ADE CORP
Form PREM14A
May 31, 2006

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
SCHEDULE 14A
(Rule 14a-101)
SCHEDULE 14A INFORMATION
Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

Filed by the Registrant þ
Filed by a Party other than the Registrant o
Check the appropriate box:

þ Preliminary Proxy Statement.

o Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2)).

o Definitive Proxy Statement.

o Definitive Additional Materials.

o Soliciting Material Pursuant to § 240.14a-12.

ADE CORPORATION
(Name of Registrant as Specified In Its Charter)
(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

o No fee required.

o Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

o Fee paid previously with preliminary materials.

þ Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the form or schedule and the date of its filing.
(1) Amount Previously Paid: $51,441

(2) Form, Schedule or Registration Statement No.: S-4

(3) Filing Party: KLA-Tencor Corporation

(4) Date Filed: March 17, 2006

A filing fee of $51,441 was previously paid in connection with this transaction at the time of the filing identified above and is being used to offset the filing fee for this preliminary proxy statement in its entirety. The filing fee of $50,410 for this preliminary proxy statement was calculated pursuant to applicable rules and orders of the Commission and is equal to $107.00 per $1,000,000 of the proposed aggregate merger consideration of $471,121,982, which represents the product of 14,496,061 issued and outstanding shares of common stock and merger consideration of $32.50 per share.

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MERGER PROPOSED YOUR VOTE IS VERY IMPORTANT

The boards of directors of KLA-Tencor Corporation and ADE Corporation have approved a merger under which KLA-Tencor will acquire ADE.

Pursuant to an amended and restated merger agreement entered into on May 26, 2006, South Acquisition Corporation, a wholly owned subsidiary of KLA-Tencor, will merge with and into ADE. Each share of ADE common stock will be converted into the right to receive $32.50 in cash.

If the merger is completed, ADE will be a wholly owned subsidiary of KLA-Tencor. ADE common stock, which is currently traded on The Nasdaq National Market under the symbol ADEX, will be delisted. On l, 2006, the closing price of ADE common stock was $ l per share.

We are asking stockholders of ADE to, among other things, consider and vote upon the approval of a merger proposal. The special meeting will be held on July 13, 2006, at 10:00 a.m., Eastern time, at ADE s corporate headquarters located at 80 Wilson Way, Westwood, Massachusetts. ADE s board of directors unanimously recommends that ADE stockholders vote FOR the merger proposal. **KLA-Tencor and ADE cannot complete the merger unless ADE stockholders approve the merger proposal.**

Whether or not you plan to attend the special meeting in person, we urge you to complete, date, sign and promptly return the enclosed proxy card in the enclosed postage pre-paid envelope to ensure that your shares will be represented at the special meeting. Your proxy is revocable and will not affect your right to vote in person if you decide to attend the special meeting. Since approval of the merger proposal requires the affirmative vote of the holders of at least $66^2/3$ % of the outstanding shares of ADE common stock, and failure to vote has the same effect as a vote against the proposal, your vote is very important regardless of the number of shares you own.

This proxy statement provides you with detailed information about the special meeting and the merger proposal to be voted on. We urge you to read this material carefully and in its entirety.

Chris L. Koliopoulos, Ph.D.
President and Chief Executive Officer
ADE Corporation

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this proxy statement. Any representation to the contrary is a criminal offense.

This proxy statement is dated l, 2006, and is first being mailed to ADE stockholders on l , 2006.

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NOTICE OF
SPECIAL MEETING OF STOCKHOLDERS
TO BE HELD ON JULY 13, 2006

1 , 2006

To our Stockholders:

Notice is hereby given that a Special Meeting of Stockholders of ADE Corporation, a Massachusetts corporation, will be held on July 13, 2006 at 10:00 a.m., Eastern time, at ADE s corporate headquarters located at 80 Wilson Way, Westwood, Massachusetts for the purpose of considering and voting on the following matters:

1. To approve the Amended and Restated Agreement and Plan of Merger, dated as of May 26, 2006, among KLA-Tencor Corporation, ADE Corporation and South Acquisition Corporation, a copy of which is attached as Annex A to this proxy statement;

2. To permit ADE s board of directors or its chairman, in its or his discretion, to adjourn or postpone the special meeting if necessary for further solicitation of proxies if there are not sufficient votes at the originally scheduled time of the special meeting to approve the ADE merger proposal; and

3. To act upon such other matters as may properly come before the special meeting.

The proposals listed above are described in this proxy statement which you are urged to read carefully and in its entirety. As of the date of this notice, ADE s board of directors knows of no other business to be conducted at the special meeting.

ADE s board of directors unanimously recommends that ADE stockholders vote FOR each of the foregoing proposals.

ADE s board of directors has fixed the close of business on May 30, 2006 as the record date for the determination of ADE stockholders entitled to notice of, and to vote at, the special meeting and any continuation, adjournment or postponement of the special meeting. During the period beginning on 1 , 2006 through the time of the special meeting, ADE will keep a list of stockholders entitled to vote at the special meeting available for inspection during normal business hours at its offices in Westwood, Massachusetts, for any purpose germane to the special meeting. The list of stockholders will also be provided and kept at the location of the special meeting for the duration of the special meeting, and may be inspected by any stockholder or its representative who is present. All persons wishing to be admitted to the special meeting must present photo identification. Please also note that if you hold your shares in street name through a broker or other nominee, you will need to bring a copy of a brokerage statement reflecting your stock ownership on the record date and check in at the registration desk at the special meeting.

By Order of the Board of Directors

William A. Levine
Clerk

THE APPROVAL OF THE MERGER PROPOSAL REQUIRES THE AFFIRMATIVE VOTE OF AT LEAST 66^{2}/3% OF THE OUTSTANDING SHARES OF ADE COMMON STOCK. YOUR FAILURE TO VOTE HAS THE SAME EFFECT AS A VOTE AGAINST THE MERGER PROPOSAL. TO VOTE YOUR SHARES, PLEASE COMPLETE, SIGN AND DATE THE ENCLOSED PROXY CARD AND MAIL IT PROMPTLY IN THE ENCLOSED RETURN ENVELOPE. YOU MAY REVOKE YOUR PROXY AT ANY TIME PRIOR TO ITS EXERCISE OR BY ATTENDING THE SPECIAL MEETING OF ADE STOCKHOLDERS IN PERSON. DO NOT SEND ANY STOCK CERTIFICATES WITH YOUR PROXY CARD.

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QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: Why am I receiving these materials?

A: We sent you this proxy statement and the enclosed proxy card because the board of directors of ADE is soliciting your proxy to vote at a special meeting of ADE stockholders. You may submit a proxy if you complete, date, sign and return the enclosed proxy card. You are also invited to attend the special meeting in person, although you do not need to attend the special meeting to have your shares voted at the special meeting. We intend to mail this proxy statement and accompanying proxy card on or about 1 , 2006 to all stockholders of record of ADE entitled to vote at the special meeting.

Q: When and where is the special meeting?

A: The special meeting will take place on July 13, 2006 at ADE s headquarters at 80 Wilson Way, Westwood, Massachusetts, 02090 at 10:00 a.m., Eastern time.

Q: Why is my vote important?

A: Approval of the merger proposal requires the affirmative vote of the holders of at least 66 2/3% of the outstanding shares of ADE common stock. **Accordingly, a failure to return your proxy card or vote in person at the special meeting will have the same effect as a vote against the merger proposal**.

Q: What am I voting on?

A. There are two matters scheduled for a vote:

Approval of the merger proposal, as described in The Proposed Merger beginning on page 9.

Approval of a proposal to adjourn the special meeting, if necessary, to permit further solicitation of proxies if there are not sufficient votes at the time of the special meeting to approve the merger proposal.

In addition, you are entitled to vote on any other matters that are properly brought before the special meeting.

Q: What are the recommendations of the ADE Board of Directors?

A: The ADE Board of Directors:

Recommends a vote **FOR** the approval of the merger proposal.

Recommends a vote **FOR** the approval of a proposal to adjourn the special meeting, if necessary, to permit further solicitation of proxies if there are not sufficient votes to approve the merger proposal.

Q: What do I need to do now?

A: After you carefully read this proxy statement, mail your signed proxy card in the enclosed return envelope as soon as possible, so that your shares may be represented at the special meeting. In order to assure that your vote is obtained, please vote your proxy as instructed on your proxy card even if you currently plan to attend the special meeting in person. If you have received multiple proxy cards, your shares may be registered in more than one account, such as brokerage accounts or employee stock purchase plan accounts. It is important that you

complete, sign, date and return each proxy card that you receive.

Q: If my shares are held in street name by my broker, will my broker vote my shares for me?

A: No. If you do not provide your broker with instructions on how to vote your street name shares, your broker will not be permitted to vote them on the approval of the merger proposal by ADE stockholders. You should therefore be sure to provide your broker with instructions on how to vote your shares. Please check the voting form used by your broker to see if it offers telephone or Internet submission of proxies.

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Q: What if I fail to instruct my broker?

A: If you fail to instruct your broker to vote your shares and the broker submits an unvoted proxy, the resulting broker non-vote will be counted toward a quorum at the special meeting, but it will otherwise have the same effect as a vote against the approval of the merger proposal.

Q: Can I change my vote after I have mailed my proxy card?

A: Yes. You can change your vote at any time before your proxy is voted at the special meeting. You can do this in any of three ways:

timely delivery of a valid, later-dated proxy;

written notice to ADE s Clerk before the special meeting that you have revoked your proxy; or

voting by ballot at the special meeting.

If you have instructed a broker to vote your shares, you must follow directions from your broker to change those instructions.

Q: Am I entitled to exercise any dissenters or appraisal rights in connection with the merger?

A: Under Massachusetts law, ADE stockholders are not entitled to exercise dissenters or appraisal rights in connection with the merger.

Q: Should I send in my stock certificates now?

A: No. Shortly after the merger is completed, you will receive a letter of transmittal with instructions informing you how to send in your ADE stock certificates to KLA-Tencor s exchange agent in order to receive the merger consideration. You should use the letter of transmittal to exchange ADE stock certificates for the merger consideration to which you are entitled as a result of the merger. DO NOT SEND ANY STOCK CERTIFICATES WITH YOUR PROXY.

Q: When do you expect the merger to be completed?

A: KLA-Tencor and ADE are working to complete the merger as soon as practicable, and expect that it will be completed by early in the third calendar quarter of 2006. However, it is possible that factors outside the control of both companies could result in the merger being completed at a later time.

WHO CAN HELP ANSWER YOUR QUESTIONS

If you have additional questions about the merger, you should contact:

ADE Corporation
80 Wilson Way
Westwood, Massachusetts 02090
Attention: Chief Financial Officer
Phone Number: (781) 467-3500
or
The Altman Group, Inc.
1200 Wall Street West
3rd Floor

Lyndhurst, New Jersey 07071
Holders: (800) 581-5204
Banks/Brokers: (201) 806-7300

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SUMMARY

This summary highlights selected information from this proxy statement and may not contain all of the information that is important to you. To understand the merger fully and for a more complete description of the legal terms of the merger agreement, you should carefully read this entire proxy statement and the documents referred to herein. See Where You Can Find More Information beginning on page 44.

The Merger (see page 9)

Under the terms of the proposed merger, South Acquisition Corporation, or South, a wholly owned subsidiary of KLA-Tencor formed for the purpose of the merger, will be merged with and into ADE. As a result, ADE will continue as the surviving corporation and will become a wholly owned subsidiary of KLA-Tencor upon completion of the merger. Accordingly, ADE shares will no longer be publicly traded.

The Amended and Restated Agreement and Plan of Merger, dated as of May 26, 2006, among KLA-Tencor Corporation, ADE Corporation and South Acquisition Corporation, which we generally refer to as the merger agreement, is attached as Annex A to this proxy statement. Please read the merger agreement carefully and fully as it is the legal document that governs the merger. For a summary of the merger agreement, see The Merger Agreement beginning on page 31.

What ADE Stockholders Will Receive in the Merger (see page 31)

ADE stockholders will receive $32.50 in cash for each share of ADE common stock they hold.

Recommendation to ADE s Stockholders (see page 16)

ADE s board of directors believes the merger is advisable and fair to you and in your best interests and recommends that you vote **FOR** the merger proposal. When you consider the board of directors recommendation of the merger, you should be aware that ADE s directors may have interests in the merger that may be different from, or in addition to, your interests. These interests are described in Interests of Certain Persons in the Merger beginning on page 27.

Reasons For and Factors Considered in Connection With the Merger (see page 16)

ADE s board of directors has unanimously approved the merger proposal. In reaching its decision to approve the merger proposal, ADE s board of directors considered a number of factors. These factors are described in the section entitled The Proposed Merger Reasons For and Factors Considered in Connection With the Merger Factors Considered by, and Recommendation of, the Board of Directors of ADE beginning on page 16.

ADE Stockholder Vote Required (see page 41)

Approval of the merger proposal requires the affirmative vote of the holders of at least 66^2/3 % of all outstanding shares of ADE common stock entitled to vote at the special meeting.

Treatment of ADE Stock Options (see page 31)

The merger agreement provides that, at the effective time of the merger:

- Except as set forth under the next bullet point, each ADE stock option outstanding under any stock option or compensation plan, agreement or arrangement of ADE which remains outstanding at the effective time of the merger will be converted into an option to purchase, on substantially the same terms and conditions previously applicable, KLA-Tencor common stock, except that the number of shares subject to the option will be multiplied by a fraction, the numerator of which is the per share merger consideration of $32.50, and the denominator of which is the average closing price of KLA-Tencor common stock on The Nasdaq National Market over the five trading days immediately preceding (but not including) the date on which the effective time of the merger

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occurs, or the option exchange ratio (such product to be rounded down to the nearest whole share), and the per share exercise price will be equal to the per share exercise price divided by the option exchange ratio. Under pre-existing agreements, the vesting of certain employees options will accelerate upon completion of the merger. See Interests of Certain Persons in the Merger beginning on page 27; and

Each ADE stock option held by a non-employee director (or former director) of ADE outstanding at the effective time of the merger will be canceled, and ADE will pay each holder for each such option an amount of cash equal to the product of (1) the excess, if any, of (A) $32.50 over (B) the applicable exercise price of such stock option by (2) the number of shares of ADE common stock that could have been purchased (assuming full vesting of all options) had such option been exercised in full immediately prior to the effective time of the merger.

Conditions to the Merger (see page 37)

The completion of the merger depends upon the satisfaction or waiver of a number of conditions, including the following:

the approval of the merger proposal by ADE s stockholders;

the expiration or termination of the waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, or the HSR Act (which has already occurred);

the absence of any applicable law or proceeding that would prohibit the consummation of the merger;

the absence of any event, change or development that has had or would reasonably be expected to have a material adverse effect on ADE;

the absence of any event, change or development that has had or would reasonably be expected to have a material adverse effect on KLA-Tencor s ability to consummate the merger;

the accuracy, as of the closing, of the parties representations and warranties, except, in certain cases, for such inaccuracies as have not and would not reasonably be expected to have a material adverse effect; and

the performance in all material respects of all of the parties covenants under the merger agreement at or prior to the effective time of the merger.

Termination of Merger Agreement (see page 38)

Right to Terminate. The merger agreement may be terminated at any time prior to the effective time of the merger in any of the following ways:

by mutual written consent of KLA-Tencor and ADE;

by either party if:

the merger has not been completed by 1 , 2006, except that if, on August 28, 2006, all conditions of the completion of the merger have been satisfied or waived other than the conditions relating to foreign antitrust approvals, ADE may extend such date by up to 75 days, but in no case shall such date be extended to later than November 22, 2006;

there exists any permanent legal prohibition against consummation of the merger;

the merger proposal is not approved by ADE s stockholders at the special meeting; or

the other party has breached its representations, warranties, covenants or agreements under the merger agreement and such breach would cause the conditions to the nonbreaching party s obligations to complete the merger not to be satisfied and be incapable of being satisfied by the end date.

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by KLA-Tencor if:

ADE s board of directors withdraws, modifies or changes its approval of the merger agreement and the transactions contemplated thereby or its recommendation of the merger to its stockholders;

ADE enters into, or publicly announces its intention to enter into, a definitive agreement or an agreement in principle with respect to a superior proposal (as described on page 33); or

ADE willfully and materially breaches its obligations not to solicit acquisition proposals or other offers. See The Merger Agreement Covenants No Solicitation beginning on page 32.

by ADE if:

prior to receiving the approval of its stockholders, ADE s board of directors authorizes ADE to terminate the merger agreement to enter into an agreement with respect to a superior proposal, except that ADE cannot terminate the merger agreement for this reason unless (1) ADE provides KLA-Tencor with three business days advance written notice of its intent to terminate the merger agreement to enter into an agreement with respect to a superior proposal, including the material terms and conditions of the superior proposal, (2) KLA- Tencor, within three business days of receiving such notice from ADE, does not make an offer that the board of directors of ADE determines, in good faith after consultation with its financial advisors, is at least as favorable to the ADE stockholders as the transaction as set forth in such written notice and (3) ADE pays KLA-Tencor the fee, described in The Merger Agreement Termination Fee Payable by ADE beginning on page 39 at or prior to such termination.

Termination Fee Payable by ADE. ADE has agreed to pay KLA-Tencor a fee of $15 million if the merger agreement is terminated:

by KLA-Tencor if ADE s board of directors withdraws, modifies or changes its approval of the merger agreement or its recommendation of the merger to its stockholders;

by KLA-Tencor if ADE enters into, or publicly announces its intention to enter into, a definitive agreement or an agreement in principle with respect to a superior proposal;

by KLA-Tencor if ADE has willfully and materially breached its obligations not to solicit acquisition proposals or other offers;

by ADE if at any time prior to receiving the approval of the merger proposal by ADE s stockholders, ADE enters into a definitive agreement with respect to a superior proposal by a third party;

by KLA-Tencor or ADE following the failure of the merger to be completed by the end date, provided that prior to the end date, an acquisition proposal was made with respect to ADE and within 12 months following the termination of the merger agreement, ADE consummates an alternative business combination; or

by KLA-Tencor or ADE following the failure by ADE s stockholders to approve the merger proposal at the special meeting, provided that prior to the special meeting, an acquisition proposal was made with respect to ADE and within 12 months following the termination of the merger agreement, ADE consummates an alternative business combination.

Expense Reimbursement by KLA-Tencor. KLA-Tencor has agreed to reimburse up to $2 million of ADE s expenses relating to the merger agreement if the merger agreement is terminated as a result of any one of certain conditions to ADE s obligation to complete the merger not having been satisfied.

Regulatory Approvals (see page 25)

Under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, the merger cannot be completed until the companies have made required notifications, provided certain information and

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materials to the Federal Trade Commission, or the FTC, and to the Antitrust Division of the United States Department of Justice, or the Antitrust Division, and specified waiting period requirements have expired. KLA-Tencor and ADE filed the required Notification and Report Forms with the Antitrust Division and the FTC by March 8, 2006. The waiting period under the statute applicable to the merger was scheduled to expire on April 7, 2006. Following discussion with the Antitrust Division staff, however, KLA-Tencor voluntarily withdrew its Notification and Report Form and then re-filed the form on April 11, 2006. The effect of this re-filing was to extend the waiting period to May 11, 2006. On May 10, 2006, the Antitrust Division staff informed KLA-Tencor and ADE that the Antitrust Division would not issue a second request extending the waiting period and granted early termination of the waiting period effective as of such date.

KLA-Tencor and ADE also conduct operations in a number of foreign countries. In connection with completion of the merger, KLA-Tencor and ADE have identified foreign jurisdictions that will require the filing of information with, or the obtaining of approval of, governmental authorities in those countries. KLA-Tencor and ADE intend to make such filings and obtain those approvals.

Opinion of ADE s Financial Advisor (see page 17)

In connection with the ADE board s evaluation of the proposed merger, ADE s financial advisor, RBC Capital Markets Corporation, rendered a written opinion to the ADE board on May 25, 2006 that, as of such date and subject to the assumptions, qualifications and limitations set forth in its opinion, the merger consideration of $32.50 in cash (without interest) per share of ADE common stock was fair, from a financial point of view, to the ADE stockholders. The full text of RBC s written opinion, dated May 25, 2006, is attached to this proxy statement as Annex B. We encourage you to read this opinion carefully in its entirety for a description of the procedures followed, assumptions made, matters considered and limitations on, the review undertaken. **RBC s opinion is addressed to ADE s board of directors and does not constitute a recommendation to any stockholder as to any matters relating to the merger.** See The Proposed Merger Opinion of ADE s Financial Advisor beginning on page 17.

Material U.S. Federal Income Tax Consequences (see page 25)

The conversion of shares of ADE common stock into cash pursuant to the merger is a taxable transaction for U.S. federal income tax purposes and may also be a taxable transaction under applicable state, local or foreign tax laws.

Your tax consequences will depend on your own situation. You should consult your tax advisor to determine the particular tax consequences of the merger to you.

Interests of Certain Persons in the Merger (see page 27)

When considering the recommendation of ADE s board of directors to vote in favor of the merger proposal, ADE stockholders should be aware that the directors and executive officers of ADE have agreements or arrangements that provide them with interests in the merger that may be different from, or in addition to, the interests of ADE stockholders. These interests include the benefits described in Interests of Certain Persons in the Merger beginning on page 27.

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FORWARD-LOOKING STATEMENTS

ADE has made forward-looking statements in this proxy statement that are subject to risks and uncertainties. These statements are based on the beliefs and assumptions of ADE s management. Generally, forward-looking statements include information concerning possible or assumed future actions, events or results of operations of ADE. Forward-looking statements specifically include, without limitation, the information in this proxy statement regarding: strengths of the combined company, revenue and profit; earnings per share; growth; the economy; future economic performance; conditions to, and the timetable for, completing the merger; litigation related to, and the legality of, the merger; management s plans; taxes; and merger-related expense.

The sections in this proxy statement that have forward-looking statements include Questions and Answers About the Merger, Summary, The Proposed Merger Background of the Merger, The Proposed Merger Reasons For and Factors Considered in Connection With the Merger, The Proposed Merger Opinion of ADE s Financial Advisor , and Interests of Certain Persons in the Merger, . Forward-looking statements may be preceded by, followed by or include the words may, will, could, would, should, expects, plans, anticipates, relies, believes, estimates potential, continue, or the negative of such terms, or other comparable terminology. ADE claims the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 for all forward-looking statements.

Forward-looking statements are not guarantees of performance. You should understand that the following important factors, in addition to those discussed elsewhere in this proxy statement could affect the future results of ADE, and could cause those results or other outcomes to differ materially from those expressed or implied in the forward-looking statements:

- the ability to manage and maintain key customer relationships;
- the ability to maintain supply of key components and manage manufacturing requirements;
- the ability to successfully manage regulatory, tax and legal matters (including intellectual property matters);
- the ability to manage global economic uncertainty and worldwide political instability;
- materially adverse changes in industry conditions generally or in the markets served by ADE;
- the ability to successfully implement new systems;
- the ability to develop and implement new technologies and introduce new products;
- customers acceptance and adoption of new products and technologies;
- the strength or weakness of the semiconductor, data storage and device markets;
- wafer pricing and wafer demand;
- the results of product development efforts and the success of product offerings to meet customer needs within the timeframe required by customers; and
- the process of, or conditions imposed in connection with, obtaining regulatory approvals for the merger.

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THE PARTIES TO THE MERGER

ADE is a Massachusetts corporation with executive offices located at 80 Wilson Way, Westwood, Massachusetts 02090. Its telephone number is (781) 467-3500. ADE is engaged in the design, manufacture, marketing and service of production metrology and inspection systems for the semiconductor wafer, semiconductor device, magnetic data storage and optics manufacturing industries. Its systems analyze and report product quality at critical manufacturing process steps, sort wafers and disks, and provide manufacturers with quality certification data upon which they rely to manage processes and accept incoming material. Semiconductor wafer, device, magnetic data storage and optics manufacturers use its systems to improve yield and capital productivity.

KLA-Tencor is a Delaware corporation whose address is 160 Rio Robles, San Jose, California 95134. Its telephone number is (408) 875-3000. KLA-Tencor is the world leader in yield management and process control solutions for semiconductor manufacturing and related industries. Its comprehensive portfolio of products, software, analysis, services and expertise is designed to help integrated circuit manufacturers manage yield throughout the entire fabrication process from research and development to final mass-production yield analysis.

South is a wholly-owned subsidiary of KLA-Tencor, whose address is c/o KLA-Tencor Corporation, 160 Rio Robles, San Jose, California 95134. Its telephone number is (408) 875-3000. South was formed solely for the purpose of facilitating KLA-Tencor s acquisition of ADE.

Except where indicated otherwise, as used in this proxy statement, KLA-Tencor refers to KLA-Tencor Corporation and its consolidated subsidiaries, and ADE refers to ADE Corporation and its consolidated subsidiaries.

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THE PROPOSED MERGER

General

The ADE board of directors is using this proxy statement to solicit proxies from the holders of ADE common stock for use at the special meeting.

At the special meeting, holders of ADE common stock will be asked to vote upon a merger proposal and a proposal to adjourn the special meeting, if necessary, to permit further solicitation of proxies in the event there are not sufficient votes at the time of the special meeting to approve the merger proposal.

As discussed below, KLA-Tencor, ADE and South originally executed an Agreement and Plan of Merger on February 22, 2006, which was amended and restated as of May 26, 2006. Within this proxy statement, references to the merger agreement are generally references to the Amended and Restated Merger Agreement dated as of May 26, 2006, among KLA-Tencor, ADE and South, unless the context otherwise requires.

Background of the Merger

ADE continually evaluates strategic opportunities within the semiconductor metrology and inspection equipment industry to strengthen its business and to deliver long-term value to its stockholders. During the past several years, senior management and the board of ADE have regularly reviewed the company s strategic growth objectives and means of achieving those objectives, including potential strategic initiatives and various business combinations. In particular, ADE s senior management and board have focused on ADE s long-term ability to compete successfully in the semiconductor metrology and inspection equipment industry. As part of ADE s strategic review of opportunities, it has considered, from time to time, possible business combinations consistent with its long-term strategy of (1) increasing the size and diversification of its operations, (2) becoming an increasingly broader provider of metrology and inspection equipment, as well as other equipment, to the bare wafer and semiconductor device industry and (3) leveraging ADE s history of operational excellence.

In early July 2005, Mr. John Kispert, currently KLA-Tencor s President and Chief Operating Officer, contacted Mr. Brian James, ADE s Chief Financial Officer, to suggest meeting later that month in San Francisco at Semicon West 2005, an annual exposition for semiconductor and related microelectronics manufacturing. ADE s management was familiar with KLA-Tencor s products and industry reputation. In addition, patent infringement litigation had arisen between the two companies in 2000 and had been resolved in early 2005.

At Semicon West 2005, Dr. Chris Koliopoulos, ADE s President and Chief Executive Officer, Mr. James, Mr. Kispert and Mr. Ken Schroeder, then KLA-Tencor s Chief Executive Officer and now a Senior Advisor to KLA-Tencor, held a meeting at which KLA-Tencor expressed its interest in a potential business combination with ADE. Mr. James and Dr. Koliopoulos informed members of ADE s board on an individual basis that KLA-Tencor had approached ADE regarding a potential business combination.

On July 13, 2005, Mr. Kispert telephoned Mr. James and stated that a member of KLA-Tencor s senior management would be contacting ADE with a more detailed proposal for KLA-Tencor to acquire ADE.

On August 9, 2005, Dr. Koliopoulos and Mr. Gary Bultman, KLA-Tencor s Senior Vice President, Strategic Business Development, met in Tucson, Arizona to discuss further the possibility of a combination of the two companies. No specific terms of such a combination were discussed.

On September 13, 2005, Dr. Koliopoulos, Mr. James, Mr. Jeffrey Hall, currently KLA-Tencor s Chief Financial Officer, and Mr. Bultman held a meeting in Boston to discuss KLA-Tencor s rationale for a proposed business combination with ADE.

On September 21, 2005, following a regularly scheduled meeting of the ADE board, Mr. Bultman visited ADE s office in Westwood, Massachusetts and met with Dr. Koliopoulos, Mr. James and the other

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members of ADE s board. Mr. Bultman outlined the proposed terms of a possible transaction and presented his views of the general benefits and synergies that would result from a combination of the two companies. In conjunction with this meeting, also on September 21, 2005, Dr. Koliopoulos received by email a non-binding term sheet from Mr. Bultman for a potential business combination between ADE and KLA-Tencor. The term sheet reflected the following material terms:

a stock-for-stock transaction in which ADE stockholders would receive shares of KLA-Tencor common stock based on a value of $30.00 for each outstanding share of ADE common stock;

the transaction would be structured as a tax-free reorganization; and

voting agreements would be executed by each executive officer, director and principal stockholder of ADE.

After internal ADE discussion among Mr. James and members of ADE s board, Mr. James indicated to Mr. Bultman that ADE would be interested in holding negotiations if the transaction would be priced at $31.00 per share of ADE common stock rather than $30.00. After conferring with members of KLA-Tencor s senior management, Mr. Bultman agreed to raise the offer price to $31.00 and negotiations between the two companies proceeded on this basis. On September 20, 2006, the closing price of ADE common stock was $22.07 per share.

On September 22, 2005, Mr. Stuart Nichols, KLA-Tencor s Vice President and General Counsel, presented an initial draft of a Non-Disclosure Agreement to Mr. James concerning commercially sensitive information to be exchanged between ADE and KLA-Tencor in the course of their discussions.

On September 23, 2005, ADE and KLA-Tencor entered into the Non-Disclosure Agreement. This agreement contained standstill provisions under which KLA-Tencor agreed for a period of 12 months not to acquire any voting securities of ADE without prior approval of ADE. Also on September 23, Mr. James and Mr. Nichols began initial discussions regarding the terms of the proposed merger.

On September 27, 2005, at a meeting of KLA-Tencor s board of directors, Mr. Bultman updated the board on the status of the negotiations with ADE and the proposed key terms of the transaction.

On September 29, 2005, KLA-Tencor and KLA-Tencor s legal counsel, Davis Polk & Wardwell, or DPW, distributed an initial draft of a proposed merger agreement to ADE, and on September 30, 2005, KLA-Tencor distributed an initial due diligence request list to ADE.

During late September and early October 2005, Mr. James and representatives of ADE s legal counsel, Sullivan & Worcester LLP, or S&W, and members of KLA-Tencor s senior management and representatives of DPW, negotiated the provisions of the initially proposed merger agreement. The parties discussed, among other things, an all-stock transaction in which ADE stockholders would receive shares of KLA-Tencor common stock valued at $31.00 for each of their shares of ADE common stock, subject to a collar which would provide that the exchange ratio would be fixed if KLA-Tencor s average stock price during a pricing period prior to closing was 20% higher or lower than KLA-Tencor s stock price at the signing of such merger agreement. Under the terms of the transaction then under discussion, if the average price was more than 20% lower than the signing price, ADE would have the option to convert the transaction into an all-cash transaction in which ADE stockholders would receive $31.00 in cash for each of their shares of ADE common stock or to terminate the merger agreement, subject in either case to the right of KLA-Tencor to top up the amount of stock issuable in the merger so that ADE stockholders would receive $31.00 in KLA-Tencor common stock per share of ADE common stock notwithstanding the collar . ADE also sought to limit the circumstances under which a material adverse change to ADE would give KLA-Tencor the ability to terminate the merger agreement. Although many merger agreement provisions remained unresolved, the most material was KLA-Tencor s insistence on a package of limitations on ADE s ability to enter into a merger transaction with a third party, including (1) a force the vote provision that would require ADE to submit the merger agreement to a vote of its stockholders even in the event that a third party made a superior merger proposal that the ADE board decided to recommend instead of the KLA-Tencor merger, (2) prohibitions on ADE s ability to seek other offers to acquire ADE, (3) a requirement for ADE to pay a break up fee in the event ADE terminated the merger agreement in the event of a superior proposal and (4) limitations on the ability of the

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parties to the voting agreements to terminate those agreements. ADE insisted on a fiduciary out , or a right to terminate the merger agreement (and, similarly, the voting agreements) to accept a superior proposal made by a third party without any requirement prior to such termination that ADE hold a meeting of its stockholders to vote on the merger agreement.

Throughout the remainder of October 2005, members of KLA-Tencor s senior management and representatives of KLA-Tencor s financial and legal advisors and members of ADE s senior management and representatives of S&W held a series of telephonic discussions regarding the issues raised by the then proposed merger agreement.

On October 4, 2005, ADE engaged RBC Capital Markets Corporation, or RBC, to act as its exclusive financial advisor to provide an opinion to ADE s board with respect to the fairness, from a financial point of view, of the consideration to be received by ADE s stockholders pursuant to a business combination with KLA-Tencor, if an agreement were reached.

On October 21, 2005, ADE s board held a special meeting to discuss KLA-Tencor s proposal, of which the directors had previously been informally informed. Representatives of S&W and RBC participated in the meeting. At this meeting, Dr. Koliopoulos and Mr. James reported on the status and progress of negotiations with members of KLA-Tencor s senior management and on due diligence relating to the proposed transaction. Dr. Koliopoulos and Mr. James, together with representatives of S&W, summarized the structure of the proposed transaction and the negotiations with KLA-Tencor to date, and discussed open issues relating to the transaction, and S&W described the ADE board s fiduciary duties under Massachusetts law. ADE s board discussed the potential benefits of the transaction to ADE and its stockholders, including the expected synergies between ADE and KLA-Tencor, as well as their belief that there were only a limited number of other potential acquirors with the strengths, resources and potential of KLA-Tencor. Among other things, ADE s board noted that the proposed transaction (1) provided ADE s stockholders with a minimum fixed-value of $31.00 per share of ADE s common stock since even if the average KLA-Tencor stock price during the pricing period prior to closing fell below the collar ADE could elect an all-cash transaction at $31.00 per share, (2) allowed ADE s stockholders to continue their investment in the combined corporation, and (3) contained a fairly narrow material adverse change clause, as compared to similar mergers and acquisitions transactions, which would limit KLA-Tencor s ability to terminate the transaction after signing, but which was not as narrow as ADE wanted. The board also noted that KLA-Tencor was still insisting on the full package of restrictions on ADE s ability to obtain and accept a superior offer. At this meeting, RBC also explained the process of preparing the analysis for, and if appropriate rendering, a fairness opinion. ADE s board discussed the foregoing topics at length and authorized Dr. Koliopoulos and Mr. James to continue discussions with KLA-Tencor.

Throughout the weeks of October 24, 2005 and November 1, 2005, representatives of KLA-Tencor, DPW and Credit Suisse, KLA-Tencor s financial advisor, visited the data room at S&W s Boston office at various times to conduct their due diligence investigations of ADE. In addition, during this time, members of senior management of ADE and KLA-Tencor and representatives of Credit Suisse, RBC, DPW and S&W held a series of telephonic meetings to discuss and answer questions about ADE s and KLA-Tencor s respective businesses.

On November 8, 2005, at a special meeting of the ADE board, Dr. Koliopoulos and Mr. James updated the ADE directors on the negotiations with KLA-Tencor and on KLA-Tencor s due diligence investigation of ADE. Following the update, representatives of S&W made a presentation to the board on the legal aspects of the transaction. After the presentation, the board engaged in an extensive discussion of the open issues outlined by ADE management and S&W. The board also discussed the current and future business and prospects of ADE in the event that the proposed transaction was not completed.

On November 10, 2005, Mr. Richard P. Wallace, currently KLA-Tencor s Chief Executive Officer, Mr. Bultman and certain members of KLA-Tencor s senior management met with Dr. Koliopoulos and Mr. James at the Boston office of S&W to discuss ADE s historical financial information and otherwise conduct due diligence regarding ADE in preparation for a meeting with a subcommittee of the KLA-Tencor board.

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On November 14, 2005, Dr. Koliopoulos and Mr. James met with certain members of KLA-Tencor s senior management, including Messrs. Schroeder, Hall and Wallace, and Mr. Kenneth Levy, chairman of KLA-Tencor s board, at KLA-Tencor s offices in San Jose, California. At this meeting, KLA-Tencor senior management gave a presentation regarding its perspective on ADE s business that was prepared by members of KLA-Tencor s project team. Dr. Koliopoulos and Mr. James also made a presentation to KLA-Tencor management regarding ADE s technologies, its tools, its lines of business and general product roadmaps. No opens items under the then proposed merger agreement were discussed at this meeting.

At a regularly scheduled meeting held on November 16, 2005, ADE s board discussed the status of the proposed transaction. At this meeting, Dr. Koliopoulos and Mr. James reported on their November 14, 2005 meeting with certain members of KLA-Tencor s senior management. Dr. Koliopoulos and Mr. James also discussed KLA-Tencor s business and products, KLA-Tencor s view of the expected synergies resulting from a combination of ADE and KLA-Tencor and the current and future business of ADE on a stand-alone basis in the event that the transaction was not completed. A representative of RBC reported to the board on the status of RBC s review and analysis of the fairness to ADE s stockholders, from a financial point of view, of the consideration to be received in the proposed transaction with KLA-Tencor.

On November 18, 2005, members of KLA-Tencor s senior management visited ADE s offices in Tucson, Arizona to review capabilities of the current optical manufacturing infrastructure available at ADE s Tucson facility.

On November 29, 2005, members of KLA-Tencor s senior management informed Dr. Koliopoulos that the proposed transaction was on hold on account of KLA-Tencor s desire to wait for the release of, and evaluate, the results of ADE s fiscal quarter ended October 31 prior to agreeing to a transaction and also on account of a transition of KLA-Tencor management. Members of KLA-Tencor s senior management indicated that KLA-Tencor would continue to consider an acquisition of ADE.

On January 23, 2006, at a special meeting of KLA-Tencor s board of directors, Mr. Wallace, Dr. Michael Kirk, a member of KLA-Tencor s senior management team, and Mr. Hall presented to the board an overview of the proposed transaction with ADE. After extensive discussions, the board approved the acquisition of ADE on the terms as described to the board.

On January 23, 2006, Mr. Wallace contacted Dr. Koliopoulos to resume discussions of the proposed transaction. Mr. James and Mr. Hall then engaged in a telephonic discussion regarding the open issues with respect to the then proposed merger agreement. Throughout the week of January 23, 2006, Mr. James, Mr. Hall, DPW and S&W held various discussions in an attempt to resolve all open issues relating to such merger agreement.

On January 25, 2006, ADE s board held a special meeting that was attended by members of ADE s senior management and S&W. At this meeting, Dr. Koliopoulos and Mr. James reported that they had been informed by KLA-Tencor management that KLA-Tencor desired to proceed with a transaction on the basis of the then current draft merger agreement, which provided for the transaction described above but also still included the full package of restrictions on ADE s ability to obtain and accept a superior offer. After a presentation from S&W on the board s fiduciary obligations, the board discussed the recent increase in ADE s stock price (on January 24, 2006, the closing stock price of ADE s common stock was $31.28 per share), and expressed concern about the board s ability to approve KLA-Tencor s offer of $31.00 per share of ADE common stock and the ability to receive stockholder approval at such a price combined with the lack of a fiduciary out in the then proposed merger agreement. ADE s board concluded that it would not approve KLA-Tencor s offer and that ADE should only resume merger negotiations if KLA-Tencor would agree to include a fiduciary out in such merger agreement and to loosen the limitations on ADE s ability to engage in negotiations and terminate the merger agreement upon acceptance of a superior offer.

On January 26, 2006, Mr. James and Mr. Hall engaged in telephonic discussions regarding the structure and the consideration for the proposed transaction. Mr. James informed Mr. Hall that ADE s board was no longer in a position to accept KLA-Tencor s proposal of $31.00 per share of ADE common stock based on economic and other terms. Mr. James also informed Mr. Hall of ADE s position on the

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fiduciary out . In response, and following discussions between DPW and S&W, Mr. Hall agreed to eliminate the force the vote provision (but not the prohibition on seeking other offers or the break up fee) and to include a fiduciary out in the then proposed merger agreement, but did not increase or modify KLA-Tencor s proposal of $31.00 per share of ADE common stock.

On February 2, 2006, following concerns expressed by Mr. James about obtaining the ADE board s approval of a transaction priced at $31.00 per share of ADE common stock, Mr. Hall and Mr. James discussed the possibility of an all-stock transaction at a fixed exchange ratio. Mr. Hall contacted Mr. James later that day to make a proposal of a fixed exchange ratio of 0.61 or 0.62 shares of KLA-Tencor common stock for each outstanding share of ADE common stock, with a collar on the value of shares of ADE common stock ranging from $31.00 to $36.30 per share of ADE common stock. Mr. James rejected Mr. Hall s proposal.

On February 8, 2006, Mr. James contacted Mr. Hall to re-open discussions on Mr. Hall s February 2, 2006 proposal. Mr. James indicated that ADE could not accept KLA-Tencor s proposal of a fixed exchange ratio of 0.62 shares of KLA-Tencor common stock for each outstanding share of ADE common stock with the proposed collar . Mr. Hall indicated that KLA-Tencor had not changed its position, and KLA-Tencor s offer remained a fixed exchange ratio with a collar as proposed on February 2, 2006.

On February 14, 2006, Mr. James again contacted Mr. Hall to inquire as to KLA-Tencor s current position. Mr. Hall again indicated that KLA-Tencor had not changed its position, and KLA-Tencor s offer remained a fixed exchange ratio with a collar as proposed on February 2, 2006.

At a regularly scheduled meeting held on February 15, 2006, ADE s board discussed recent developments in the proposed transaction. This meeting was attended by members of ADE s senior management and representatives of S&W and RBC. At this meeting, Mr. James reported on the status and progress of discussions with KLA-Tencor since the last meeting of ADE s board. Also at this meeting, Mr. James summarized the most recent discussions with KLA-Tencor over changing from the fixed value structure to a fixed exchange ratio structure with a collar whereby the number of shares of KLA-Tencor common stock into which ADE common stock would be converted would be fixed at the time of execution of the then proposed merger agreement.

ADE s board discussed at length Mr. James report and presentations by representatives of S&W and RBC, including a discussion of the impact of alternative pricing structures. The board came to a consensus that a fixed exchange ratio, with or without a collar , would be acceptable in principle based on the board s confidence in KLA-Tencor and its view of industry trends, the respective prices of ADE s and KLA-Tencor s stock, the potential transaction benefits, and the belief that the premium relative to ADE s historical prices outweighed the risk of not having a fixed value or collar . However, the board decided that the premium implied by the most recent proposal from KLA-Tencor was inadequate. The board instructed Mr. James to continue negotiations with KLA-Tencor over a higher exchange ratio and to report back to the board.

Later that day, Mr. James contacted Mr. Hall to propose a fixed exchange ratio of 0.65 shares of KLA-Tencor common stock for each outstanding share of ADE common stock with no collar . Mr. Hall declined the proposal.

On February 16, 2006, Dr. Koliopoulos and Mr. Wallace agreed to present to their respective boards an all-stock transaction at a fixed exchange ratio of 0.64 shares of KLA-Tencor common stock for each outstanding share of ADE common stock with no collar .

On February 17, 2006, at a meeting of KLA-Tencor s board of directors, the board authorized an acquisition of ADE at a fixed exchange ratio of 0.64 shares of KLA-Tencor common stock for each outstanding share of ADE common stock.

On February 18 and 19, 2006, members of KLA-Tencor s senior management and representatives of DPW and Credit Suisse, and members of ADE s senior management and representatives of S&W and

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RBC, participated in conference calls to discuss the remaining open issues relating to the then proposed merger agreement and the remaining due diligence items.

On February 21, 2006, the ADE board held a special meeting that was attended by Mr. James and representatives of S&W and RBC. Mr. James, S&W and RBC reviewed with ADE s board the terms of the most recent draft of the then proposed merger agreement and the resolution of open issues relating to the merger agreement. ADE s board discussed KLA-Tencor s proposal of a fixed exchange ratio of 0.64 shares of KLA-Tencor common stock for each outstanding share of ADE common stock. Although the stock price of both KLA-Tencor and ADE had increased since November 2005, ADE s board concluded that the proposed fixed exchange ratio still represented a premium over both current and recent ADE stock prices and a significant increase in the valuation of ADE common stock from November 2005 and even more so compared to longer periods of time.

Representatives of RBC reviewed their financial analysis and rendered to ADE s board RBC s oral opinion, which opinion was subsequently confirmed in writing, that as of February 21, 2006, based upon and subject to the various factors, assumptions, procedures, limitations and qualifications set forth in such opinion, the consideration of 0.64 of a share of KLA-Tencor common stock (together with cash in lieu of fractional shares of KLA-Tencor common stock) for each outstanding share of ADE common stock to be received by stockholders of ADE pursuant to the merger was fair from a financial point of view to such holders. Upon execution of the amended and restated merger agreement, on May 26, 2006, as discussed below in this section, RBC s February 21, 2006 opinion was superseded by the opinion it delivered to the ADE board on May 25, 2006 with regard to the fairness to ADE s stockholders from a financial point of view, of the revised merger consideration provided for in that agreement. The later opinion is described in more detail in The Proposed Merger Opinion of ADE s Financial Advisor beginning on page 17, and the full text of the later opinion is attached as Annex B to this proxy statement and should be carefully read in its entirety.

Following these discussions and presentations, ADE s board, at the February 21, 2006 board meeting, unanimously determined that the then proposed merger was advisable, fair to, and in the best interests of ADE and its stockholders, approved the then proposed merger agreement and the merger subject to the resolution of some minor issues relating to the then proposed merger agreement and the voting agreements, and recommended that ADE stockholders vote **for** approval of the KLA-Tencor merger proposal.

On February 21, 2006, Dr. Koliopoulos and Mr. James engaged in telephonic discussions with members of KLA-Tencor s senior management regarding the remaining minor issues that involved changes to the voting agreements and the then proposed merger agreement.

On February 22, 2006, Mr. Landon Clay, chairman of ADE s board, Dr. Koliopoulos, Mr. James and certain representatives of S&W and RBC held a meeting to discuss the trading prices of the shares of ADE and KLA-Tencor common stock since the issuance of RBC s fairness opinion on February 21, 2006, and the relationship between those trading prices and that opinion. Representatives of RBC indicated that those trading prices had not affected RBC s willingness to agree to the inclusion of its fairness opinion in this proxy statement as one of the factors considered by ADE s board in approving the merger with KLA-Tencor on the financial terms previously negotiated between the companies and reflected in the then proposed merger agreement.

On the evening of February 22, 2006, ADE and KLA-Tencor executed the merger agreement. Before the opening of trading on The Nasdaq National Market on February 23, 2006, ADE and KLA-Tencor issued a joint press release announcing the proposed merger.

Early in the morning of May 22, 2006, *The Wall Street Journal* published an article suggesting that there were irregularities in the timing of KLA-Tencor s past stock option grants.

Later in the morning of May 22, 2006, Mr. Hall called Mr. James and Mr. Kispert called Dr. Koliopoulos, in each case to discuss the matters referred to in *The Wall Street Journal* article and their impact on the proposed merger.

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On May 23, 2006, Dr. Koliopoulos sent a letter to Mr. Wallace expressing ADE s desire to learn more facts about the situation described in *The Wall Street Journal* article and expressing concern about the impact that it might have on the proposed merger.

Later in the day on May 23, 2006, Mr. Wallace called Dr. Koliopoulos. Mr. Wallace informed Dr. Koliopoulos that the U.S. Attorney s Offices for the Eastern District of New York and the Northern District of California had sent KLA-Tencor subpoenas and Mr. Wallace mentioned other related items, including a shareholder suit that was filed on May 22, 2006. Mr. Wallace and Dr. Koliopoulos discussed the impact of these matters and the matters referred to in *The Wall Street Journal* article on the proposed transaction. Dr. Koliopoulos expressed concern about the effects that a resulting delay in the merger might have on ADE and its stockholders, customers and employees. Mr. Wallace then proposed that the consideration be changed such that ADE stockholders would receive cash rather than KLA-Tencor common stock. Mr. Wallace stated that KLA-Tencor would be having a board meeting that night and that he was prepared to propose converting the merger into an all-cash transaction valued at $31.00 per share of ADE common stock. Later on May 23, 2006, Dr. Koliopoulos called Mr. Wallace and suggested that a higher value per share was appropriate based on the closing market price of ADE common stock on February 23, 2006, the date of initial announcement of the proposed merger, which was $32.83. Mr. Wallace replied that he was not sure whether the KLA-Tencor board would be willing to approve a transaction at such value.

On May 23, 2006, at a special meeting of KLA-Tencor s board of directors, the board discussed Mr. Wallace s negotiations with Dr. Koliopoulos and approved the acquisition of ADE in an all-cash merger transaction on terms as described to the board.

Later in the evening of May 23, 2006, a representative of DPW informed a representative of S&W that the KLA-Tencor board had authorized an all-cash transaction, with final pricing terms to be negotiated.

On May 24, 2006, Mr. Wallace called Dr. Koliopoulos and proposed an all-cash merger transaction with a fixed value of $32.50 per share of ADE common stock.

At a regularly scheduled meeting held on May 24, 2006, ADE s board, along with Mr. James and representatives of S&W and RBC, discussed KLA-Tencor s proposal and the circumstances surrounding *The Wall Street Journal* article. ADE s board discussed the value being offered by KLA-Tencor relative to the current and recent prices of ADE common stock, as well as the potential impact of the allegations set forth in *The Wall Street Journal* article and any ensuing investigations or lawsuits on both the KLA-Tencor and ADE stock prices, as well as the ability to complete the merger in a timely manner. The board instructed Dr. Koliopoulos to indicate to KLA-Tencor ADE s willingness to proceed with an all-cash transaction at a value of $32.50 per share of ADE common stock, subject to agreement on the terms of an amended and restated merger agreement, and recessed its meeting to May 25, 2006.

Later that day, representatives of DPW sent a draft amended and restated merger agreement that replaced the fixed exchange ratio with a fixed cash price per share and other related changes. On May 25, 2006, representatives of DPW and S&W negotiated additional changes to the amended and restated merger agreement, including a right for either party to terminate the agreement if the merger is not completed by August 28, 2006 (which could be extended to November 22, 2006 if certain conditions were not met) and a condition to ADE s obligation to close that there shall not have been an event that has a material adverse effect on KLA-Tencor s ability to complete the merger.

Later on May 25, 2006, at the resumption of the ADE board meeting, S&W reviewed with the board the terms of the draft amended and restated merger agreement. Representatives of RBC reviewed an updated financial analysis and rendered to ADE s board RBC s oral opinion, which opinion was subsequently confirmed in writing, that as of May 25, 2006, based upon and subject to the various factors, assumptions, procedures, limitations and qualifications set forth in such opinion, the cash consideration of $32.50 (without interest) for each outstanding share of ADE common stock to be received by stockholders of ADE pursuant to the merger was fair from a financial point of view to such holders. When the

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amended and restated merger agreement was executed the next day, RBC s opinion of May 25, 2006 superseded the opinion delivered by RBC on February 21, 2006 with respect to the previously proposed stock-for-stock merger between KLA-Tencor and ADE. See Opinion of ADE s Financial Advisor beginning on page 17 for further information regarding this opinion and also see the full text of RBC s opinion, which is attached as Annex B to this proxy statement and should be carefully read in its entirety.

Following these discussions and presentations, ADE s board, at the May 25, 2006 board meeting, unanimously determined that the merger, as restructured, was advisable, fair to, and in the best interests of ADE and its stockholders, approved the amended and restated merger agreement and the merger, and recommended that ADE stockholders vote **FOR** approval of the amended and restated merger agreement with KLA-Tencor s merger proposal.

On May 26, 2006, ADE and KLA-Tencor executed the amended and restated merger agreement and issued a joint press release announcing the amended and restated merger agreement.

Reasons For and Factors Considered in Connection With the Merger

Factors Considered by, and Recommendation of, the Board of Directors of ADE

ADE s board believes that the merger is advisable for, fair to, and in the best interests of ADE and its stockholders. Accordingly, ADE s board has unanimously approved the merger agreement and the merger and unanimously recommends that ADE stockholders vote FOR approval of the merger proposal. When ADE s stockholders consider their board s recommendation, ADE s stockholders should be aware that ADE s directors may have interests in the merger that may be different from, or in addition to, their interests. These interests are described in Interests of Certain Persons in the Merger beginning on page 27.

In reaching its conclusion to approve the merger, ADE s board consulted with ADE s management team, as well as ADE s financial advisor and legal counsel, reviewed a significant amount of information and considered a variety of factors, including the following material factors:

- the limited number of possible acquirors in the semiconductor industry with the perceived resources and interest in combining and, in particular, with the same perceived strengths as a combination of KLA-Tencor and ADE would provide;

- the then-current financial market conditions and historical market prices, volatility and trading information with respect to shares of ADE common stock;

- information concerning the business operations, financial performance and condition, asset quality, earnings and prospects of ADE as a standalone entity, and the ability to compete in what the ADE board believed was a consolidation phase in the semiconductor industry;

- the merger consideration being offered for ADE shares and the implied premium over recent and historical market prices of ADE common stock;

- the amount of cash and current assets owned by KLA-Tencor that are sufficient to enable it to pay the cash consideration and the lack of any financing conditions to such payment;

- the written opinion, and related financial analyses of RBC, that, as of May 25, 2006, based on and subject to the various factors, assumptions, procedures, limitations and qualifications set forth in the opinion, the consideration of $32.50 (without interest) in cash for each share of ADE common stock provided for in the merger agreement was fair from a financial point of view to holders of shares of ADE common stock. See the section entitled The Proposed Merger Opinion of ADE s Financial Advisor beginning on page 17. A copy of RBC s written opinion, dated as of May 25, 2006, is attached as Annex B to this proxy statement and should be carefully read in its entirety;

the structure of the merger, including the fact that the fixed merger consideration provides certainty as to what ADE s stockholders will receive in the merger;

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the ability of stockholders to liquidate their equity interests in ADE;

the inclusion of a fiduciary out in the merger agreement that permits ADE, subject to payment of a termination fee, to terminate the merger agreement in order to accept a superior merger proposal made by a third party; and

the ability to consummate the merger, including the conditions to the merger requiring receipt of necessary regulatory approvals, and the likelihood of the merger being approved by the appropriate regulatory authorities.

ADE s board also identified and considered certain potentially adverse consequences to ADE, ADE stockholders and the combined company that could arise from the merger, including:

the possibility that the merger may not be completed and the potential adverse consequences if the merger is not completed;

the fact that the merger is expected to be a taxable transaction for ADE stockholders for U.S. federal income tax purposes;

if, once initiated, the merger is not ultimately completed, this fact could have the effect of depressing values offered by others to ADE in a business combination and could erode customer and employee confidence in ADE;

the fact that under Massachusetts law and the ADE charter, approval of the merger proposal requires the affirmative vote of at least $66^{2}/3$ % of the holders of the outstanding shares of ADE common stock; and

the interests of ADE s executive officers with respect to the merger may be different from, or in addition to, the interests of ADE stockholders, as described in the section entitled Interests of Certain Persons in the Merger beginning on page 27.

After consideration of these material factors, ADE s board determined that these risks are of a nature that are customary in business combinations similar to the merger, were reasonably acceptable under the circumstances, or, in light of the anticipated benefits, the risks were unlikely to have a material impact on the merger and that, overall, these risks were significantly outweighed by the potential benefits of the merger.

The foregoing discussion of the information and factors considered by ADE s board is not intended to be exhaustive but includes the material factors considered by ADE s board. In view of the wide variety of factors considered in connection with its evaluation of the merger and the complexity of these matters, ADE s board did not find it useful to and did not attempt to quantify, rank or otherwise assign relative weights to these factors. In addition, ADE s board did not undertake to make any specific determination as to whether any particular factor, or any aspect of any particular factor, was favorable or unfavorable to its ultimate determination, but rather ADE s board conducted an overall analysis of the factors described above, including discussions with ADE s management, outside consultants, legal counsel and financial advisor. In considering the factors described above, individual members of ADE s board may have given different weight to different factors. It should be noted that this explanation of the reasoning of ADE s board and information presented in this section is forward-looking in nature and, therefore should be read in light of the factors discussed in the section entitled Forward-Looking Statements beginning on page 7.

Opinion of ADE s Financial Advisor

On May 25, 2006, RBC rendered its written opinion to ADE s board of directors that, as of that date and subject to the assumptions, qualifications and limitations set forth in its opinion, the merger consideration, as defined below, was fair, from a financial point of view, to the ADE stockholders. The full text of the opinion of RBC is attached to this proxy statement as Annex B. This summary of the opinion

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is qualified in its entirety by reference to the full text of the RBC opinion. ADE stockholders are urged to read the RBC opinion carefully and in its entirety.

RBC s opinion was provided for the information and assistance of the ADE board of directors in connection with its consideration of the merger. RBC s opinion did not address ADE s underlying business decision to engage in the merger or the relative merits of the merger compared to any alternative business strategy or transaction in which ADE might engage. RBC s opinion and presentation to the ADE board of directors were only two of many factors taken into consideration by the ADE board of directors in making its determination to approve the merger. RBC s opinion does not constitute a recommendation to the ADE stockholders as to how they should vote on the merger proposal.

RBC s opinion addressed solely the fairness of the merger consideration, from a financial point of view, to the ADE stockholders and did not address other merger terms or arrangements, including, without limitation, the financial or other terms of any voting or employment agreement. As used in this section and the opinion of RBC, the term merger consideration refers to the consideration of $32.50 in cash (without interest) per share of ADE common stock specified in the merger agreement.

In rendering its opinion, RBC assumed and relied upon the accuracy and completeness of the financial, legal, tax, operating, and other information provided to it by ADE, including, without limitation, the financial statements and related notes thereto of ADE. RBC did not assume responsibility for independently verifying, and did not independently verify, this information. RBC assumed, after discussions with the management of ADE, that the First Call and Thomson One Analytics consensus estimates it reviewed regarding the potential future performance of ADE as a standalone entity corresponded to the best currently available estimates and judgments of the management of ADE. RBC expressed no opinion as to those financial forecasts or the assumptions on which they were based. RBC did not assume any responsibility to perform, and did not perform, an independent evaluation or appraisal of any of the assets or liabilities of ADE, and RBC was not furnished with any valuations or appraisals of these types. In addition, RBC did not assume any obligation to conduct, and did not conduct, any physical inspection of the property or facilities of ADE. Additionally, RBC was not asked to, and did not consider, the possible effects of any litigation or other claims affecting ADE.

In rendering its opinion, RBC assumed that all conditions to the consummation of the merger would be satisfied without waiver and that the executed version of the merger agreement would not differ, in any respect material to its opinion, from the latest draft RBC reviewed.

The opinion of RBC spoke only as of the date it was rendered, was based on the conditions as they existed and information with which RBC was supplied as of such date, and was without regard to any market, economic, financial, legal or other circumstances or event of any kind or nature which may exist or occur after such date. RBC has not undertaken to reaffirm or revise its opinion or otherwise comment on events occurring after the date of its opinion and does not have an obligation to update, revise or reaffirm its opinion. Unless otherwise noted, all analyses were performed based on market information available as of May 24, 2006, the last trading day preceding the finalization of RBC s analysis.

In connection with its review of the merger and the preparation of its opinion, RBC undertook the review and inquiries it deemed necessary and appropriate under the circumstances, including:

- reviewing the financial terms of the draft merger agreement dated May 25, 2006;
- reviewing and analyzing certain publicly available financial and other data with respect to ADE and certain other relevant historical operating data relating to ADE made available to RBC from published sources and from the internal records of ADE;
- conducting discussions with members of the senior management of ADE with respect to the business prospects and financial outlook of ADE as a standalone entity;
- reviewing historical financial information relating to ADE and First Call and Thomson One Analytics consensus estimates regarding the potential future performance of ADE as a standalone entity;

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reviewing the reported prices and trading activity for the common stock of ADE; and

performing other studies and analyses as RBC deemed appropriate.

In arriving at its opinion, in addition to reviewing the matters listed above, RBC performed the following analyses:

RBC compared selected market valuation metrics of ADE and other comparable publicly-traded companies with the financial metrics implied by the merger consideration;

RBC compared the financial metrics of selected precedent transactions with the financial metrics implied by the merger consideration; and

RBC compared the premiums paid in selected precedent transactions with the premiums implied by the merger consideration.

For the purposes of its premiums paid analysis, RBC took into consideration both:

the trading prices of ADE common stock for periods RBC considered relevant prior to, and ending on, February 22, 2006, the last trading day immediately preceding the public announcement of the previously proposed merger pursuant to which each ADE common share would have been converted into 0.64 of a share of KLA-Tencor common stock; and

the trading prices of ADE common stock for periods RBC considered relevant prior to, and ending on May 24, 2006, the last trading day prior to RBC finalizing its presentation to the ADE board of directors with respect to RBC s conclusions on the fairness of the merger consideration to ADE s stockholders from a financial point of view.

In connection with the rendering of its opinion to the ADE board of directors, RBC prepared and delivered to the ADE board of directors written materials containing the analyses listed above and other information material to the opinion. In presenting its opinion to the ADE board of directors, RBC noted that it did not perform a discounted cash flow analysis due to a lack of long-term financial projections for ADE. Set forth below is a summary of the analyses used by RBC, including information presented in tabular format. To fully understand the summary of the analyses used by RBC, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the analysis.

Comparable Company Analysis. RBC prepared a comparable company analysis to analyze ADE s implied transaction multiples relative to a group of publicly-traded companies that RBC deemed for purposes of its analysis to be comparable to ADE. In this analysis, RBC compared the enterprise value of ADE implied by the merger consideration, expressed as a multiple of actual last twelve months revenue and operating profit and projected calendar year 2006 revenue and operating profit, to the respective mean and median enterprise value to revenue and enterprise value to operating profit multiples of the comparable companies implied by the public trading price of their common stock. RBC also compared the per share value of ADE common stock implied by the merger consideration, expressed as a multiple of actual last twelve months earnings per share and projected calendar year 2006 earnings per share, to the respective mean and median price to earnings per share multiples of the comparable companies implied by the public trading price of their common stock. In addition, RBC compared the equity value of ADE implied by the merger consideration, expressed as a multiple of tangible book value, to the respective mean and median equity value to tangible book value multiples of the comparable companies implied by the public trading price of their common stock. Projected revenue, operating profit and earnings per share for ADE and the comparable companies used in the analysis were based on First Call and Thomson One Analytics consensus estimates. For the purposes of its analysis, RBC assumed that ADE s calendar year end was the twelve month period ending January of the following year. RBC defined enterprise value as equity value plus total debt, preferred stock and minority interest less cash and cash equivalents and defined tangible book value as actual stockholders equity less goodwill and other intangible assets.

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RBC compared enterprise value to revenue, enterprise value to operating profit, price to earnings per share and equity value to tangible book value multiples of ADE s implied transaction valuation with those of the following publicly-traded companies:

Applied Materials

FEI

ICOS Vision Systems

KLA-Tencor

Nanometrics[1]

Rudolph Technologies

Therma-Wave

Veeco Instruments

Zygo

[1] Does not reflect pending acquisition of Accent Optical Technologies.

The following table presents, as of May 24, 2006, ADE s implied enterprise value to revenue, enterprise value to operating profit, price to earnings per share and equity value to tangible book value multiples and the mean and median enterprise value to revenue, enterprise value to operating profit, price to earnings per share and equity value to tangible book value multiples for the listed comparable companies:

	Comparable Company Analysis		**ADE (As Implied by the Merger Consideration)**
	Mean	**Median**	
Enterprise value as a multiple of:			
Last twelve months revenue	2.3x	2.0x	3.8x
Projected calendar year 2006 revenue	2.0x	1.8x	3.2x
Enterprise value as a multiple of:			
Last twelve months operating profit	17.0x	13.8x	21.6x
Projected calendar year 2006 operating profit	17.9x	15.5x	12.7x
Share price as a multiple of:			
Last twelve months earnings per share	30.7x	22.6x	28.8x
Projected calendar year 2006 earnings per share	20.4x	19.9x	25.2x
Equity value as a multiple of:			
Tangible book value	3.1x	3.0x	3.4x

RBC noted that: (1) ADE s multiples implied by the merger consideration for the last twelve months and projected calendar year 2006 revenue were above the mean and median multiples of the comparable companies analyzed; (2) ADE s multiple implied by the merger consideration for the last twelve months operating profit was above the

mean and median multiples of the comparable companies analyzed and for projected calendar year 2006 operating profit was below the mean and median multiples of the comparable companies analyzed; (3) ADE s multiple implied by the merger consideration for the last twelve months earnings per share was below the mean multiple and above the median multiple of the comparable companies analyzed and for projected calendar year 2006 earnings per share was above the mean and median multiples of the comparable companies analyzed; (4) earnings per share for both ADE and the comparable companies may not reflect statutory tax rates; and (5) ADE s multiple implied by the merger consideration for tangible book value was above the mean and median multiples of the comparable companies analyzed.

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Precedent Transaction Analysis. RBC compared enterprise value to revenue, enterprise value to earnings before interest, taxes, depreciation and amortization, or EBITDA, equity value to net income and equity value to tangible book value multiples relating to the proposed merger of ADE and KLA-Tencor with like multiples in selected precedent merger and acquisition transactions. In selecting precedent transactions, RBC considered comparable semiconductor capital equipment company transactions announced after January 1, 2000, in which the transaction values were greater than $75 million and less than $1 billion. Based on these criteria, the following thirteen transactions were analyzed:

Acquiror	Target
Applied Materials	Applied Films
Nanometrics	Accent Optical Technologies
Brooks Automation	Helix Technology
Entegris	Mykrolis
Rudolph Technologies	August Technology
Toppan Printing	DuPont Photomasks
AIXTRON AG	Genus
Credence Systems	NPTest
Keystone Holdings	Coorstek
Novellus Systems	SpeedFam-IPEC
Brooks Automation	PRI Automation
Novellus Systems	GaSonics International
MKS Instruments	Applied Science and Technology

For the purpose of calculating the multiples, revenue, EBITDA and net income were derived from the actual revenue, adjusted EBITDA (adjusted to exclude non-cash and one-time charges) and adjusted net income (adjusted to exclude non-cash and one-time charges) of the target companies in the last twelve months prior to the announcement of the transaction. For the purpose of calculating the multiples, tangible book value was derived from the latest actual tangible book value of the target companies prior to the announcement of the transaction. Financial data regarding the precedent transactions was taken from filings with the SEC, press releases, Bloomberg and Dealogic.

The following table compares the implied transaction multiples for the merger with the corresponding mean and median multiples for the selected precedent transactions:

	Precedent Transaction Analysis		ADE (As Implied by the Merger Consideration)
	Mean	Median	
Enterprise value as a multiple of:			
Last twelve months revenue	1.9x	2.0x	3.8x
Last twelve months EBITDA	12.9x	9.8x	19.4x
Equity value as a multiple of:			
Last twelve months net income	29.9x	21.0x	29.3x
Tangible book value	3.5x	2.8x	3.4x

RBC noted that: (1) ADE s multiples for last twelve months revenue and last twelve months EBITDA implied by the merger consideration were above both the mean and median multiples found in the selected precedent transactions analyzed; and (2) ADE s multiples for last twelve months net income and tangible book value implied by the merger

consideration were below the mean multiples and above the median multiples found in the selected precedent transactions analyzed.

Premiums Paid Analysis (Premiums to Price). RBC compared the premiums implied by the merger consideration to the premiums of the selected precedent transactions included in the Precedent Transaction Analysis (see above). RBC also compared the premiums implied by the merger consideration to the premiums in general technology transactions, consisting of public to public technology

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transactions announced since January 1, 2005 in which the transaction values were greater than $100 million and less than $1 billion. RBC performed this analysis taking into account the trading prices of ADE common stock both during relevant periods ending on February 22, 2006, the last trading day immediately preceding the public announcement of the previously proposed stock-for-stock merger between KLA-Tencor and ADE, and during relevant periods ending on May 24, 2006, the last trading day prior to RBC finalizing its presentation to the ADE board of directors with respect to RBC s conclusions on the fairness, from a financial point of view, of the merger consideration to ADE s stockholders. RBC compared the premiums implied by dividing the value of the per share merger consideration by ADE s spot price one day, one week, one month and three months prior to February 22, 2006 and May 24, 2006 to the spot price premiums for the same periods for the targets in the selected transactions. The following table summarizes this analysis using both measuring periods:

Spot Premiums Paid Analysis Summary

	Mean				**Median**			
	One Day	**One Week**	**One Month**	**Three Months**	**One Day**	**One Week**	**One Month**	**Three Months**
Type of Transactions:								
Selected Precedent Transactions	32.0%	40.7%	36.9%	13.3%	30.4%	34.3%	34.7%	9.6%
General Technology Transactions	21.7%	24.4%	28.1%	NA	16.7%	20.4%	28.3%	NA
ADE as of May 24, 2006 (as implied by the merger consideration)	28.8%	12.7%	5.2%	(0.8)%	28.8%	12.7%	5.2%	(0.8)%
ADE as of February 22, 2006 (as implied by the merger consideration)	5.0%	6.3%	5.8%	35.9%	5.0%	6.3%	5.8%	35.9%

	Low				**High**			
	One Day	**One Week**	**One Month**	**Three Months**	**One Day**	**One Week**	**One Month**	**Three Months**
Type of Transactions:								
Selected Precedent Transactions	5.0%	2.8%	1.1%	(28.1)%	72.4%	88.7%	72.9%	58.5%
General Technology Transactions	(25.4)%	(14.8)%	(25.7)%	NA	83.3%	84.6%	81.5%	NA
ADE as of May 24, 2006 (as implied by the merger consideration)	28.8%	12.7%	5.2%	(0.8)%	28.8%	12.7%	5.2%	(0.8)%
ADE as of February 22, 2006 (as implied by the merger consideration)	5.0%	6.3%	5.8%	35.9%	5.0%	6.3%	5.8%	35.9%

NA=not available

RBC noted that: (1) due to an increase in the trading prices of ADE common stock during the measuring period ending February 22, 2006, the spot one day, one week and one month premiums implied by the merger consideration as of February 22, 2006 were below both the mean and median selected precedent transactions and general technology transactions premiums analyzed; (2) the spot three months premium implied by the merger consideration as of February 22, 2006 was above both the mean and median selected precedent transactions premiums analyzed; (3) the spot one day premium implied by the merger consideration as of May 24, 2006 was below both the mean and median selected precedent transactions premiums analyzed and above both the mean and median general technology transactions premiums analyzed; (4) the spot one week and one month premiums implied by the merger consideration as of May 24, 2006 were below both the mean and median selected precedent transactions and general technology transactions premiums analyzed; (5) the spot three months premium implied by the merger consideration as of May 24, 2006 was below both the mean and median selected precedent transactions premiums analyzed; (6) the spot one day, one week and one month premiums implied by the merger consideration as of February 22, 2006 and as of May 24, 2006 were within the range of the low and the high selected precedent transactions and general technology transactions premiums analyzed; and (7) the

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spot three months premiums implied by the merger consideration as of February 22, 2006 and as of May 24, 2006 were within the range of the low and the high selected precedent transactions premiums analyzed.

RBC also compared the premiums implied by dividing the value of the per share merger consideration by ADE s average price one week, one month and three months prior to February 22, 2006 and May 24, 2006 to the average price premiums for the same periods for the targets in the selected precedent transactions included in the Precedent Transaction Analysis (see above). The following table summarizes this analysis using both measuring periods:

Average Premiums Paid Analysis Summary

	Mean			Median		
	One Week	One Month	Three Months	One Week	One Month	Three Months
Type of Transactions:						
Selected Precedent Transactions	35.3%	37.5%	25.4%	34.0%	36.5%	19.9%
ADE as of May 24, 2006 (as implied by the merger consideration)	20.1%	9.1%	5.7%	20.1%	9.1%	5.7%
ADE as of February 22, 2006 (as implied by the merger consideration)	6.3%	3.2%	15.7%	6.3%	3.2%	15.7%

	Low			High		
	One Week	One Month	Three Months	One Week	One Month	Three Months
Type of Transactions:						
Selected Precedent Transactions	3.5%	2.8%	5.7%	65.9%	66.7%	63.3%
ADE as of May 24, 2006 (as implied by the merger consideration)	20.1%	9.1%	5.7%	20.1%	9.1%	5.7%
ADE as of February 22, 2006 (as implied by the merger consideration)	6.3%	3.2%	15.7%	6.3%	3.2%	15.7%

RBC noted that: (1) due to an increase in the trading prices of ADE common stock during the measuring period ending February 22, 2006, the average one week, one month and three months premiums implied by the merger consideration as of February 22, 2006 were below both the mean and median selected precedent transactions premiums analyzed; (2) the average one week, one month and three months premiums implied by the merger consideration as of May 24, 2006 were below both the mean and median selected precedent transactions premiums analyzed; and (3) the average one week, one month and three months premiums implied by the merger consideration as of February 22, 2006 and as of May 24, 2006 were within the range of the low and the high selected precedent transactions premiums analyzed.

In reaching its opinion, RBC did not assign any particular weight to any one analysis or the results yielded by that analysis. Rather, having reviewed these results in the aggregate, RBC exercised its professional judgment in determining that, based on the aggregate of the analyses used and the results they yielded, the merger consideration was fair, from a financial point of view, to ADE stockholders. RBC believed that it was inappropriate to, and therefore did not, rely solely on the quantitative results of the analyses and, accordingly, also made qualitative judgments concerning differences between the characteristics of ADE and the merger and the data selected for use in its analyses, as further discussed below.

No single company or transaction used in the above analyses as a comparison is identical to ADE or the proposed merger, and an evaluation of the results of those analyses is not entirely mathematical. Rather, the analyses involve complex considerations and judgments concerning financial and operating characteristics and other factors that could affect the acquisition, public trading or other values of the companies, businesses, or transactions analyzed. The analyses were prepared solely for purposes of RBC providing an opinion as to the fairness of the merger consideration, from a financial point of view, to ADE s stockholders and do not purport to be appraisals or necessarily reflect the prices at which businesses or securities actually may be sold, which are inherently subject to uncertainty.

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The opinion of RBC as to the fairness, from a financial point of view, of the merger consideration, was necessarily based upon market, economic, and other conditions that existed as of the date of its opinion and on information available to RBC as of that date.

The preparation of a fairness opinion is a complex process that involves the application of subjective business judgment in determining the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances. Several analytical methodologies were used by RBC and no one method of analysis should be regarded as critical to the overall conclusion reached. Each analytical technique has inherent strengths and weaknesses, and the nature of the available information may further affect the value of particular techniques. The overall conclusions of RBC were based on all the analyses and factors presented herein taken as a whole and also on application of RBC s own experience and judgment. Such conclusions may involve significant elements of subjective judgment and qualitative analysis. RBC therefore believes that its analyses must be considered as a whole and that selecting portions of the analyses and of the factors considered, without considering all factors and analyses, could create an incomplete or misleading view of the processes underlying its opinion.

In connection with its analyses, RBC made, and was provided by ADE s management with, numerous assumptions with respect to industry performance, general business and economic conditions and other matters, many of which are beyond ADE s control. Analyses based upon forecasts of future results are not necessarily indicative of actual future results, which may be significantly more or less favorable than suggested by these analyses. Because these analyses are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of ADE or its advisors, none of ADE, RBC or any other person assumes responsibility if future results or actual values are materially different from these forecasts or assumptions.

ADE selected RBC to render its opinion based on RBC s experience in mergers and acquisitions and in securities valuation generally. RBC is an internationally recognized investment banking firm and is regularly engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, corporate restructurings, underwritings, secondary distributions of listed and unlisted securities, private placements, and valuations for corporate and other purposes. In the ordinary course of business, RBC may act as a market maker and broker in the publicly-traded securities of ADE and KLA-Tencor and receive customary compensation, and may also actively trade securities of ADE and/or KLA-Tencor for its own account and the accounts of its customers, and, accordingly, RBC and its affiliates, may hold a long or short position in such securities.

Under its engagement letter with ADE, RBC became entitled to receive a customary fee for the delivery of its February 21, 2006 opinion to the ADE board of directors regarding the fairness to ADE s stockholders, from a financial point of view, of the consideration to be paid to them in the previously proposed stock-for-stock merger between KLA-Tencor and ADE. Upon the signing of the amended and restated merger agreement, RBC s May 25, 2006 opinion described above in this section superseded RBC s prior opinion but RBC remains entitled to retain the portion of the fee paid to it for the delivery of its prior opinion as well as the portion of the fee for that opinion payable to it upon the closing of the merger. In addition, under an amendment to its engagement letter entered into in contemplation of the execution of the amended and restated merger agreement, RBC is entitled to an additional customary fee in connection with RBC s May 25, 2006 opinion, a portion of which was paid upon delivery of the opinion and a portion of which is payable upon the closing of the merger. Whether or not the merger closes, ADE has also agreed to reimburse RBC for its reasonable out-of-pocket expenses and to indemnify it against liability that may arise out of services performed by RBC in connection with the merger, including without limitation, liabilities arising under the federal securities laws. The terms of the engagement letter were negotiated at arm s-length between ADE and RBC and the ADE board of directors was aware of this fee arrangement at the time of its adoption and approval of the amended and restated merger agreement and approval of the merger.

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Material U.S. Federal Income Tax Consequences

The following describes the material U.S. federal income tax consequences to holders of the ADE common stock whose shares are converted into the right to receive cash in the merger, but does not purport to be a complete analysis of all potential tax considerations for all holders. This summary does not address the consequences of the merger under the tax laws of any state, local or foreign jurisdiction and does not address tax considerations applicable to holders of stock options, restricted stock or restricted stock units. In addition, this summary does not describe all of the tax consequences that may be relevant to particular classes of taxpayers, including persons who are not citizens or residents of the United States, who acquired their shares of ADE common stock through the exercise of an employee stock option or otherwise as compensation, who hold their shares as part of a hedge, straddle or conversion transaction, whose shares are not held as a capital asset for tax purposes or who are otherwise subject to special tax treatment under the Internal Revenue Code of 1986, as amended, or the Code. If a partnership holds ADE common stock, the tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partner of a partnership holding ADE common stock, you should consult your tax advisors.

This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as currently in effect. These laws are subject to change, possibly on a retroactive basis. Any such change could alter the tax consequences to you from those described herein.

The receipt of cash for ADE common stock pursuant to the merger will be a taxable transaction for federal income tax purposes. In general, if you receive cash in exchange for your shares of ADE common stock pursuant to the merger, you will recognize capital gain or loss equal to the difference, if any, between the cash received and your adjusted tax basis in the shares surrendered. Gain or loss will be determined separately for each block of shares of ADE common stock (i.e., shares acquired at the same cost in a single transaction) converted into cash pursuant to the merger. Such gain or loss will be long-term capital gain or loss if your holding period for such shares is more than one year at the time of the consummation of the merger. Long-term capital gain will be subject (in the case of holders who are individuals) to tax at a maximum federal income tax rate of 15%. Capital gain recognized from the disposition of ADE common stock held for one year or less will be short-term capital gain subject to tax at ordinary income tax rates. Certain limitations may apply to the use of capital losses.

You may be subject to backup withholding tax at a 28% rate on the receipt of cash pursuant to the merger. In general, backup withholding will only apply if you fail to furnish a correct taxpayer identification number, or otherwise fail to comply with applicable backup withholding rules and certification requirements. Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowable as a refund or credit against your U.S. federal income tax liability provided you furnish the required information to the Internal Revenue Service.

THE FOREGOING TAX DISCUSSION IS INCLUDED FOR GENERAL INFORMATION ONLY AND IS BASED UPON PRESENT LAW. DUE TO THE INDIVIDUAL NATURE OF TAX CONSEQUENCES, YOU SHOULD CONSULT YOUR OWN TAX ADVISOR AS TO THE SPECIFIC TAX CONSEQUENCES OF THE MERGER TO YOU, INCLUDING THE EFFECT OF APPLICABLE STATE, LOCAL AND OTHER TAX LAWS.

Regulatory Matters Relating to the Merger

U.S. Antitrust. Under the HSR Act and the rules that have been promulgated thereunder by the FTC, the merger may not be consummated unless KLA-Tencor and ADE provide certain information to the Antitrust Division and the FTC, and specified waiting period requirements have been satisfied. Pursuant to the requirements of the HSR Act, KLA-Tencor and ADE each filed Notification and Report Forms with respect to the merger with the Antitrust Division and the FTC by March 8, 2006. As a result, the waiting period applicable to the merger was scheduled to expire on April 7, 2006. Following discussion with the Antitrust Division staff, however, KLA-Tencor voluntarily withdrew its Notification and Report

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Form and then re-filed the form on April 11, 2006. The effect of this re-filing was to extend the waiting period under the HSR Act to May 11, 2006. On May 10, 2006, the Antitrust Division staff informed KLA-Tencor and ADE that the Antitrust Division would not issue a second request extending the HSR Act waiting period and granted early termination of the HSR waiting period effective as of such date.

Other Laws. KLA-Tencor and ADE conduct operations in a number of foreign countries. In connection with completion of the merger, KLA-Tencor and ADE have identified the foreign jurisdictions that will require the filing of information with, or the obtaining of approval of, governmental authorities therein. KLA-Tencor and ADE have made such filings, and in some of these countries, approvals must be received as a condition to the closing of the merger. Some of the other approvals, which are not as a matter of practice required to be obtained prior to effectiveness of a merger, may not be obtained before the closing. If those approvals that are required for closing are not obtained by August 28, 2006, ADE may either terminate the merger agreement or extend the date after which either ADE or KLA-Tencor may terminate the merger agreement to a date no later than November 22, 2006. See The Merger Agreement Termination.

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INTERESTS OF CERTAIN PERSONS IN THE MERGER

When considering the recommendation of ADE s board to vote **FOR** the approval of the ADE merger proposal, ADE stockholders should be aware that some directors and executive officers of ADE have agreements or arrangements that provide them with interests in the merger that are different from, or in addition to, the interests of ADE stockholders. The board of ADE was aware of these interests and considered them, among other matters, during its deliberations with respect to the merger and in deciding to recommend that ADE stockholders vote **FOR** the approval of the ADE merger proposal.

Agreement with Dr. Koliopoulos. Dr. Koliopoulos agreement with ADE, or the Koliopoulos Agreement, provides that in the event that a change of control transaction (as defined in the Koliopoulos Agreement, which definition covers the merger) occurs or is pending, or Dr. Koliopoulos employment with ADE terminates on account of his death or disability, all of his unvested options to acquire shares of ADE s common stock will, on the date of and immediately prior to the consummation of the change of control transaction or the termination of Dr. Koliopoulos employment, accelerate and become immediately exercisable in full for a period of up to two years following the occurrence of such event, regardless of any stock option plan of ADE or any stock option agreement between ADE and Dr. Koliopoulos. As of the date of this proxy statement, of the options to purchase 100,000 shares of ADE common stock held by Dr. Koliopoulos, options with respect to 70,000 shares are currently vested, while options to purchase 30,000 shares will become fully vested prior to or upon the closing of the merger under the terms of the Koliopoulos Agreement, with an exercise price of $6.125 per share.

Under the terms of the Koliopoulos Agreement, Dr. Koliopoulos is also entitled to receive severance payments under certain circumstances. If Dr. Koliopoulos employment terminates (1) for a reason other than cause , his death or disability, or (2) because ADE does not offer to extend the term of the Koliopoulos Agreement for at least one additional year upon expiration of the term of the agreement (ending June 20, 2008), or if Dr. Koliopoulos terminates his employment due to job restructuring which includes a change in his position as the Chief Executive Officer of ADE or a material diminishment of his duties and responsibilities so that they are no longer consistent with the duties and responsibilities of the Chief Executive Officer of ADE (regardless of whether such change in title, duties or responsibilities results from a merger, change of control of ADE, action by ADE s board or otherwise), then all of his compensation and benefits shall terminate on the date of his employment, and ADE (or its successor) will be required, under certain circumstances, to pay to Dr. Koliopoulos severance compensation for 24 months following the termination of this employment at a yearly rate equal to his annualized base salary as of the date of termination. Dr. Koliopoulos current annual salary is $407,000. Cause is defined in the Koliopoulos Agreement as (1) a material breach by Dr. Koliopoulos of his obligations under the Koliopoulos Agreement or any other agreement between him and ADE, (2) the willful or knowingly reckless engaging by Dr. Koliopoulos in conduct which is or may be materially financially injurious to ADE, (3) the commission by Dr. Koliopoulos of fraud, embezzlement or theft against ADE or (4) conviction of, or Dr. Koliopoulos written admission to, a felony.

Agreements with Other Executive Officers. Each of Mr. James, ADE s Executive Vice President, and Mr. David Basila, ADE s Vice President, is a party to an agreement with ADE. Mr. James agreement, or the James Agreement, provides that in the event that a change of control transaction (as defined in the James Agreement, which definition covers the merger) occurs or is pending, or if Mr. James employment with ADE terminates on account of his death or disability, his unvested options to acquire shares of ADE s common stock will, on or prior to the consummation of the change of control transaction or the termination of Mr. James employment, accelerate and become immediately exercisable in full, regardless of any stock option plan of ADE or any stock option agreement between ADE and Mr. James. As of the date of this proxy statement, of the options to purchase 170,000 shares of ADE common stock held by Mr. James, options with respect to 158,000 shares are currently vested, while options to purchase 12,000 shares will become fully vested upon the closing of the merger under the terms of the James Agreement, with exercise prices ranging from $9.795 to $21.17 per share.

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Under the terms of the James Agreement, Mr. James is also entitled to receive his base salary and remain eligible to participate in ADE s medical and dental plans (to the extent permitted under such plans) for a period of 12 months following the termination of his employment with ADE if (1) his employment is involuntarily terminated by ADE and ADE does not have cause for such termination, or (2) his employment with ADE is constructively terminated . Mr. James current annual salary is $319,000. Constructive termination is defined as an involuntary relocation beyond a reasonable commuting distance or a substantial, sustained and material reduction in Mr. James compensation, title, status, authority or responsibility at ADE, without his consent. Cause is defined in the James Agreement as (1) Mr. James continued material failure to perform the reasonable and customary duties and responsibilities assigned to him following a 30 day cure period, (2) conduct that is materially detrimental to the business, goodwill or reputation of ADE, (3) conduct that constitutes dishonesty, fraud or other malfeasance, (4) felonious conduct, (5) immoral and/or reprehensible conduct, (6) violation of any provision of the James Agreement or (7) any other action constituting cause under the laws of Massachusetts. Under the James Agreement, ADE is not obligated to make any payments to Mr. James if he resigns (except due to constructive termination) or if he is terminated for cause .

Mr. Basila s agreement provides for the same severance arrangement (12 months of base salary and medical benefits upon a termination with cause or a constructive termination) as set forth in the James Agreement. Mr. Basila s current annual salary is $231,000. Mr. Basila s agreement does not contain any provision relating to stock options.

Ownership of Common Stock; Stock Options

Security Ownership by ADE Executive Officers and Directors. As of May 30, 2006, directors and executive officers of ADE beneficially owned an aggregate of 4,114,495 shares of ADE common stock, including options to purchase 247,000 shares of ADE common stock exercisable within 60 days of the date of this proxy statement. ADE s directors and executive officers have agreed to vote the shares of ADE common stock that they beneficially own in favor of the merger.

The voting agreements to which the ADE directors and executive officers are parties permit gifts of up to 12,000 shares of ADE common stock by each such person prior to the closing of the merger. The voting agreement between Dr. Koliopoulos and KLA entered into in connection with the merger agreement further permits Dr. Koliopoulos to enter into hedging arrangements with respect to the shares of ADE common stock that he beneficially owns, so long as any counterparty to any such hedging arrangement agrees in writing to be bound by the terms of the voting agreement with respect to Dr. Koliopoulos shares of ADE common stock. See The Merger Agreement Voting Agreements beginning on page 40.

Stock Options. Dr. Koliopoulos and Mr. James hold options to purchase 100,000 shares and 170,000 shares, respectively, of ADE common stock. Mr. Basila does not hold any options to purchase shares of ADE common stock. As described in the section entitled Treatment of ADE Stock Options, below, KLA-Tencor will assume all of Dr. Koliopoulos and Mr. James outstanding options to purchase ADE common stock in the merger.

Each non-employee director of ADE holds options to purchase (1) 10,000 shares of ADE common stock with an exercise price of $20.74 per share and (2) 5,000 shares of ADE common stock with an exercise price of $21.97 per share. Under the terms of the merger agreement, the outstanding stock options held by ADE s non-employee directors (or former directors), whether or not exercisable or vested, will be canceled, and ADE will pay to each director at or promptly after the effective time of the merger for each such stock option an amount in cash determined by multiplying (1) the excess, if any, of (a) $32.50 over (b) the applicable exercise price of such stock option by (2) the number of shares of ADE common stock the director could have purchased (assuming full vesting of all options) had such director exercised such stock option in full immediately prior to the effective time of the merger. For example, based on the options held by non-employee directors, as described above, each ADE non-employee director would receive a lump sum payment of $170,250 for his options upon the closing of the merger.

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The following table sets forth information regarding beneficial ownership of ADE s common stock as of May 30, 2006, by (1) each ADE director, (2) ADE s chief executive officer and each other executive officer, (3) all ADE directors and executive officers as a group and (4) each other person known to ADE to be the beneficial owner of more than five percent of ADE s common stock on that date.

Name	Shares Beneficially Owned(1)	Percentage of Total
Directors and Executive Officers:		
Harris Clay(2)	885,769	6.1%
Landon T. Clay(3)	1,755,108	12.1%
H. Kimball Faulkner(4)	101,717	*
Chris L. Koliopoulos(5)	843,680	5.8%
Kendall Wright(6)	19,656	*
Brian C. James(7)	166,000	1.1%
David F. Basila(8)	342,565	2.4%
All directors and executive officers as a group (7 persons)(9)	4,114,495	27.9%
Other Five Percent Stockholders:		
Mellon Financial Corporation(10)	1,045,986	7.2%
Private Capital Management, Inc.(11)	2,676,747	18.5%
Royce & Associates, LLC(12)	1,372,800	9.5%

* Less than one percent.

(1) Beneficial ownership of shares for purposes hereof, as determined in accordance with applicable SEC rules, includes shares of common stock as to which a person or entity has or shares voting power and/or investment power. Unless otherwise indicated, each beneficial owner listed above has sole voting and investment power for all of the shares of ADE common stock shown to be beneficially owned by that person or entity. All amounts shown in this column include shares obtainable upon exercise of stock options exercisable within 60 days from the date of this table.

(2) Mr. Clay s address is c/o ADE Corporation, 80 Wilson Way, Westwood, Massachusetts 02090. Includes 2,000 shares of common stock issuable upon exercise of stock options.

(3) Includes 240,000 shares held by the Landon T. Clay Charitable Annuity Lead Trust No. 2, 6,500 shares held by the LTC Corp. Pension and Profit Sharing Plan, 180,000 shares held by the Monadnock Charitable Lead Trust, 13,316 shares held by or on behalf of Mr. Clay s children and 1,000 shares held by the East Hill Hedge Fund. Mr. Clay disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. Mr. Clay s address is c/o East Hill Management, 200 Clarendon Street, John Hancock Towers, Suite 6000, Boston, Massachusetts 02116. Also includes 2,000 shares of common stock issuable upon exercise of stock options.

(4) Includes 99,717 shares held in Mr. Faulkner s grantor retained annuity trust for which Mr. Faulkner is a trustee and has shared voting and investment power. Also includes 2,000 shares of common stock issuable to Mr. Faulkner upon exercise of stock options.

(5) Dr. Koliopoulos address is c/o ADE Corporation, 80 Wilson Way, Westwood, Massachusetts 02090. Includes 75,000 shares of common stock issuable upon exercise of stock options.

(6) Includes 2,000 shares of common stock issuable upon exercise of stock options.

(7) Includes 164,000 shares of common stock issuable upon exercise of stock options.

(8) Includes 248,450 shares of common stock held by SJR Technology L.P., which is beneficially owned by Mr. Basila, his wife and his children.

(9) Includes an aggregate of 247,000 shares of common stock issuable upon exercise of stock options.

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(10) Based solely on the most recent Schedule 13G filed by Mellon Financial Corporation, or Mellon, with the SEC on February 15, 2006. The address of Mellon is c/o One Mellon Center, Pittsburgh, Pennsylvania 15258.

(11) Based solely on the most recent Schedule 13G/ A filed by Private Capital Management, L.P., or PCM, with the SEC on February 14, 2006. Includes 2,618,847 shares held by PCM clients and managed by PCM, as to which PCM, its Chief Executive Officer, Bruce S. Sherman, and its President, Gregg J. Powers, have shared dispositive power. Also includes 54,900 shares as to which Mr. Sherman has sole dispositive power. Messrs. Sherman and Powers disclaim beneficial ownership for the shares held by PCM s clients and disclaim the existence of a group. The address of Private Capital Management, Inc. is 8889 Pelican Bay Blvd., Naples, FL 34108.

(12) Based solely on the most recent Schedule 13G filed by Royce & Associates, LLC, or Royce, with the SEC on January 10, 2006. The address of Royce is 1412 Avenue of the Americas, New York, NY 10019.

ADE s Directors and Executive Officers

Under the merger agreement, ADE will be permitted to pay up to an aggregate of $180,000 of compensation to non-employee directors prior to the effective time of the merger which has accrued through the effective time. For biographical information regarding ADE s directors and executive officers, information concerning the compensation paid to the chief executive officer and the most highly compensated executive officers of ADE other than the chief executive officer for the 2005 fiscal year, as well as any information regarding certain relationships and related transactions involving ADE s directors and executive officers for the 2005 fiscal year, see ADE s proxy statement used in connection with its 2005 annual meeting of stockholders.

Treatment of ADE Stock Options

At the effective time of the merger, each outstanding option to purchase shares of ADE common stock (other than options held by non-employee directors), whether or not vested or exercisable, will cease to represent a right to acquire shares of ADE common stock and will be converted automatically into an option to purchase shares of KLA-Tencor common stock on substantially the same terms and conditions (including vesting schedule, subject to the Koliopoulos and James Agreements described above) as were applicable to such stock option immediately prior to the effective time of the merger, except that (1) the number of shares of KLA-Tencor common stock subject to each assumed ADE stock option shall be determined by multiplying the number of shares of ADE common stock subject to the stock option by the option exchange ratio (rounded down to the nearest whole share) and (2) the per share exercise price for shares of KLA-Tencor common stock issuable upon exercise of such assumed ADE stock option will be determined by dividing the per share exercise price for the shares of ADE common stock in respect of which the ADE stock option was exercisable immediately prior to the effective time of the merger by the option exchange ratio.

Director and Officer Liability

KLA-Tencor is obligated, for six years after the effective time of the merger, to cause the surviving corporation in the merger to indemnify and hold harmless the present and former officers and directors of ADE in respect of acts or omissions occurring at or prior to the effective time of the merger to the fullest extent permitted by Massachusetts law or any other law, or as provided under ADE s articles of organization and bylaws in effect on the date of the merger agreement.

KLA-Tencor is also obligated, for six years after the effective time of the merger, to cause the surviving corporation in the merger to provide officers and directors liability insurance in respect of acts or omissions occurring prior to the effective time of the merger covering each present and former officer and director of ADE currently covered by ADE s officers and directors liability insurance policy on terms with respect to coverage and amount that are not less favorable than those of the policy that is currently in effect. KLA-Tencor is not obligated to pay an aggregate premium for insurance coverage in excess of 250% of the amount per year that ADE paid in its last full fiscal year.

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THE MERGER AGREEMENT

The following is a summary of the material terms of the merger agreement. This summary does not purport to describe all the terms of the merger agreement and is qualified by reference to the complete merger agreement which is attached as Annex A to this proxy statement and incorporated herein by reference. We urge you to read carefully the full text of the merger agreement.

Explanatory Note Regarding Summary of Merger Agreement and Representations and Warranties in the Merger Agreement

The summary of the terms of the merger agreement is intended to provide information about the terms of the merger. The terms and information in the merger agreement should not be relied on as disclosures about KLA-Tencor or ADE without consideration to the entirety of public disclosure by KLA-Tencor and ADE as set forth in all of their respective public reports with the SEC. The terms of the merger agreement (such as the representations and warranties) govern the contractual rights and relationships, and allocate risks, between the parties in relation to the merger. In particular, the representations and warranties made by the parties to each other in the merger agreement have been negotiated between the parties with the principal purpose of setting forth their respective rights with respect to their obligation to close the merger should events or circumstances change or be different from those stated in the representations and warranties. Matters may change from the state of affairs contemplated by the representations and warranties. KLA-Tencor and ADE will provide additional disclosure in their public reports to the extent that they are aware of the existence of any material facts that are required to be disclosed under federal securities law and that might otherwise contradict the terms and information contained in the merger agreement and will update such disclosure as required by federal securities laws.

General. Under the merger agreement, South, a wholly owned subsidiary of KLA-Tencor will merge with and into ADE, with ADE continuing as the surviving corporation. As a result of the merger, ADE will become a wholly owned subsidiary of KLA-Tencor. The merger agreement also provides that the directors of South at the effective time of the merger will be the directors of the surviving corporation, and the officers of ADE will be the officers of the surviving corporation, until, in each case, their respective successors are duly elected or appointed and qualified in accordance with applicable law.

Effective Time of the Merger. As soon as practicable (and no later than on the second business day) after the satisfaction or waiver of the conditions to the merger, South and ADE will file a certificate of merger and articles of merger with the Delaware Secretary of State and the Massachusetts Secretary of the Commonwealth, respectively. The merger will become effective when the certificate of merger and the articles of merger are filed.

Consideration to Be Received in the Merger; Treatment of Stock Options

The merger agreement provides that, at the effective time of the merger:

- each share of ADE common stock issued and outstanding immediately prior to the effective time of the merger will be converted into the right to receive $32.50 in cash;

- except as set forth under the next bullet point, each ADE stock option outstanding under any ADE stock option or compensation plan, agreement or arrangement of ADE at the effective time of the merger will be converted into an option to acquire, on substantially the same terms and conditions previously applicable, shares of KLA-Tencor common stock, except that the number of shares of KLA-Tencor common stock underlying the new KLA-Tencor option will equal the number of shares of ADE common stock for which the corresponding ADE option was exercisable, multiplied by the option exchange ratio (rounded, if necessary, down to the nearest whole share). The per share exercise price for the shares of KLA-Tencor common stock issuable upon exercise of such assumed ADE stock option will be determined by dividing the per share exercise price for the shares of ADE common stock in respect of which the ADE stock option was exercisable

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immediately prior to the effective time of the merger by the option exchange ratio. KLA-Tencor has agreed to take all actions required under the rules and regulations of The Nasdaq National Market with respect to the assumed ADE stock options and to register the shares of KLA-Tencor common stock underlying the assumed options;

each ADE stock option held by a non-employee director or former director of ADE outstanding at the effective time of the merger will be canceled, and ADE will pay each holder for each such option an amount of cash equal to: the product of (i) the excess, if any, of (A) $32.50 over (B) the exercise price of such option and (ii) the number of shares of ADE common stock the holder could have purchased (assuming full vesting of all options) had such holder exercised such option in full immediately prior to the effective time of the merger; and

shares of ADE common stock held as treasury stock or owned by ADE, KLA-Tencor or KLA-Tencor s subsidiaries will be cancelled. None of KLA-Tencor or its subsidiaries currently owns any shares of ADE common stock.

For a further discussion of the treatment of ADE stock options and other employee benefit plans under the merger agreement, see Interests of Certain Persons in the Merger beginning on page 27.

Exchange of Certificates in the Merger

Prior to the effective time of the merger, KLA-Tencor will appoint an exchange agent to handle the exchange of ADE stock certificates or uncertificated shares of ADE common stock for the merger consideration. Promptly after the effective time of the merger, the exchange agent will send a letter of transmittal, which is to be used to exchange ADE stock certificates or uncertificated shares of ADE common stock for shares of KLA-Tencor common stock, to each former ADE stockholder. The letter of transmittal will contain instructions explaining the procedure for surrendering ADE stock certificates or transferring uncertificated ADE common stock.

ADE stockholders who surrender their stock certificates, together with a properly completed letter of transmittal, or transfer their uncertificated shares of ADE common stock, will receive the merger consideration into which the shares of ADE common stock were converted in the merger. After the effective date of the merger, each certificate or uncertificated share that previously represented shares of ADE common stock will only represent the right to receive the merger consideration into which those shares of ADE common stock have been converted.

Covenants

KLA-Tencor and ADE have each undertaken certain covenants in the merger agreement concerning the conduct of their respective businesses between the date the merger agreement was signed and the completion of the merger. The following summarizes the more significant of these covenants:

No Solicitation. ADE has agreed that it and its subsidiaries, officers, directors, employees, investment bankers, attorneys, accountants, consultants or other agents or advisors will not, directly or indirectly:

solicit, initiate or take any action that could reasonably be expected to facilitate or encourage the submission of any acquisition proposal;

enter into or participate in any discussions or negotiations with, furnish any nonpublic information relating to ADE or any of its subsidiaries or afford access to the business, properties, assets, books or records of ADE or any of its subsidiaries to, otherwise cooperate in any way with, or knowingly assist, participate in, facilitate or encourage any effort by, any third party that a person acting in good faith would reasonably believe is seeking to make, or has made, an acquisition proposal, except to notify such third party as to the existence of these provisions;

fail to make when required, withdraw or modify in a manner adverse to KLA-Tencor its recommendation of the merger that the ADE stockholders approve the merger proposal (or

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recommend an acquisition proposal or take any action or make any public statement inconsistent with such recommendation);

grant any third party any waiver or release under any standstill or similar agreement with respect to any class of equity securities of ADE or any of its subsidiaries; or

enter into any agreement in principle, letter of intent, term sheet or other similar instrument relating to an acquisition proposal.

The merger agreement provides that the term acquisition proposal means, other than the transactions contemplated by the merger agreement, any offer, proposal or inquiry relating to, or any third party indication of interest in, (1) any acquisition or purchase, direct or indirect, of 20% or more of the consolidated assets of ADE and its subsidiaries or 20% or more of any class of equity or voting securities of ADE or any of its subsidiaries whose assets, individually or in the aggregate, constitute more than 20% of the consolidated assets of ADE, (2) any tender offer (including a self-tender offer) or exchange offer that, if consummated, would result in such third party beneficially owning 20% or more of any class of equity or voting securities of ADE or (3) a merger, consolidation, share exchange, business combination, reorganization, recapitalization, liquidation, dissolution or other similar transaction involving ADE or any of its subsidiaries that, if consummated, would result in such third party or its stockholders beneficially owning 20% or more of any class of equity or voting securities of ADE or the surviving entity in such transaction.

The merger agreement also provides that, notwithstanding the foregoing, prior to receiving the approval of the ADE stockholders in connection with the merger, ADE s board of directors, directly or indirectly through advisors, agents or other intermediaries, may:

engage in negotiations or discussions with any third party or the third party s representatives that has made a bona fide, unsolicited written acquisition proposal that ADE s board of directors reasonably believes will lead to a superior proposal;

thereafter furnish to such third party nonpublic information relating to ADE or any of its subsidiaries pursuant to a confidentiality agreement with terms no less favorable to the ADE than those contained in the confidentiality agreement dated as of September 23, 2005 between ADE and KLA-Tencor;

following a determination by ADE s board of directors that such acquisition proposal is a superior proposal, make an adverse recommendation change; and/or

take any action ordered by a court of competent jurisdiction;

provided, that in each case above ADE must provide KLA-Tencor with prior written notice of its decision to take such action and in each of the first three cases above ADE s board of directors must determine in good faith after consultation with its outside legal counsel that the failure to take such action would be inconsistent with its fiduciary duties under applicable law.

Under the terms of the merger agreement, a superior proposal means any bona fide, unsolicited written acquisition proposal (with the references to 20% or more contained therein being replaced with 75% or more) on terms that ADE s board of directors determines in good faith by a majority vote, after considering the advice of ADE s financial advisor and taking into account all the terms and conditions of the acquisition proposal, including any break-up fees, expense reimbursement provisions and conditions to consummation, are more favorable and provide greater value to ADE s stockholders than as provided under the merger agreement and the transactions contemplated thereby and for which financing, if a cash transaction, is then fully committed or reasonably determined to be available by ADE s board of directors.

ADE is permitted to take any actions in order to comply with Rule 14e-2(a) or Rule 14d-9 under the Exchange Act with regard to an acquisition proposal, except that ADE s board of directors may not recommend that ADE s stockholders tender shares of capital stock in connection with any tender or

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exchange offer unless ADE s board of directors determines in good faith by a majority vote, after considering advice from its outside legal counsel that the failure to take such action would be inconsistent with its fiduciary duties under applicable law.

Covenant to Recommend. ADE has agreed that its board of directors will recommend approval of the merger proposal to the ADE stockholders.

However, ADE s board is permitted to withdraw or to modify or to qualify in a manner adverse to KLA-Tencor such recommendation of the merger, before receipt of the approval of ADE s stockholders if:

following receipt of a bona fide written acquisition proposal with respect to which its board of directors reasonably believes in good faith by majority vote, after consultation with its outside legal counsel, there is a reasonable likelihood that such acquisition proposal could result in a superior proposal; and

ADE s board of directors determines in good faith that the failure to effect a change in its recommendation of the merger could be reasonably expected to result in a breach of its fiduciary duties under applicable law.

Operations of ADE Pending Closing. ADE has undertaken a covenant that places restrictions on it and its subsidiaries until either the effective time of the merger or the termination of the merger agreement. In general, ADE and its subsidiaries are required to conduct their business in the ordinary course consistent with past practice and to use reasonable best efforts to preserve intact their business organizations and relationships with third parties and to keep available the services of their present officers and employees.

ADE has agreed that, except as required by law, it will not do any of the following:

enter into any contract, agreement, lease, license, note, bond, mortgage, indenture, guarantee, other evidence of indebtedness or other instrument, obligation or commitment as specified in the merger agreement;

adopt or propose to adopt any change to ADE s articles of organization or bylaws;

reclassify, recapitalize, split, combine, exchange or readjust any shares of capital stock of ADE;

declare, set aside or pay any dividend or other distribution with respect to any shares of capital stock of ADE, or repurchase, redeem or otherwise acquire any outstanding shares of capital stock or other securities of, or other ownership interests in, ADE or any of its subsidiaries;

issue, sell, pledge, dispose of, grant, or encumber, except in each case as permitted by the merger for issuances of shares upon the exercise of existing options or under ADE s employee stock purchase plan or grants of a limited number of stock options:

any shares of its capital stock of any class;

any options, warrants, convertible securities or other rights to acquire any shares of such capital stock; or

any other ownership interest of ADE or any of its subsidiaries;

amend any material term of any outstanding security of ADE or any of its subsidiaries;

grant severance or termination pay or increase employee benefits or compensation above limits set forth in the merger agreement;

enter into any plan or agreement of merger or consolidation involving ADE or any of its subsidiaries, or involving any acquisition by ADE or any of its subsidiaries of a material amount of stock or assets of any other entity;

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sell or otherwise dispose of any material subsidiary or sell, lease, license or otherwise dispose of any assets, securities or property in each case material to ADE and its subsidiaries, on a consolidated basis, except either pursuant to existing contracts or commitments or in the ordinary course consistent with past practice;

incur, assume or guarantee any material indebtedness for borrowed money;

create or otherwise incur any lien on any asset of ADE or any of its subsidiaries;

make any loan, advance or capital contribution in excess of $1,000,000 to or investment in any entity;

change any method of accounting or accounting principles or practice by ADE or any of its subsidiaries, except for any such change required by reason of a concurrent change in Generally Accepted Accounting Principles, or GAAP, or Regulation S-X under the Exchange Act; or

authorize, agree or commit to do any of the foregoing.

Reasonable Best Efforts Covenant. KLA-Tencor and ADE have agreed to use their reasonable best efforts to take all actions and do all things necessary, proper or advisable under applicable laws to complete the merger and the other transactions contemplated thereby, including:

to prepare and to file as promptly as practicable with any governmental authority or other third party all documentation to effect all necessary filings, notices, petitions, statements, registrations, submissions of information, applications and other documents;

to obtain and to maintain all required approvals, consents, registrations, permits, authorizations and other confirmations from any governmental authority or other third party that are necessary, proper or advisable to consummate the transactions contemplated by the merger agreement;

to defend any lawsuits or other proceedings challenging the merger agreement; and

to satisfy the conditions to closing.

ADE and KLA-Tencor will cooperate with each other in connection with the making of all such filings, including providing copies of all such documents to the non-filing party and its advisors prior to filing and, if requested, to accept all reasonable additions, deletions or changes suggested in connection therewith. ADE and KLA-Tencor will use their respective reasonable efforts to furnish to each other all information required for any application or other filing to be made pursuant to the rules and regulations of any applicable law in connection with the transactions contemplated by the merger agreement.

Other Covenants. The merger agreement contains certain other covenants, including covenants relating to access to information and cooperation between KLA-Tencor and ADE in the preparation of this proxy statement and other governmental filings, public announcements and certain tax matters.

KLA-Tencor has also agreed to indemnify present and former directors and officers of ADE to the fullest extent permitted by applicable law for a period of six years after the effective time of the merger and to provide officers and directors liability insurance covering such persons for acts and omissions occurring prior to the effective time of the merger (subject to limitations on increases in the premium). In addition, for a period of one year, KLA-Tencor has agreed to provide benefits to ADE employees who continue their employment with ADE after the merger that are similar to the benefits such employees received prior to the merger.

Representations and Warranties

The merger agreement contains a number of representations and warranties with respect to KLA-Tencor and ADE. The representations and warranties are subject, in some cases, to specified exceptions and qualifications.

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Reciprocal representations and warranties relate to, among other things:

corporate existence, qualification to conduct business and corporate standing and power;

corporate authority to enter into, and carry out the obligations under, the merger agreement and enforceability of the merger agreement;

absence of a breach of the certificate of incorporation or articles of organization, bylaws, law or material agreements as a result of the merger;

information supplied for use in this proxy statement;

payment of fees to finders or brokers in connection with the merger agreement; and

governmental authorization.

Additional representations and warranties made by ADE relate to, among other things:

the unanimous approval by its board of directors of the merger agreement and the transactions contemplated by the merger agreement;

its capitalization, including in particular the number of shares of ADE common stock and stock options outstanding;

corporate existence, qualification to conduct business, corporate standing and power and capitalization of its subsidiaries;

the absence of certain changes to ADE or its subsidiaries or events not in the ordinary course consistent with past practices since April 30, 2005 through the date of the merger agreement;

the absence of any violation of any applicable law and court order which could reasonably be expected to have a material adverse effect and to the knowledge of ADE, absence of any investigation or threat or notice of such violation;

the absence of any action, suit or proceeding pending that could reasonably be expected to have a material adverse effect or that challenges or seeks to prevent, enjoin, alter or materially delay the merger or any of the transactions contemplated by the merger agreement;

filings with the SEC, disclosure controls and procedures, internal control over financial reporting and financial statements;

the absence of outstanding loans or other extensions of credit by ADE or its subsidiaries to any executive officer or director of ADE, and compliance with Section 402 of the Sarbanes-Oxley Act of 2002;

compliance with laws;

certain tax matters;

absence of undisclosed material liabilities;

the significant contractual agreements to which ADE or any of its subsidiaries is a party;

certain tax representations;

employment and labor matters;

the absence of interested party transactions;

opinion of ADE s financial advisor;

its intellectual property;

its properties and assets;

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certain environmental matters with respect to ADE; and

actions related to antitakeover statutes.

The additional representations and warranties made by KLA-Tencor relate to, among other things:

the ownership of South;

the absence of any business activity by the South other than as contemplated by the merger agreement;

the absence of the necessity for KLA-Tencor s stockholders to approve the merger proposal;

KLA-Tencor s current assets as of March 31, 2006;

the absence of any changes since June 30, 2005 that have had or would reasonably be expected to have a material adverse effect on KLA-Tencor s ability to complete the merger; and

KLA-Tencor s ability to pay the merger consideration and satisfy its other financial obligations under the merger agreement.

Conditions to the Merger

Conditions to the Obligations of both KLA-Tencor and ADE

The companies respective obligations to complete the merger are subject to the satisfaction of the following conditions:

the approval of the merger proposal by the ADE stockholders in accordance with Massachusetts law;

the absence of any applicable law that will prohibit the consummation of the merger; and

the expiration or termination of any applicable waiting period under the HSR Act relating to the merger (which has already occurred).

Conditions to the Obligations of KLA-Tencor and South

KLA-Tencor s and South s obligations to complete the merger are subject to the satisfaction or waiver prior to the effective time of the merger of the following conditions:

ADE s performance in all material respects of all covenants that it is required to perform pursuant to the merger agreement;

as of the effective time of the merger (other than representations and warranties that are made as of a specified date, which need only be accurate as of such specified date), the accuracy of (1) ADE s representations and warranties which are not qualified as to materiality or material adverse effect and (2) ADE s representations and warranties which are qualified as to materiality or material adverse effect, disregarding such qualifications and exceptions, in each case, except for such inaccuracies as have not and would not reasonably be expected to have over a commercially reasonable period of time (which period of time shall not be less than one year), individually or in the aggregate, a material adverse effect on ADE;

the absence of any instituted or pending action or proceeding by any governmental authority:

challenging or seeking to make illegal, to delay materially or otherwise directly or indirectly to restrain or prohibit the consummation of the merger or seeking to obtain material damages relating to the transactions contemplated by the merger;

seeking to restrain or prohibit KLA-Tencor s, South s or any of KLA-Tencor s other affiliates (1) ability effectively to exercise full rights of ownership of ADE common stock, or (2) ownership or operation (or that of its respective subsidiaries or affiliates) of all or any material

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portion of the business or assets of ADE and its subsidiaries, taken as a whole, or of KLA-Tencor and its subsidiaries, taken as a whole; or

seeking to compel KLA-Tencor and its subsidiaries or affiliates to dispose of or hold separate all or any material portion of the business or assets of ADE and its subsidiaries, taken as a whole, or of KLA-Tencor and its subsidiaries, taken as a whole; and

ADE having not suffered from any event, change or development which, individually or in the aggregate, has had or would reasonably be expected to have a material adverse effect.

Conditions to the Obligations of ADE

ADE s obligations to complete the merger are subject to the satisfaction or waiver prior to the effective time of the merger of the following conditions:

KLA-Tencor s and South s performance in all material respects of all covenants that they are required to perform pursuant to the merger agreement;

as of the effective time of the merger (other than representations and warranties that are made as of a specified date, which need only be accurate as of such specified date), the accuracy of (1) KLA-Tencor s and South s representations and warranties which are not qualified as to materiality or material adverse effect and (2) KLA-Tencor s and South s representations and warranties which are qualified as to materiality or material adverse effect, disregarding such qualifications and exceptions, in each case, except for such inaccuracies as have not and would not reasonably be expected to have, individually or in the aggregate, a material adverse effect on KLA-Tencor; and

the absence of any event, change or development that has had or would reasonably be expected to have a material adverse effect on KLA-Tencor s ability to consummate the merger.

Termination

KLA-Tencor s board of directors and ADE s board of directors may jointly agree to terminate the merger agreement at any time before completing the merger. In addition, the merger agreement may be terminated by either KLA-Tencor or ADE if:

the merger has not been completed by l , 2006, except that if, on August 28, 2006, all conditions to the completion of the merger have been satisfied or waived other than the conditions relating to foreign antitrust approvals, ADE may extend such date by up to 75 days, but in no case shall such date be extended to later than November 22, 2006;

there is any permanent legal prohibition to consummating the merger; or

the merger proposal is not approved by ADE s stockholders at the special meeting.

KLA-Tencor may also terminate the merger agreement if:

ADE s board of directors withdraws, modifies or changes its approval of the merger agreement and the transactions contemplated thereby or its recommendation of the merger to its stockholders;

ADE enters into, or publicly announces its intention to enter into, a definitive agreement or an agreement in principle with respect to a superior proposal;

ADE breaches any representation, warranty, covenant or agreement under the merger agreement and such breach causes any condition to KLA-Tencor s obligations to complete the merger to not be satisfied and to be incapable of being satisfied by the end date; or

ADE willfully and materially breaches its obligations not to solicit acquisition proposals or other offers. See The Merger Agreement No Solicitation above.

ADE may also terminate the merger agreement if:

KLA-Tencor or South breaches any of their respective representations, warranties, covenants or agreements under the merger agreement and such breach causes any condition to ADE s

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obligations to complete the merger to not be satisfied and to be incapable of being satisfied by the end date; or

prior to receiving the approval of its stockholders of the merger agreement and the transactions contemplated thereby, ADE s board of directors authorizes ADE to terminate the merger agreement to enter into an agreement with respect to a superior proposal, except that ADE cannot terminate the merger agreement for this reason unless (1) ADE provides KLA-Tencor with three business day advance written notice of its intent to terminate the merger agreement, including the material terms and conditions of the superior proposal, (2) KLA-Tencor, within three business days of receiving such notice from ADE, does not make an offer that the board of directors of ADE determines, in good faith after consultation with its financial advisors, is at least as favorable to the ADE stockholders as the transaction as set forth in such written notice (and ADE will not enter into any such binding, definitive agreement during such three business day period) and (3) ADE pays KLA-Tencor the fee described in The Merger Agreement Termination Fee Payable by ADE below at or prior to such termination.

If the merger agreement is validly terminated, the agreement will become void without any liability on the part of any party unless the party is in willful breach thereof. However, some provisions of the merger agreement including those relating to termination fees and expenses, as well as the confidentiality agreement entered into between KLA-Tencor and ADE, will continue in effect notwithstanding termination of the merger agreement.

Termination Fee Payable by ADE

ADE has agreed to pay KLA-Tencor a fee of $15 million if the merger agreement is terminated:

by KLA-Tencor if ADE s board of directors withdraws, modifies or changes its approval of the merger agreement or its recommendation of the merger to its stockholders;

by KLA-Tencor if ADE enters into, or publicly announces its intention to enter into, a definitive agreement or an agreement in principle with respect to a superior proposal;

by KLA-Tencor if ADE has willfully and materially breached its obligations not to solicit acquisition proposals or other offers; and

by ADE if at any time prior to receiving the approval of the merger proposal by ADE s stockholders, ADE enters into a definitive agreement with respect to a superior proposal by a third party;

by KLA-Tencor or ADE following the failure of the merger to be completed by the end date, provided that prior to the end date, an acquisition proposal was made with respect to ADE and within 12 months following the termination of the merger agreement, ADE consummates an alternative business combination; or

by KLA-Tencor or ADE following the failure by ADE s stockholders to approve the merger proposal at the special meeting, provided that prior to the special meeting, an acquisition proposal was made with respect to ADE and within 12 months following the termination of the merger agreement, ADE consummates an alternative business combination.

For purposes of this proxy statement, the term alternative business combination means any of the following transactions (other than the transactions contemplated by the merger agreement): (1) ADE merges with or into, or is acquired, directly or indirectly, by merger or otherwise by, a third party; (2) a third party, directly or indirectly, acquires more than 50% of the total assets of ADE and its subsidiaries, taken as a whole; (3) a third party, directly or indirectly, acquires more than 50% of the outstanding shares of ADE common stock; or (4) ADE adopts or implements a plan of liquidation, recapitalization or share repurchase relating to more than 50% of the outstanding shares of ADE common stock or an extraordinary dividend relating to more than 50% of such outstanding shares or 50% of the assets of ADE and its subsidiaries, taken as a whole.

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Expense Reimbursement by KLA-Tencor

KLA-Tencor has agreed to reimburse up to $2 million of ADE s expenses relating to the merger agreement if the merger agreement is terminated as a result of any one of certain conditions to ADE s obligation to complete the merger not having been satisfied.

Other Expenses

Except as provided above, all costs and expenses incurred in connection with the merger agreement and the transactions contemplated thereby, other than termination fees payable upon termination under The Merger Agreement Termination Fee Payable by ADE described above, will be paid by the party incurring such expenses.

Amendments; Waivers

Any provision of the merger agreement may be amended or waived before the effective time of the merger if, but only if, the amendment or waiver is in writing and signed, in the case of an amendment, by each party to the merger agreement or, in the case of a waiver, by each party against whom the waiver is to be effective, provided that, after approval of the merger proposal by ADE stockholders and without their further approval, no amendment or waiver shall reduce the amount or change the kind of consideration to be received in exchange for shares of ADE common stock.

Voting Agreements

As a condition to KLA-Tencor s and South s entering into the original merger agreement on February 23, 2006, the directors and executive officers of ADE entered into voting agreements with KLA-Tencor. By entering into the voting agreements, these parties have agreed to vote shares of ADE stock that they beneficially own in favor of the merger proposal. They have also granted KLA-Tencor their proxies, with the limited right to vote such parties shares beneficially owned as of February 22, 2006 in favor of the merger proposal.

The ADE stockholders who are parties to the voting agreements have agreed to certain limitations on their ability to sell, transfer or otherwise dispose of a portion of any shares of KLA-Tencor common stock received in connection with the merger, except that the voting agreements permit these parties to donate up to 12,000 shares to a charity. Such shares would not be subject to the provisions of the voting agreement. In addition, the voting agreement between KLA-Tencor and Dr. Koliopoulos permits certain hedging arrangements, provided that any counterparty to any such hedging arrangement will, as a condition to such transaction, agree in writing to be bound by the terms of such voting agreement.

As of May 30, 2006, the ADE stockholders who are party to the voting agreements collectively beneficially owned shares representing 27.9% of the votes attributable to outstanding shares of ADE s common stock.

None of the ADE stockholders who are parties to the voting agreements were paid additional consideration in connection with the voting agreements.

In addition, each of the parties to the voting agreements has agreed not to and not to permit any of its agents to in any way (1) solicit or initiate any proposal for an alternative acquisition or (2) engage in negotiations with, or disclose any nonpublic information relating to ADE or afford access to information regarding ADE or its subsidiaries to any person that may be considering making or who has made a proposal for an alternative acquisition. The parties to the voting agreements further agreed to keep KLA-Tencor fully informed of the status and details of any proposal for an alternative acquisition of which such party is aware.

The voting agreements will terminate upon the earlier to occur of the termination of the merger agreement and the completion of the merger.

No Dissenters or Appraisal Rights

ADE stockholders are not entitled to any dissenters or appraisal rights in connection with the merger.

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INFORMATION ABOUT THE ADE SPECIAL MEETING AND VOTING

ADE s board of directors is using this proxy statement to solicit proxies from the stockholders of ADE at the special meeting. This proxy statement is first being mailed to ADE stockholders on or about 1 , 2006.

This proxy statement contains important information regarding the special meeting, the proposals on which you are being asked to vote, information you may find useful in determining how to vote and voting procedures.

Date, Time and Place of the Special Meeting

The special meeting will be held on July 13, 2006 at 10:00 a.m., Eastern time, at ADE s corporate headquarters located at 80 Wilson Way, Westwood, Massachusetts.

Purpose of the Special Meeting

The purpose of the special meeting is:

1. To approve the Amended and Restated Agreement and Plan of Merger, dated as of May 26, 2006, among KLA-Tencor, ADE and South, a copy of which is attached as Annex A to this proxy statement. This proposal is referred to in this proxy statement as the merger proposal;

2. To permit ADE s board of directors or its chairman in its or his discretion, to adjourn or postpone the special meeting if necessary for further solicitation of proxies if there are not sufficient votes at the originally scheduled time of the special meeting to approve the merger proposal; and

3. To act upon such other matters as may properly come before the special meeting.

Stockholder Record Date for the Special Meeting

ADE s board of directors has fixed the close of business on May 30, 2006 as the record date for determining which ADE stockholders are entitled to notice of, and to vote at, the special meeting. On the record date, there were 14,496,061 shares of ADE common stock outstanding, held by approximately 83 holders of record.

During the period beginning on 1 , 2006 through the time of the special meeting, ADE will keep a list of stockholders entitled to vote at the special meeting available for inspection during normal business hours at its offices in Westwood, Massachusetts, for any purpose germane to the special meeting. The list of stockholders will also be provided and kept at the location of the special meeting for the duration of the special meeting, and may be inspected by any stockholder who is present.

Quorum; Vote Required for Each Proposal

Quorum. A majority of the shares of ADE common stock outstanding on the record date must be represented, either in person or by proxy, to constitute a quorum at the special meeting. Proxies marked as abstentions and broker non-votes will be used in determining the number of shares present at the special meeting. At the special meeting, each share of ADE common stock is entitled to one vote on all matters properly submitted to ADE stockholders.

Proposal Number One: The affirmative vote of the holders of at least $66^2/3$ % of the outstanding shares of ADE common stock outstanding on the record date is required to approve the ADE merger proposal.

Proposal Number Two: The affirmative vote of the holders of a majority of the shares of ADE common stock present at the special meeting in person or by proxy and entitled to vote on the proposal is required to permit ADE s board of directors or its chairman, in its or his discretion, to adjourn or postpone the special meeting if necessary to solicit further proxies in favor of the ADE merger proposal.

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ADE s board of directors unanimously recommends that ADE stockholders vote FOR each of the proposals.

Shares Beneficially Owned by ADE Directors and Executive Officers

The directors and executive officers of ADE beneficially owned and were entitled to vote, or shared the right to vote, 4,114,495 shares of ADE common stock, or approximately 27.9% of the total outstanding shares of ADE common stock on the record date, and each of them has indicated his intention, and has agreed, to vote **FOR** each of the proposals. See The Merger Agreement Voting Agreements beginning on page 40.

Voting Procedures

ADE stockholders may vote by returning the enclosed proxy card by mail or in person at the special meeting. All shares of ADE common stock represented by properly executed proxy cards received before or at the special meeting will be voted in accordance with the instructions indicated on those proxy cards.