AXCELIS TECHNOLOGIES INC
Form DEF 14A
March 23, 2010

Use these links to rapidly review the document
TABLE OF CONTENTS

Table of Contents

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

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant ý

Filed by a Party other than the Registrant o

Check the appropriate box:

o Preliminary Proxy Statement

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

ý Definitive Proxy Statement

o Definitive Additional Materials

o Soliciting Material Pursuant to §240.14a-12

Axcelis Technologies, Inc.

(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):

ý 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:

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o 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:

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

(3) Filing Party:

(4) Date Filed:

Table of Contents

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
to Be Held May 7, 2010

The 2010 annual meeting of the stockholders of Axcelis Technologies, Inc., a Delaware corporation, will be held at the offices of the Company at 108 Cherry Hill Drive, Beverly, Massachusetts, at 11:30 a.m. on Friday, May 7, 2010 for the following purposes:

1. To elect as directors the two (2) nominees named in the attached proxy statement to serve until the 2011 annual meeting of stockholders.

2. To ratify the appointment of our independent registered public accounting firm to audit our financial statements for the year ending December 31, 2010.

3. To transact such other business as may properly come before the meeting or any adjournment thereof.

Only stockholders of record at the close of business on March 9, 2010 will be entitled to vote at the annual meeting or at any adjournment.

It is important that your shares be represented at the meeting. Therefore, whether or not you plan to attend the meeting, please complete your proxy card and return it in the enclosed envelope, which requires no postage if mailed in the United States. If you attend the meeting and wish to vote in person, your proxy will not be used.

By order of the Board of Directors,

Lynnette C. Fallon,
Secretary

Dated: March 26, 2010

Directions to 108 Cherry Hill Drive, Beverly, MA

From Boston's Logan Airport: On leaving Boston's Logan Airport, take Route 1A north for 3 miles. Turn left onto Route 60 West for 2 miles. At the 2nd rotary, take Route 1 North for 6.6 miles. Exit onto Routes 95/128 North toward Gloucester.

From Route 128 North: Take Route 128 North to Exit 22 W. At bottom of exit ramp, take a right onto Route 62. Take your first right onto State Road, bear right at fork onto Conant Street. Follow Conant Street past the Cherry Hill Creamery on left and take a left onto Cherry Hill Drive. 108 Cherry Hill Drive is the first building on your right.

Table of Contents

PROXY STATEMENT

TABLE OF CONTENTS

GENERAL INFORMATION ABOUT VOTING	2
SHARE OWNERSHIP OF 5% STOCKHOLDERS	4
SHARE OWNERSHIP OF DIRECTORS AND EXECUTIVE OFFICERS	5
PROPOSAL 1: ELECTION OF DIRECTORS	6
PROPOSAL 2: RATIFICATION OF THE APPOINTMENT OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	10
EXECUTIVE COMPENSATION	12
2009 Compensation Discussion and Analysis	12
2009 Compensation Committee Report	16
2009 Summary Compensation Table	17
Grants of Plan Based Awards in Fiscal 2009	18
Outstanding Equity Awards at Fiscal 2009 Year End	19
Option Exercises and Stock Vested During Fiscal 2009	21
Payments on Termination or Change in Control	21
COMPENSATION OF DIRECTORS	24
CORPORATE GOVERNANCE	25
Board of Directors Leadership Structure and Risk Oversight	25
Board of Directors Independence and Meetings	26
Compensation Committee	27
Nominating and Governance Committee	28
Audit Committee	29
2009 Audit Committee Report	30
Code of Ethics	32
Certain Relationships and Related Transactions	32
OTHER MATTERS	33
Stockholder Communications to the Directors	33
Compensation Committee Interlocks and Insider Participation	33
Section 16(a) Beneficial Ownership Reporting Compliance	33
Deadlines for Stockholder Proposals	33

Table of Contents

GENERAL INFORMATION ABOUT VOTING

The Board of Directors of Axcelis Technologies, Inc. ("Axcelis" or the "Company") is soliciting your proxy for use at the 2010 annual meeting of stockholders to be held on Friday, May 7, 2010 and at any adjournment of the meeting. This proxy statement and the accompanying proxy card are first being sent or given to stockholders of Axcelis on or about March 26, 2010. The meeting will be held at the Company's offices at 108 Cherry Hill Drive, Beverly MA. Driving directions are on the Notice accompanying this Proxy Statement.

Important Notice Regarding the Availability of Proxy Materials for the Shareholder Meeting to Be Held on May 7, 2010: This Proxy Statement and our Annual Report to Shareholders are available on our website at www.axcelis.com/proxy.html.

Who can vote. You may vote your shares of Axcelis common stock at the annual meeting if you were a stockholder of record at the close of business on March 9, 2010. On that date, there were 104,135,179 shares of common stock outstanding. You are entitled to one vote for each share of common stock that you held on the record date.

How to vote your shares. You may vote your shares either by proxy or by attending the meeting and voting in person. If you choose to vote by proxy, please complete, date, sign and return the proxy card in the enclosed postage prepaid envelope. The proxies named in the proxy card will vote your shares as you have instructed. If you sign and return the proxy card without indicating how your votes should be cast, the proxies will vote your shares in favor of each proposal, as recommended by our Board of Directors. Even if you plan to attend the meeting, please complete and mail your proxy card to ensure that your shares are represented at the meeting. If you attend the meeting, you can still revoke your proxy by voting in person. If your shares are held in a brokerage or bank account, you must make arrangements with your broker or bank to vote your shares in person.

Proposals to be considered at the annual meeting. The principal business expected to be transacted at the meeting, as more fully described below, will be the re-election of two directors whose current terms end in 2010 and the ratification of the selection of independent auditors of the Company.

Quorum. A quorum of stockholders is required to transact business at the meeting. A majority of the outstanding shares of common stock entitled to vote, represented at the meeting in person or by proxy, constitutes a quorum for the transaction of business.

Number of votes required. The number of votes required to approve the proposals that are scheduled to be presented at the meeting is as follows:

Proposal	Required Vote
Election of two nominees as directors	Each nominee must receive a plurality of the votes cast.
Ratification of the appointment of our independent registered public accounting firm (our "independent auditors") to audit our financial statements for 2010	This requires the affirmative vote of a majority of the votes cast.

Abstentions. Abstaining from voting for a nominee in the election of directors or on the proposal to ratify the appointment of our auditors will reduce the number of votes cast as well as the number of votes in favor, so will have no impact on the results of voting.

Table of Contents

Broker non-votes. A broker non-vote occurs when a broker cannot vote a customer's shares registered in the broker's name because the customer did not send the broker instructions on how to vote on the matter and the broker is barred by law or stock exchange regulations from exercising its discretionary voting authority in the particular matter. Brokers will have voting discretion for shares registered in their own name on the proposal to ratify the appointment of our independent auditors, but not in the election of directors. Broker non-votes will not be included in the votes cast, so will have no impact on the results of voting with respect to the election of directors and ratification of the appointment of the independent auditors.

Discretionary voting by proxies on other matters. Aside from the proposals for the election of directors and the ratification of our selection of auditors, we do not know of any other proposals that may be presented at the 2010 annual meeting. If another matter is properly presented for consideration at the meeting, the persons named in the accompanying proxy card will exercise their discretion in voting on the matter.

How you may revoke your proxy. You may revoke the authority granted by your executed proxy card at any time before we exercise it by filing with our Corporate Secretary, Lynnette C. Fallon, a written revocation or a duly executed proxy card bearing a later date, or by voting in person at the meeting. If your shares are held in a brokerage account, you must make arrangements with your broker or bank to revoke your proxy.

Expenses of solicitation. We will bear all costs of soliciting proxies. We will upon request reimburse brokers, custodians and fiduciaries for out-of-pocket expenses incurred in forwarding proxy solicitation materials to the beneficial owners of stock held in their names. In addition to solicitations by mail, our directors, officers and employees may solicit proxies from stockholders in person or by other means of communication, including telephone, facsimile and e-mail, without additional remuneration. We may retain a proxy solicitation firm to assist in the solicitation of proxies. We will bear all reasonable fees and expenses if such a firm is retained.

Householding of Annual Meeting Materials. Some banks, brokers and other nominee record holders may be "householding" our proxy statements and annual reports. This means that only one copy of our proxy statement and annual report to stockholders may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you if you call or write us at the following address or telephone number: Axcelis Technologies, Inc., 108 Cherry Hill Drive, Beverly, Massachusetts 01915, Attn: Corporate Secretary, telephone: (978) 787-4000. If you want to receive separate copies of the proxy statement or annual report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address and telephone number. Our annual report is also available on our website at www.axcelis.com.

Table of Contents

SHARE OWNERSHIP OF 5% STOCKHOLDERS

The following table shows the amount of our common stock beneficially owned as of December 31, 2009 (except as otherwise indicated in the footnotes) by persons known by us to own more than 5% of our common stock.

Beneficial Owner(1)	Shares Owned	Percent of Class
FMR LLC and Edward C. Johnson 3d(2)		
82 Devonshire Street, Boston, MA 02109	14,446,257	13.9%
Donald Smith & Co., Inc.(3)		
152 West 57th Street, New York, NY 10019	10,699,888	10.3%
Schneider Capital Management Corporation(4)		
460 E. Swedesford Rd., Suite 2000, Wayne, PA 19087	9,539,365	9.17%
Sterling Capital Management LLC(5)		
4064 Colony Road, Suite 300, Charlotte, NC 28211	9,481,120	9.11%

(1) Unless otherwise noted, the number of shares beneficially owned by each person listed includes any shares over which a person has sole or shared voting or investment power. The percentage ownership of each person listed in the table was calculated using the total number of shares outstanding on December 31, 2009 (104,076,564 shares).

(2) Based on a Schedule 13G/A filed with the Securities and Exchange Commission in February 2010 reporting on ownership as of December 31, 2009, which states that such shares are held in client accounts managed by investment advisor subsidiaries of FMR LLC. One of such subsidiaries, Fidelity Management & Research Company ("Fidelity"), is the beneficial owner of 10,327,957 of such shares (9.9% of the class) as a result of acting as investment advisor to Fidelity Low Priced Stock Fund (the "Fund"), which holds all of such shares. According to the Schedule 13G/A, Edward C. Johnson 3d and FMR LLC, through its control of Fidelity and the investment companies, each have sole dispositive power over all the shares reported in the table and sole voting power over 4,118,300 of such shares. Neither Mr. Johnson nor FMR LLC has voting power with respect to the Fund's shares. Fidelity votes those shares pursuant to guidelines of the investment companies' trustees. Fidelity and the Fund are located at the same address as FMR LLC.

(3) Based on a Schedule 13G/A filed with the Securities and Exchange Commission in February 2010 reporting on ownership as of December 31, 2009, which states that such shares are owned by advisory clients of Donald Smith & Co., Inc. According to the Schedule 13G, Donald Smith & Co., Inc. has sole voting power over 8,668,888 of such shares and the sole power to dispose of all of such shares.

(4) Based on a Schedule 13G filed with the Securities and Exchange Commission in February 2010 reporting on ownership as of December 31, 2009, which states that Schneider Capital Management Corporation is a registered investment advisor. According to the Schedule 13G, such company has sole voting power over 8,222,509 of such shares and the sole power to dispose of all of such shares.

(5) Based on a Schedule 13G/A filed with the Securities and Exchange Commission in February 2010 reporting on ownership as of December 31, 2009. This filing states that such shares are owned by advisory clients of Sterling Capital Management LLC.

Table of Contents

SHARE OWNERSHIP OF DIRECTORS AND EXECUTIVE OFFICERS

The following table shows the amount of our common stock beneficially owned as of March 2, 2010 by our directors, the executive officers named in the Summary Compensation Table below, and all of our current executive officers and directors as a group.

Beneficial Owner(1)	Shares Owned	Shares Subject to Exercisable Rights to Acquire as of April 30, 2010	Total Shares Beneficially Owned	Percent of Class
Non-Executive Directors				
R. John Fletcher	69,185	105,000	174,185	*
Stephen R. Hardis	372,920	150,000	522,920	*
William C. Jennings	57,185	105,000	162,185	*
Patrick H. Nettles	63,685	135,000	198,685	*
H. Brian Thompson	82,185	135,000	217,185	*
Geoffrey Wild	36,595	90,000	126,595	*
Named Executive Officers				
Mary G. Puma(2)	222,045	1,256,100	1,478,145	1.40%
Matthew P. Flynn	63,878	94,821	158,699	*
Stephen G. Bassett	63,149	70,000	133,149	*
Lynnette C. Fallon	84,765	234,000	318,765	*
Kevin J. Brewer	62,024	107,915	169,939	*
All current Executive Officers and Directors as a Group (12 persons)(3)	1,215,444	2,496,836	3,712,280	3.48%

* Indicates less than 1%.

(1) Unless otherwise noted, the number of shares beneficially owned by each person listed includes any shares over which the person has sole or shared voting or investment power. The shares shown in the table also include shares that the persons named in this table have the right to acquire on or before April 30, 2010 (60 days after March 2, 2010) by exercising a stock option or other right. Unless otherwise noted, each person has sole investment and voting power (or shares that power with his or her spouse) over the shares listed in the table. The percentage ownership of each person listed in the table was calculated using the total number of shares outstanding on March 2, 2010 (104,120,179 shares), plus any shares that person could acquire upon the exercise of any options or other rights on or before April 30, 2010.

(2) Ms. Puma's ownership includes 20,000 shares owned by her husband.

(3) Includes shares and exercisable options held by the directors and named executive officers, as well as one other executive officer who beneficially owns an aggregate of 37,827 shares and 14,000 exercisable options.

Table of Contents

PROPOSAL 1: ELECTION OF DIRECTORS

Our Board of Directors has fixed the number of directors at seven. The number of directors is subject to increase or decrease by action of the Board. Until we amended our charter in 2009, directors were divided into three classes and elected for three year terms. Under the 2009 charter amendment, the classified Board is being phased out, commencing at the 2010 Annual Meeting. At the upcoming annual meeting, two directors will be elected to hold office for a term of one year until our annual meeting in 2011 and until their successors are elected and qualified. Each of the Board's nominees, Patrick H. Nettles and Geoffrey Wild, has consented to serve if elected. However, if any nominee is unable to serve, proxies will be voted for any other candidate nominated by the Board. The Board recommends a vote FOR each of the two nominees.

The following table contains biographical information about the nominees for director and current directors whose term of office will continue after the meeting.

Name and Age	Business Experience and Other Directorships	Director Since	Present Term Expires
*Geoffrey Wild Age: 53	Mr. Wild is Group Chief Executive Officer and a director of AZ Electronic Materials Holdings, a position he has held since early 2010. AZ Electronic Materials is a provider of high-purity, advanced technology products for use in integrated circuits and devices, flat panel displays and photolithographic printing. Prior to that, from January 2008 he was Chief Executive Officer and President of Cascade Microtech, Inc., a supplier of semiconductor wafer measurement and test probes. Prior to that, from 2002 through 2007, Mr. Wild was Chief Executive Officer and President of Nikon Precision, Inc., a supplier of lithography systems. Prior to joining Nikon, Mr. Wild was Chief Executive Officer of TheSupply, Inc., an e-commerce provider of supply chain services. During the past five years, Mr. Wild has served as a director of E Ink Corporation and Nikon Precision, Inc.	2006	2010
*Patrick H. Nettles Age: 66	Mr. Nettles has served as Executive Chairman of the Board of Directors of CIENA Corporation, a manufacturer of optical networking equipment, since May 2001. Prior to that, Mr. Nettles served as Chairman of the Board of Directors and Chief Executive Officer of CIENA from October 2000, as its President, Chief Executive Officer and Director from April 1994, and as its Director and Chief Executive Officer from February 1994. Mr. Nettles is a director of Progressive Corporation.	2001	2010

Table of Contents

Name and Age	Business Experience and Other Directorships	Director Since	Present Term Expires
Stephen R. Hardis Age: 74	Mr. Hardis was the Company's Chairman of the Board until May 2006 and currently serves as Lead Director. He was Chairman and Chief Executive Officer of Eaton Corporation until July 2000. Mr. Hardis became Eaton's Chairman in January 1996 and its Chief Executive Officer in September 1995. Prior to that, he served as Eaton's Vice Chairman from 1986 and its Executive Vice President Finance and Administration from 1979. Mr. Hardis is a director of Lexmark International Group, Inc., Marsh & McLennan Companies, Inc., Nordson Corporation, and Progressive Corporation, and during the past years, he was also a director of American Greetings Corporation and Steris Corporation.	2000	2011
H. Brian Thompson Age: 70	Mr. Thompson is Executive Chairman of Global Telecom & Technology (GTT), a global telecommunications network integrator that provides its clients with a broad portfolio of wide-area network and wireless mobility services from its headquarters in Northern Virginia and offices in London, Dusseldorf, and Denver. Mr. Thompson continues to head his own private equity investment and advisory firm, Universal Telecommunications, Inc. From December 2002 to June 2007, Mr. Thompson was Chairman of Comsat International, one of the largest independent telecommunications operators serving all of Latin America. He also served as Chairman and Chief Executive Officer of Global TeleSystems Group, Inc. from March 1999 through September of 2000. Mr. Thompson was Chairman and CEO of LCI International from 1991 until its merger with Qwest Communications International Inc. in June 1998. Thompson became Vice Chairman of the board for Qwest until his resignation in December 1998. Thompson previously served as Executive Vice President of MCI Communications Corporation from 1981 to 1990, and prior to MCI, was a management consultant with the Washington, DC offices of McKinsey & Company for nine years, where he specialized in the management of telecommunications. He currently serves as a member of the board of directors of ICO Global Communications (Holdings) Ltd, Penske Automotive Group, and Sonus Networks, Inc., and during the past five years he was also a director of Mercator Partners Acquisition Corporation, Bell Canada International, Inc. ArrayComm, Inc. and United Auto Group.	2002	2011

Table of Contents

Name and Age	Business Experience and Other Directorships	Director Since	Present Term Expires
R. John Fletcher Age: 64	Mr. Fletcher is Chief Executive Officer of Fletcher Spaght, Inc., a strategy consulting organization, which he founded in 1983, and Managing Director of Fletcher Spaght Ventures, a venture fund. Prior to founding Fletcher Spaght, Inc., Mr. Fletcher was a manager at the Boston Consulting Group. Mr. Fletcher is also a director of AutoImmune, Inc., and Spectranetics Corporation, and during the past five years, he was also a director of Panacos, Inc.	2003	2011
William C. Jennings Age: 70	Mr. Jennings is a retired partner of PricewaterhouseCoopers LLP, a global accounting and advisory firm, where he led the risk management and internal control consulting practice from 1992 until his retirement in 1999. Before that, Mr. Jennings served as a senior audit partner at Coopers & Lybrand, as a senior executive vice president at Shearson Lehman Brothers, responsible for quality assurance, internal audit and compliance, and as an executive vice president and chief financial officer of Bankers Trust. Since retiring from PricewaterhouseCoopers, Mr. Jennings has provided independent consulting services to a number of companies. He is a director of Silgan Holdings Inc., and Spectranetics Corporation, and during the past five years, he was also a director of Nyfix, Inc.	2003	2012
Mary G. Puma Age: 52	Ms. Puma is Axcelis' Chairman (since May 2006), Chief Executive Officer (since January 2002) and President (since May 2000). Prior to becoming Chief Executive Officer, Ms. Puma served as Chief Operating Officer from May 2000, and, before that, served as a Vice President of the Company from February 1999. In 1998, she became General Manager and Vice President of the Implant Systems Division of Eaton Corporation, a global diversified industrial manufacturer. In May 1996, she joined Eaton as General Manager of the Commercial Controls Division. Prior to joining Eaton, Ms. Puma spent 15 years in various marketing and general management positions for General Electric Company. Ms. Puma is also a director of Nordson Corporation.	2000	2012

*
Indicates a nominee for election as director.

Table of Contents

Experience, Qualifications Attributes of the Nominees and Continuing Directors

The specific experience, qualifications, attributes or skills of Mr. Nettles and Mr. Wild, as well as the other directors continuing in office, that led to the conclusion that each of these individuals should serve as a director of the Company, in light of our business and structure, are:

Nominees

Mr. Nettles' work experience as a chief executive officer and chief financial officer of a global capital equipment business gives him the skills to provide leadership and guidance to management and the other Board members in respect to the financial and operational matters affecting Axcelis. Mr. Nettles has also had meaningful experience in corporate transactions, especially in the area of mergers and acquisitions, which has been helpful to management and the other Board members in recent years and may be beneficial in the future. Mr. Nettles has served as chairman of the Board's Nominating and Governance Committee since its formation in 2002 and the Board has benefited from his strong leadership in that area.

Mr. Wild's work experience provides him with an understanding of the semiconductor industry and the role of a supplier of equipment and materials to these international customers, who are largely based in Asia. Mr. Wild's role as chief executive officer has exposed him to operational and financial and accounting issues which are relevant to the Company's business. Mr. Wild has served as a member of the Audit Committee since joining the Board in 2006 and the Board has benefited from his continuing service on that committee.

Continuing Directors

Mr. Hardis' work experience as a chief executive officer and chief financial officer of a global capital equipment business gives him the skills to provide leadership and guidance to management and the other Board members with respect to financial and operational matters affecting Axcelis. In addition, Mr. Hardis' experience on other public company boards of directors has exposed him to broad experience in corporate governance matters that has benefited our board. Finally, Mr. Hardis' experience with our business when it was owned by Eaton Corporation has provided our Board with a historical context in which to address issues relating to our business and products. Mr Hardis has served as Lead Director since May 2006 (prior to which he was Chairman beginning in 2000), and also serves on both the Compensation Committee and Nominating and Governance Committees since those committees were formed in 2000 and 2002, respectively. The Board highly values his contributions in these roles.

Mr. Thompson's work experience leading a number of companies in the telecom industry gives him the skills to provide leadership and guidance to management and the other Board members in respect to the financial and operational matters affecting Axcelis. Mr. Thompson has also had significant experience in corporate transactions, especially in the capital markets, which has been helpful to management and the other Board members in recent years and may be beneficial in the future. Mr. Thompson has served as chairman of the Board's Compensation Committee since October 2002 and the Board has benefited from his strong leadership in that area.

Mr. Fletcher's work experience gives him extensive experience in strategic planning, especially in the area of market analysis, which has been beneficial to the Board's understanding of the Company's business opportunities. Mr. Fletcher's work also provides him with insight into capital formation matters which may be beneficial in the future. Mr Fletcher has served on the Compensation Committee since May 2006 and on the Audit Committee since April 2004. The Board highly values his contributions in these roles.

Table of Contents

Mr. Jennings' work experience in accounting, risk management and internal controls gives him the skills needed to lead the Board's audit committee, which he has done since joining the Board in 2003. His role as a senior executive at two financial institutions also gives him the skills to provide leadership and guidance to management and the other Board members in respect to the financial and operational matters affecting Axcelis. Mr. Jennings has served as chairman of the Board's Audit Committee since April 2004 and as a member since June 2003 and the Board has benefited from his strong leadership in that area. Mr. Jennings temporarily served as chief executive officer of U.S. Interactive, Inc. from September 2000 until November 2000, which company filed for bankruptcy protection in January 2001.

Ms. Puma's long experience in our industry, as well as her role as Axcelis' chief executive officer and president allow her to provide essential insight into the Company's past and current business operations which is critical to the Board's decision-making in all financial and operational matters affecting Axcelis. Ms. Puma's strong leadership during challenging periods of the Company's history, notably her oversight of a complete revitalization of the Company's product lines while implementing substantial cost reductions, have been highly valued by the Board.

PROPOSAL 2: RATIFICATION OF THE APPOINTMENT OF OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Upon the recommendation of its Audit Committee, the Board of Directors has appointed the independent registered public accounting firm of Ernst & Young LLP as independent auditors to conduct the annual audit of our financial statements for 2010 and is seeking stockholder ratification of the appointment. Ernst & Young LLP is an internationally recognized independent registered public accounting firm that audited the Company's financial statements in 2009 and which the Audit Committee believes is well qualified to continue.

Representatives of Ernst & Young are expected to attend the annual meeting and be available to respond to appropriate questions. They will also have the opportunity to make a statement if they desire.

The aggregate fees billed for each of the last two fiscal years for professional services rendered by Ernst & Young LLP were as follows:

	2008	2009
Audit Fees	$ 2,091,925	$ 1,728,077
Audit Related Fees	$ 14,500	$ 15,300
Tax Fees		
Tax compliance and preparation of returns	$ 169,041	$ 91,133
International tax planning	$ 139,324	$ 85,068
General tax planning and other tax services	$ 66,017	$ 13,244
Total Tax Fees	$ 374,382	$ 189,445
Total Fees	$ 2,480,807	$ 1,932,822

Audit fees include statutory audits for subsidiaries and branches operating in countries outside of the United States. 2008 audit fees also include a U.S. GAAP audit of SEN Corporation, an SHI and Axcelis Company, a joint venture that Axcelis divested in 2009. Audit related fees include the audit for the Company's 401(k) plan required under ERISA. International tax planning relates to the setting of fair compensation for services provided to us by our foreign subsidiaries to ensure appropriate revenue levels are reported for taxation in those foreign countries. General tax planning and other tax services includes, in 2008, assisting with three foreign tax audits.

Table of Contents

Under the Audit Committee's charter, the Audit Committee must pre-approve the fees to be paid to the independent auditor for audit services. In addition, the Audit Committee has adopted a policy requiring the Committee's pre-approval of all audit-related or non-audit (including tax) services performed by the independent auditor in order to assure that these services do not impair the auditor's independence. The policy prohibits the independent auditor's performance of certain types of services as inconsistent with independence.

Any approval required under the policy must be given by the Audit Committee or by any member or members to whom the Committee has delegated that authority. The Audit Committee does not delegate its responsibility to approve services performed by the independent auditor to any member of management.

The standard applied by the Audit Committee in determining whether to grant approval of any type of non-audit service, or of any specific engagement to perform a non-audit service, is whether the services to be performed, the compensation to be paid therefor and other related factors are consistent with the independent auditor's independence under guidelines of the Securities and Exchange Commission, the Public Company Accounting Oversight Board and applicable professional standards. Relevant considerations include whether the work product is likely to be subject to, or implicated in, audit procedures during the audit of our financial statements, whether the independent auditor would be functioning in the role of management or in an advocacy role, whether the independent auditor's performance of the service would enhance our ability to manage or control risk or improve audit quality, whether such performance would increase efficiency because of the independent auditor's familiarity with our business, personnel, culture, systems, risk profile and other factors, and whether the amount of fees involved, or the proportion of the total fees payable to the independent auditor in the period that is for non-audit services, would tend to reduce the independent auditor's ability to exercise independent judgment in performing the audit.

All of the non-audit services rendered by Ernst & Young LLP in respect of the 2008 and 2009 fiscal years were pre-approved by the Audit Committee in accordance with this policy.

Ernst & Young LLP informed the Company that they are not aware of any relationship with the Company that, in their professional judgment, may reasonably be thought to bear on the independence of Ernst & Young LLP.

Ratification of the appointment of Ernst & Young LLP by the stockholders is not required by law or by our bylaws. The Board of Directors is nevertheless submitting it to the stockholders to ascertain their views. If this proposal is not approved at the annual meeting by the affirmative vote of holders of a majority of the votes cast at the meeting, the Audit Committee intends to reconsider its recommendation of Ernst & Young LLP as independent auditors. The Company may retain the firm for 2010 notwithstanding a negative stockholder vote.

The Board of Directors recommends a vote FOR ratification of the appointment of Ernst & Young LLP.

Table of Contents

EXECUTIVE COMPENSATION

2009 Compensation Discussion and Analysis

This Compensation Discussion and Analysis is intended to provide a context for the disclosures contained in this Proxy Statement with respect to the compensation paid to the Company's principal executive officer (Mary G. Puma), principal financial officer (Stephen G. Bassett), and the three most highly compensated other executive officers serving as executive officers at December 31, 2009 included in the Summary Compensation Table below. These executive officers are referred to herein as "named executive officers" or "NEOs." Specifically, this Compensation Discussion and Analysis will explain the objectives and material elements of the compensation of the NEOs during 2009.

Compensation Principles and Tools

The Company's executive compensation program is designed to:

(1) retain executive talent by offering compensation that is commensurate with pay at other companies of a similar size in the same or similar industries, as adjusted for individual factors; and

(2) drive achievement of annual strategic goals by rewarding executives through incentive pay tied to approved financial and operational goals.

All executive compensation is determined by the Compensation Committee of the Board of Directors. For a discussion of the Committee's processes in general, see "Corporate Governance Compensation Committee" elsewhere in this Proxy Statement. Executive compensation for incumbent executives is reviewed annually.

Executive compensation decision-making begins by determining the level and mix of types (base, incentive and equity) of compensation for a particular position that are paid by similar companies for comparable positions. The Committee had no pre-established policy or target for the allocation between cash and non-cash compensation, short-term and long-term incentive compensation or incentive and base compensation. The Compensation Committee sets compensation by using this information together with an evaluation of the unique education, training and experience of the executive officer and his or her overall value to the Company. Factors considered by the Compensation Committee in valuing the NEO's services include the executive's contributions to the Company's competitive position in the marketplace, individual performance, and the past and expected contribution by the executive officer toward the achievement of the Company's performance objectives. While the benchmarking information is a very important starting point, this subjective review is necessary to ensure that the level and mix of types of executive compensation is appropriate for the particular individual and will drive the performance of the executive.

In 2009, the Compensation Committee reviewed all elements of each NEO's compensation in the context of each executive's total compensation. This was done by reviewing comprehensive reports on each executive's current and historical base and annual incentive cash compensation, equity portfolio and contractual arrangements with the Company.

Material Elements of Named Executive Officer Compensation

The key elements of NEO compensation are: base salaries; an annual cash incentive program; equity compensation; and a "double-trigger" Change of Control Agreement. Executives also may participate, on the same terms as all other employees, in an Employee Stock Purchase Plan, a 401(k) retirement savings plan and health and welfare benefits.

The following discussion seeks to explain why Axcelis has chosen to pay each compensation element, how Axcelis determines the amount of each element, and how the element and the

Table of Contents

Company's decisions regarding that element in 2009 fit into the Company's overall compensation objectives and affect decisions regarding other elements.

Base Salary. The Company pays a base salary to each of its NEOs. The objective is to provide base compensation to the executive that is competitive with base compensation the executive could earn in a similar position at other companies, because Axcelis believes that this is necessary to attract and retain suitably qualified executives. Base pay for NEOs is set on commencement of employment with the Company and annually reviewed thereafter. In past years, the Committee has engaged a compensation consultant on an annual basis to provide market-based compensation information for each of the executive officer positions at Axcelis. Since the Committee did not anticipate any executive officer compensation adjustments in 2009 in light of our financial position and performance, the Committee did not retain a compensation consultant for this purpose in 2009. In years where the Committee is considering compensation adjustments, such market data would be used by the Committee, together with recommendations from the Chief Executive Officer. In the event that base pay is a factor in calculating annual incentive cash compensation or equity grants, when fixing or adjusting base pay, the Compensation Committee will consider the impact of a change on these other compensation components.

CEO Base Pay in 2009. In May 2009, Ms. Puma proposed to the Compensation Committee that, notwithstanding the terms of her employment agreement with the Company, her annual base pay be temporarily reduced during 2009 and 2010 to $400,000. She also proposed that she would decline any cash bonus for 2008 and 2009. On May 6, 2009, the Compensation Committee accepted these proposals as a modification to her employment agreement, with the condition that in the event that Ms. Puma is at any time entitled to separation pay under her employment agreement or under her Change of Control Agreement, all amounts due to her shall be calculated as if the modifications had never taken effect. Accordingly, Ms. Puma's base compensation for 2009 was $400,000, reflecting a 20% reduction of the base compensation set in her employment agreement.

2009 Base Pay for the Other NEOs. At its meeting in August 2009, the Compensation Committee reviewed the cash compensation of each incumbent executive officer. At that time, the 2009 base compensation of the NEOs showed the impact of four weeks of unpaid leave earlier in the year. Management had implemented unpaid leaves in 2009 to reduce compensation expense during the market downturn. Given the Company's financial performance during 2009, no adjustments to base compensation were proposed to or approved by the Compensation Committee in August 2009. In November 2009, the Compensation Committee reviewed comprehensive reports on each executive officer's compensation which reflected the impact of an additional four weeks of unpaid leave in 2009, for a total of eight weeks, which resulted in an annualized reduction in actual base pay during 2009 for all NEOs (other than Ms. Puma) of 15.4% from the annual rate of base pay last approved by the Compensation Committee. The Compensation Committee took no action during 2009 to modify the annual rate of base pay for the NEOs other than Ms. Puma.

Annual Cash Incentive. An annual cash incentive has been a component of the compensation paid to the executive officers in past years.

2009 Cash Incentive. Given the Company's financial performance and condition during 2009, the Compensation Committee did not implement any cash incentive for NEOs in respect of the Company's performance during 2009. As noted above, Ms. Puma agreed to forgo any cash incentive for 2009 as a modification to her employment agreement.

2008 Cash Incentive. In 2008, the Compensation Committee adopted an annual incentive plan, called the 2008 Axcelis Team Incentive Plan, in which the NEOs participated. In February 2009, the Compensation Committee approved a scoring of the Company's performance under the 2008 Axcelis Team Incentive Plan of 32% of the target amount based on financial and operational targets that were

Table of Contents

described in Axcelis' 2009 proxy statement, but it deferred any determination of the individual performance scores for the NEOs. Although the 2008 Axcelis Team Incentive Plan contemplated a payout in early 2009, the Compensation Committee deferred approving it during 2009. In February 2010, the Compensation Committee approved the payout of the 2008 Axcelis Team Incentive Plan, in the form of restricted stock units, to the NEOs other than Ms. Puma, who had agreed to forgo her payout.

Long Term Incentive Compensation through Equity. The Compensation Committee also grants the NEOs equity compensation under the 2000 Stock Plan. Equity compensation for NEOs, which has taken the form of stock options and restricted stock units, is designed to align the interests of executives with those of our investors and to retain executives during multi-year vesting periods. Equity grants are a key retention device as a result of vesting provisions which typically extend over four years. Long term ownership of equity awards is further encouraged through the Company's executive stock ownership guidelines, which establish a minimum number of shares that the executive must own. In the case of the NEOs, the required ownership ranges from 20,000 shares in the case of Ms. Puma to 12,000 shares in the case of the other NEOs. These levels were set to create meaningful investments by executives in shares of the Company, so that their interest in the value of the Company's stock was not limited to stock price appreciation via options without a downside.

Equity grants are also intended to drive performance, in that the value ultimately realized is linked to stock price appreciation. Option grants have no value without stock price appreciation, and restricted stock units have value at grant that can increase with stock price appreciation. Thus, equity grants should constructively influence management's motivation to enhance the value of the Company's stock.

Equity grants to executives are made upon hire and, typically, thereafter on an annual basis. Annual equity grants to executive officers have been made in most years in order to ensure a meaningful retentive effect by maintaining the percentage of the executive's equity position that is unvested.

Form, Size and Timing of Equity Grants. The Compensation Committee determines the form of equity grants made to the NEOs. The 2000 Stock Plan permits the Compensation Committee to award several different forms of equity rights, including restricted stock, restricted stock units, incentive stock options and non-qualified stock options. Past equity grants to NEOs have taken the form of non-qualified stock options and restricted stock units.

In 2009, the Compensation Committee determined that stock options were an attractive form of equity compensation in light of the Company's depressed stock price. In November 2009, after reviewing the values of each executive's equity portfolio, the Committee made a stock option grant to each executive officer, including the NEOs. These grants are exercisable for a number of shares that the Committee considered an appropriate incentive for each of the NEOs to both (1) provide a retentive effect on the executive during the four year vesting period and (2) incentivize the executive to improve Company performance and stock price. In determining the size of these grants, the Committee took into account the Company's total outstanding shares, grants made to non-executive employees and an appropriate total annual burn rate for the Company's equity compensation. The grant date fair values of these grants are lower than available competitive market information might suggest for executives in these positions. If the Committee had been guided by such data and sized the 2009 equity grants using Black-Scholes or another valuation methodology that takes the trading price into account, the grants would have been inappropriately large. So, while the 2009 option grants are exercisable for fewer shares than competitive market information would suggest, the Committee believes that these grants are of sufficient size to create a meaningful financial incentive. These grants are set forth in the Grants of Plan-Based Awards in Fiscal 2009 table below.

The 2009 stock option grants to NEOs were approved by the Compensation Committee at a regularly scheduled meeting on November 2, 2009. The Committee's approval specified that the grants

Table of Contents

would become effective on November 17, 2009 and that the exercise price of such options would equal the closing market price of the common stock on that date. It is the Committee's general practice to approve equity awards with a future effective date, usually on the 15th of the month following the approval. The Company believes that this time period between the approval and effectiveness of an equity grant means that the Committee is unable to know or estimate the trading price of the Company's common stock on the effective date of grant. As a result, the Committee has not, to date, thought it necessary to adopt a policy of timing the approval or effectiveness of equity awards to specific dates following the release of financial results or other material information.

Vesting Provisions. Stock options granted to executives will forfeit in the event of a termination of employment prior to vesting. In setting the vesting provisions for the stock options grants to the NEOs in 2009 the Committee sought to balance the reward and retentive effects of such equity grants by setting the vest dates for 25% of such shares on each of the next four anniversaries of November 16, 2009.

Puma Employment Agreement

The Company has an Amended and Restated Employment Agreement with Mary G. Puma effective November 6, 2007. As discussed above, in 2009, Ms. Puma agreed to modifications to her employment agreement affecting her compensation for 2008, 2009 and 2010. She agreed to reduce her base compensation for 2009 and 2010 by 20%. She also declined any incentive compensation for 2008 or 2009. See below under "Payments on Termination or Change of Control" for a further discussion of Ms. Puma's employment agreement.

Change of Control Agreements

Each of the NEOs has a Change of Control Agreement with the Company, described below under "Payments on Termination or Change of Control." No actions were taken by the Compensation Committee in 2009 relating to the Change of Control Agreements.

Other Compensation Components

In order to encourage our executives to obtain adequate financial and tax planning assistance, Axcelis reimburses up to $5,500 of an executive's annual tax and financial planning expenses. This program is the only executive perquisite at Axcelis and amounts paid to NEOs under this program are included in the "All other compensation" column in the Summary Compensation Table.

Executives may elect to make contributions to a retirement account in the Company's IRC Section 401(k) plan, which is available to all employees and under which the Company made a matching contribution to each participant in 2007 and 2008. The Company eliminated the 401(k) plan matching contribution in 2009. For 2007 and 2008, the matching contribution under the 401(k) Plan was the greater of (1) 100% of the employee's pre-tax contributions to the plan, capped at $1,000, or (2) 50% of the employee's pre-tax contributions to the plan, up to the first 6% of eligible pre-tax compensation contributed to the plan. The Company's matching contributions to the accounts of the NEOs under the 401(k) plan are shown in the "All other compensation" column in the Summary Compensation Table.

NEOs may also participate in the Company's medical and dental insurance offerings by electing to make payroll deductions designed to cover approximately 25% of the cost of those programs (the Company covers the other 75% of the cost). The Company provides life, accidental death and dismemberment and disability insurance for all employees, and the opportunity to increase coverage levels via payroll deductions. Finally, the Company maintains the Employee Stock Purchase Plan, an IRC Section 423 plan, a voluntary plan in which employees may purchase Axcelis shares through salary deductions.

Table of Contents

Tax Implications

In setting NEO compensation, the Committee takes into account the impact of IRC Section 162(m), which bars the Company from taking a tax deduction for compensation for any NEO that exceeds $1 million, subject to exceptions for certain performance-based compensation. To the extent that compensation under an annual cash incentive plan and/or in the form of restricted stock units causes the total compensation paid to an NEO to exceed $1 million in any year, such excess compensation would not be tax deductible to the Company. In the case of cash incentive payments, this is because certain components of the plan, such as the Committee's determination that some operational and individual performance goals have been achieved, may require subjectivity that does not meet the requirements of Section 162(m). In the case of restricted stock unit awards, it is because vesting is based on the length of the NEO's service, which is not performance-based for purposes of Section 162(m).

The Compensation Committee believes that the structure of its cash incentive plans will provide benefits to the Company that outweigh the potential tax deductions that might be available if the plans included only objective performance measures. It also believes that the benefits of the use of service-based restricted stock units to provide long-term incentives outweigh the potential loss of tax deductions from such equity compensation. To date, the Company's tax deductions for compensation have not been limited by Section 162(m) except in connection with the Axcelis Team Incentive bonuses paid to the Chief Executive Officer with respect to 2004 and 2006. The Committee expects to continue to take Section 162(m) into account as it makes decisions in future years and may modify the forms of compensation used accordingly.

In addition, in making compensation decisions, the Committee considers the impact of IRC Section 409A, which imposes certain requirements on "nonqualified deferred compensation plans."

2009 Compensation Committee Report

The Compensation Committee has reviewed and discussed the foregoing Compensation Discussion and Analysis with management and, based on this review and discussion, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement.

By the Compensation Committee,

H. Brian Thompson, Chairman
R. John Fletcher
Stephen R. Hardis

Table of Contents

2009 Summary Compensation Table

Name and Principal Position	Year	Salary ($)	Stock awards ($)(1)	Option awards ($)(1)	Non-equity incentive plan compensation ($)	All other compensation ($)(2)	Total ($)
Mary G. Puma	2009	$ 400,000	$ 0	$ 166,592	$ 0	$ 0	$ 566,592
Chairman, Chief Executive	2008	$ 500,000	$ 0	$ 72,070	$ 0	$ 6,900	$ 578,970
Officer and President	2007	$ 500,000	$ 500,000	$ 0	$ 0	$ 12,250	$ 1,012,250
Stephen G. Bassett	2009	$ 265,385	$ 0	$ 83,296	$ 0	$ 0	$ 348,681
Executive Vice President	2008	$ 300,000	$ 0	$ 36,035	$ 0	$ 0	$ 336,035
and Chief Financial Officer	2007	$ 284,307	$ 276,000	$ 0	$ 0	$ 0	$ 560,307
Matthew P. Flynn	2009	$ 309,615	$ 0	$ 99,955	$ 0	$ 0	$ 409,570
Executive Vice President,	2008	$ 349,999	$ 0	$ 43,242	$ 0	$ 6,900	$ 400,141
Customer Operations	2007	$ 327,114	$ 315,000	$ 0	$ 0	$ 11,319	$ 653,433
Lynnette C. Fallon	2009	$ 269,808	$ 0	$ 83,296	$ 0	$ 0	$ 353,104
Executive Vice President,	2008	$ 305,000	$ 0	$ 36,035	$ 0	$ 6,900	$ 347,935
HR/Legal and General Counsel	2007	$ 305,000	$ 305,000	$ 0	$ 0	$ 6,750	$ 616,750
Kevin J. Brewer	2009	$ 265,385	$ 0	$ 83,296	$ 0	$ 945	$ 349,626
Executive Vice President,	2008	$ 277,885	$ 0	$ 36,035	$ 0	$ 7,975	$ 321,895
Operations	2007	$ 258,653	$ 250,000	$ 0	$ 0	$ 2,326	$ 510,979

(1) Represents the grant date fair value of the stock and option awards received by the NEO in the year indicated, determined in accordance with FASB ASC Topic 718, using the assumptions described in the Stock Award Plans and Stock-Based Compensation Note to the Company's Financial Statements included in the Form 10-K filed with the Securities and Exchange Commission for the respective year.

(2) The amounts in this column represent (A) the amount paid in cash as a matching contribution to Axcelis' 401(k) plan in respect of contributions made by the NEO during 2008 and 2007 and (B) amounts reimbursed under the Company's Executive Tax and Financial Planning Reimbursement Program. In the case of Mr. Brewer, the 2009 figure includes the value of a service award.

Other than Ms. Puma, the named executive officers (NEOs) do not have employment agreements. Ms. Puma's employment agreement is described under the heading "Payments on Termination or Change in Control" in this Proxy Statement. In the case of Ms. Puma, her 2009 base compensation reflects her agreement to reduce her base pay by 20% from the amount specified in her employment agreement. In the case of the other NEOs, the 2009 base compensation amounts reflect the eight weeks of unpaid leave required during 2009.

The Company did not adopt a non-equity incentive compensation plan in 2009. The Compensation Committee deferred authorizing any payment under the 2008 Axcelis Team Incentive Plan during 2009. See the "2009 Compensation Discussion and Analysis" for additional information on the 2008 Axcelis Team Incentive Plan. Ms. Puma has declined any payment with respect to the 2008 Axcelis Team Incentive Plan. No payout was earned under the 2007 Axcelis Team Incentive Plan.

The proportion that an NEO's salary and non-equity incentive compensation bear to each other and to the NEO's total compensation is largely a result of the various factors involved in the calculation of the payout under the Axcelis Team Incentive plan as described in the "2009

Compensation Discussion and Analysis" above.

Table of Contents

Grants of Plan Based Awards in Fiscal 2009

Name	Grant Date	Date of Compensation Committee Approval	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1) Target ($)	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1) Maximum ($)	All Other Option Awards: Number of Securities Underlying Options (#)(2)	Exercise or Base Price of Option Awards ($/Sh)	Grant Date Fair Value of Stock and Option Awards(3)
Mary G. Puma	11/16/2009	11/2/2009	$ 0	$ 0	250,000	$ 1.16	$ 166,592
Stephen G. Bassett	11/16/2009	11/2/2009	$ 0	$ 0	125,000	$ 1.16	$ 83,296
Matthew P. Flynn	11/16/2009	11/2/2009	$ 0	$ 0	150,000	$ 1.16	$ 99,955
Lynnette C. Fallon	11/16/2009	11/2/2009	$ 0	$ 0	125,000	$ 1.16	$ 83,296
Kevin J. Brewer	11/16/2009	11/2/2009	$ 0	$ 0	125,000	$ 1.16	$ 83,296

(1) The Compensation Committee did not adopt a non-equity incentive plan in 2009, as discussed in the "Compensation Discussion and Analysis" above.

(2) The only equity awards issued to NEOs during 2009 were stock options granted under the Company's 2000 Stock Plan effective November 17, 2009, as described in the table entitled Outstanding Equity Awards at Fiscal 2009 Year End. Other than future services to the Company, no consideration was paid or will be due in respect of these stock options or the shares issued thereon. These stock options will be forfeited if the NEO's employment terminates prior to vesting.

(3) Represents the grant date fair value of the option awards received by the NEO in 2009, determined in accordance with FASB ASC Topic 718, using the assumptions described in the Stock Award Plans and Stock-Based Compensation Note to the Company's Financial Statements included in the Form 10-K filed with the Securities and Exchange Commission for 2009.

Table of Contents

Outstanding Equity Awards at Fiscal 2009 Year End

		Option Awards				Stock Awards	
Name		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested ($)(6)
Mary G. Puma							
	1					41,667	$ 58,750.47
	2					53,680	$ 75,688.80
		606,100	0	$ 22.00	7/10/2010		
		84,699	0	$ 8.44	1/25/2010		
		100,000	0	$ 10.28	6/21/2012		
		100,000	0	$ 5.85	6/21/2012		
		125,000	0	$ 5.70	5/1/2013		
		125,000	0	$ 11.48	5/1/2013		
		100,000	0	$ 11.87	6/25/2014		
		100,000	0	$ 7.97	6/25/2014		
	3	62,500	187,500	$ 0.70	11/17/2018		
	5	0	250,000	$ 1.16	11/16/2019		
Stephen G. Bassett							
	1					23,000	$ 32,430.00
	2					29,631	$ 41,779.71
		20,000	0	$ 9.90	12/18/2013		
		25,000	0	$ 11.87	6/25/2014		
		25,000	0	$ 7.97	6/25/2014		
	4	31,250	93,750	$ 0.70	11/17/2018		
	5	0	125,000	$ 1.16	11/16/2019		
Matthew P. Flynn							
	1					22,917	$ 32,312.97
	2					33,819	$ 47,684.79
		3,388	0	$ 8.44	1/25/2010		
		4,500	0	$ 22.00	7/10/2010		
		4,911	0	$ 14.10	7/30/2011		
		4,910	0	$ 13.20	7/31/2011		
		5,000	0	$ 10.28	6/21/2012		
		15,500	0	$ 6.88	11/5/2012		
		3,750	0	$ 5.85	6/21/2012		
		15,000	0	$ 5.70	5/1/2013		
		15,000	0	$ 11.48	5/1/2013		
		15,000	0	$ 11.87	6/25/2014		
		15,000	0	$ 7.97	6/25/2014		
	4	37,500	112,500	$ 0.70	11/17/2018		
	5	0	150,000	$ 1.16	11/16/2019		
Lynnette C. Fallon							
	1					25,417	$ 35,837.97
	2					32,745	$ 46,170.45
		27,000	0	$ 11.75	4/9/2011		
		13,500	0	$ 14.10	7/30/2011		
		13,500	0	$ 13.20	7/30/2011		
		30,000	0	$ 10.28	6/21/2012		
		30,000	0	$ 5.85	6/21/2012		
		30,000	0	$ 5.70	5/1/2013		

	30,000	0	$	11.48	5/1/2013
	30,000	0	$	11.87	6/25/2014
	30,000	0	$	7.97	6/25/2014
4	31,250	93,750	$	0.70	11/17/2018
5	0	125,000	$	1.16	11/16/2019

Table of Contents

		Option Awards				Stock Awards	
Name		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested ($)(6)
Kevin J. Brewer							
	1					20,834	$ 29,375.94
	2					26,841	$ 37,845.81
		12,705	0	$ 8.44	1/25/2010		
		7,200	0	$ 22.00	7/10/2010		
		10,715	0	$ 14.10	7/30/2011		
		10,714	0	$ 13.20	7/30/2011		
		7,143	0	$ 10.28	6/21/2012		
		15,000	0	$ 6.88	11/5/2012		
		7,143	0	$ 5.85	6/21/2012		
		10,000	0	$ 5.70	5/1/2013		
		10,000	0	$ 11.48	5/1/2013		
		15,000	0	$ 11.87	6/25/2014		
		15,000	0	$ 7.97	6/25/2014		
	4	31,250	93,750	$ 0.70	11/17/2018		
	5	0	125,000	$ 1.16	11/16/2019		

(1) These restricted stock units will vest on July 3, 2010, provided that such vesting may accelerate on achievement of market capitalization targets.

(2) These restricted stock units vest as to 50% of the shares on each of July 1, 2010 and 2011.

(3) The unexercisable options will become exercisable as to 1/3 of the unexercisable shares on each of November 17, 2010, 2011 and 2012, provided that no such option shall be exercisable until the closing price of the Company's common stock as reported by the Nasdaq has remained above $5.00 per share (as adjusted for any stock splits, stock dividends, stock combinations or other similar change in capitalization) for a period of not less than 20 consecutive trading days, provided further that the forgoing proviso will be deemed satisfied in the event that a change of control as defined in the 2000 Stock Plan has occurred on or before the date of exercise.

(4) The unexercisable options will become exercisable as to 1/3 of the unexercisable such shares on each of November 17, 2010, 2011 and 2012, provided that no such option shall be exercisable until the closing price of the Company's common stock as reported by the Nasdaq has remained above $4.00 per share (as adjusted for any stock splits, stock dividends, stock combinations or other similar change in capitalization) for a period of not less than 20 consecutive trading days, provided further that the forgoing proviso will be deemed satisfied in the event that a change of control as defined in the 2000 Stock Plan has occurred on or before the date of exercise.

(5) The unexercisable options will become exercisable as to 25% of such shares on each of November 16, 2010, 2011, 2012 and 2013.

(6) Using the closing market price on December 31, 2009 of $1.41.

Table of Contents

Option Exercises and Stock Vested During Fiscal 2009

	Option Awards		Stock Awards	
Name	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise ($)	Number of Shares Acquired on Vesting (#)(1)	Value Realized on Vesting ($)(2)
Mary G. Puma	0	0	92,691	$ 39,211
Stephen G. Bassett	0	0	51,166	$ 21,645
Matthew P. Flynn	0	0	59,779	$ 25,526
Lynnette C. Fallon	0	0	56,541	$ 23,918
Kevin J. Brewer	0	0	52,393	$ 22,327

(1) Represents shares vested in July 2009 on restricted stock units granted in 2005, 2006 and 2007. A portion of these vested shares were withheld, and not issued, by the Company for the purposes of tax withholding. The net numbers of shares issued to the named executive officers were: 63,263 to Ms. Puma, 34,922 to Mr. Bassett, 40,801 to Mr. Flynn, 38,590 to Ms. Fallon and 35,760 to Mr. Brewer.

(2) Using the closing market price on the vesting date of July 1, 2009 ($0.45) and on July 6, 2009 ($0.39), the first trading day after the vesting date of July 3, 2009. The actual amount received by the executives on the sale of the net shares issued on restricted stock units will depend on the market values at the time of such transactions.

Payments on Termination or Change in Control

Employment Agreement with Ms. Puma. The Company has an Employment Agreement with Ms. Puma effective November 2007 that provides for a one-year term of employment at a minimum annual base salary of $500,000 and an annual target incentive compensation opportunity of 100% of base salary. In 2009, Ms. Puma agreed to modifications to her employment agreement affecting her compensation for 2008, 2009 and 2010. She agreed to reduce her base compensation for 2009 and 2010 to $400,000. She also declined any incentive compensation for 2008 or 2009.

Ms. Puma's base salary and incentive opportunities may be subject to future adjustment by the Board, but not below the minimum levels in her Employment Agreement, as modified. The term of Ms. Puma's agreement automatically renews on a year-to-year basis unless one party notifies the other that the agreement will not be extended. Such termination notice must be sent within a 60 day window period beginning 180 days prior to the next anniversary of the effective date. The agreement also provides that Ms. Puma will participate in the 2000 Stock Plan, the 401(k) savings plan and the welfare benefit plans that we sponsor.

In the event Ms. Puma's employment is terminated prior to the end of the term for reasons other than cause, death, disability or voluntary resignation without "good reason," she is entitled to receive all compensation accrued to date, acceleration of vesting of options and other equity rights and a cash separation payment. The cash separation payment will equal 24 months of her base compensation and two times an annual bonus amount determined in accordance with the agreement. For this purpose, Ms. Puma's annual bonus compensation will be her current base multiplied by the greater of (a) the percentage of her base that she actually received as a bonus for the prior fiscal year or (b) 25%. The

Table of Contents

following table sets forth the separation pay that would have been due to Ms. Puma if a qualifying termination occurred on December 31, 2009:

Lump sum cash payment(1)	Value of accelerated vesting on equity awards(2)	18 months of COBRA premiums for health coverage(3)	Total
$1,250,000	$374,434	$26,507	$1,650,941

(1) This amount represents 24 months of Ms. Puma's base salary at the highest rate in effect in the year preceding December 31, 2009 ($41,667) plus 24 months of a minimum bonus amount specified in the agreement equal to 25% of the base pay ($10,417). This amount is due within 30 days of termination.

(2) This amount reflects a valuation of the acceleration of Ms. Puma's outstanding equity awards using the methodology prescribed under IRC Section 280G, which provides for an excise tax on certain change of control payments. This valuation is based on the closing price of our common stock on the last trading day of 2009 ($1.41). The actual amount received by Ms. Puma on exercise of options and sales of shares issued on restricted stock units will depend on the market values at the time of such transactions.

(3) Ms. Puma's employment agreement provides that the Company will pay for up to 18 months of COBRA premiums. This amount represents 18 months of COBRA premiums in effect during 2010 for Ms. Puma's coverage elections. Actual COBRA rates will change on January 1, 2011.

In the event of an actual termination of Ms. Puma's employment, it is possible that her separation pay would be renegotiated by Ms. Puma and the Board of Directors, in which case the amounts payable might differ from the foregoing.

Change of Control Agreements. The Company has entered into a Change of Control Agreement with each of our executive officers, including Ms. Puma, to provide that severance compensation will be paid in a lump sum within 30 days of a covered termination following a change in control, as defined in the agreement. These Change of Control Agreements provide that executive officers are entitled to severance compensation in the event there is both (1) a change in control and (2) a termination of employment within three years of that change in control for reasons other than cause, death, disability or voluntary resignation without Good Reason. Under the Change of Control Agreements, "Good Reason" can be a material diminution in the executive's authority, a material reduction in base pay or a material change in geographic location of the executive's job. A "change of control" is defined in the agreement and covers a number of events, including a merger or acquisition involving the Company in which the persons holding the Company's shares immediately prior to the transaction hold less than 75% of the shares outstanding after the transaction.

In these agreements, the executives have agreed not to be engaged by, or own, any business competing with any of the businesses conducted by the Company for a period of 12 months following any termination of employment (whether or not following a change of control). The executives also agreed not to solicit employees of the Company to leave employment with the Company or solicit or induce customers of the Company to cease doing business with the Company, during such period.

If severance compensation is payable, it would consist of a cash payment equal to the sum of (a) the Company's accrued obligations for base pay and incentive compensation and (b) the amount determined by multiplying the executive's then salary and average bonus by three. For this purpose, an executive's average bonus is his or her current bonus opportunity multiplied by the average of the individual performance scores given to the executive in the last three years, but without taking into account company performance scores. In the event such severance is payable, all unvested restricted

Table of Contents

stock units and options held by the executive will become vested until termination or expiration in accordance with their terms. We will also reimburse the executive for the effects, including federal, state and local income tax consequences, of any excise tax due on severance compensation, as shown the chart below. The excise taxes due under Sections 280G and 4999 of the IRC are unpredictable and can have widely divergent and unexpected effects based on an executive's personal compensation history. Therefore, to provide a predictable and equal level of benefit between individuals without regard to the effect of the excise tax, the Company determined that it was appropriate to pay the cost of this excise tax plus an amount needed to pay income taxes due on such additional payment. The amounts due to each named executive officer in the event that a change of control and termination occurred on December 31, 2009 are set forth in the table below:

Estimated Payments under the Change of Control Agreements if due at December 31, 2009

Name	Lump sum cash payment(1)	Value of accelerated vesting on equity awards(2)	Excise tax due under IRC 280G, plus gross-up amount(3)	Total
Mary G. Puma	$ 3,300,000	$ 374,434	$ 1,335,626	$ 5,010,060
Stephen G. Bassett	$ 1,392,000	$ 194,212	$ 564,056	$ 2,150,268
Matthew P. Flynn	$ 1,877,400	$ 223,994	$ 807,745	$ 2,909,139
Lynnette C. Fallon	$ 1,540,860	$ 186,383	$ 626,805	$ 2,354,048
Kevin J. Brewer	$ 1,534,862	$ 187,221	$ 657,348	$ 2,379,431

(1) This amount, which is due within 30 days of termination, represents (A) separation pay equal to three times (2.78 in the case of Mr. Bassett) the NEO's current base salary plus an average bonus amount based on past performance assessments and (B) the amount earned but unpaid under the 2008 Axcelis Team Incentive Plan. No cash incentive plan was adopted for 2009.

(2) This amount reflects a valuation of the acceleration of the NEO's outstanding equity awards using the methodology prescribed under IRC Section 280G, which provides for an excise tax on certain change of control payments. This valuation is based on the closing price of our common stock on the last trading day of 2009 ($1.41). The actual amount received by the NEO on exercise of options and sales of shares issued on restricted stock units will depend on the market values at the time of the change of control.

(3) The Change of Control Agreement with each NEO provides for the Company's reimbursement of the excise tax liability due on the separation pay under I.R.C. Section 280G, which amount is grossed up to cover income taxes due on such reimbursement. Therefore, the amounts shown in this column represent amounts due to taxing authorities and will not be retained by the executive.

In the event Ms. Puma receives payment under her Change of Control Agreement, she will not receive amounts and benefits due under her Employment Agreement unless such amounts are in excess of the amounts paid under the Change of Control Agreement. Also, in the event of an actual termination of an NEO's employment in connection with a change of control, it is possible that the NEO's separation pay would be renegotiated by the NEO and the Board of Directors, in which case the amounts payable might differ from the foregoing.

Table of Contents

COMPENSATION OF DIRECTORS

The Nominating and Governance Committee has responsibility under its charter to review and determine recommended non-employee director compensation for adoption by the full Board. All equity grants to non-employee directors are either made under automatic granting language in the 2000 Stock Plan or by the Compensation Committee on the recommendation of the Board of Directors.

2009 Director Fees. After reviewing a peer benchmarking report prepared by a compensation consultant in February 2007, the Board of Directors, at the recommendation of the Nominating and Governance Committee, approved changes to the compensation for independent directors. They approved the following cash fees, effective January 1, 2007, and no changes to these fees were approved during 2009:

Retainers (paid in quarterly installments)	
Lead Director	$50,000
Board Member (not Lead Director)	$30,000
Audit Committee Chair	$15,000
Compensation Committee Chair	$10,000
Nominating Committee Chair	$7,500
Meeting Fees (paid quarterly following meetings)	
In Person Board Meetings	$2,000 per meeting
Telephone Board Meetings	$1,000 per meeting
In Person or Telephone Committee Meetings	$1,000 per meeting, only to committee members

Non-employee directors also receive reimbursement of out-of-pocket expenses incurred in attending Board and committee meetings. Non-employee directors do not receive any Company-paid perquisites.

2009 Equity Awards. All non-employee directors of Axcelis receive an automatic initial stock option grant for 40,000 shares under our 2000 Stock Plan upon initial election to the Board. These non-employee director options have an exercise price equal to the closing price of our common stock on the grant date and are fully exercisable on the 181st day after the date the option is granted, provided the optionee is still a director on that date. The options have a term of ten years from the date of grant. No new non-employee directors joined the Board in 2009.

On May 6, 2009, the Compensation Committee approved the issuance under the 2000 Stock Plan of non-qualified stock options exercisable for 50,000 shares of common stock to each of the non-employee directors, effective July 15, 2009. These option grants became fully exercisable on the 181st day after the date of grant if the director remained in service on that date. Long term ownership of equity awards by directors is encouraged through the Company's director stock ownership guidelines, which provide that non-employee directors should own a minimum of 20,000 shares of Axcelis common stock. This level was set to create meaningful investments by directors in shares of the Company, so that their interest in the value of the Company's stock was not limited to stock price appreciation via options without a downside.

Table of Contents

The chart below shows compensation for all non-employee directors who served the Company during 2009:

Name	Fees earned or paid in cash ($)	Stock awards ($)(1)	Option awards ($)(2)(3)	Total ($)
R. John Fletcher	$ 55,000	$	$ 14,414	$ 69,414
Stephen R. Hardis	$ 79,000	$	$ 14,414	$ 93,414
William C. Jennings	$ 65,000	$	$ 14,414	$ 79,414
Patrick H. Nettles	$ 61,500	$	$ 14,414	$ 75,914
H. Brian Thompson	$ 63,000	$	$ 14,414	$ 77,414
Geoffrey Wild	$ 50,000	$	$ 14,414	$ 64,414

(1) The outside directors did not receive any restricted stock grants in 2009. As of December 31, 2009, each of Messrs. Hardis, Fletcher, Thompson, Jennings and Nettles held an aggregate of 52,185 shares of common stock received as restricted stock grants from the Company and Mr. Wild held 36,595 shares of common stock received as a restricted stock grant from the Company.

(2) The amount shown represents the grant date fair value of the option awards received by the director in 2009, determined in accordance with FASB ASC Topic 718, using the assumptions described in the Stock Award Plans and Stock-Based Compensation Note to the Company's Financial Statements included in the Form 10-K filed with the Securities and Exchange Commission for 2009.

(3) As of December 31, 2009, the non-employee directors in office held the following total stock options, all of which were fully vested (except the 2009 grants discussed above) and had exercise prices ranging from $0.44 to $16.63:

	Aggregate # of shares subject to outstanding options	Lowest exercise price	Highest exercise price
Fletcher	105,000	$ 0.44	$ 11.91
Hardis	150,000	$ 0.44	$ 16.63
Jennings	105,000	$ 0.44	$ 11.91
Nettles	135,000	$ 0.44	$ 14.17
Thompson	135,000	$ 0.44	$ 13.22
Wild	90,000	$ 0.44	$ 6.61

CORPORATE GOVERNANCE

Board of Directors Leadership Structure and Risk Oversight

Our Governance Policies provide that, if the Chairman of the Board is the Chief Executive Officer, the independent directors shall elect a Lead Director. The Board believes that having a Lead Director allows the Chief Executive Officer to focus principally on managing the Company, enhances Board administration and communications between the independent directors, and allows for consistent Board leadership during any Chief Executive Officer transition. Accordingly, when Mary G. Puma became Chairman of the Board of Directors in May 2006 in addition to her role as Chief Executive Officer, Stephen R. Hardis was appointed by the Board as Lead Director. The responsibilities of the Lead Director include:

Setting the board's agenda in collaboration with the CEO;

Acting as a regular communication channel between the board and CEO;

Table of Contents

- Organizing and presiding over executive sessions to review the company's performance and management effectiveness;
- Conducting exit interviews with resigning senior managers to determine whether their departure reflect problems with the CEO or other company issues;
- Coordinating the activities of the independent directors;
- With the Chairman of the Nominating and Governance Committee, addressing any actions arising from the annual Board self-evaluation, coordinating the assessment of the committee structure, organization, and charters, and evaluating the need for any changes; and
- Coordinating the performance evaluation of the Chairman and CEO.

The Board designates the Lead Director annually after each annual meeting of shareholders. Our Board has determined that this leadership structure is appropriate for our business because the title of Chairman is commonly recognized by our customers as being the top management position. Giving Ms. Puma that title ensures that she is recognized by all third parties as our most senior manager. In practice, the role of the Lead Director as described above and in our Governance Policies encompasses all of the management oversight and Board leadership functions typically held by a non-executive Chairman. The Company provides an appropriately substantial retainer to compensate the outside director assuming the Lead Director role for the director's time, effort and focus.

Axcelis' business involves many unavoidable operational and financial risks which management and our Board seek to mitigate through careful planning and execution. Our risks include:

- The highly competitive nature of the semiconductor equipment industry, which may limit the rate and level of acceptance of our current products by customers;
- We may be unable to continually invest in product improvement and new product development to meet customer expectations for both technological and cost factors;
- We may be unable to maintain an adequate a global infrastructure to support our customers;
- The cyclical nature of the semiconductor industry and its overall condition in a particular period;
- We may be unable to access sufficient capital to meet fluctuating capital requirements; and
- The uncertainties of global economies, including the availability of credit.

Our Board of Directors provides oversight for these operational risks by receiving reports from management at our quarterly in-person Board meetings, as well as through monthly management reports and interim telephonic meetings. These include reports on the market environment, customer sales results and forecasts, product development results and forecasts, and overall financial performance and forecasts. Board members have the opportunity to provide input and direction to management on managing our risks in the context of the current information. In order to ensure that longer term risks are also considered by the Board in a timely and consistent matter, the full Board dedicates one in-person meeting each year to review and approve a strategic plan and to review and approve a profit plan. These plans are used to manage the business throughout the year. In addition, one Board meeting each year is focused on longer term technology development to ensure the emerging market trends are identified, understood and their implications for Axcelis' products appropriately addressed.

Board of Directors Independence and Meetings

The Board of Directors has determined that all directors who served on the Board during 2009, other than Ms. Puma, are or were independent under the criteria established by NASDAQ, and that the members of the Audit Committee also meet the additional independence requirements of the Securities and Exchange Commission. None of the directors, to the Company's knowledge, had any

Table of Contents

business, financial, family or other type of relationship with the Company or its management (other than as a director and stockholder of the Company), except for any relationships that the Board considered to be immaterial under the NASDAQ independence standards. In determining that each such director is independent, the Board considers whether Axcelis purchases and sells products and services from and to companies (or their affiliates) at which directors are or have been employed as officers or serve as directors. During 2009, Mr. Hardis served as a director of an entity that sold products or services to the Company. The amount paid to the other entity by the Company was below the total revenue threshold in the NASDAQ independence standards (that is, the greater of $200,000 or 5% of the recipient's consolidated gross annual revenues). The Board determined that this relationship did not impair Mr. Hardis' independence.

Our Board of Directors held 11 meetings during 2009 and acted twice by unanimous written consent. The average rate of attendance at Board and committee meetings for all current directors was 100%. All Board members whose terms continue after the annual meeting of stockholders are expected to attend the annual meeting of stockholders, subject to special circumstances. All Board members then in office attended the annual meeting in 2009. Our Board has standing Audit, Compensation and Nominating and Governance Committees. Independent directors have regularly scheduled executive sessions at which only independent directors are present.

Compensation Committee

During 2009, the Compensation Committee was composed of Mr. Thompson (Chairman), Mr. Hardis and Mr. Fletcher. The Compensation Committee holds four regularly scheduled meetings per year and occasionally calls special meetings or acts by written consent to address particular matters. In 2009, the Compensation Committee met six times. The Compensation Committee operates under a written charter, a copy of which is available on our website at www.axcelis.com.

The Compensation Committee establishes the compensation philosophy for Axcelis and has all the authority of the Board of Directors to act or exercise corporate powers with respect to the compensation of the executive officers and the administration of Axcelis' equity compensation plans. The Compensation Committee is responsible to ensure that an annual review of executive officer performance and succession planning is presented to the Board.

The Compensation Committee meets in the first quarter of each year to establish the goals and targets applicable to the executives' annual incentive compensation for the coming year, as well as to determine the results for the year just ended. In 2009, annual equity compensation decisions for executive officers were made on November 2, 2009 with the grants effective on November 16, 2009. Other compensation decisions are made throughout the year, as circumstances warrant and as described in detail in "Compensation Discussion and Analysis" above. The Committee may delegate its authority under the 2000 Stock Plan to the extent permitted by applicable law, including delegating to executive officers the authority to make awards other than to directors or executive officers.

To support its decision-making processes, the Compensation Committee accesses the advice of an independent compensation consultant with respect to the structure and competitiveness of the Company's executive compensation programs, as well as the programs' consistency with the Company's executive compensation philosophy. The Committee has the sole authority to hire and fire all outside compensation consultants providing information and advice to the Committee. During 2009, the Compensation Committee's compensation consultant was Pearl Meyer & Partners, which firm did not provide any other services to the Company. At the request of the Committee, management will make specific proposals to the Committee regarding compensation for executive officers. Management will often work with the Committee's outside consultant to ensure that the consultant has access to the appropriate information to enable the consultant to complete its analyses for the Committee. Management ensures that the consultant's invoices are paid from Company funds. The Chief Executive

Table of Contents

Officer, the Chief Financial Officer and the Executive VP HR/Legal usually participate in Compensation Committee meetings to present and discuss the material. After such a discussion, Mr. Bassett and Ms. Fallon will leave the meeting, allowing the Compensation Committee time to meet alone with Ms. Puma, after which she leaves the Committee in executive session. All decisions on executive compensation are made by the Compensation Committee in executive session without Ms. Puma.

For a discussion on the Compensation Committee's actions during 2009, see the "Compensation Discussion and Analysis" above.

Nominating and Governance Committee

During 2009, the Nominating and Governance Committee was composed of Mr. Nettles (Chairman) and Mr. Hardis. The Nominating and Governance Committee is responsible for identifying and nominating candidates for membership on the Board of Directors, making recommendations to the Board on non-employee director compensation and establishing governance policies for the Board and management. The Committee operates under a written charter and governance policies, copies of which are available on our website at www.axcelis.com. The Committee held six meetings in 2009.

Under a process established by the Nominating and Governance Committee, the Board of Directors undertakes an annual self-evaluation of Board size, function and management interaction. In addition, each Board member completes an annual self and peer performance review.

The Nominating and Governance Committee seeks new nominees for election to the Board, when necessary, through a variety of channels, including the engagement of director search firms and less formal recommendations through business and personal contacts. Director search firms engaged by the Company are paid a retainer fee to identify and screen candidates meeting specifications established by the Committee for a particular Board nominee search. Such specifications will change from one search to another based on the Committee's determination of the needs of Board composition at the time a particular search is initiated.

The Nominating and Governance Committee will evaluate any candidate recommended for nomination as a director, whether proposed by a stockholder or identified through the Committee's own search processes, about whom it is provided appropriate information. In evaluating a candidate, the Committee must, at a minimum, determine that the candidate is capable of discharging his or her fiduciary duties to the stockholders of the Company. The Committee will determine whether the particular nomination would be consistent with Axcelis' governance policies. These policies provide in part that all new candidates for election to the Board and all Board members eligible for nomination for re-election to the Board shall be evaluated on the following criteria:

(a) such candidate or Board member's current level of, and on-going commitment to, education regarding the responsibilities of a member of a Board of Directors under standards established by the Nominating and Governance Committee;

(b) the adequacy of such candidate or Board member's time available to commit to responsibilities as a member of the Board;

(c) the existence of any financial relationship with the Company other than that arising as an employee of the Company, as a Board member and/or as a stockholder; and

(d) in the case of re-election, such member's compliance with our Director Stock Ownership Policy.

If a candidate is presented to the Nominating and Governance Committee at a time when it has established specifications for a particular Board search, the Committee will consider whether the candidate satisfies the established specifications. More generally, the Committee will consider a

Table of Contents

candidate's skills, character, leadership experience, business experience and judgment, and familiarity with relevant industry, national and international issues in light of the backgrounds, skills and characteristics of the current Board and the needs of the Company's business. The Nominating and Governance Committee will consider a nominee's national origin or ethnicity if it contributes to Board diversity that is beneficial to the Company for business reasons. Given the portion of the Company's revenues derived from Asian customers, Board members with insight into Asian business or markets are highly valued. Finally, the Committee must consider whether a nominee (in conjunction with the existing Board members) will assist the Company in meeting the requirements of applicable law, the rules of the Securities and Exchange Commission, the NASDAQ listing standards, and the IRC regarding the independence, sophistication and skills of the members of the Board of Directors and the Audit, Compensation and Nominating and Governance committees.

In order to recommend a candidate for consideration by the Nominating and Governance Committee, a stockholder must provide the Committee with the candidate's name, background and relationship with the proposing stockholder, a brief statement outlining the reasons the candidate would be an effective director of Axcelis and information relevant to the considerations described above. Such information should be sent to the Nominating and Governance Committee of Axcelis Technologies, Inc., 108 Cherry Hill Drive, Beverly, Massachusetts 01915, Attn: Corporate Secretary. The Committee may require further information.

Audit Committee

The Audit Committee operates under a written charter and is responsible for assisting the Board of Directors in monitoring and oversight of (1) the integrity of the Company's financial statements and its systems of internal accounting and financial controls and (2) the independence and performance of the Company's internal and independent auditors. The Audit Committee has adopted procedures for the handling of complaints regarding accounting, internal controls and auditing matters which are described in our Code of Ethics. The Audit Committee's charter and the Company's Code of Ethics are both available on our website at www.axcelis.com. The Audit Committee met four times during 2009. The Audit Committee consisted of Mr. Jennings (Chairman), and Messrs. Fletcher and Wild.

The Board of Directors has determined that each of Mr. Jennings, Mr. Fletcher and Mr. Wild are audit committee financial experts as defined in Item 401 of Regulation S-K promulgated by the Securities and Exchange Commission. The Board's conclusions regarding the qualifications of a director as an audit committee financial expert are based on his certification that he has (1) an understanding of generally accepted accounting principles and financial statements; (2) the ability to assess the general application of such principles in connection with the accounting for estimates, accruals and reserves; (3) experience preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company's financial statements, or experience actively supervising one or more persons engaged in such activities; (4) an understanding of internal controls and procedures for financial reporting; and (5) an understanding of audit committee functions.

For a report on the Audit Committee's actions during 2009, see the "2009 Audit Committee Report" below.

Table of Contents

2009 Audit Committee Report

The Audit Committee schedules meetings to occur after the preparation of quarterly and annual financial statements but prior to the public release of financial results for the period. The Committee met in May, August and November of 2009, prior to the release of the financial results for the first, second and third quarters of 2009, respectively, and in February 2010, prior to the release of our 2009 year-end results. If appropriate, additional meetings may also be held during the year to address a variety of recurring and non-recurring topics, such as the Company's internal control systems, changes to the Audit Committee charter and other matters. In addition, throughout 2009, the Audit Committee provided oversight of the Company's preparations for management's assessment of its internal controls over financial reporting as required by Section 404 of the Sarbanes Oxley Act of 2002. The Committee receives regular reports from management on this topic and confirmation of the processes and timing of preparation from the independent auditors.

At all of these meetings, Axcelis' Chief Executive Officer and Chief Financial Officer were present, as were our General Counsel and our independent auditors. The Committee's agenda is established by the Committee's chairman, with input from the Company's Chief Financial Officer. Depending on the content of the meeting, the Committee holds private sessions with the Company's independent auditors, and, separately, with management, at which candid discussions of financial management, accounting and internal control issues can take place. In its executive sessions with representatives of the independent auditors, the Committee seeks to engage in a meaningful dialogue to address any questions or concerns identified by the Committee and to obtain an understanding of any questions or concerns of the auditors.

At the recommendation of the Audit Committee, the Board of Directors appointed Ernst & Young LLP as our Independent Registered Public Accounting Firm to audit our financial statements for 2009. At the 2009 annual meeting of stockholders, our stockholders ratified this appointment. The Audit Committee discussed with our independent auditors and the Company's Chief Financial Officer overall audit scopes and plans, the results of external audit examinations, evaluations by the auditors of the Company's internal controls and the quality of the Company's financial reporting.

Management has reviewed with the Audit Committee the audited consolidated financial statements for the year ended December 31, 2009 prepared by management and audited by Ernst & Young LLP, management's assessment of the effectiveness of our internal control over financial reporting and Ernst & Young LLP's evaluation of our internal control over financial reporting. In addition, the Committee received from the independent auditors (1) their annual written reports covering matters required to be discussed by the auditors with the Committee under Statement on Auditing Standards No. 61, *Communication with Audit Committees* and (2) their disclosures and the letter required by applicable requirements of the Public Company Accounting Oversight Board regarding independence from the Company and its management. Both items were discussed with the auditors and management at an Audit Committee meeting, including a discussion of any relationship that may impact the objectivity and independence of our auditors and whether the provision of any non-audit services by the auditors is compatible with maintaining their independence. The review included a discussion of the quality, not just the acceptability, of the accounting principles, the reasonableness of significant judgments, and the clarity of disclosures in the financial statements.

In reliance on these reviews and discussions, and the report of our Independent Registered Public Accounting Firm, the Audit Committee recommended to the Board of Directors that such audited financial statements be included in the Company's 2009 Annual Report on Form 10-K for filing with the Securities and Exchange Commission and in the Annual Report to Stockholders which accompanies this proxy statement.

The Committee and the Board have also recommended, subject to reconsideration in the absence of stockholder ratification, the selection of the Company's independent auditors for the current year, as

Table of Contents

discussed above under "Proposal 2: Ratification of the Appointment of Our Independent Registered Public Accounting Firm."

In performing all of these functions, the Audit Committee acts only in an oversight capacity. Necessarily, in its oversight role, the Committee relies on the work and assurances of the Company's management, which has the primary responsibility for financial statements and reports, and of the independent auditors, who in their report on the audited annual financial statements, express an opinion on the conformity of the Company's annual financial statements to accounting principles generally accepted in the United States.

By the Audit Committee,

William C. Jennings, Chairman
R. John Fletcher
Geoffrey Wild

Table of Contents

Code of Ethics

Axcelis has set forth its policy on ethical behavior in a document called "Ethical Business Conduct at Axcelis." This policy applies to the members of our Board of Directors and all employees, including (but not limited to) our principal executive officer, principal financial officer, principal accounting officer or controller and persons performing similar functions. This policy comprises written standards that are reasonably designed to deter wrongdoing and to promote the behavior described in Item 406 of Regulation S-K promulgated by the Securities and Exchange Commission. The text of this code of ethics is posted on the Investors page of our website at www.axcelis.com, where we may also disclose any amendments to and waivers of the code.

Certain Relationships and Related Transactions

The governance rules of the NASDAQ Global Market require the Company to conduct an appropriate review of all related party transactions which are disclosable under Item 404 of Regulation S-K. In its charter, the Nominating and Governance Committee is given responsibility to review and approve any such related party transactions, including (a) business arrangements between the Company and directors or their affiliates or between the Company and employees, other than compensation for service as a director or as an employee of the Company, and (b) any other relationships between a director or employee and the Company or a third party (including membership on the boards of directors of a third party) which create the appearance or reality of a current or potential conflict of interest.

Axcelis reviews all relationships and transactions reported to it in which the Company and our directors and executive officers or their immediate family members are participants to determine whether such persons have a direct or indirect material interest. The Company's General Counsel is primarily responsible for the development and implementation of processes and controls to obtain information from the directors and executive officers with respect to related person transactions and for then determining, based on the facts and circumstances, whether the Company or a related person has a direct or indirect material interest in the transaction. As required under SEC rules, transactions that are determined to be directly or indirectly material to the Company or a related person are disclosed in the Company's proxy statement. In addition, the Nominating and Governance Committee reviews and approves or ratifies any related person transaction that is required to be disclosed. In the course of its review and approval or ratification of a disclosable related party transaction, the Nominating and Governance Committee considers:

the nature of the related person's interest in the transaction;

the material terms of the transaction, including, without limitation, the amount and type of transaction;

the importance of the transaction to the related person;

the importance of the transaction to the Company;

whether the transaction would impair the judgment of a director or executive officer to act in the best interest of the Company; and

any other matters the Committee deems appropriate.

Any member of the Nominating and Governance Committee who is a related person with respect to a transaction under review may not participate in the deliberations or vote respecting approval or ratification of the transaction, provided, however, that such director may be counted in determining the presence of a quorum at a meeting of the Committee that considers the transaction.

Table of Contents

During 2009, no related person transactions requiring disclosure in the proxy statement were identified or submitted to the Nominating and Governance Committee for approval. As discussed above under "Board of Directors Independence and Meetings," the Company had arms-length commercial dealings with a company of which Mr. Hardis is a director, which are not material individually or in the aggregate.

OTHER MATTERS

Stockholder Communications to the Directors

Security holders may communicate with the Axcelis Board of Directors by mailing a communication to the entire Board or to one or more individual directors in care of the Corporate Secretary, Axcelis Technologies, Inc., 108 Cherry Hill Drive, Beverly, Massachusetts 01915. All communications from security holders to Board members (other than communications soliciting the purchase of products and services) will be promptly relayed to the Board members to whom the communication is addressed.

Compensation Committee Interlocks and Insider Participation

During 2009, the Compensation Committee of the Board of Directors consisted of Mr. Hardis, Mr. Fletcher and Mr. Thompson, as Chairman, none of who has been an officer or employee of Axcelis or had a relationship during 2009 requiring disclosure under Item 404 of Regulation S-K.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors, executive officers and persons owning more than 10% of our registered equity securities to file with the SEC reports of their initial ownership and of changes in their ownership of our common stock and to provide us with copies of all Section 16(a) reports they file.

To our knowledge, based solely on our review of copies of reports furnished to us and written representations that no other reports were required, during 2009, our directors, officers, and 10% stockholders complied with all Section 16(a) filing requirements.

Deadlines for Stockholder Proposals

Assuming the 2011 annual meeting is not held more than 30 days before or 30 days after May 7, 2011, if you wish to bring business before or propose director nominations at the 2011 annual meeting, you must give written notice to Axcelis by February 6, 2011 (the date 90 days before the anniversary of the 2010 annual meeting).

If you intend to bring proposed business to the 2011 annual meeting and you would like us to consider the inclusion of your proposal in our proxy statement for the meeting, you must provide written notice to Axcelis of such proposal prior to November 26, 2010 (120 days before the anniversary date of the mailing of this proxy statement), assuming the 2011 annual meeting is not held more than 30 days before or 30 days after May 7, 2011.

Notices of stockholder proposals and nominations shall be given in writing to Axcelis Technologies, Inc., 108 Cherry Hill Drive, Beverly, Massachusetts 01915, Attn: Corporate Secretary.