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Jimmy Fu and Moog, Inc.: Understanding Shareholders' Equity

Background

Early in 2009, Jimmy Fu pondered the outcome of the interview he had just completed with the head of Human Resources at Moog, Inc. Jimmy was being considered for the role of Director of Financial Analysis and Planning at Moog, a position that was vacant due to the promotion of Jennifer Walter to Controller and Principal Accounting Officer. At the end of the discussion, he was handed a stack of paperwork on the company and its H.R. policies. Although impressed with the atmosphere at the company and its objective to make talented and enthusiastic employees work together to solve complex and difficult technical challenges (their words, not his), he really wanted to understand the employee compensation package he was being offered.

The first page on the company claimed Moog to be a worldwide designer, manufacturer, and integrator of high performance precision motion and fluid controls and systems for a broad range of applications in aerospace and defense, industrial and medical markets. The company had five operating segments: Aircraft Controls, Industrial Systems, Components, Space and Defense Controls, and Medical Devices which account for 35%, 28%, 18%, 14%, and 5% of sales, respectively. However, to Jimmy, it looked like Moog made highly engineered valves and controls used in some cool applications. Indeed, he had first become aware of the company in relation to its role providing the motion controls for the roofing system on Centre Court for the All England Tennis and Croquet Club at Wimbledon as well as its work on differential, clutch, and transmission controls for Formula 1 racing cars. He was also excited to see the rapid growth in Moog's wind turbine control business. Other than that, he thought that the company looked a lot like a small version of General Electric.

As Jimmy reviewed the information he had been given, it continued with relatively conventional language: "The people who work for Moog are the power and energy behind everything we do. We're committed to looking after them in a way that really says 'thank you.' In addition to salary, we offer a benefits package that is designed to attract and motivate the best talent, and gives our employees genuine security." This supported what he had been told during the interview—that although benefits varied from location to location, they would be competitive. Given that he would be relocating to East Aurora, New York, he had been told that his package would include a generous

Craig Chapman, Assistant Professor, Kellogg School of Management, prepared this case specifically for the Harvard Business School Brief Case Collection. This case was prepared solely as a basis for class discussion and not as an endorsement, a source of primary data, or an illustration of effective or ineffective management. This case was developed from published sources including multiple 10-K filings of Moog, Inc., which have been simplified for the purposes of the case.

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relocation package, comprehensive health program, retirement plan, and recreational activities which, he smiled, would apparently include holiday gatherings, picnics, and sporting events.

As he read further, the language became less generic and stated that as a “key employee” he would receive 6,000 stock options issued “at-the-money” in relation to Class A stock which would vest in equal annual increments over a five-year period from the date of grant, as well as 300 shares of restricted Class B stock which would vest over a three-year period from the date of grant.¹ Both classes of shares were traded on the New York Stock Exchange with tickers MOG-A and MOG-B respectively. Given Moog’s generally strong retention of employees, Jimmy was highly confident that he would have a long career with Moog, so the vesting periods didn’t worry him.

However, he wasn’t sure whether he should be concerned about some additional language which was supposedly “standard” at Moog: “Where employment is terminated for cause, you will be entitled to the cash equivalent of any unutilized vacation, but will not be entitled to participate in any profit share award or incentive compensation payable after the date of termination. In such circumstances, the right to exercise any stock options is also terminated. Upon a voluntary termination, you will receive employment benefits, up to the date of termination, as well as the cash value of any unutilized vacation benefits and any vested stock options may be exercised but you will not be entitled to receive any profit share award or incentive compensation payable after termination. Upon an involuntary termination other than for cause, all stock option and restricted stock grants shall vest immediately and you will be entitled to receive, for one year, certain perquisites and insurance benefits. Where involuntary termination occurs by reason of a change of control of Moog, you will receive the benefits otherwise provided for an involuntary termination, with accelerated vesting of options and restricted stock.”

Although he could always look up the stock prices, Jimmy’s challenge was to understand what he would actually own when holding the restricted stock and options and how their values might change depending on the actions that the company might take. He understood that if he held a 1% stake in the company’s equity, this would represent 1% of both the assets and liabilities,² but what did this really mean and how might this change over time? He therefore turned to the company’s 10-K³ filings that were contained in the stack of documents he had been given and examined the balance sheet and its footnotes which explained how the shareholders’ equity had changed over the years. The shareholders’ equity section of Moog’s balance sheet contained more transactions and appeared much more complicated than he had expected.

Armed with an explanation of key terms used in the balance sheet and some accounting rules (see **Exhibit 1**) from a friend who already worked at Moog, Jimmy decided to see if he could work through the accounting for the various transactions that he knew about in 2007 to develop a proforma equity statement for the fiscal year and then apply his understanding to determine the transactions for 2008 which resulted in the equity statement for the year ended September 2008.⁴

¹ The restrictions were such that Jimmy could not sell his Class B shares, nor would he receive dividends on unvested shares.

² FASB Statement of Accounting Concepts No. 6, downloaded from http://www.fasb.org/pdf/aop_CON6.pdf, defines assets as “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events” and liabilities as “probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events.”

³ The 10-K is a comprehensive report of the company’s performance which must be submitted to the Securities and Exchange Commission annually. 10-K filings of publicly traded US companies are available at www.sec.gov.

⁴ The company’s fiscal year ended on the last Saturday in September.

Excerpts from the Consolidated Balance Sheets of Moog, Inc.

(dollars in thousands)	27 Sep 2008	30 Sep 2006
Common stock – par value \$1		
Class A – Authorized 50,000,000 shares		
Issued 40,676,405 and outstanding 37,698,332 shares at September 27, 2008	40,676	
Issued 25,147,785 and outstanding 22,910,728 shares at September 30, 2006		25,148
Class B - Authorized 10,000,000 shares		
Issued 7,934,184 and outstanding 4,112,746 shares at September 27, 2008	7,934	
Issued 5,342,607 and outstanding 2,794,982 shares at September 30, 2006		5,343
Additional paid-in capital	280,903	198,593
Retained earnings	448,879	322,989
Treasury shares (Class A) ^a	(48,949)	(48,192)
Treasury Shares (Class B) ^b	(5,095)	(5,095)
Accumulated other comprehensive income (loss)	7,566	(27,130)
TOTAL SHAREHOLDERS' EQUITY	731,914	471,655

^a Class A Common stock in treasury: 2,978,073 shares at 27 Sep. 2008; 2,237,057 shares at 30 Sep. 2006.

^b Class B Common stock in treasury: 3,821,438 shares at 27 Sep. 2008; 2,547,625 shares at 30 Sep. 2006.

Additional Information Regarding Transactions in 2007

In the Management Discussion and Analysis section of Moog's 10-K report for the 2007 fiscal year, Jimmy found the following information regarding transactions that affected the shareholders' equity section of Moog's balance sheet during Moog's 2007 fiscal year, as follows:

1. The Board of Directors of Moog approved a three-for-two stock split of its Class A and Class B common stock to shareholders of record on March 18, 2007, distributed April 1, 2007. This was effected in the form of a 50% stock distribution (dividend).
2. During May and June 2007, the company purchased 112,199 Class A Shares on the open market at an average price of \$29.70 per share (including trading costs).
3. On July 5, 2007, employees purchased 147,017 Class A Shares from the company by exercising employee stock options. These shares had been previously purchased in the open market at an average price of \$5.09 per share which was equal to the average exercise price⁵ of the options exercised. The fact that the exercise price of the options is equal to the purchase price is purely a coincidence and rarely occurs in practice.
4. Between May and August 2007, shareholders elected to convert 11,545 Class B shares into Class A shares.
5. Moog reported net income of \$64.79 million for the year with an additional loss associated with foreign currency translation of \$16.50 million and paid no dividends.

⁵ The exercise price of an option is the fixed price at which the owner of the option can purchase the underlying security when the option is exercised.

Additional Information Regarding Transactions in 2008

Similarly, Jimmy was able to find information regarding some of the transactions which occurred during Moog's 2008 fiscal year as follows:

1. On February 21, 2008, Moog completed the offering and sale of 2,875,000 shares of Class A common stock at a price of \$31 per share. The net proceeds of \$84.5 million were used to pay down outstanding credit facility borrowings.
2. In July 2008, employees purchased 342,695 Class A shares from the company by exercising employee stock options. These shares had been previously purchased by the company in the open market at an average price of \$5.33 per share.
3. Moog reported net income of \$81.345 million for the year.

Assignment Questions

1. Put yourself in Jimmy's shoes and using information contained in **Exhibit 1**. Explain the changes in the equity section of the balance sheet that occurred as a result of the five transactions which Jimmy found referenced in Moog's 2007 10-K filing. Discuss how they might affect the value of Jimmy's restricted stock and options (in terms of the direction as opposed to magnitude of value changes) had he been working for the firm at the time. Where appropriate, provide details on any changes to the number of shares authorized, issued and outstanding as well as the appropriate valuation for balance sheet purposes.
2. Prepare the Shareholders' Equity section of the Balance Sheet for Moog, Inc., as at September 29, 2007.
3. Given your answer to the previous question and the additional information regarding transactions in 2008 detailed above, prepare and describe in detail the set of equity related transactions which would generate the Shareholders' Equity section of the Balance Sheet for Moog, Inc., as at September 27, 2008. Be specific in your responses and show all the effects of each transaction on the balance sheet, income statement, and cash flow statement. (If you are unable to report transactions which result in a perfect replication of the 2008 Balance Sheet, you should document the effects of those transactions which you think occurred and provide the equity section of a pro-forma Balance Sheet for September 2008.)
4. For fiscal years beginning after December 15, 2005, the FASB requires that an expense (equal to the fair value of the option being granted) must be charged upon issuance of employee stock options.⁶ Assuming that Jimmy was issued a grant of 12,000 options which he will exercise once they are all vested when the stock price has risen to \$10 per share, describe in detail how to account for the options in each fiscal year from the grant date until the exercise date. You should assume that the fair value of each option was \$3 on the grant date when the stock price was \$5.00 and that the first options would vest on the grant date. You should assume that the company issues new shares to satisfy its obligation.

⁶ For options that vest over time, GAAP requires that the fair value of the option be recorded ratably over the vesting period.

Exhibit 1 Explanation of terms used in the Consolidated Balance Sheet

Term	Description
Authorized Share Capital	The maximum number of shares that may be issued by the company. The value is specified in the articles of incorporation (or other constitutive documents) but can generally be changed with shareholder approval.
Issued Shares	The number of shares that have actually been issued by the company. Legally this must be less than the authorized share capital.
Outstanding Shares	The number of shares held by external shareholders of the company. This equals the number of shares issued by the company less any shares held in treasury.
Par Value	The nominal value of the shares which was printed on the front of the stock certificate when issued. It has little significance since the market price when issued is rarely equal to or less than the par value. If a company issues shares at less than par value (a "partly-paid" share), an account called "Discount to Capital Stock" is debited for the difference. This is rare and illegal in many states. In addition, in the absence of a definitive agreement to the contrary, shareholders remain liable to the company for the difference between the amount paid and the par value. If a stock split occurs (other than by way of dividend) the par value is adjusted accordingly.
Class B Common Stock	Some companies have multiple classes of stock (including preferred stock) which vary in terms of priority for distributions, voting rights, and ranking in liquidation. According to the Moog's balance sheet footnotes and corporate website, Class A and Class B stock share equally in [the company's] earnings, and are identical with certain exceptions. Other than on matters relating to the election of directors or as required by law where the holders of Class A and Class B shares vote as separate classes, Class A shares have limited voting rights, with each share of Class A being entitled to one-tenth of a vote on most matters, and each share of Class B being entitled to one vote. Class A shareholders are entitled, subject to certain limitations, to elect at least 25% of the Board of Directors (rounded up to the nearest whole number) with Class B shareholders entitled to elect the balance of the directors. No cash dividend may be paid on Class B shares unless at least an equal cash dividend is paid on Class A shares. Class B shares are convertible at any time into Class A shares on a one-for-one basis at the option of the shareholder. Class A trades on a regular basis and while Class B shares trade daily, they trade at a lower volume quantity. Large institutions hold the vast majority of Moog's Class A stock. Moog's current and past employees hold the vast majority of Moog's Class B stock.
Additional Paid-in Capital	The amount (in excess of the par value) paid into the company when stock is issued. In the event of a stock split (unless split by way of distribution), the additional paid-in capital is reduced with the reduction being transferred to the Common Stock category.
Retained Earnings	The cumulative portion of net income which has not otherwise been distributed to the shareholders of the company. Change in retained earnings for the period is generally calculated as net income less dividends. When dividends are made by way of stock distributions, the retained earnings are reduced by the market value of the stock distribution if the distribution is less than 20-25% of the outstanding shares and by the par value of the stock being distributed otherwise.

Exhibit 1 (continued)

Term	Description
Treasury Shares	<p>Shares which have been repurchased by the company. While being held in treasury, such shares do not carry any voting rights and do not receive cash dividends. However, they may be re-issued at a later date or, alternatively, retired or cancelled.</p> <p>Moog accounts for shares held in treasury using the cost method. A commonly used alternative to this would have been to use the par value method, in which the books reflect a stock purchase as a retirement of shares (debiting common stock).</p> <p>Under both accounting methods, if the shares are re-sold, any difference between the original purchase price and the sale price is recorded as a change in the Additional Paid-in Capital account. If the shares are retired or cancelled then relevant adjustments to par value, additional paid-in capital and retained earnings must be made to offset the removal of the shares from treasury.</p>
Accumulated Other Comprehensive Income (Loss) ^a	<p>This item reflects the cumulative effects of gains and losses that are not shown in the income statement. This may include items such as unrealized gains and losses on: i) available for sale securities; ii) cash flow or currency hedge derivatives; or iii) translation of foreign currency subsidiary accounts to the parent company's reporting currency.</p>
Accounting for Stock Options	<p>When stock options are expensed, the matching entry increases Additional Paid-in Capital. Upon exercise, the transaction is treated in a manner similar to the issuance of any shares (either new shares or from treasury stock).</p> <p>A stock option issued "at-the money" has an exercise price equal to the market price of the underlying security on the date the option is granted.</p>
Value of Stock Options	<p>Based upon the Black-Scholes option pricing formula, the value of a call option increases if any of the following occur:</p> <ul style="list-style-type: none"> i) Stock price increases ii) Exercise price decreases iii) Volatility of stock price increases iv) Risk-free interest rate increases v) Time to maturity increases
Options and Stock Splits	<p>When a stock splits, call and put options are adjusted accordingly. In such cases, option investors are usually "made whole" when stocks split. In general, stock dividends of greater than 10% are called stock splits and result in options splits or adjustments. Similarly, employee stock ownership plans typically have provisions to split options if the stock splits (Moog does). However, this provision is not required by law and it is possible to have options which are not adjusted.</p>

^a See Financial Accounting Statements (FAS) 52, 115 and 133