UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

(MARK ONE)

[X] ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (FEE REQUIRED)

For the fiscal year ended **December 31, 2000** or

[] TRANSITION REPORT PURSUANT TO SECTION 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
(NO FEE REQUIRED)

For the transition period from _____to _____

Commission file number 2-69114

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

Applied Materials, Inc. Employee Savings and Retirement Plan

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

APPLIED MATERIALS, INC. 3050 Bowers Avenue Santa Clara, California 95054

SIGNATURE

Pursuant to the requirement of the Securities Exchange Act of 1934, the Administrative Committee has duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

APPLIED MATERIALS, INC. EMPLOYEE SAVINGS AND RETIREMENT PLAN

June 27, 2001

By: /s/ Julio A. Aranovich

Julio A. Aranovich Group Vice President, Global Human Resources Applied Global University

APPLIED MATERIALS, INC. EMPLOYEE SAVINGS AND RETIREMENT PLAN

Table of Contents

Independent Accountants' Report

Financial Statements:

Statements of Net Assets Available for Benefits - December 31, 1999 and 2000

Statements of Changes in Net Assets Available for Benefits - years ended December 31, 1999 and 2000

Notes to Financial Statements

Consent of Independent Accountants (Exhibit 23.1)

INDEPENDENT ACCOUNTANTS' REPORT

To the Participants and Administrative Committee of the Applied Materials, Inc. Employee Savings and Retirement Plan:

We have audited the financial statements of the Applied Materials, Inc. Employee Savings and Retirement Plan (the Plan) as of December 31, 1999 and 2000, and for the years then ended, as listed in the accompanying table of contents. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 1999 and 2000, and the changes in net assets available for benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s/ MOHLER, NIXON & WILLIAMS MOHLER, NIXON & WILLIAMS Accountancy Corporation

Campbell, California May 24, 2001

APPLIED MATERIALS, INC. EMPLOYEE SAVINGS AND RETIREMENT PLAN STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	1999	
ASSETS		
Investments, at fair value		\$1,158,853,124 16,075,579
Assets held for investment purposes	1,702,202,429	1,174,928,703
Employer contribution receivable		1,977,767
Total assets		
LIABILITIES		
Forfeitures payable		(635,078)
Net assets available for benefits	\$1,702,091,687 =========	\$1,176,271,392 =========

See notes to financial statements.

APPLIED MATERIALS, INC. EMPLOYEE SAVINGS AND RETIREMENT PLAN STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

	Years Decemb 1999	per 31, 2000
Additions to net assets attributed to:		
<pre>Investment income: Dividends and interest Net realized and unrealized appreciation/(depreciation) in</pre>	\$21,665,002	\$24,093,793
fair value of investments	951,243,819	(575,580,419)
-	972,908,821	(551, 486, 626)
Contributions: Participant Employer	15,510,060	25,976,031 108,210,040
Transfers in from Consilium, Inc. Savings and Retirement Plan		
Total additions	1,044,720,484	(443, 276, 586)
Deductions from net assets attributed to:		
Withdrawals and distributions Transfers out to other qualified plans	(64,716,074) (4,085,297)	(82,543,709)
Total deductions	(68,801,371)	(82,543,709)
Net increase/(decrease) in net assets	975,919,113	(525,820,295)
Net assets available for benefits: Beginning of year	726,172,574	1,702,091,687

See notes to financial statements.

APPLIED MATERIALS, INC. EMPLOYEE SAVINGS AND RETIREMENT PLAN NOTES TO FINANCIAL STATEMENTS

December 31, 1999 and 2000

Note 1 - Significant accounting policies

General

The following description of the Applied Materials, Inc. (Applied) Employee Savings and Retirement Plan (the Plan) provides only general information. Participants seeking detailed information about the Plan should refer to the Plan document and the Summary Plan Description/Prospectus for the Plan.

The Plan is a defined contribution plan that Applied established in 1981 to provide benefits to eligible employees, as defined in the Plan document. The Plan covers all eligible U.S. or expatriate employees of Applied. Eligible employees of Applied may enroll in the Plan after receipt of their first paycheck. The Plan is intended to comply with the applicable requirements of the Internal Revenue Code (the Code) and the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended.

Administration

Under ERISA, Applied is the designated administrator of the Plan. Applied's Board of Directors has appointed an Administrative Committee (the 401(k) Committee) to manage the day-to-day operation and administration of the Plan. Applied has contracted with Fidelity Institutional Retirement Services Company (Fidelity) to maintain the Plan's individual participant accounts, and with Fidelity Management Trust Company (Fidelity Trust) to act as the custodian and trustee. Applied currently pays administrative expenses on behalf of the Plan, except for loan fees paid by Plan participants who elect to receive a Plan loan. Loan fees are insignificant to these financial statements, and are therefore reported as withdrawals. Brokerage commissions and other charges incurred in connection with investment transactions are paid from Plan assets.

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and changes therein, and the disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Basis of accounting

The financial statements of the Plan are prepared using the accrual method of accounting. Participant and Applied matching contributions are recorded in the period during which Applied withholds payroll deductions from participant's earnings. Benefits are recorded when paid.

Investments

Investments of the Plan are held by Fidelity Trust and are invested in the investment options available in the Plan based solely upon instructions received from Plan participants or as provided in the Plan document. The Plan's investments are valued at fair value, as measured by quoted market prices, as of the last day of the Plan year. Purchases and sales of securities are recorded on a trade-date basis and dividends are recorded on the ex-dividend date. Participant loans are valued at cost, which approximates fair value.

During 1999, the PBHG Emerging Growth Fund was replaced with the Dreyfus Small Cap Stock Index Fund, and a new fund, the Vanguard Mid-Cap Index Fund, was added.

Income taxes

The Plan is intended to qualify for favorable federal and state income tax treatment accorded to plans that qualify under Section 401(a) of the Code, and therefore to be exempt from federal income and state franchise taxes. The Plan has been amended subsequent to receipt of its most recent Internal Revenue Service favorable determination letter dated May 22, 1996. Prior to the end of the applicable remedial amendment period, Applied intends to submit the Plan, as amended, for a new favorable determination letter, which is expected to be received in due course.

Reclassifications

Certain reclassifications were made in the 1999 financial statements to conform with the 2000 presentation.

Risks and uncertainties

The Plan provides participants with various investment options in any combination of mutual funds, stocks, bonds, fixed income securities and other investment securities. Investment securities are exposed to various risks, such as those associated with interest rates, market conditions and credit worthiness of the securities' issuers. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in risks in the near term could materially affect participants' account balances and the amounts reported in the financial statements.

Note 2 - Acquisitions and transfers

In December 1998, Applied acquired Consilium, Inc. (Consilium), and eligible employees of Consilium started to contribute to the Plan in March 1999. Consilium sponsored a defined contribution plan (the Consilium Plan), which was merged with the Plan during 1999. As a result, Consilium Plan assets of \$7,129,202 were transferred into the Plan during 1999.

In October 1999, Applied acquired the remaining 50 percent ownership interest in AKT, Inc. (AKT). Prior to the acquisition, AKT was a 50 percent-owned joint venture, and AKT's U.S. employees were eligible to contribute to the Plan. As a result of the acquisition, the Plan became a single employer plan.

In October 1999, Applied acquired Obsidian, Inc. (Obsidian), and the employees of Obsidian became eligible to contribute to the Plan.

During 1999, Applied transferred certain employees to a third-party company. As a result, the account balances of the affected participants were transferred to the third-party company's 401(k) plan in 1999.

In March 2000, Applied acquired Etec Systems, Inc. (Etec), and the employees of Etec became eligible to contribute to the Plan in April 2000.

Note 3 - Participation and benefits

Participant contributions

Participants may elect to have Applied contribute up to 15 percent of their eligible pre-tax compensation, subject to a dollar limit established by the Code. For participants who elect to contribute a portion of their compensation to the Plan, taxable compensation is reduced by the amount contributed. Participant salary deferral contributions are invested in various funds in one-percent increments according to the participant's direction.

Participants are also allowed to make rollover contributions of amounts received from other tax-qualified employer-sponsored retirement plans or conduit IRAs. Such contributions are deposited in the appropriate investment funds in accordance with the participant's direction and the Plan's provisions.

Applied matching contributions

Participants in the Plan become eligible for Applied matching contributions immediately upon enrolling in the Plan. Matching contributions are invested primarily in the Applied Materials, Inc. Common Stock Fund (the Stock Fund), and cannot be transferred to other investment funds until a participant has completed 10 years of service or is fully vested and age 50. Such participants may transfer their matching contributions into or out of the Stock Fund. Applied matches 100 percent of participant contributions up to the first three percent of compensation contributed, and 50 percent of every dollar between four percent and six percent of compensation contributed. Applied's contributions are made bi-weekly, and may be in the form of cash, shares of Applied's common stock or any combination thereof. Fidelity Trust will use cash contributions to purchase shares of Applied's common stock in the open market (at the then prevailing market price), directly from Applied, or from other persons in private transactions. During 1999 and 2000, Applied's matching contributions have been in the form of cash contributions. Applied can change the matching contribution rate, subject to the limits of the Plan and the Code. No changes in the matching contribution rate were made during 1999 or 2000.

Participant accounts

Each participant's account is credited with the participant's contribution and his or her portion of Applied contributions and Plan earnings or losses.

Payment of benefits

Upon termination, a participant or beneficiary generally will receive a lump- sum cash distribution, but may elect to receive whole shares of Applied's common stock for any portion of his or her vested account balance in the Stock Fund. The Plan provides for automatic lump-sum distribution, upon participant termination of employment, of account balances that do not exceed \$5,000.

Loans to participants

The Plan allows participants to borrow up to the lesser of \$50,000 or 50 percent of their vested account balances (excluding Applied matching contributions). Loans are secured by the participants' vested balances, bear interest at prime plus one percent at the time of the borrowing and must be repaid to the Plan from bi-weekly payroll deductions over the loan term, which will be a minimum of one year and a maximum of five years. Loans are generally payable in full upon a participant's termination of employment from Applied, or the occurrence of certain other events. Specific loan terms and conditions are established by the 401(k) Committee. Outstanding loans at December 31, 2000 carry interest rates ranging from 7.0 percent to 10.0 percent.

Vesting

Participants are immediately vested in their salary deferral and rollover contributions and any related earnings. Upon three years of credited service, participants begin to vest 20 percent each year in Applied's matching contributions allocated to their accounts, and are fully vested after seven years of credited service. Participants who are actively employed by Applied become fully vested upon death, total disability, attainment of normal retirement age or termination of the Plan. As required by the Code, former employees of certain acquired companies have different vesting schedules according to their original vesting schedules and years of service with their former employer. If a participant leaves Applied prior to becoming fully vested, the unvested portion of his or her matching account will be forfeited. Forfeitures can be used to offset Applied's matching contribution. Forfeitures used to offset Applied's matching contribution in 1999 and 2000 were \$6,069,911 and \$6,707,704, respectively.

Note 4 - Party-in-interest and related party transactions

As allowed by the Plan, participants may elect to invest in the Stock Fund. In addition, Applied matching contributions are generally invested in the Stock Fund. Aggregate investment in Applied's common stock at December 31, 1999 and 2000 was as follows:

	Number of shares	Fair Value	Cost
1999	20,087,790	\$1,272,671,701	\$271,486,359
2000	21,982,052	\$841,974,259	\$957,418,895

The Stock Fund invests primarily in Applied's common stock. The remainder of the Fund is invested in the Fidelity Institutional Cash Portfolio Money Market to allow for timely handling of exchanges, withdrawals and distributions.

Certain Plan investments in mutual funds are managed by the Plan trustee, Fidelity Trust. Any purchases and sales of these funds are performed in the open market at fair market value and qualify as party-in-interest transactions. Such transactions are permitted under the provisions of the Plan and are exempt from the prohibition of party-in-interest transactions under ERISA and applicable exemptions promulgated thereunder.

Note 5 - Investments

The following table includes the fair values of investments and investment funds that represent five percent or more of the Plan's net assets at December 31:

	1999	2000
Fidelity:		
Retirement Government Money		
Market Portfolio	\$116,291,423	\$69,834,846
Equity Income Fund	40,890,928	37,313,177
Intermediate Bond Fund	18,123,149	14,350,427
Magellan Fund	102,140,717	82,058,516
Contrafund	21,085,628	19,451,516
Spartan U.S. Equity Index Fund	25,767,104	19,907,011
Applied Materials, Inc. Common Stock Fund*	1,296,766,990	857,069,644
Janus Worldwide Fund	54,932,080	41,977,696
INVESCO Total Return Fund	4,715,907	3,263,024
Vanguard Mid-Cap Index Fund	1,425,965	4,760,460
Dreyfus Small Cap Stock Index Fund	7,188,287	8,866,807
Participant Loans	12,874,251	16,075,579
-		
Assets held for investment purposes	\$1,702,202,429	\$1,174,928,703
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^{*} Includes Applied matching contributions, which are nonparticipant-directed. See Note 6 for further details.

The Stock Fund includes investments in the Fidelity Institutional Cash Portfolio Money Market of \$24,095,289 at December 31, 1999 and \$15,095,385 at December 31, 2000. The balance of the Stock Fund is invested in Applied's common stock.

The Plan's investments, including gains and losses on investments bought, sold and held during the year, appreciated/(depreciated) in value as follows for the years ended December 31:

	1999	2000
Mutual funds	\$26,197,694 925,046,125	(\$32,946,224) (542,634,195)
	\$951,243,819	(\$575,580,419)

As discussed in Note 3, Applied matching contributions are generally invested in the Stock Fund and cannot be transferred to other investment funds until a participant meets certain criteria. As a result, the portion of the Stock Fund that relates to employer contributions is a nonparticipant-directed investment. The net assets and significant components of the changes in net assets relating to nonparticipant-directed investments are as follows for the years ended December 31:

	1999	2000
Net Assets:		
Common Stock	\$694,447,764 =======	\$433,576,558 =======
Changes in Net Assets:		
Employer contributions Net realized and unrealized appreciation/(depreciation) in	\$15,326,503	\$23,547,914
fair value of investments	138,696,766 (17,183,694)	(266,563,415) (28,749,407)
investments	(51,111,806)	10,893,702
Net increase/(decrease)	85,727,769	(260,871,206)
Net assets - beginning of year	608,719,995	694,447,764
Net assets - end of year	\$694,447,764 ========	\$433,576,558 =======

Note 7 - Plan termination and/or modification

Applied currently intends to continue the Plan indefinitely for the benefit of its participants and their beneficiaries; however, it reserves the right to terminate and/or modify the Plan at any time and for any reason, subject to the provisions of ERISA. In the event the Plan is terminated, participants would become fully vested in their accounts.

EXHIBIT INDEX

EXHIBIT
NUMBER DESCRIPTION

23.1 Consent of Independent Accountants

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 33-52072 and No. 333-31289) of Applied Materials, Inc. of our report dated May 24, 2001, with respect to the financial statements of the Applied Materials, Inc. Employee Savings and Retirement Plan included in this Annual Report on Form 11-K.

/s/ MOHLER, NIXON & WILLIAMS MOHLER, NIXON & WILLIAMS Accountancy Corporation

Campbell, California June 27, 2001