

DIVIDEND DISCOUNT VS. FREE CASH FLOW VALUATION: AN ANALYSIS OF MATTEL INCORPORATED

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CASE DESCRIPTION

The purpose of this analysis is to value the equity of Mattel, Inc. (NYSE:MAT) and place a buy or sell recommendation as an independent analyst. The data are examined to determine whether or not the company's stock is valued above or below the market price in order for investors to make a buy or sell decision. The industry environment will be assessed using Porter's five-force model of competitive strategy and the DuPont identity. Valuation techniques employed include the capital asset pricing model, the dividend-discount model (DDM), the free cash flow model (FCF) and the P/E valuation approach.

CASE SYNOPSIS

Two alternative valuation approaches will be considered and a buy or sell recommendation for Mattel, Inc. stock will be determined. Mattel is one of three major toy makers in the United States along with Hasbro and Lego. The competitive environment of Mattel will be assessed using the DuPont identity and Porter's five force model of competitive strategy as well as determining an estimate of the value of Mattel stock using various valuation approaches. In the case of Mattel, a dividend has historically been paid but was recently discontinued so the most appropriate valuation approach under these circumstances will be evaluated.

MATTEL, INC. (MAT)

Mattel Inc. is a designer and manufacturer of a wide range of children's toys. Its most popular brands include Monster High, Barbie, Hotwheels, Fisher-Price and American Girl. They also develop and market toys based on popular movies like Cars, Toy Story, Batman and Superman. The company was founded in 1945 and is based in El Segundo, California and has approximately 28,000 employees.

Mattel Creations was founded by Harold "Matt" Matson and Elliot Handler. The company initially sold picture frames and then dollhouse furniture. Matson soon sold his share to Handler due to poor health and Handler's wife took over Matson's role. In 1947 the company had its first hit toy which was a ukulele called "Uke-a-Doodle". The company incorporated the next year in California and became the first year-round sponsor of the Mickey Mouse Club TV series in 1955. The Barbie doll which was introduced in 1959 became the company's best selling toy ever and it is still produced and sold by Mattel today.

Mattel first went public in 1960 and was listed on the New York Stock Exchange in 1963. Mattel then acquired several companies during the 1960's as shown in the chart below:

Acquisition	Year
Dee and Cee Toy Company, Ltd.	1962
Standard Plastic Products, Inc.	1966
Hong Kong Industrial Co., Ltd.	1966
Precision Molds, Ltd.	1966
Rosebud Dolls, Ltd.	1967
Monogram Models, Inc.	1968
Ratti Vallensasca, Mebetoys, Ebiex S.A.	1969
H&H Plastics Company, Inc.	1969
Metaframe Corporation	1969

Mattel continued its growth by purchasing several other companies from 1971 through 2000. Some of these companies have since been sold as indicated by a beginning and end date in the chart below. Others are still held by Mattel today.

Acquisition	Year
Ringling Bros. and Barnum and Baily Circus/ Feld Productions	1971-1982
Ice Follies	1979-1982
Holiday on Ice	1979-1982
Western Publishing	1979
International Games	1992
Corgi Toys, Ltd.	1989
Fisher-Price, Inc.	1993
Tyco Toys, Inc. (owners of the Matchbox Brand)	1997
Pleasant Company (owners of the American Girl brand)	1998
The Learning Company	1999-2000

Then in 2012 through 2016, Mattel made the following acquisitions which they still hold today.

Acquisition	Year
HiT Entertainment	2012
Mega Brands	2014
Fuhu	2016

Table 1
Historical Financial Information for MAT
(in thousands)

<i>Item</i>	2017	2016	2015
<i>Total Revenue</i>	4,882	5,457	5,703
<i>Cost of Goods Sold</i>	3,081	2,902	2,896
<i>Gross Profit</i>	1,801	2,555	2,807
<i>Net Income</i>	-1,159	318	369

INDUSTRY ANALYSIS

The domestic toy industry is a stable, mature and subject to a highly fragmented channel of distribution. The industry has recently been experiencing a declining growth rate. Traditional toy manufacturers are seeing increased competition from digital gaming products, digital media and products that combine traditional “analog” products with a digital play experience for children. Going forward, most major toy manufacturers like Mattel plan to incorporate more digital and electronically interactive products into the lines.

The Retail Market

The retail market is fragmented with traditional retail outlets like Walmart, Toys-R-Us and Target experiencing declining toy sales and online retailers like Amazon capturing an increasing volume of the market for toys. This has led to lower prices which puts downward pressure on the gross profit margins of toy manufacturers. This has a particularly great impact in the toy industry because toy sales are seasonal. For example, Toys-R-Us which was the largest toy retailer in the United States generated 43 percent of its total annual revenues during the fourth quarter.

Competition in the retail market is based on competitive pricing (which negatively impacts the gross profit margin of manufacturers), credit programs, promotional pressures and competing store openings.

Structural Trends in the Industry

In the long term shifting demographics can have a significant impact on industry dynamics. Over time women are having less children and at older ages. Data from the U.S. Center for Disease Control and Prevention published data through one of its specialty websites (BabyCenter.com) which indicated the increasing age of first time mothers over time. In 1970 the average age of first time mothers was 21 and by 2008 that figure had risen to 25.1. The birth rate in the U.S. has declined every year since 2007.

In addition to the increasing age for first time mothers and the decreasing birth rate young children are becoming familiar with digital media at a much earlier age. Today most toy products are first seen by children on a television or movie screen. This has resulted in the toy industry becoming heavily reliant on licensing deals with the entertainment industry. Competition among toy companies for these licensing deals is quite intense.

Outlook for growth in the toy industry is somewhat low but expected to increase significantly as manufacturers move to capitalize on franchises that span multiple platforms. This is expected to result in products ranging from cartoons to video games to movies to actual toys. Most of the larger companies in the toy industry (like Mattel and Hasbro) are making acquisitions based on these trends.

Counterfeiting in the Toy Industry

In the toy industry counterfeiting has been a well-known problem for many years. Recently, the OECD estimated that these illegal activities accounted for 12% of the European toy market. The two main countries of origin for counterfeit toys are China (88%) and Hong Kong

(10%). Counterfeiting of toys is somewhat different from what is typically thought of as trademark infringement. Typically, the counterfeiter copies the product and the brand or trademark. In the toy industry what most often occurs is that the counterfeiter will copy the design of the product and sell it under a similar, but not identical, trademark. The main problem country for counterfeiting, according the OECD is China. Most major toy manufacturers have located their production in a few regions of China. These regions produce genuine toys as well as counterfeit toys. Another country of concern is Turkey where production of counterfeit toys exceeds production of genuine toys.

VALUATION DATA

Your analysis requires some information about the market in general as well as information on how the price of Mattel stock behaves under certain conditions. While compiling the following information, you realize that your estimate of the value of Mattel stock is quite sensitive to certain factors. In this regard, you decide to conduct a sensitivity analysis to determine how sensitive the value estimate is to various input variables.

The data collection begins with interest rates. Consulting a reliable source, you learn that the interest rate on a 90 day United States treasury bill is 3.0 percent while interest rates on a 6 month treasury bill are 3.2 percent. A long-term government bond is trading to yield 4.0 percent. Recent rates on certificates of deposit at large banks are around 4.9 percent and large creditworthy corporations have issued commercial paper with a yield of 5 percent. During this same time period, the standard and Poor's 500 earned an average return of 12 percent.

In addition to the above information on market interest rates, Table 2 contains some information you compiled relating to Mattel and the market. The dividends of Mattel grew over the past 5 years at the rate of nearly 16 percent per year. This rate however is not expected to continue over the next 5 years due to market conditions and the economic outlook for the industry.

The appropriateness of each valuation model under these circumstances should be considered as a value estimate is developed. Then, once a value estimate has been developed potentially profitable trading strategies should be recommended based on the value estimate and using various types of financial instruments.

THE CHALLENGE

As an equity analyst your task is to estimate the value of Mattel and recommend profitable strategies which could be used based on the value estimate. Your analysis should include the following:

1. *Evaluate the prospects for Mattel on each of the variables in Porter's "5-Forces Model".*
2. *Analyze the ROE, Profit Margin and ROA using the DuPont identity.*
3. *Calculate the expected return for MAT stock.*
4. *Evaluate the value for MAT stock using the constant growth model.*
5. *Determine the value estimate using the Price/Earnings valuation approach.*
6. *Find the value estimate for Mattel using the two-stage Dividend Discount Model.*

7. List the investment options you as an equity analyst could consider and then indicate (based on the analysis listed above) which of those options you would recommend, and why.

Table 2
Company Specific and Market Data for Mattel, Inc.

Beta Coefficient for MAT	.91
Recent Price/Earnings Ratio For MAT	15.2
Return on S&P 500	12.0
Recent Price for MAT	15.00
Current Dividend	.91 in 2017