UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

APPLIED MATERIALS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 94-1655526 (I.R.S. Employer Identification No.)

3050 Bowers Avenue, P.O. Box 58039, Santa Clara, California 95052-8039 (Address of Principal Executive Offices) (Zip Code)

APPLIED MATERIALS, INC. 2016 DEFERRED COMPENSATION PLAN (Full title of the plan)

Thomas F. Larkins Senior Vice President, General Counsel and Corporate Secretary Applied Materials, Inc. 3050 Bowers Avenue, P.O. Box 58039, Santa Clara, California 95052-8039 (Name and address of agent for service)

Telephone number, including area code, of agent for service: (408) 727-5555

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934:

Large accelerated filer 🛛 🖾

Non-accelerated filer \Box (Do not check if a smaller reporting company)

Accelerated filer \Box

Smaller reporting company \Box

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Deferred Compensation Obligations (1)	\$80,000,000	100%	\$80,000,000	\$8,056
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(1) The Deferred Compensation Obligations are unsecured obligations of the registrant to pay deferred compensation in the future in accordance with the terms of the Applied Materials, Inc. 2016 Deferred Compensation Plan.

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INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents are incorporated by reference in this registration statement: (i) the latest annual report of Applied Materials, Inc. (the "Registrant") filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and (ii) all other reports filed by the Registrant pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of the fiscal year covered by the annual report referred to in clause (i) above (other than the portions of these documents not deemed to be filed). All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act (other than the portions of these documents not deemed to be filed), prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this registration statement and to be a part hereof from the date of filing of such documents.

Item 4. Description of Securities.

The securities being registered pursuant to this registration statement represent unsecured general obligations of the Registrant (the "Obligations") to pay certain deferred compensation in the future in accordance with the terms of the Applied Materials, Inc. 2016 Deferred Compensation Plan (the "Plan"). The Obligations rank equally with other unsecured and unsubordinated indebtedness of the Registrant.

Under the Plan, the Registrant has provided a select group of management or highly compensated employees of the Registrant and its participating affiliates (each, a "Participating Employer") with the opportunity to elect to defer certain eligible compensation that is otherwise payable by a Participating Employer, as set forth in the Plan. Employer contributions also may be made by a Participating Employer, in its sole discretion, on behalf of a Plan participant, as set forth in the Plan.

A Plan participant's deferral contributions and any discretionary employer contributions made on his or her behalf under the Plan will be credited to the participant's account(s) under the Plan. A participant's Plan account(s) will be credited with deemed investment returns equal to the experience of selected investment funds offered under the Plan, as elected by the participant in accordance with the Plan's procedures. If a participant fails to make an investment election with respect his or her Plan account(s), the account(s) will be deemed invested in the Plan's default investment fund, as determined by the Plan's administrative committee (the "Committee") in its discretion. Amounts deferred into the Plan prior to 2016 will be credited with deemed interest at a rate determined under the Plan.

A participant will be 100% vested at all times in his or her deferral contributions under the Plan. A participant generally will be vested in any employer contributions made on his or her behalf by a Participating Employer in accordance with the vesting schedules established by the Committee at the time such amounts are first credited to the participant's Plan account.

The Obligations generally are payable upon a participant's separation from service or the date(s) elected by the participant in accordance with the terms of the Plan, subject to exceptions as provided in the Plan, such as death, qualifying disability, unforeseeable emergency or qualifying change in control of the Registrant. The Obligations generally are payable in the form of a lump sum cash payment or annual cash installment payments, at the election of the participant made in accordance with the terms of the Plan.

A Plan participant may designate one or more beneficiaries to receive any portion of his or her Plan account payable in the event of the participant's death, in accordance with the Plan's procedures. Plan participants or their beneficiaries generally may not sell, transfer, pledge, assign or otherwise dispose of any right or interest in the Plan.

The Registrant may, in its sole discretion, establish a grantor trust, commonly known as a rabbi trust, as a vehicle for accumulating assets to pay the Obligations. Any such rabbi trust shall be constructed to constitute an unfunded arrangement that shall not affect the status of the Plan as an unfunded plan for purposes of the Employee Retirement Income Security Act or the Internal Revenue Code. The Obligations may be paid from the general assets of the Participating Employers or from the assets of any such rabbi trust.

The Registrant has reserved the right to amend or terminate the Plan at any time and for any reason, provided that any such amendment may not reduce or delay the vesting of account balances of any participant accrued as of the date of any such amendment.

The Obligations are not convertible into any other security of the Registrant. The Obligations will not have the benefit of a negative pledge or any other affirmative or negative covenant on the part of the Registrant. No trustee has been appointed to take action with respect to the Obligations and each Plan participant or beneficiary will be responsible for enforcing his or her own rights, if any, with respect to the Obligations.

The foregoing is not a complete description of the Obligations, and is qualified in its entirety by reference to the terms of the Plan document.

Item 5. Interests of Named Experts and Counsel.

Inapplicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended. The Registrant's Certificate of Incorporation provides for indemnification of the Registrant's directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law. In addition, the Registrant has entered into indemnification agreements with its directors and certain of its officers.

Item 7. Exemption From Registration Claimed.

Inapplicable.

Item 8. Exhibits.

- 4.1 Applied Materials, Inc. 2016 Deferred Compensation Plan, incorporated by reference to Exhibit 10.33 to the Registrant's Form 10-K (file no. 000-06920) filed December 9, 2015.
- 5.1 Opinion of McDermott Will & Emery LLP.
- 23.1 Consent of KPMG LLP, independent registered public accounting firm.
- 23.2 Consent of McDermott Will & Emery LLP (included in the opinion filed as Exhibit 5.1 to this registration statement).
- 24.1 Power of Attorney of Directors (included on the signature page of this registration statement).

Item 9. Undertakings

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of the securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Santa Clara, State of California on the 10th day of June, 2016.

APPLIED MATERIALS, INC.

By: /s/ Gary E. Dickerson

Gary E. Dickerson President Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS:

Each of the undersigned directors or officers of Applied Materials, Inc., a Delaware corporation (the "Company"), hereby constitutes and appoints Gary E. Dickerson, Robert J. Halliday and Thomas F. Larkins and each of them with power to act alone, his or her true and lawful attorney-in-fact, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to execute a Registration Statement on Form S-8 or other appropriate form, under the Securities Act of 1933, as amended, relating up to \$80 million of general unsecured obligations of the Company to pay deferred compensation pursuant to the Company's 2016 Deferred Compensation Plan, and any and all amendments (including post-effective amendments) to such Registration Statement, and to file the same, with exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing necessary or desirable to be done in and about the premises, as fully to all intents and purposes, as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

Signature	Title	Date
/s/ Gary E. Dickerson Gary E. Dickerson	President, Chief Executive Officer and Director (Principal Executive Officer)	June 10, 2016
/s/ Robert J. Halliday Robert J. Halliday	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	June 10, 2016
/s/ Charles W. Read Charles W. Read	Corporate Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	June 10, 2016

<u>Signature</u>	Title	Date
/s/ Willem P. Roelandts Willem P. Roelandts	Chairman of the Board	June 10, 2016
/s/ Xun Chen Xun Chen	Director	June 10, 2016
/s/ Aart J. de Geus Aart J. de Geus	Director	June 10, 2016
/s/ Stephen R. Forrest Stephen R. Forrest	Director	June 10, 2016
/s/ Thomas J. Iannotti Thomas J. Iannotti	Director	June 10, 2016
/s/ Susan M. James Susan M. James	Director	June 10, 2016
/s/ Alexander A. Karsner Alexander A. Karsner	Director	June 10, 2016
/s/ Adrianna C. Ma Adrianna C. Ma	Director	June 10, 2016
/s/ Dennis D. Powell Dennis D. Powell	Director	June 10, 2016
/s/ Robert H. Swan Robert H. Swan	Director	June 10, 2016

EXHIBIT INDEX

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24.1 Power of Attorney of Directors (included on the signature page of this registration statement). Applied Materials, Inc. 3050 Bowers Avenue P.O. Box 58039 Santa Clara, California 95052-8039

Re: Form S-8 Registration Statement

Ladies and Gentlemen:

At your request, we are rendering this opinion in connection with the Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission for the proposed issuance of \$80,000,000 in aggregate amount of deferred compensation obligations (the "Obligations") of Applied Materials, Inc., a Delaware corporation (the "Company"), pursuant to the Applied Materials, Inc. 2016 Deferred Compensation Plan, as amended (the "Plan"). The Obligations are unsecured obligations of the Company to pay deferred compensation in the future in accordance with the terms of the Plan.

We have examined and relied, to the extent we deem proper, on certificates of officers of the Company as to factual matters, and on the originals or copies certified or otherwise identified to our satisfaction, of all such corporate records of the Company and such other instruments, documents and records which we have deemed relevant and necessary for the purposes of the opinion expressed herein. In our examination, we have assumed the genuiness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies, and the authenticity of the originals of such copies.

Based on the foregoing, we are of the opinion that the Obligations, when issued in accordance with the terms of the Plan, will be valid and binding obligations of the Company, enforceable in accordance with their terms, except as enforcement may be limited by bankruptcy, insolvency or other laws of general applicability relating to or affecting enforcement of creditors' rights or by general principles of equity.

We do not express any opinion herein concerning any law other than the law of the State of California.

We consent to the filing of this opinion as an exhibit to the Registration Statement and we consent to the use of our name wherever it appears in the Registration Statement. In giving this consent, we do not hereby admit that we come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

/s/ McDermott Will & Emery LLP

Consent of Independent Registered Public Accounting Firm

The Board of Directors Applied Materials, Inc.:

We consent to the use of our reports dated December 9, 2015, with respect to the consolidated balance sheets of Applied Materials, Inc. and subsidiaries as of October 25, 2015 and October 26, 2014, and the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended October 25, 2015, and the effectiveness of internal control over financial reporting as of October 25, 2015, incorporated herein by reference.

/s/ KPMG LLP

Santa Clara, California June 10, 2016