A Stock Valuation Case: An Application of the "Method of Comparables" for Macy's Shares

Halil D. Kaya* **Julia S. Kwok**

Abstract

The primary focus of this case is the application of the "Method of Comparables" in the estimation of the value of a security. An investment decision will be made based on the comparison of the selling price and the estimated value. A security will be good for purchase if the estimated value is higher than the market price. This method utilizes basic financial ratios that are commonly provided by financial web sites. First, using Yahoo Finance website, the pricing, sales, book value of equity and shares outstanding data are collected for both the target firm and the competitor firms. Then, the pricing multiples (i.e. price earnings ratio, price to sales ratio and price to book ratio) of the competitors are calculated. After that, those multiples along with the target firm's earnings, sales, book value and shares outstanding data are used to estimate target firm's share value. The case also examines the impact of treating "negatives" in the data. Students will learn that replacing negative earnings with zeros tend to induce less bias in target firm's value estimation than excluding the "negative" data altogether.

Keywords: financial statement analysis, valuation, comparables, stock investments
JEL classifications: G11, G12, A22

Introduction

March 14, 2015 was a sunny day. Mary took advantage of the nice weather to have lunch at the Mall. On her way back to work, she walked by Susan's investment office. Susan was Mary's college roommate. They both liked shopping together to find new fashionable clothes. Looking at her watch, Mary realized she had half an hour to spend. She thought she would drop by and say hello to Susan.

The Performance of Macy's

"Hi, Susan, how are you?" How is your business?" said Mary. Susan was a recent finance graduate. Susan replied, "I am doing fine. Thank you. After so many years, the market is still recovering from the mortgage crisis; many investors have been buying back stocks that they have sold during the crisis. What are you up to?" "I want to start my investment in securities, too. I have a couple thousand dollars, would Macy's be a good stock to invest in now? That was our favorite store to shop among all of the department stores," Mary exclaimed. She added, "Also, I read from Motley's Fool's article on Macy's today about its earnings per share growth for the last 16 quarters" (Zahid Waheed, 2014).

In response to Mary's questions, Susan checked the monthly adjusted returns of Macy's in Yahoo Finance. She found that, since March 2010, Macy's stock price had an average annual increase of 23.5% over the last 5 years. The stock rose from $19.98 to $57.38. Susan then told Mary that Macy's was indeed a growing stock. She added that its success could be attributed to the omni-channel integration, e-commerce and magic selling strategies which allowed merging of sales channels, online shopping and better customer care. Since investment strategy 101 is to buy low, and sell high, given Macy's stock price had been going up, Susan was not sure whether Macy's was currently overvalued or undervalued by the market.

The Method of Comparables

Susan remembered her class lecture on the two types of valuation of stocks, namely absolute and relative evaluation. The absolute evaluation focuses on finding the intrinsic value of the security based on fundamentals. That involves more complicated models of discounting cash flows from dividends, operations and residual income.

On the other hand, relative evaluation is quick and easy to use. It assumes two similar securities should sell for one price in an efficient market, i.e. "Law of One Price." So an analyst can estimate its stock price by multiplying target company's specific earnings, sales and equity value data by the earning, sales and equity "per share" financial multiples of its competitors.

Since Mary was not familiarized with financial models, Susan decided to use the easy-to-perform-and-analyze "Comparables Method" to estimate the relative value of Macy's stock.

The Financial Data

Dillards, JC Penney and Nordstrom were selected as competitors of Macy's as they were all in retail department store business. Susan would need some financial data regarding these companies. She went to SEC's (i.e. Securities and Exchange Commission) website and downloaded these companies' most recent balance sheet and income statement data. Out of those statements, she knew that she would need the EPS (i.e. earnings per share), the sales number, the number of outstanding shares, and the book value of equity. She also knew that she would need the current share price for each company. After some work, she had found all the necessary information to run the analysis. Below were the data that she had gathered:

All data are in US$ except for the number of outstanding shares. The share price as of March 15, 2014 is shown in the first column. The "Earnings per share" is shown in the second column. The third column reports the book value of equity. The last column shows the number of outstanding shares.

Firm	P ($)	EPS ($)	Sales ($)	BV of equity ($)	# of shares
Macy's	58.58	3.93	27,931 mil.	6,249 mil.	378.3 mil.
Dillard's	90.61	7.10	6,532 mil.	1,992 mil.	45.6 mil.
JC Penney	8.71	-5.57	11,859 mil.	3,087 mil.	249.3 mil.
Nordstrom	61.33	3.77	12,166 mil.	2,080 mil.	194.5 mil.

The Decision

Susan thinks that the following steps would be necessary to perform the analysis:

1. Based on the data above, calculate Sales per share, BV of equity/share values of all firms. Note that EPS is directly given.
2. Calculate P/E, P/Sales, and P/B for all of Macy's competitors based on the data obtained.
3. Find the average of the P/E, P/Sales, and P/B multiples for the three competitors.

4. Multiply those averages calculated in step 3 with Macy's EPS, Sales per share, and BV of equity/share values, respectively to get three value estimates for Macy's shares.
5. The average of the three estimates would then be Susan's best estimate of Macy's value per share.

The investment decision would be based on the comparison of the selling price and the estimated value. Macy's would be a good buy if the estimated value was higher than the market price.

Questions to Students

1. Use all of the above data to estimate the value of Macy's shares. One problem above is the negative EPS (i.e. loss) by JC Penney. What should you do if you have negative earnings for a comparable firm? If you do not include JC Penney in the P/E calculations (but use it in the other multiples), using the "Method of Comparables", what would you find as the value of Macy's shares? Would you invest in Macy's shares?

2. If instead of completely dropping JC Penney from the P/E calculations and just use "0" for JC Penney's EPS, using the "Method of Comparables", what would you find as the value of Macy's shares? Would you invest in Macy's shares?

3. How different are your results in questions (1) and (2)? Why do you think your estimates for Macy's shares are so different in these two alternative actions? Which action would be wiser: Dropping JC Penney completely from the P/E calculations, or instead entering a value of "0" for its EPS number?

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Authors

Halil D. Kaya*

Associate Professor of Finance, Department of Accounting and Finance, College of Business and Technology, Northeastern State University, Broken Arrow, OK 74014; Email: kaya@nsuok.edu

Julia S. Kwok

Associate Professor of Finance, Department of Accounting and Finance, College of Business and Technology, Northeastern State University, Broken Arrow, OK 74014

* Corresponding Author