000 the maximum parachute payment otherwise allowable under the federal tax laws without the imposition of Section 4999 excise tax.

2010 Severance Plan:

Messrs. Bell and Kirloskar participate in the 2010 Severance Plan. They each have the right to receive benefits under that plan solely in connection with a termination of their employment under certain circumstances within one year following a change of control of the Company.

If Mr. Bell or Mr. Kirloskar is terminated other than for cause, or voluntarily resigns for good reason, within one year following a change of control, then such officer will receive (i) salary continuation payments for 18 months, (ii) a pro-rated annual incentive payment for the fiscal year of his termination or resignation (calculated based on such officer's annual incentive bonus for the then-most recently completed fiscal year and the proportion of the then-current fiscal year served through the date of termination or resignation), (iii) 100% vesting acceleration of all of his outstanding equity awards, and (iv) the extension of the post-termination exercise period of each stock option or stock appreciation right granted after January 1, 2006 so that the option or right will remain exercisable for twelve months following the date of termination or resignation, but in no event beyond the original term of the award. The calculation in clause (iii) of this paragraph with respect to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date will be delayed until the extent of the achievement of those criteria (and thus the maximum number of shares issuable under the applicable award) has been finally determined.

As noted above, the 2010 Severance Plan does not contain tax gross-up provisions related to excise taxes that may be imposed by Code Section 4999 as the result of a participant receiving a payment that would constitute a "parachute payment" within the meaning of Code Section 280G upon or in connection with a change of control of the Company. Instead, the 2010 Severance Plan provides that, if a payment under the 2010 Severance Plan would constitute such a "parachute payment" and would therefore be subject to Code Section 4999 excise tax, then the payment will be reduced to either (a) the largest portion of the payment that would result in no portion of the payment being subject to the excise tax or (b) the largest portion, up to and including the total, of the payment, whichever amount, after taking into account all applicable federal, state and local employment taxes, income taxes, and the excise tax (all computed at the highest applicable marginal rate), results in the participant's receipt, on an after-tax basis, of the greater amount of the payment notwithstanding that all or some portion of the payment may be subject to the excise tax.

Table Reflecting Potential Termination and Change of Control Payments:

The following table shows the estimated amounts that would have been payable to each of the Named Executive Officers upon the occurrence of each of the indicated events, had the applicable event occurred on June 30, 2011. For such officers, the amount attributable to the accelerated vesting of stock options, performance shares and restricted stock units is based upon the closing fair market value of our Common Stock on the last trading day of fiscal year 2011. That value was \$40.48 per share, as reported on the NASDAQ Global Select Market on June 30, 2011. The actual compensation and benefits the officer would receive at any subsequent date would likely vary from the amounts set forth below as a result of certain factors, such as a change in the price of our Common Stock and any additional benefits the officer may have accrued as of that time under applicable benefit or compensation plans.

The amounts that would have been payable to each of our Named Executive Officers upon the occurrence of the indicated event had the applicable event occurred on June 30, 2011 are as follows:

Original Severance Plan

Name and Principal Position	Event	Salary/Bonus Continuation & Additional Monthly Payments (\$)	Pro-rated Bonus (\$)	Extension of Post-Termination Exercise Period for Stock Options (\$) ⁽¹⁾⁽²⁾	Accelerated Vesting of Stock Awards (\$) ⁽³⁾	Excise Tax Gross-Up (\$)	Total (\$)
Richard P. Wallace President & Chief Executive Officer	Termination without Cause or Resignation for Good Reason ⁽⁴⁾	1,600,000	3,130,494	82,955	6,144,904 ⁽⁵⁾	—	10,958,353
	Termination without Cause or Resignation for Good Reason following Change of Control ⁽⁴⁾⁽⁶⁾	6,680,916	3,130,494	82,955	13,489,758 ⁽⁷⁾	5,634,645	29,018,768
Mark P. Dentinger Executive Vice President & Chief Financial Officer	Termination without Cause or Resignation for Good Reason ⁽⁴⁾	800,000	891,000	—	2,216,685 ⁽⁵⁾	—	3,907,685
	Termination without Cause or Resignation for Good Reason following Change of Control ⁽⁴⁾⁽⁶⁾	2,474,000	891,000	—	5,638,864 ⁽⁷⁾	2,196,653	11,200,517
Brian M. Martin Executive Vice President, General Counsel & Corporate Secretary	Termination without Cause or Resignation for Good Reason ⁽⁴⁾	680,000	700,863	—	1,203,956 ⁽⁵⁾	—	2,584,819
	Termination without Cause or Resignation for Good Reason following Change of Control ⁽⁴⁾⁽⁶⁾	1,428,375	700,863	—	2,864,405 ⁽⁷⁾	1,176,637	6,170,280

2010 Severance Plan

Name and Principal Position	Event	Salary Continuation Payments (\$)	Pro-rated Bonus (\$)	Extension of Post-Termination Exercise Period for Stock Options (\$) ⁽¹⁾⁽²⁾	Accelerated Vesting of Stock Awards (\$) ⁽³⁾	Payment Reduction (If Any) to Maximize Net Amount Received (\$)	Total (\$)
Bobby R. Bell Executive Vice President, Global Customer Organization	Termination without Cause or Resignation for Good Reason following Change of Control ⁽⁴⁾⁽⁶⁾	562,500	738,710	—	5,540,012 ⁽⁷⁾	—	6,841,222
Virendra A. Kirloskar Senior Vice President & Chief Accounting Officer	Termination without Cause or Resignation for Good Reason following Change of Control ⁽⁴⁾⁽⁶⁾	421,200	538,075	—	1,744,688 ⁽⁷⁾	—	2,703,963

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- (1) Reflects the incremental compensation charge that would be recorded by the Company in connection with the extension, in accordance with the applicable severance plan, of the post-termination exercise period of the applicable stock options (if any) held by the participant.
 - (2) All stock options held by the Named Executive Officers as of June 30, 2011 were fully vested. As a result, no value is reported in this table with respect to the acceleration of vesting of stock options under the terms of the severance plans.
 - (3) As noted above, pursuant to the terms of the Original Severance Plan and the 2010 Severance Plan, the vesting acceleration of all outstanding equity awards, when applied to any performance-based equity awards for which the achievement of the applicable performance criteria has not yet been determined as of the participant's termination date, is to be delayed until the extent of the achievement of those criteria (and thus the maximum number of shares issuable under the applicable award) has been finally determined. As of the date of this Proxy Statement, the extent to which the performance criteria for the fiscal year 2011 performance share awards will be earned is not yet known, as that determination will be made following the end of fiscal year 2012, based on the Company's achieved level of weighted average operating margin percentage over fiscal years 2011 and 2012. For purposes of this table, the fiscal year 2011 performance share awards have been valued based on the probable outcome (determined as of the grant date) of the performance-based conditions applicable to the awards, which, as described in footnote (6) to the Summary Compensation Table in this Proxy Statement, has been determined to be equal to the maximum number of shares potentially issuable under the fiscal year 2011 performance share awards.
 - (4) For purposes of the Original Severance Plan and the 2010 Severance Plan, "Cause" means (A) outside of the applicable period following a Change of Control (two years for the Original Severance Plan; one year for the 2010 Severance Plan), the occurrence of any of the following events: (i) the participant's conviction of, or plea of nolo contendere to, a felony; (ii) the participant's gross misconduct; (iii) any material act of personal dishonesty taken by the participant in connection with his or her responsibilities as an employee of the Company, or (iv) the participant's willful and continued failure to perform the duties and responsibilities of his or her position after there has been delivered to the participant a written demand for performance from the Board which describes the basis for the Board's belief that the participant has not substantially performed his or her duties and provides the participant with thirty (30) days to take corrective action, and (B) within the applicable period following a Change of Control, the occurrence of any of the following events: (i) the participant's conviction of, or plea of nolo contendere to, a felony that the Board reasonably believes has had or will have a material detrimental effect on our reputation or business; (ii) the participant's willful gross misconduct with regard to the Company that is materially injurious to us; (iii) any act of personal dishonesty taken by the participant in connection with his or her responsibilities as an employee of the Company with the intention or reasonable expectation that such action may result in substantial personal enrichment of the participant or (iv) the participant's willful and continued failure to perform the duties and responsibilities of his or her position after there has been delivered to the participant a written demand for performance from the Board which describes the basis for the Board's belief that the participant has not substantially performed his or her duties and provides the participant with thirty (30) days to take corrective action.

For purposes of the Original Severance Plan and the 2010 Severance Plan, "Good Reason" means (A) outside of the applicable period following a Change of Control (two years for the Original Severance Plan; one year for the 2010 Severance Plan), the occurrence of any of the following events: (i) a material reduction of the participant's duties, title, authority or responsibilities; (ii) a reduction in the participant's base salary, other than a reduction that applies to other executives generally; (iii) a material reduction in the aggregate level of the participant's employee benefits, or overall compensation, other than a reduction that applies to other executives generally; or (iv) the relocation of the participant's office more than thirty-five (35) miles from its then present location, unless such relocated office is closer to the participant's then principal residence, and (B) within the applicable period following a Change of Control, the occurrence of any of the events listed above in this paragraph except that any reduction in the participant's base salary shall constitute Good Reason even if such reduction applies to other executives generally; *provided however*, that in no event shall Good Reason exist unless the participant provides us with thirty (30) days written notice specifying in detail the grounds for a purported Good Reason resignation and we fail to cure the purported grounds for the Good Reason within such thirty (30) day notice period.

- (5) The RSUs and performance shares (to the extent earned) awarded by the Company vest 50% on the two-year anniversary of the grant date and 50% on the four-year anniversary, provided the officer continues in our employ through the applicable vesting date. The amounts marked by this footnote (5) reflect the pro-rated vesting of the applicable officer's outstanding equity awards through the date of his termination or resignation, without giving effect to the "cliff-vesting" provisions applicable to the awards.
- (6) For purposes of the Original Severance Plan and the 2010 Severance Plan, a "Change of Control" means the occurrence of any of the following events: (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) becoming the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities representing 50% or more of the total voting power represented by our then outstanding voting securities; (ii) the sale or disposition by us of all or substantially all of our assets; (iii) the consummation of a merger or consolidation of the Company with any other corporation, other than a merger or consolidation which would result in our voting securities outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 50% of the total voting power represented by the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or (iv) a change in the composition of our Board, as a result of which fewer than a majority of the directors are Incumbent Directors (where "Incumbent Directors" means directors who either (A) were directors of the Company as of a specified date (February 16, 2006 for the Original Severance Plan; November 3, 2010 for the 2010 Severance Plan) or (B) are elected, or nominated for election, to the Board with the affirmative votes of at least a majority of those directors whose election or nomination was

not in connection with any transactions described in subsections (i), (ii) or (iii) or in connection with an actual or threatened proxy contest relating to the election of directors of the Company).

- (7) The amounts marked by this footnote (7) reflect both (a) the pro-rated vesting of the applicable officer's outstanding equity awards through the date of his termination or resignation, without giving effect to the "cliff-vesting" provisions applicable to the awards (as described in footnote (5) to this table), and (b) the accelerated vesting of the applicable officer's outstanding equity awards for service periods after the date of his termination or resignation. The following table provides the breakdown for each such reported amount:

Name	Value of Pro-Rated Vesting Through Date of Termination/Resignation (\$)	Value of Accelerated Vesting for Service Period After Date of Termination/Resignation (\$)	Total Value Reported (\$)
Richard P. Wallace	6,144,904	7,344,854	13,489,758
Mark P. Dentinger	2,216,685	3,422,179	5,638,864
Brian M. Martin	1,203,956	1,660,449	2,864,405
Bobby R. Bell	2,458,027	3,081,985	5,540,012
Virendra A. Kirloskar	792,517	952,171	1,744,688

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Review, Approval or Ratification of Related Party Transactions

Our Standards of Business Conduct require that all employees and Directors avoid conflicts of interests, including situations in which their personal interests interfere in any way, or appear to interfere, with the interests of KLA-Tencor.

In addition, our Board has adopted a written policy and procedures for the review, approval or ratification of related party transactions. Under this policy, the Audit Committee reviews transactions, arrangements or relationships in which the Company (including any of its subsidiaries) is a participant, the amount involved exceeds \$100,000 in any fiscal year, and one of our executive officers, Directors, Director nominees or 5% stockholders (or their immediate family members) has a direct or indirect material interest (other than solely as a result of being a director or beneficial owner of less than a specified percentage of shares of the other entity (5% for publicly traded entities and 10% for other entities)). As part of that review, the Audit Committee may consider such factors as it determines to be appropriate under the circumstances, which factors may include the position of the related party with the Company, the related party's interest in the transaction, the materiality of the transaction, the business purpose for and reasonableness of the transaction, and comparable market terms for similar transactions that do not involve related parties.

Following such review, if the Audit Committee concludes that the terms of the related party transaction are acceptable and appropriate, the Audit Committee either approves or ratifies (as applicable) the transaction. No member of the Audit Committee participates in the review of a transaction for which he or she is the related party. The related party transaction policy created standing pre-approval for certain recurring related party transactions, including, among others, (i) executive officer or Director compensation that has been approved by the Compensation Committee or the Board, and (ii) any contract, transaction or arrangement with any party who was not a related party at the time such contract, transaction or arrangement was entered into with the Company, and renewals or extensions thereof pursuant to contractual arrangements in effect and binding on the Company prior to the date that the party became a related party.

Transactions with Related Persons – Purchases of Goods and Services

The following represents the only transaction (or collection of transactions) in which KLA-Tencor was a participant during fiscal year 2011, the aggregate amount involved exceeded \$120,000, and any related person had a material direct or indirect interest (as determined, and as required to be reported, in accordance with SEC rules and regulations):

Mr. Calderoni's brother, Frank Calderoni, serves as an executive officer of Cisco Systems Inc. ("Cisco"). During fiscal year 2011, we purchased approximately \$545,854 in telecommunications equipment and services from Cisco.

The transactions with Cisco were reviewed and approved or ratified by the Audit Committee in accordance with the policies and procedures described above.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of June 30, 2011 with respect to shares of our Common Stock that may be issued under our existing equity compensation plans.

	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights ⁽¹⁾	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights ⁽²⁾	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in Column A)
	A	B	C
Equity Compensation Plans Approved by Stockholders ⁽³⁾	12,544,462	\$46.01	15,028,299 ⁽⁴⁾⁽⁵⁾⁽⁶⁾
Equity Compensation Plans Not Approved by Stockholders ⁽⁷⁾⁽⁸⁾	1,653,138	\$43.44	—
Total	14,197,600	\$45.46	15,028,299

- (1) Includes 6,540,449 shares of our Common Stock subject to restricted stock units that will entitle each holder to the issuance of one share of our Common Stock for each unit that vests over the holder's period of continued employment with the Company. Excludes purchase rights accruing under our 1997 Amended and Restated Employee Stock Purchase Plan (the "Purchase Plan"). Under the Purchase Plan, each eligible employee may purchase shares of Common Stock at each semi-annual purchase date (the last day of June and December each year), up to a maximum of \$25,000 worth of stock (determined on the basis of the fair market value per share on the date the purchase right is granted) for each calendar year the purchase right remains outstanding. As of June 30, 2011, the date of the information set forth in the table above (and a date on which a purchase occurred under the Purchase Plan), the purchase price payable per share under the terms of the Purchase Plan was equal to eighty-five percent (85%) of the lower of (i) the closing selling price per share of our Common Stock on the first day of the six-month offering period and (ii) the closing selling price per share of our Common Stock on the purchase date (or, if the purchase date is not a trading day, on the immediately preceding trading day). As of June 30, 2011, the weighted-average remaining contractual term of all outstanding options was 2.05 years.
- (2) Calculated without taking into account 6,540,449 shares of our Common Stock subject to outstanding restricted stock units that will become issuable as those units vest, without any cash consideration or other payment required for such shares.
- (3) Consists of our (a) 2004 Equity Incentive Plan ("2004 Equity Plan"), (b) 1982 Stock Option Plan, (c) Purchase Plan and (d) 1998 Outside Director Option Plan (the "Outside Director Plan").
- (4) Includes shares of our Common Stock available for future issuance under the 2004 Equity Plan, the Purchase Plan and the Outside Director Plan. No further shares are available for issuance under the 1982 Stock Option Plan.
- (5) As of June 30, 2011, 9,920,758 shares of our Common Stock were available for issuance under the 2004 Equity Plan. Shares reserved for issuance under this plan may be issued upon the exercise of stock options or stock appreciation rights, or pursuant to full value awards such as restricted stock awards or restricted stock units that vest upon the completion of designated service periods or performance units or performance shares that vest upon the attainment of prescribed performance milestones (and the completion of designated service periods). Shares issued pursuant to full value awards made under the 2004 Equity Plan will reduce the share reserve available under such plan by 1.8 shares for every one full value share issued.
- (6) As of June 30, 2011 (after giving effect to the purchase under the Purchase Plan on that date), 3,474,201 shares of our Common Stock were reserved for issuance under the Purchase Plan. This plan contains an annual automatic share renewal provision pursuant to which the number of shares of our Common Stock reserved for issuance under this plan will automatically increase on the first day of each fiscal year by an amount equal to the lesser of 2,000,000 shares or the number of shares which we estimate will be required to be issued under the plan during the forthcoming fiscal year. Two million shares were registered and added to the Purchase Plan during the fiscal year ended June 30, 2011.
- (7) Consists solely of the 2000 Non-Statutory Plan pursuant to which options have been granted to our employees and consultants. The 2000 Non-Statutory Plan was terminated during the fiscal year ended June 30, 2005, and no further options may be granted under that plan.
- (8) Excludes information for options assumed by us in connection with acquisitions of companies. As of June 30, 2011, a total of 17,944 shares of our Common Stock were issuable upon exercise of outstanding options assumed in those acquisitions and issued under the following plans, which have not been approved by our stockholders: Therma-Wave, Inc. 2000 Equity Incentive Plan (as amended), ADE Corporation 1995 Stock Option Plan, ADE Corporation 1997 Employee Stock Option Plan (as amended) and ADE Corporation 2000 Employee Stock Option Plan (as amended). The weighted average exercise price of those outstanding options is \$38.39 per share. No additional options may be granted under the plans under which these options were assumed.

REPORT OF THE AUDIT COMMITTEE

KLA-Tencor's Audit Committee is comprised of non-employee Directors, each of whom meets current standards of independence and financial experience requirements of the NASDAQ Stock Market. At the beginning of fiscal year 2011, the Audit Committee consisted of Messrs. Calderoni, Kaufman, Patel and Wang, with Mr. Calderoni serving as the Chairman of the Committee. Effective November 3, 2010 (the date of last year's annual stockholders' meeting), in connection with a periodic rotation of committee memberships, Mr. Kaufman ceased to serve as a member of the Audit Committee, and Mr. Bond was appointed as a member of the Audit Committee. In addition, on November 4, 2010, the Board appointed Ms. Higashi as a member of the Audit Committee. From November 4, 2010 through the date of this Proxy Statement, the Audit Committee has consisted of Messrs. Calderoni, Bond, Patel and Wang and Ms. Higashi, with Mr. Calderoni serving as the Chairman of the Committee.

The Board has determined that, of the current members of the Audit Committee, each of Mr. Calderoni, Ms. Higashi and Mr. Patel is an "audit committee financial expert" within the meaning of the rules and regulations promulgated by the SEC. The Board has adopted a written charter for the Audit Committee that details the responsibilities of the Audit Committee. This report relates to the activities undertaken by the Audit Committee in fulfilling such responsibilities. The charter is reviewed at least annually for changes, as appropriate, and is posted on KLA-Tencor's website at <http://ir.kla-tencor.com> in the Corporate Governance section.

KLA-Tencor's management is responsible for establishing and maintaining a system of internal controls and the financial reporting process. The Audit Committee is responsible for overseeing the Company's auditing, accounting and financial reporting processes, system of internal controls, and legal and ethical compliance. This report relates to the activities undertaken by the Audit Committee in fulfilling such responsibilities. During fiscal year 2011 and subsequent to the completion of the fiscal year, the Audit Committee reviewed, discussed and provided input on the Company's audited consolidated financial statements contained in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2011. The Audit Committee also met routinely with PricewaterhouseCoopers LLP, the Company's independent registered public accounting firm, with and without members of the Company's management team present, to evaluate and approve the Company's internal controls and the overall quality of the Company's financial reporting. The Audit Committee also met with the Company's Chief Executive Officer and Chief Financial Officer to discuss and act, as necessary, on accounting issues and risks facing the Company.

The Audit Committee also discussed with the independent registered public accounting firm the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (and/or superseded) (AICPA, Professional Standards, Vol. 1, AU Section 380), as adopted by the Public Company Accounting Oversight Board ("PCAOB") in Rule 3200T.

The Audit Committee received from the independent registered public accounting firm the written disclosures and the letter required by the applicable requirements of the PCAOB regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence. In addition, on a quarterly basis, the members of the Audit Committee discussed with the independent registered public accounting firm their independence, and the independent registered public accounting firm reaffirmed the independence of the Audit Committee members. After reviewing such information, the Audit Committee determined that the independent registered public accounting firm is independent

from management and KLA-Tencor. The Audit Committee also concluded that the provision of services covered by fees paid to the independent registered public accounting firm was compatible with maintaining their independence.

Based on the reviews and discussions referred to above, the Audit Committee recommended to the Board, and the Board approved, the inclusion of the audited financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2011, filed with the SEC on August 5, 2011.

MEMBERS OF THE AUDIT COMMITTEE

Robert M. Calderoni, Chairman

Robert T. Bond

Emiko Higashi

Kiran M. Patel

David C. Wang

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**KLA-TENCOR ANNUAL MEETING OF STOCKHOLDERS
NOVEMBER 3, 2011**

12:00 p.m., local time

KLA-Tencor Milpitas Facility
Building Three
Three Technology Drive
Milpitas, California 95035

Directions to KLA-Tencor's Milpitas Facility:

From Highway 237 Heading East:

Exit at McCarthy Boulevard. At the stop light, turn right onto McCarthy Boulevard. At the next intersection, turn right onto Technology Drive. KLA-Tencor is on the right side.

From Highway 237 Heading West:

Exit at McCarthy Boulevard. At the stop light, turn left onto McCarthy Boulevard (this will take you back over the freeway). At the next intersection, turn right onto Technology Drive. KLA-Tencor is on the right side.



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