

*Кривчун Сергей Павлович, студент,
Российский экономический университет имени Плеханова,
Россия, г. Москва*

ОЦЕНКА КОМПАНИИ ИНДУСТРИИ ВИДЕОИГР НА ОСНОВЕ EVA, MVA, CFROI И SVA

Аннотация: Индустрия видеоигр - одна из наиболее перспективных и прибыльных индустрий в настоящее время. Основываясь на данных авторитетных ресурсов, сейчас эта индустрия даже прибыльнее чем индустрия кино. Тем не менее, наблюдается явный недостаток исследований по данной теме. Предыдущие исследования были направлены на индустрию кино. Однако, не менее интересно будет рассмотреть доходы игровых разработчиков, и как они создают благосостояние для своих акционеров. Лучшим способом будет использование таких индикаторов как EVA, SVA, CFROI и MVA. Объектом анализа является компания Electronic Arts, как один из лидеров на данном рынке. Цель данной работы – проанализировать, сколько благосостояния создает эта компания для акционеров. Эта работа будет полезна инвесторам, которые рассматривают возможность покупки акций компаний-разработчиков. В результате исследования было обнаружено, что Electronic Arts приносит большой доход своим акционерам и их рыночная стоимость имеет большой потенциал роста. Инвесторам следует обратить больше внимания на эту индустрию, так как она будет приносить большой доход в ближайшем будущем.

Ключевые слова: EVA, SVA, CFROI, MVA, игровые разработчики, акции, благосостояние акционеров.

Annotation: The industry of videogames is one of the most perspective and profitable nowadays. Based on the data of reliable resources it is now even more

profitable than the industry of movies. Nevertheless, there is lack of research about that theme. Researchers preferred considering revenues on movies. However, it will be necessary and exciting to study the revenues of videogames producers and wealth of their shareholders. The best way to do it is to use measurements of Value Based Management. These are such parameters as EVA, CFROI, SVA, MVA. The analyzed company will be Electronic Arts. The purpose of this paper is to test how many wealth for shareholders this company creates. The indicators were calculated based on one of the leading companies in the industry. This article will be useful for investors who consider purchasing stocks of game developers. As a result, it was found that it was found that the Electronic Arts create a lot of wealth for shareholders and the market value of the company has a lot of potential to grow. The recommendation is to pay more attention on this company and this industry since it is supposed to yield higher returns in the nearest future.

Keywords: EVA, SVA, CFROI, MVA, game developers, stocks, shareholders' wealth.

Introduction

The industry of videogames is a relatively new industry in the economy. It showed one of the most significant rises of revenues and consumer. Games became popular in the end of the 20th century. However, it was a privilege of the particular group of people. First, the prices of videogames were very high. Second, the prices of gaming consoles were high as well. In general, the main consumers were teenagers from rich families. Later, videogames were becoming more affordable and its audience was increasing. Now this industry covered almost all group of people. There were developed different types of games for all the players. Nowadays, revenues of game developers are higher than revenues of movie makers. In 2018 the total revenue topped \$43 billion dollars [4]. It was 18% higher than one year earlier. Twenty years before it was impossible to believe that the videogame industry can makes more money than films. However, it can be seen from the figure 1, its revenue is much higher. The same situation with the music industry.

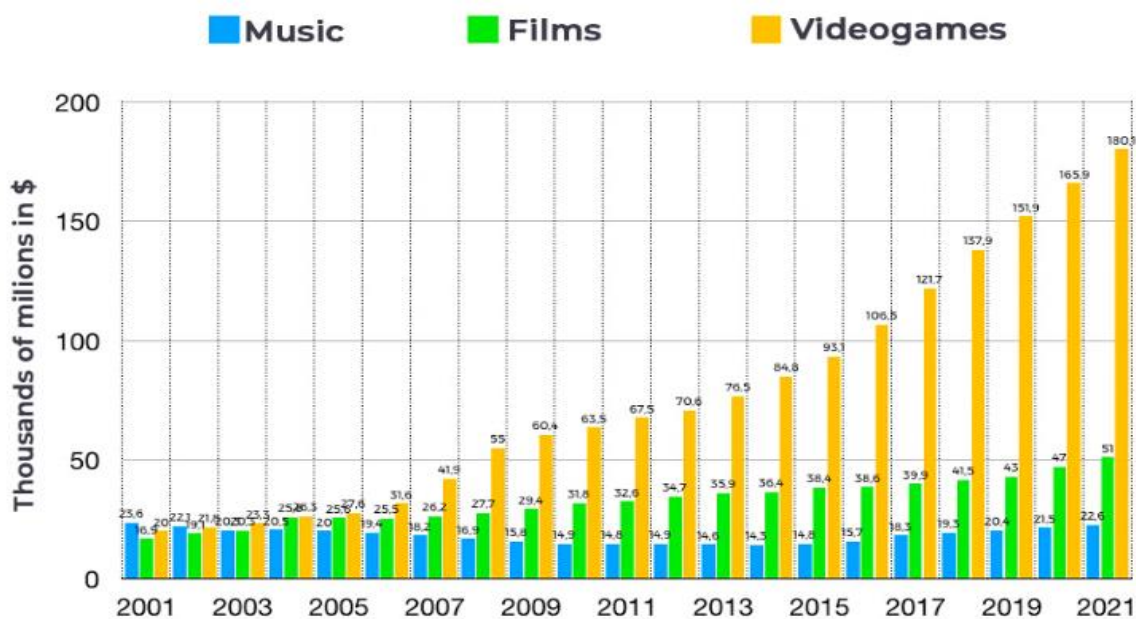


Figure 1. Revenues of music, films, and videogames industry

This picture also shows forecasts. It is seen that the difference is projected to grow farther. This situation makes this industry more and more attractive for investors. Therefore, it is going to be very interesting to investigate how much wealth for shareholders the company can create. In this work the example of real company will be considered. Using new methods of accounting it is going to be shown how the company is profitable.

Literature review

At first, it is needed to develop the article which describe the details of industry and the game developers earn money. A good example of such a work is “Value Creation in the Video Game Industry: Industry Economics, Consumer Benefits, and Research Opportunities” by Andre Marchand and Thorsten Hennig-Thurau published in 2013. They have considered different aspects which game developers have to pay attention on. For instance, they found that piracy is not the problem for developers because the level of protection is very high nowadays. Also they stated that game developers have to move people interest from the real life to the virtual reality. They provide the example of “Guitar Hero” which is totally based on playing the guitar. Also they found clear correlation of communication to media to the amount of sales. Finally,

they stated that developers have to create the game for different type of players because the different people play videogames. It is not always children and not always men. The statistics showed that the average wage of players is 37 years and 42% of them are women.

The next works discover the details of Value Based Management techniques. Shareholder Value Added is discovered in the work “Value Added (SVA) in financial decisions: A review of the application of the concept of Shareholder” by Mahmoud Samadi Largania Value. This work considers the importance of Value Based Management techniques and develop why this so-called “new method of accounting” is better than “old method of accounting”. Old method includes the calculation of financial ratios. But accounting profit does not always lead to increase in shareholders’ wealth. Therefore, nowadays managers are more focused on Value Based Management.

Another relevant work is Value based management with a practical example by Vladimir Bukvic. The main idea of the article is financial indicators that are now used by firms to follow their profitability and value creation are inconsistent with the mechanism of capital markets and with what market considers to be crucial for determining value. Constantly bigger efficiency in the capital markets requires a more efficient allocation of capital within firms. Therefore, a new system of indicators, as for example VBM (Value Based Management) which better reflects opportunities and threats, is urgent and needed. At the end of this paper, the author emphasizes and advocates the thesis that a simultaneous choice of both indicators, i.e. EVA and CVA, has an important effect on managerial resources and on the selection of a strategy as well as on the question of how investors (owners) estimate an individual firm as their potential investment.

Methodology

In order to determine how the company creates value for shareholders, the four main measurement values must be calculated, such as economic value added (EVA), shareholders value added (SVA), cash flow return on investment (CFROI), and market value added (MVA). The methodology of their calculation will be developed in this

part. It will be reasonable to start the analysis from the Economic value added, one of the most useful and popular measure of value based management. Many large American companies have adopted EVA, such as Coca Cola, Boise Cascade and others [2, pp. 225-237]. The basic calculation of EVA is:

$$EVA = NOPAT - Cost\ of\ capital \quad (1)$$

Non-operating profit after tax (NOPAT) is Operating Profits less taxes but before financing costs and non-cash entries (although not depreciation). NOPAT is the residual income we have generated on the capital invested.

Cost of Capital is the charge for use of capital. It includes interest on the debt and a charge for the equity capital based on a cash equivalent equity is multiplied by the cost of equity rate.

The another way to estimate the value is the Cash Flow Return on Investment (CFROI) [5, pp. 7]. The formula of CFROI is as follows:

$$CFROI = \frac{Gross\ Cash\ Flow + Economic\ Depreciation}{Gross\ Inflation\ Adjusted\ Assets} \quad (2)$$

where: Gross Cash Flow is Earnings before interest, after tax+depreciation

Economic Depreciation is the replacement cost (calculated by the sum needed to buy the same asset at the end of the life of the current one+inflation). Gross Inflation Adjusted Assets is net value of assets+depreciation.

The next measurement is the Shareholders Value Added (SVA). The main idea of it is that funds of shareholders have to provide higher rate of return than they could if they were invested in other assets with same level of risk [3, pp. 490-497]. The common way to calculate SVA is:

$$SVA = NOPAT - WACC * Capital \quad (3)$$

WACC is used as the minimum rate which should be exceed in order to create value.

The last measure of VBM is the Market Value Added. It is the measure which shows the difference between the market value of the company and invested capital. It indicated the sum of all capital claims plus market value of debt and equity. The simpler formula is:

$$MVA = Market\ Value\ of\ the\ company - Book\ shareholders'\ equity \quad (4)$$

At the end of this part it has to be stated that the calculation of Value Based Management is not simple. In order to calculate EVA, CFROI, SVA, MVA, it is need to have an access to the financial reports of the company. Also the market values of the company and its assets have to be known. Despite these difficulties, the Value Based Management measuring values are very useful and can tell a lot about the company.

It was decided to select Electronic Arts as an object of research. It is an American video game company which has the big developing studio in British Columbia, Canada. This studio produces highly popular sports simulator, such as NHL, NBA Live, FIFA, Madden NFL and so long. It was founded in 1982. In 2018 the company showed the sales revenue of 5.15 billion US dollars and Net Income of 1.04 billion US dollars. It has more than 9 thousand employees in all subsidiaries. It stocks traded as NASDAQ-100 components and S&P 500 component. EA is the second-largest companies in the world by revenue and market capitalization [1].

Findings

In order to start calculation of VBM measurements, it is needed to determine the company's beta which will be used in calculating the company's cost of capital. It was obtained through regression analysis and was equal to 0,91. Using the CAPM model the cost of equity was calculated an equal to 11%. In the next step the cost of debt was calculated. It was determined based on the credit rating followed from the interest coverage ratio. Also it has to be adjusted to the corporate tax rate. The company's cost of debt 4,34%. Gathering this data WACC is equal to 2,23%. EVA is equal to \$996,25mln.

The next part of the analysis is calculation of Shareholder Value Added. All necessary components of the formula were obtained during EVA calculation. Shareholder Value added was equal to \$899mln.

One more step is to calculate Market Value Added. It is needed to use the book value of shareholders' equity and market value of the company. Market value of the company is \$27,791mln. Booked shareholders' equity is \$5,331mln. Therefore, Market Value Added is \$22,460mln.

At last, the Cash Flow Return on Investment will be calculated. In order to calculate the CFROI, it was needed to determine operating cash flow and capital employed. Operating cash flow is composed of change in net working capital, Non-cash expense and net income. Capital employed is fixed assets minus current liabilities. The CFROI rate was equal to 25%.

Conclusion and discussion

At first, it is reasonable to start the discussion from EVA. This given level is very high. The company has a very low cost of debt and the cost of capital. Also profitability indicators of EA is high in comparison with other industries. This is a very good sign for shareholders. The company will be able to pay huge dividends. The same can be said about Shareholders Value Added. The company creates a lot of wealth for shareholders. Usually, shareholders carry more about these two points than about accounting profit. Higher accounting profit does not mean more wealth for shareholders. Therefore, they are more focused on the EVA and SVA.

Also shareholders look at the rate of Cash Flow Return on Investment. This factor shows how much return the company earns on its investment. This CFROI rate has to be compared to the WACC return. It shows how company's project profitable comparing to the cost of invested funds. How it can be noted the WACC is much less than CFROI rate. Therefore, it can be concluded that company's projects are very profitable and this is positive signal for shareholders.

One more indicator for discussion is Market Value Added. Looking at the current market price of stocks and total number of shares outstanding, it is seen that the market value of the company is \$27bln. At the same time, book value of equity is \$5.3bln. It means that the company is highly valued by the market and it has a lot of potential to grow. It gives the possibility that price of EA stocks will go up.

EA has a very good level of profitability comparing to other companies in the industry. Also it has a lot of free space to repay its debt. EA shows high profit return on share.

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