



Hochschule Aalen

Abschlussarbeit WS 2013/2014

Hochschule für Technik und Wirtschaft Aalen

Fakultät Wirtschaftswissenschaften

Studiengang Internationale Betriebswirtschaft

zur Erlangung des Bachelorgrades "Bachelor of Arts"

Factors of Success for Share Repurchases

What factors have to be given to ensure that share repurchases create long-term shareholder value?

A Critical View

vorgelegt von Philip Hettich

Matrikelnummer 29583

Margaretenstrasse 6

70327 Stuttgart

Erstbetreuer: Professor Dr. Ingo Scheuermann

Zweitbetreuer: Professor Dr. Markus Peter

Ausgabedatum: 04. November 2013

Abgabetermin: 04. Mai 2014

1. ABSTRACT

This paper deals with the question of which factors have to be given for successful share repurchases that create long-term shareholder value. Center of the thesis is the agency theory and its influence on share repurchases. Based on theoretical findings success factors for share repurchases are derived and then verified by case studies.

The main drivers for a successful share repurchase elaborated by this paper are a suitable long-term executive compensation, an independent board of directors and a shareholder structure without a majority shareholder. Additionally the findings show that tying repurchases to certain share price thresholds improves the quality of share repurchases.

Keywords: Share Repurchase, Undervaluation, Agency Theory

TABLE OF CONTENTS

1. Abstract	I
2. Index of Abbreviations.....	III
3. Table of Figures	IV
4. Index of Tables.....	V
5. Introduction, Objective and Scope of the Paper.....	1
5.1. Introduction	1
5.2. Objective and Methodology	2
5.3. Scope and Bonds	3
6. Mechanics and Accounting of Share Repurchases	4
6.1. Mechanics of Share Repurchases	4
6.2. Accounting for Share Repurchases	6
7. Share Repurchases versus Dividends	7
7.1. The Dividend Substitution Hypothesis	8
7.1.1. The Preferential Tax Hypothesis.....	8
7.1.2. The Cash-Flow Permanence Hypothesis.....	9
7.2. Share Repurchases, Dividends and Employee Stock Options	10
8. Motivations For Share Repurchases.....	11
8.1. Optimization of Capital Structure	12
8.2. Increasing Earnings per Share Hypothesis.....	15
8.3. Undervaluation Hypothesis / Signaling Theory	21
9. Agency Theory.....	25
9.1. Corporate Governance.....	29
9.2. Agency Theory, Corporate Governance and Repurchases.....	30
10. What Makes a Successful Share Repurchase?	31
11. Investigation Methodology.....	33
12. Case Studies.....	34
12.1. International Business Machines.....	34
12.2. Weight Watchers International.....	41
12.3. Berkshire Hathaway	50
13. Results and Conclusions.....	58
14. Bibliography.....	60
15. Word of Honor Statement in German	69

2. INDEX OF ABBREVIATIONS

BV – Book Value

BVPS – Book Value per Share

CEO – Chief Executive Officer

DCF – Discounted Cash Flow

EPS – Earnings per Share

ESO – Employee Stock Option

FY – Fiscal Year

IBM – International Business Machines

IFRS – International Financial Reporting Standards

Inc. – Incorporated

IPO – Initial Public Offering

IT – Information Technology

LBO – Leveraged Buyout

Liab. – Liabilities

PSU – Performance Stock Unit

P/E – Price to Earnings

ROA – Return on Assets

ROE – Return on Equity

SEC – Securities and Exchange Commission

Unch. – Unchanged

USD – U.S. Dollar

U.S. – United States

WACC – Weighted Average Cost of Capital

3. TABLE OF FIGURES

Figure 1: Payout Instruments	5
Figure 2: IBM Treasury Stock, Annual Report 2013	7
Figure 3: WACC and Debt/Equity Ratio	14
Figure 4: Agency Theory Illustration.....	27
Figure 5: Manager Self-Dealing.....	28
Figure 6: IBM Shares Outstanding.....	35
Figure 7: IBM vs. S&P500 5-Year.....	36
Figure 8: IBM 2013 CEO Compensation Components	37
Figure 9: IBM Cash Flow From Financing and Diluted EPS 10-Year	38
Figure 10: IBM CAPEX and Long-Term Debt 10 Year.....	39
Figure 11: IBM Revenue Quarter on Quarter	39
Figure 12: 2013 IBM CEO Compensation.....	40
Figure 13: Weight Watchers Board of Directors Artal Nominees	42
Figure 14: Weight Watchers Board of Directors and CEO Compensation.....	42
Figure 15: Weight Watchers Board of Directors Composition.....	43
Figure 16: Weight Watchers Key Numbers 2009-2013	43
Figure 17: Weight Watchers Share Price 5 Year	44
Figure 18: Weight Watchers Share Repurchase Conditions	44
Figure 19: Weight Watchers Cash and Equivalents.....	46
Figure 20: Weight Watchers Cash Flow Statement	46
Figure 21: Weight Watchers Debt Issuance and Share Repurchase	46
Figure 22: Weight Watchers Income Statement Q1 2012.....	47
Figure 23: Weight Watchers CEO-dealings.....	48
Figure 24: Weight Watchers Balance Sheet After the Buyback	49
Figure 25: Berkshire Hathaway, Mr. Buffett Personal Holdings.....	51
Figure 26: Berkshire Hathaway Board of Directors Composition.....	52
Figure 27: Berkshire Hathaway Price-to-Book Value	53
Figure 28: Berkshire Hathaway Statements of Changes in Shareholders' Equity	54
Figure 29: Berkshire Hathaway Repurchase Threshold.....	55

4. INDEX OF TABLES

Table 1: Model Company Balance Sheet Before Buyback.....	15
Table 2: Model Company Balance Sheet After Buyback	15
Table 3: Model Company Income.....	15
Table 4: Model Company Valuation.....	16
Table 5: Model Company Share Price Development.....	18
Table 6: Model Company Earnings Estimates.....	19
Table 7: Model Company Balance Sheet.....	22
Table 8: Model Company Income Statement and Intrinsic Value.....	22
Table 9: Model Company Buyback of Undervalued Shares.....	23
Table 10: Model Company Buyback of Overvalued Shares.....	24
Table 11: Berkshire Hathaway Intrinsic Value per Share.....	57

5. INTRODUCTION, OBJECTIVE AND SCOPE OF THE PAPER

5.1. INTRODUCTION

At present interesting things can be witnessed at the United States' (U.S.) stock market. More and more low yielding cash is piling up on corporate balance sheets¹, which cannot be profitably reinvested into the companies' operations². Especially, but not only, companies in the technology sector such as Apple and Microsoft generate earnings at a much higher pace, than they are able to reinvest in their businesses³. Apple as an example has accumulated USD 147 billion in cash and equivalents (e.g. marketable securities) by the end of September 2013. This amount may still increase going forward even though Apple is investing in its business on a large scale through capital expenditure and strategic acquisitions⁴.

Since investors demand a return when providing capital to a company it is understandable that they don't like to see too much of low yielding cash sitting on the balance sheet. Hence management and investors seek for possibilities to return those funds to the company owners, so they can find better, higher yielding investments for that cash. Companies listed on the stock market either choose to return cash to shareholders by paying out dividends or repurchasing their own stock⁵. This is why Apple, pushed by its investors, initiated a USD 100 billion program to return excess funds to shareholders until the end of 2015 by share repurchases and dividends⁶. Recently in April 2014 that program was accelerated by the commitment to return an additional USD 30 billion to shareholders by share repurchases to clear cash of the balance sheet. But not just Apple also many other companies have these kinds of payout programs in place⁷.

Unlike with dividend payments where shareholders typically receive a cash payment, the profit from share repurchases is an appreciating share price⁸.

¹ Schoenenberger, C. R., The Wallstreet Journal., Companies Continue to Hoard Cash (2013).

² Demos, T./ Russolillo, S./ Jarzemy, M., The Wallstreet Journal., Firms Send Record Cash Back to Investors (2013).

³ Harjani, A., US Corporate Cash (2013).

⁴ Apple Inc., 10-K Annual Report 2013 (2013).

⁵ Lahart, J., The Wallstreet Journal., Record Cash Piles (2010).

⁶ Apple Inc., 10-K Annual Report 2013 (2013).

⁷ Apple Press Info: Apple Expands Capital Return Program to Over \$130 Billion (2014).

⁸ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). p. 4

However there are plenty of negative examples where companies repurchased shares and the stock price did not react at all or even continued to slide. Dell, the producer of personal computers, is such an example. Dell's share price saw a decline ever since it announced the increase of its share repurchase program in early 2005⁹. Back then Dell's share price stood at over USD 40. Lately in 2013 Dell was taken private for only \$13.85 a share¹⁰. For shareholders and the company itself this buyback didn't create any value at all. In fact the funds that were spent to acquire shares destroyed value since later those shares could have been purchased for just a fraction of what has been paid for them in 2005.

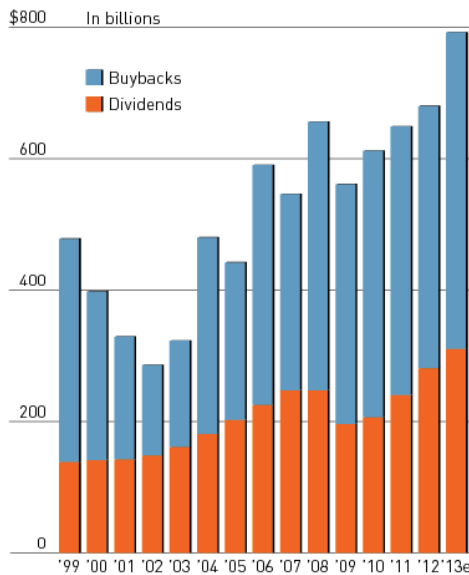


Figure 1: Payout Instruments Comparison

In the year of 2013 shares valued at a total of USD 475,6 billion have been repurchased by the fortune 500 U.S. listed companies, which makes share repurchases the largest payout instrument, even superior to dividend payments¹¹. Reviewing those buyback programs it became obvious that there are a lot of companies that have successfully increased shareholder value by repurchasing their own shares and other companies that have failed to do so. To figure out the reasons for those different outcomes, it is necessary to elaborate factors beneficial to

successful share repurchases by analyzing companies that repurchased shares in the past.

5.2.OBJECTIVE AND METHODOLOGY

This paper intends to provide an answer to the question of which factors have to be given to exercise a successful share repurchase that creates long-term shareholder value.

⁹ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

¹⁰ De la Merced, M. J./ Hardy, Q., The New York Times, Battle for Dell (2013).

¹¹ Press Release: S&P 500 Stock Buybacks Up 19% in 2013 (2014).

First the paper will give a descriptive explanation into the mechanics of share repurchases, then motivations for buying back stock will be elaborated and discussed. Hereby the focus will be put on the signaling and undervaluation hypothesis. These hypotheses are closely linked to agency theory and corporate governance, which connect executive compensation and monitoring with the share repurchase decision.

Derived from the theoretical findings, factors for successful share buybacks will be formulated. Case studies of companies that have been active acquirers of their own shares will then be consulted to verify those success factors.

In a conclusion these factors of success will be summarized and will serve as guidelines to judge on the eventual successfulness of future share repurchases from a shareholder's point of view.

5.3.SCOPE AND BONDS

The success factors of share buybacks analyzed in this paper are only focusing on the situation in the U.S. and on companies listed on U.S stock exchanges. Theories and drawn conclusions might not be applicable to countries outside the U.S., as legal frameworks for share repurchases may differ from country to country.

Furthermore the success-factors are discussed based on a shareholder point of view.

A successful buyback in this paper is defined as a buyback that creates long-term value for shareholders through an appreciating share price, thus investigating returns right after the announcement of share repurchases will not be subject to the analysis. Long-term in that case depicts a timeframe exceeding at least five years. Also share repurchases pursuing other goals like serving as an acquisition currency or protecting the company from hostile takeovers will not be covered within this paper.

6. MECHANICS AND ACCOUNTING OF SHARE REPURCHASES

6.1. MECHANICS OF SHARE REPURCHASES

The following paragraph gives an explanation on how share buybacks of publicly traded companies actually function. There are basically three major and different ways for companies to repurchase their own shares, either through a repurchase on the open market, a tender offer respective Dutch auction tender offer,¹² or the method of a negotiated repurchase.¹³

The **Open Market Repurchase** is the most common way companies use to repurchase shares. Approximately 90% of all share buybacks at the U.S. stock market account for open market repurchases.¹⁴ Companies performing this method are regularly acquiring their own shares on the stock market at current market price. Normally the amount that will be spent on the buyback and the period during which shares will be repurchased is communicated in advance. The expiration date and the amount of the program can be freely chosen but have to be disclosed according to the SEC.¹⁵ However, such a program is not binding. Should market conditions change unfavorably it can be terminated at any time. Furthermore this method typically proves to be less costly than tender offerings as no premium to market price has to be granted to shareholders. However an open market repurchase requires highly liquid markets. Otherwise a large buyback would strongly drive up the share price and the cost of the buyback would be unreasonably high, because the sudden high demand for shares meets the persisting low supply.¹⁶

Over time other ways to buy back shares have established. The **Fixed-Price Tender Offer**, unlike open market repurchases, does not buy the shares at market price but offers all shareholders to sell their shares at a fixed price to the company. This method is benefiting large buybacks intending to repurchase a lot of shares in a very short period of time, as prices are not driven up through the unusual high demand in the stock. The company determines a fixed price at which shares can

¹² Copeland, T. E./ Weston, J. F./ Shastri, K., Finanzierungstheorie und Unternehmenspolitik (2008). p. 849f

¹³ Vermaelen, T., Foundations and Trends in Finance, Share Repurchases (2005). p. 7

¹⁴ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). p. 13

¹⁵ Skadden, Corporate Finance Alert, Share Repurchases (2013).

¹⁶ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). p. 13ff

be tendered, a target number of shares that are offered to shareholders and an expiration date for the offer. All shareholders are free to accept or reject the offer.¹⁷ Such an offer usually contains a premium to the present market price as an incentive for shareholders to separate from their shares. The higher the premium the more shareholders are likely to accept the offer and vice versa. This premium is critical for the fulfillment of the Fixed-Price Tender Offer and should be set as low as possible in order to lower the cost of the buyback for the company, but just as high as necessary to buyback the intended amount of shares. In America from 1984 to 1989 that premium averaged 11,9% on the market price of shares.¹⁸

The **Dutch Auction Tender Offer** tries to avoid that specific problem of setting the correct premium as it limits itself to communicate the volume of shares to be bought back. Then the company announces a period for shareholders to submit a price, which they would sell their shares to the company for. The lowest price submitted that is able to fetch the entire targeted buyback volume is now offered to shareholders. Basically the difficulty of evaluating the premium is shifted from the company to the shareholder. Premiums paid in America from 1984 to 1989 using the Dutch Auction Tender Offer averaged 7,7% of the market price.¹⁹

Another way to repurchase shares is the **Negotiated Repurchase**, where the company is directly in talks with a major shareholder. Both parties negotiate on a fixed price to which shares are bought back. That price typically contains a premium to the current market price of the stock, too. Other shareholders are locked out of that transaction and cannot participate. In the US this is the less used method of repurchasing stock and almost solely applied to defend a company against takeover, which is not subject to this paper.²⁰

After the shares are bought back, they are either used as an **acquisition currency** (acquisitions of companies can not only be paid in cash but also by using own stock of the same value), held back for **later reissuance** on the market at an higher price, used for **employee compensation** or most of the time the shares are being **retired**, which is also the only type discussed in this paper.²¹ Retiring

¹⁷ Vermaelen, T., Foundations and Trends in Finance, Share Repurchases (2005). p. 3-5

¹⁸ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). pp. 16-17

¹⁹ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). pp. 17-18

²⁰ Blieffert, C., Der Aktienrückkauf aus empirischer Sicht (2008). pp. 18-19

²¹ Investopedia, What happens when a company buys back its shares? (2009).

shares reduces the total number of shares outstanding, as they cease to exist any longer. This leaves shareholders that did not sell their shares to the buyback program with a bigger ownership stake in the company, as holding the same number of shares now accounts for a larger percentage of the reduced overall share-count.²²

6.2.ACCOUNTING FOR SHARE REPURCHASES

To understand the impact of share repurchases on companies it is necessary to cover the basic accounting of such. However this chapter only gives explanations on how accounting for repurchases in combination with the cancellation respectively retirement of shares works. There are various methods of accounting for repurchases, nevertheless only the cost-method will be covered as it is most straightforward and sufficient for the purposes of this paper. Furthermore, it is assumed that acquired shares are cancelled and not reissued at a later date.

International Financial Reporting Standards (IFRS) require recording share repurchases on the balance sheet. Companies mostly fund share repurchases using cash. Consequently the cash-position on the balance sheet's asset side is reduced by the number of shares acquired times the price paid per acquired share. On the equity and liability side the acquisition of own shares impacts the item "treasury stock". Treasury stock represents shares of the own company. It is non-voting stock and is not eligible for dividend payments. Basically it can be treated as unissued capital. As the name "cost method" suggests, treasury stock is accounted for on cost basis. It can be viewed as a contra account to equity. Hence, when shares are repurchased, treasury stock is debited with the amount of acquired shares valued at cost (or number of shares repurchased times price paid per acquired share). Share repurchases thus reduce a company's equity base similar to a reduction of shareholder capital.²³

Figure 2 shows the liabilities and equity side of IBM's 2013 balance sheet. IBM has been buying back shares for years, which resulted in a very large treasury

²² Buffett, W. E., Letter to Shareholders 2012 (2013).

²³Weil, R./ Schipper, K./ Francis, J., Financial Accounting (2012). p. 529 ff

stock account. By the end of fiscal year 2013 that number showed a balance of USD 137.242 million. IBM thereby reduced its equity base by the same amount.²⁴

Contingencies and commitments	M		
Equity	L		
IBM stockholders' equity			
Common stock, par value \$.20 per share, and additional paid-in capital		51,594	50,110
Shares authorized: 4,687,500,000			
Shares issued (2013—2,207,522,548; 2012—2,197,561,159)			
Retained earnings		130,042	117,641
Treasury stock, at cost (shares: 2013—1,153,131,611; 2012—1,080,193,483)		(137,242)	(123,131)
Accumulated other comprehensive income/(loss)		(21,602)	(25,759)
Total IBM stockholders' equity		22,792	18,860
Noncontrolling interests	A	137	124
Total equity		22,929	18,984
Total liabilities and equity		\$ 126,223	\$ 119,213

Figure 2: IBM Treasury Stock, Annual Report 2013

Important to consider is the fact that repurchased shares are not considered as an investment, such minority holdings in another company. Holdings in other companies alter in value along with the share price of the company that was invested in; however repurchased shares never change in value and are always remaining in the treasury stock account on cost basis.²⁵

7. SHARE REPURCHASES VERSUS DIVIDENDS

A lot of companies are generating excess funds from their operations and can neither reinvest them profitably nor do they need that cash for other purposes such as paying down debt. Whenever companies find themselves in such situation they should think about returning those funds to shareholders. Typically this is done either by paying out dividends or repurchasing shares.²⁶

This chapter should give a brief overview on the differences of dividends and share repurchases and deals with the question whether or not these payout instruments are substitutable.

²⁴ IBM Corp., Annual Report 2013 (2014).

²⁵ Weil, R./ Schipper, K./ Francis, J., Financial Accounting (2012). p. 529 ff

²⁶ Lahart, J., The Wallstreet Journal., Record Cash Piles (2010).

7.1. THE DIVIDEND SUBSTITUTION HYPOTHESIS

As mentioned, companies distribute cash to shareholders by either paying dividends or repurchasing stock. Historically there has been an affinity of U.S. corporations towards paying dividends, because of the introduction of the Securities and Exchange Act of 1934. This regulation strongly prohibited any fraud in connection with buying and selling of securities. Therefore firms hesitated to repurchase stock on the open market in fear of harsh punishments and investigations because of market manipulation. Some 48 years later in 1982 the SEC released a regulation that gave corporations the go-ahead to legally repurchase shares.²⁷ Therefore in the more recent years the trend to payout funds, reversed in favor of share repurchases. From 1999 onwards more money has been spent on buybacks than on dividends.²⁸ The following gives an explanation on why share buybacks might be the more attractive payout instrument. Modigliani and Miller state in their dividend irrelevancy theory that dividends and buybacks are perfectly substitutable when all investors behave rationally and a perfect capital market is given. In a perfect capital market there is no information asymmetry between the players in the market, there are no transactions costs such as taxes when securities are bought and sold, and none of the market participants is large enough to influence the price of securities with their transactions.²⁹

7.1.1. THE PREFERENTIAL TAX HYPOTHESIS

Moving away from the perfect capital market and taking into account taxes, share repurchases seem to be more attractive and not substitutable to dividends. Dividends and share buybacks trigger different kinds of taxes. Dividends, in the U.S., are taxed as income whereas the proceeds from share buybacks resulting from an increasing share price are taxed at capital gains tax. In the past the capital gains tax was significantly lower than the income tax, which induced corporations to start choosing buybacks over dividends to lower tax payments for shareholders.

²⁷ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

²⁸ Grullon, G./ Michaely, R., Journal of Finance, Dividend Substitution Hypothesis (2002).

²⁹ Miller, M. H./ Modigliani, F., Journal of Business, Dividend Policy (1961).

³⁰ This hypothesis is still valid in countries that tax dividends at a lower rate than capital gains.³¹

Nowadays capital gains and dividends are taxed at the same rate. Sellers that have held shares beyond a one-year period are subject to a 15%-20% capital gains tax, when their marginal income tax rate is within the 25%-39,6% bracket³². Dividends are taxed the same 15%-20% when the recipients find themselves in the 25%-39,6% tax-bracket and are holder of the common stock for more than 60 days.³³ However dividend payments trigger a tax event every time they are distributed to the shareholders. Proceeds from share repurchases remain untaxed until the shareholder decides to sell his holdings.

In case an investor is not seeking for income but decides to reinvest dividend payments by buying more shares of the company, the investor would be better off with repurchases as payout instrument. Each time the investor receives the dividend he can reinvest 15%-20% less, because taxes have to be deducted. Repurchases by contrast increase the share price but trigger no taxes.

For the reinvesting shareholder share repurchases are therefore preferable to dividend payments based on a taxation point of view.³⁴

7.1.2. THE CASH-FLOW PERMANENCE HYPOTHESIS

Surveys show that dividends are used to payout stable earnings, whereas share buybacks are used to distribute extraordinary, less sustainable earnings.³⁵ Companies are reluctant to increase the dividend to an unsustainable level and seek for other ways to distribute earnings in buying back shares, as it has been discovered that share prices negatively react to dividend decreases. Whereas not renewing or slowing down share repurchases is not perceived as badly by markets since buybacks never include a commitment for future payouts. Furthermore repurchasing fewer shares than intended or totally stop repurchasing can also

³⁰ Amromin, G./ Harrison, P./ Liang, N. et al., Finance and Economics Discussion Series, Dividend Tax Cut (2005).

³¹ Grullon, G./ Michaely, R., Journal of Finance, Dividend Substitution Hypothesis (2002).

³² Wells Fargo, Tax Treatment of Dividend Income (2013).

³³ Tax Foundation, Federal Capital Gains Tax Rates, 1988-2013 (2013).

³⁴ Value-Aktien, Aktienrückkäufe aus Sicht der Aktionäre (2012).

³⁵ Jagannathan, M./ Stephens, C. P./ Weisbach, M. S., Journal of Financial Economics, choice between dividends and stock repurchases (2000).

indicate that other more profitable investments were found and thus prompt a positive reaction.³⁶

7.2.SHARE REPURCHASES, DIVIDENDS AND EMPLOYEE STOCK OPTIONS

Apart from a beneficial taxation for the non-income seeking shareholder, share repurchases are also preferable to dividends when employee stock options (ESO) are granted to employees.

ESOs are a kind of equity compensation that companies give out to their employees. Employees holding ESOs have the right to purchase stock of their company at a determined price (strike price) and quantity. Usually ESOs are equipped with a so-called vesting period during which the option holder is restricted to exercise the ESOs. All this is settled in the option agreement. After the expiration of the vesting period ESOs can be exercised, which means stock can be acquired at strike price, and then be sold immediately at market price. Consequently the greater the difference between strike- market price the more valuable is the ESO and hence employee compensation.³⁷ Employees are granted stock options as a compensation for several reasons. Less well-capitalized companies use stock options to be able to preserve funds that they otherwise would have to spend when compensating in cash. Furthermore giving out ESOs to employees aligns interests of shareholders and employees. Both parties now benefit from an appreciating share price. In consequence employees are likely to become more effective and productive which streamlines the business and puts shareholder value in focus.³⁸

Most of the time issued ESOs are not dividend protected, which means that dividend payments to shareholders lead to a decrease in option value. Every time a company pays a dividend, the share price decreases by the distributed amount. After that markdown the stock trades ex-dividend. The value of ESOs is always tied to the underlying; in that case the share price of the company that grants the ESOs. A share price reduction caused by dividend payments thus reduces the value of ESOs. Consequently ESOs of a company that does not pay a dividend are more valuable than ESOs of an equal company that does. Share repurchases don't

³⁶Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

³⁷ Summa, J., Employee Stock Options (2009).

³⁸ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

have that markdown disadvantage and hence are more beneficial to ESO holders.³⁹

Therefore to maximize personal net worth top-level executives holding significant amounts of ESOs are incentivized to favor share repurchases over dividend payments.⁴⁰ A study by Christine Jolls supports that theory. The findings show that at companies heavily relying on ESO based compensation more shares are repurchased than at companies less reliant on that kind of employee compensation.⁴¹

8. MOTIVATIONS FOR SHARE REPURCHASES

This chapter intends to outline the various reasons for corporation's to repurchase their shares. In 2005 Brav, Graham, Harvey and Michaely conducted a survey where 384 financial executives were questioned and another 23 executives were interviewed about their motives for share buybacks.

The most mentioned reason for repurchasing shares was an undervaluation of the company at current share prices and the objective to inform shareholders about that. Those two buyback reasons can be summarized and explained by the **Undervaluation Hypothesis or Signaling Theory**. Coming in second was the motivation to initiate a share repurchase program to increase earnings per share. The matter behind that is covered in the **Increasing Earnings per Share Hypothesis**. Another frequently named motivation for repurchasing stock was the **Optimization of the Capital Structure**, without having to take on additional debt.⁴²

In the following chapter theories behind those motivations will be explained in detail. However this paper does not cover share repurchases without the intention of having a direct impact on shareholder value, such as defending the company against a takeover, repurchasing shares that serve as an acquisition currency or repurchasing shares that are held back for later reissuance.

³⁹ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁴⁰ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁴¹ Jolls, C., Stock Repurchases and Incentive Compensation (1998).

⁴² Brav, A./ Graham, J. R./ Harvey, C. R. et al., Tuck Contemporary Corporate Finance Issues III Conference Paper Payout policy in the 21st century (2005).

8.1.OPTIMIZATION OF CAPITAL STRUCTURE

Share repurchases as stated above can be used as an instrument to optimize the capital structure of a company without taking on additional debt. By that repurchases are able to maximize a firm's value. The capital structure informs about how a firm has financed its assets, a combination of borrowed money (debt) and owners' funds (equity). Capital structure is commonly measured by the debt-to-equity ratio or debt-to-asset ratio.⁴³

$$Debt/Equity = \frac{Longterm\ Debt}{Equity}$$

This combination defines the cost of capital, which affects the value of the business. The lower the cost of capital, the higher is the value of the business respectively shareholder value, which incentivizes executives to optimize the capital structure.⁴⁴

Modigliani and Miller found out that in a perfect capital market scenario the capital structure does not influence the weighted average cost of capital (WACC) of a company and hence its value. WACC represent the minimum return that a company has to earn on its investments, determined by the weighted average of cost of debt and cost of equity.⁴⁵ Usually debt financing a business is cheaper than using equity, since in the event of default creditors' claims are served prior to those of equity holders. In consequence equity holders demand a higher premium than creditors for taking the additional risk of being served second, which makes debt cheaper than equity.

Nevertheless loading up on cheap debt in a perfect capital market environment will not lower the WACC, because the benefits of a more debt weighted capital structure are perfectly offset by an increase in cost of equity. In fact more seniority debt make the equity investment more risky as in the event of default the risk to suffer a complete loss rises. Commanding a higher return on the equity investment compensates for the additional risk, hence cost of equity rises.

⁴³ Vermaelen, T., Foundations and Trends in Finance, Share Repurchases (2005). p. 68 - 69

⁴⁴ Damodaran, A., The Debt-Equity Trade Off: The Capital Structure Decision (2003).

⁴⁵ Modigliani, F./ Miller, M. H., American Economic Review, The Cost of Capital (1958).

Therefore in a perfect capital market there is no valuation-benefit to be realized from taking on debt. Thus companies would be indifferent choosing their capital structure.⁴⁶

Leaving behind the scenario of a perfect capital market and introducing taxes there is a different outcome. The interest payment on debt is tax-deductible reducing the overall tax burden by the amount of the total interest payments times the firm's marginal tax-rate. Literature describes this benefit as "Tax-Shield". It makes debt cheaper and more preferable than equity. Using a more debt weighted capital structure thus reduces WACC and positively influences a firm's value.

$$WACC = \frac{E}{D + E} * ke + \frac{D}{D + E} * kd * (1 - t)$$

Where: E = shareholders equity, D = long-term debt, ke = cost of equity, kd = cost of debt.

It therefore could be assumed that 100% debt financing would be best for every business, but that is not the case. There are limits to what degree a company can be levered beneficially. When a certain debt to equity ratio is reached WACC are increasing again, because the company becomes more and more unlikely (risky) to be able to serve its interest payments, as payments take an increasing share out of the earnings. Hence creditors are exposed to an increasing default risk and command high premiums when they decide to lend money to an already highly levered company.⁴⁷

It should be every management's target, when it has committed itself to maximize shareholder value, to adjust the capital structure by leveraging the balance sheet in a way that minimizes the WACC and in consequence increases intrinsic value. By buying back shares the capital structure can be adjusted in order to achieve a more favorable capital structure without taking on additional debt. Taking on debt to repurchase shares accelerates this effect. Repurchasing and retiring shares reduce the equity base of the company by exactly the amount that was spent on the acquired shares (see chapter "accounting of share buybacks"). As the total equity base is reduced and liabilities stay unaffected or increase, given that the buyback

⁴⁶ Villamil, A. P., The Modigliani-Miller Theorem (2012).

⁴⁷ Damodaran, A., Corporate Finance: Capital Structure and Financing Decisions (2002).

is debt financed, the capital structure becomes more debt weighted (higher debt/assets). Eventually that lowers WACC, enhances the firm's value and benefits shareholder value (Figure3).⁴⁸

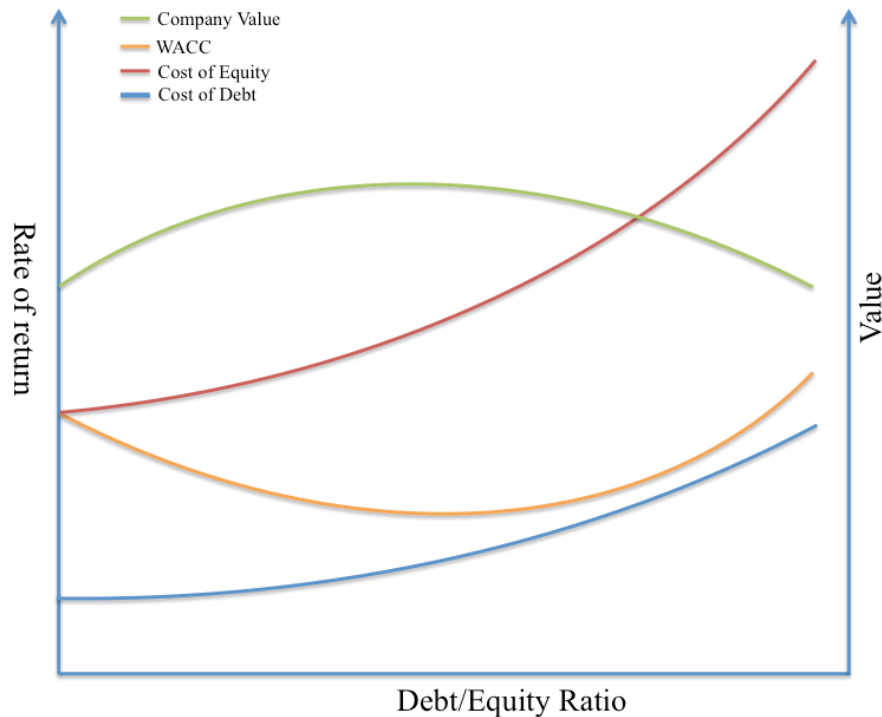


Figure 3: WACC and Debt/Equity Ratio

Theory defines the value of a company as the equation of all future cash flows generated by the assets of a company and discounted by the firm's WACC. Firm value for this reason increases along with lower WACC, as future earnings are discounted at a lower rate.⁴⁹

$$V = \sum_{t=1}^{\infty} \frac{CF_t}{(1 + WACC)^t}$$

Where: V = company value, CF = future free cash-flows

⁴⁸ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

⁴⁹ Gartzke, C./ Hedemann, K./ Schütt-Schnoor, K., Methoden der Unternehmensbewertung (2013).

8.2. INCREASING EARNINGS PER SHARE HYPOTHESIS

Among the questioned executives in the aforementioned survey buying back stock to increase earnings per share (EPS) was a widespread reason.⁵⁰ EPS are calculated by dividing net income by the total number of shares outstanding⁵¹.

$$EPS = \frac{\text{Net Income}}{\text{Total Shares Outstanding}}$$

The following example explains the impact of share repurchases on EPS: Assumed a firm has 1.000.000 shares outstanding and the following balance sheet and income statement:

Assets		Equity / Liabilities	
Cash	8.000.000 USD	Equity	40.000.000 USD
Operating Assets	32.000.000 USD		
Total Assets	40.000.000 USD	Total Equity and Liab.	40.000.000 USD

Table 1: Model Company Balance Sheet Before Buyback

Assets		Equity / Liabilities	
Cash	/	Equity	32.000.000 USD
Operating Assets	32.000.000 USD		
Total Assets	32.000.000 USD	Total Equity and Liab.	32.000.000 USD

Table 2: Model Company Balance Sheet After Buyback

USD	Before Buyback	After Buyback
Interest Income (3%)	240.000	
Operating Income	1.760.000	1.760.000
Total Income	2.000.000	1.760.000

Table 3: Model Company Income

The value of the operating business earning USD 1.760.000 annually is USD 17.600.000 based on a DCF calculation⁵². Additional to the operating business the

⁵⁰ Brav, A./ Graham, J. R./ Harvey, C. R. et al., Tuck Contemporary Corporate Finance Issues III Conference Paper Payout policy in the 21st century (2005).

⁵¹ E&Y, Financial reporting developments A comprehensive guide: Earnings per share (2013).

⁵² DCF based on hurdle rate of 10% and no future growth. Hurdle rate equals WACC

firm holds USD 8.000.000 in cash, (earning USD 240.000 in interest income annually) which equals a total intrinsic value of USD 25.600.000. Distributed on 1.000.000 shares equals a shares price of USD 25,6.

USD	Before Buyback	After Buyback
Value of Operations	17.600.000	17.600.000
Cash	8.000.000	
Total Value of Equity	25.600.000	17.600.000

Table 4: Model Company Valuation

Using the above mentioned data (income before buyback USD 2.000.000 and 1.000.000 shares outstanding) EPS of USD 2 are calculated.

$$\textit{Before Buyback: EPS} = \frac{2.000.000}{1.000.000} = 2$$

The firm now decides to use all of its cash to repurchase and retire shares, paying USD 25,6 for each share, the firm is able to repurchase 312.500 shares. That leaves the company with now 687.500 shares outstanding followed by a decrease in income to USD 1.760.000 (Table 4). That is the case as the total amount of USD 8.000.000 in cash on the balance sheet was used to buyback shares, and therefore ceases to earn interest of USD 240.000 p.a. EPS after the buyback consequently increase to USD 2,56.

$$\textit{After Buyback: EPS} = \frac{1.760.000}{687.500} = 2,56$$

Nevertheless the businesses intrinsic value (based on a DCF-calculation) does not increase along with EPS. In fact income falls by USD 240.000 as the firm misses out on interest payments and thus its intrinsic value is lowered.⁵³ The increase in EPS is only derived from a reduction of the equation's denominator (shares outstanding), which indicates the number of shares that total income is distributed

⁵³ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

on. That makes every share now accounting for a bigger part of net income and the whole business as compared to before the buyback⁵⁴.

An important ratio in conjunction with EPS is the price to earnings ratio (P/E), which is often used by investors to compare valuations of companies of the same industry. It also reveals future EPS growth expectations that investors have in the stock. The higher the P/E the higher are expected future EPS.

$$P/E = \frac{\text{Share Price}}{\text{EPS}}$$

Using the above data the buyback-effect on the P/E ratio can be made obvious.

$$\text{Before Buyback: } P/E = \frac{25,6}{2} = 12,8$$

$$\text{After Buyback: } P/E = \frac{25,6}{2,56} = 10$$

The P/E ratio falls after shares are bought back and retired, because the loss in income due to the missing interest proceeds is more than offset by an increasing EPS induced by the reduced share count.

The drop of the P/E ratio can also be explained as follows: The share buyback acts like a separator that deconsolidates the business into two independent units. One unit represents cash and carries a P/E of 33,33 the other unit representing the businesses operations carries a P/E of 10,00. The P/E of 12,8 represents the weighted P/E ratio of both units. When the cash position is fully used to fund the buyback the P/E lowers to that of the operating business, a P/E of 10.⁵⁵

It could be assumed that a share price appreciation would take place after the buyback as earnings are now distributed over less outstanding shares, which makes every share representing a bigger part of the company's earnings. But the increase in EPS, triggered by the lower share count, is perfectly offset by a decrease in intrinsic value (see Table 5 intrinsic value and shares outstanding

⁵⁴ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁵⁵ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

decrease 31,25%), hence the share price remains unchanged and in theory no value is created for shareholders by the repurchase.⁵⁶

USD	Before Buyback	After Buyback	
Intrinsic Value	25.600.000	17.600.000	31,25%
Shares Outstanding	1.000.000	687.500	31,25%
Share Price	25,6	25,6	unch.

Table 5: Model Company Share Price Development

After having found out that in theory there is no share price increase after executing a buyback to boost EPS it is astonishing to see that executives consider buybacks as a way to increase EPS as important in the survey conducted by Brav et al.⁵⁷

Another less mechanical approach by Paul Hribar et al. could help to explain that. In their 2004 study the authors uncovered that some firms show unusually high volumes of repurchases of their own stock to boost EPS when they are likely to trail past EPS growth rates or analyst's quarterly EPS estimates. In other years when forecasts are likely to be met lower repurchase activity could be witnessed.⁵⁸ According to a survey by Barth et al 1999 markets grant premium multiples to companies showing steadily rising EPS over a longer period. A break of that habit often causes P/E ratios and thus share price to correct.⁵⁹ The same holds true for missing quarterly analyst EPS estimates.⁶⁰

Managers are therefore closely monitoring and managing EPS using share repurchases to make sure estimates or prior growth rates are met and share price does not fall due to a negative earnings surprise.

E.g. if a company (A) is estimated to report USD 6,05 in EPS an runs slightly short of that number by reporting only USD 6,00 a share it would see its share

⁵⁶ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

⁵⁷ Brav, A./ Graham, J. R./ Harvey, C. R. et al., Tuck Contemporary Corporate Finance Issues III Conference Paper Payout policy in the 21st century (2005).

⁵⁸ Hribar, P./ Jenkins, N. T./ Johnson, W. B., Journal of Accounting and Economics, Repurchases as an Earnings Management Device (2006).

⁵⁹ Barth, M. E./ Elliott, J. A./ Finn, M. W., Journal of Accounting Research, patterns of increasing earnings (1999).

⁶⁰ Skinner, D. J./ Sloan, R. G., Earnings Surprises (1999).

price decline after the reporting earnings to the market. In contrast another company (B) (also estimated to report USD 6,05 but likely to report EPS falling short of that number) decides prior to earnings to react to the shortfall by buying back 10.000 shares. Hence B reports USD 6,06, beating estimates by a small margin, and sees its share price holding steady or increase after the earnings. Both companies are exactly the same with the only difference that company B successfully managed its EPS.⁶¹

	Company A	Company B
Net Income	6.000.000	6.000.000
Beg. Shares Outstanding	1.000.000	1.000.000
Shares Repurchased	10.000	/
End. Shares Outstanding	990.000	1.000.000
EPS Estimate	6,05	6,05
EPS Reported	6,06	6,00

Table 6: Model Company Earnings Estimates

Alongside the influence on EPS, share buybacks are impacting other financial ratios, as well. The shortened equity base directly impacts the profitability ratios return on equity (ROE) and return on assets (ROA) and basically every other ratio denominated by equity or total assets. ROE is a measurement for profitability that informs about how much a company earns on every dollar of equity invested.⁶²

The same holds true for ROA, which indicates how much is earned by the total assets of a company. A company with unchanged net income that executes on a share repurchase would deliver both increasing ROE and ROA since the equity and total asset base is reduced.⁶³ Buybacks can therefore be used to tweak these ratios to match previously set targets.

$$ROE = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

⁶¹ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁶² Buhl, K., Kennzahlen: Der Return on Equity (ROE) (2011).

⁶³ Neus, W., Einführung in die Betriebswirtschaftslehre aus institutionenökonomischer Sicht (2009). p.348

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Where: Total Assets = Shareholder's Equity + Total Liabilities

Another financial ratio impacted by buybacks is the net asset value per share, or book value per share (BVPS) of a company. Investors often use this ratio as an indicator to uncover undervalued equities. Book value equals the total assets of a firm net its total liabilities. To arrive at BVPS the book value is divided by total shares outstanding. When shares are bought back below book value (current share price > BVPS) book value per share increases, otherwise a decrease can be witnessed.⁶⁴

$$BVPS = \frac{Book\ Value}{Total\ Shares\ Outstanding}$$

8.2.1. OFFSETTING DILUTION OF EQUITY COMPENSATION PLANS

As explained before, the number of shares outstanding of a company influences several per share metrics such as EPS. With an increasing number of shares outstanding due to the issuance of stock based compensation, such as ESOs, those numbers are diluted and negatively impacted. Some companies therefore try to offset the caused dilution by repurchasing shares.⁶⁵ In his 1998 survey, Scott J. Weisbrenner proved that thesis. He uncovered a positive correlation of outstanding ESOs and the repurchase behavior of companies. The costs of ESOs according to him are reflected best in the EPS numbers that decrease alongside an increasing number of shares outstanding. A steady buyback with the size able to offset the ESO dilution can therefore hide ESO related costs as it boosts EPS. Additionally he states that EPS are often used to measure management performance, which gives additional incentive to perform a buyback that offsets EPS dilution.⁶⁶ The repurchases that are transferring the wealth from shareholders

⁶⁴ Little, K., Understanding Book Value (not specified).

⁶⁵ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁶⁶ Weisbrenner, S. J., Corporate Share Repurchases and Stock Options (2000).

to employees, hence share buybacks that offset the dilution represent the cost of ESOs.⁶⁷

8.3. UNDERVALUATION HYPOTHESIS / SIGNALING THEORY

Most mentioned reason to justify a share repurchase among the executives questioned in the survey by Brav et al. was that shares are repurchased, because executives considered their shares undervalued.⁶⁸ The undervaluation hypothesis therefore is finding a lot of appreciation in literature. This paper puts that theory in its center, as it seems that it gives the best hints on how to increase long-term shareholder value by repurchasing shares.

As the name “undervaluation hypothesis” suggests, the theory claims that executives buy back shares because of an undervaluation of their company at the current stock price. A corporation’s shares are undervalued when they trade below intrinsic value.⁶⁹ The intrinsic value can be defined as the sum of all future discounted cash flows that a business will earn in its lifetime.⁷⁰ Hence executives are repurchasing shares when, in their opinion, the stock is trading at a discount to intrinsic value. Berkshire Hathaway Inc. is a very suitable example of a corporation acting according to the undervaluation hypothesis. Warren Buffett, chairman and CEO of Berkshire Hathaway Inc., informed investors in his 2012 letter to shareholders that his company would repurchase shares every time they trade below 120% of book value per share, which according to Buffett presents a meaningful discount to intrinsic value. At that price level he sees his company’s shares significantly undervalued. In addition to his repurchasing commitment he emphasized that repurchasing shares above the intrinsic value would hurt shareholder value.⁷¹

To explain why a repurchase of overvalued shares hurts shareholder value it is necessary to distinguish between shareholders participating in the buyback program and continuing stockholders holding on to their shares. If a shareholder

⁶⁷ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁶⁸ Brav, A./ Graham, J. R./ Harvey, C. R. et al., Tuck Contemporary Corporate Finance Issues III Conference Paper Payout policy in the 21st century (2005).

⁶⁹ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁷⁰ Howell, R., The Wallstreet Journal., Intrinsic Value (2013).

⁷¹ Buffett, W. E., Letter to Shareholders 2012 (2013).

decides to participate in the repurchase program and sells his shares to the company he will most likely benefit nevertheless shares are over- or underpriced. The increased demand for the shares caused by the repurchasing company usually gives prices a short-term lift since demand for the shares increases. Additionally signaling produces stock price rises after the announcement of a share repurchase.⁷²

The case is different with continuing shareholders that do not capitalize from short-term share price gains and decide not to sell their shares to the company. Continuing shareholders should have significant interest in management repurchasing only undervalued shares, as intrinsic value is affected by the buybacks. If overvalued shares are bought back the intrinsic value of a business decreases and shareholder value is eventually going to be destroyed. The following example illustrates that⁷³.

A company with the below balance sheet and income statement decides to repurchase shares using all of its USD 8 million of cash. Prior to the repurchase the company had one million shares outstanding. In the chapter before the intrinsic value for the same company was calculated. It equaled USD 25,6 million or USD 25,6 on a per share basis assuming a yield on cash of 3% and a 10% hurdle rate.

Assets		Equity / Liabilities	
Cash	8.000.000 USD	Equity	40.000.000 USD
Operating Assets	32.000.000 USD		
Total Assets	40.000.000 USD	Total Equity and Liab.	40.000.000 USD

Table 7: Model Company Balance Sheet

USD	Before Buyback	After Buyback
Interest Income (3%)	240.000	/
Operating Income	1.760.000	1.760.000
Total Income	2.000.000	1.760.000
Intrinsic Value	25.600.000	17.600.000

Table 8: Model Company Income Statement and Intrinsic Value

⁷² Vermaelen, T., Foundations and Trends in Finance, Share Repurchases (2005), p. 67 ff

⁷³ Buffett, W. E., Letter to Shareholders 2011 (2012).

The shares now trade below intrinsic value at USD 20 a share. Thus the firm is able to repurchase 400.000 of its shares with its USD 8 million in cash, which reduces outstanding shares to 600.000. Spending cash in order to acquire own shares, as previously explained, reduces intrinsic value since the company is missing out on interest payments. Intrinsic value after the repurchase hence decreases to USD 17.6 million.

However repurchasing shares below intrinsic value reduces the share count at a higher rate than intrinsic value of the business is decreasing. Shares outstanding of the model company decrease at a 40% rate, whereas intrinsic value falls just 31,25%. On a per share basis though, intrinsic value increases 14,57%, from USD 25,6 to USD 29,33 per share making each share more valuable for investors (table 9).

USD	Before Buyback	After Buyback	Alteration
Intrinsic Value	25.600.000	17.600.000	- 31,25%
Shares Outstanding	1.000.000	600.000	- 40,00%
Intrinsic Value / Share	25,60	29,33	+14,57%
Share Price	20,00		
Shares Repurchased	400.000		

Table 9: Model Company Buyback of Undervalued Shares

The other way round the same holds true for repurchasing shares above intrinsic value, in this example at 30 USD. Share count falls at a lower rate (-26,67%) as only 266.666 shares can be bought back with USD 8 million, however intrinsic value decreases by the same amount (-31,25%). Intrinsic value per share consequently falls and each share now represents only USD 24 in intrinsic value, USD 1,6 less than prior to the repurchase. For the investor that implies a destruction of value caused by the share repurchase (table 10).

USD	Before Buyback	After Buyback	Alteration
Intrinsic Value	25.600.000	17.600.000	- 31,25%
Shares Outstanding	1.000.000	733.333	- 26,67%
Intrinsic Value / Share	25,60	24,00	- 6,25%
Share Price	30,00		
Shares Repurchased	266.666		

Table 10: Model Company Buyback of Overvalued Shares

Markets are said to behave efficiently. That would implicate that the share price represents intrinsic value at any time. However from time to time markets happen to misprice equities and share prices deviate from intrinsic value (both to the up- and downside). That creates opportunities for companies to increase intrinsic value by repurchasing undervalued shares but also sets pitfalls of destroying value when overpriced shares are acquired.⁷⁴

In his 2011 letter to shareholders Buffett additionally expressed that his intention is not to cash out shareholders cheaply by repurchasing undervalued shares, but to inform about the corporation's value and assets that shareholders are selling when participating in the buyback program.⁷⁵ This behavior is called signaling and goes hand in hand with the undervaluation hypothesis. Every time a corporation repurchases shares its executives are sending a signal to the markets that, in their opinion, shares are trading at a discount to intrinsic value. This is understood as a sign that the share price does not correctly reflect future cash flows and hence suggests that the market undervalues the company at current share prices.⁷⁶ Executives are typically having much better insight and access to information in their company than outside investors have; an information asymmetry between company insiders (executives) and non-insiders exists. Therefore executives are credited of being able to value their own company more accurately than non-insiders.⁷⁷ Since executives are appointed to act according to the owners (shareholders) interest, they are trusted to only repurchase undervalued shares since acquiring overvalued stock would diminish intrinsic value and hurt

⁷⁴ Graham, B., *Intelligent Investieren* (2005), p. 224 ff

⁷⁵ Buffett, W. E., *Letter to Shareholders 2011* (2012).

⁷⁶ Efficient markets do not have information asymmetries.

⁷⁷ Buffett, W. E., *Letter to Shareholders 2011* (2012).

shareholders. Because of this, communicating or signaling of an undervaluation of the company by buying back shares is highly valuable to shareholders. This is also the reason why usually investors are buying up shares right after the announcement of the buyback to take immediate advantage of the prevailing mispricing. Consequently rising stock prices can be witnessed after the announcement of a share buyback.⁷⁸

Having discussed both the Undervaluation Hypothesis and the Signaling Theory it becomes obvious that they always belong together. However the undervaluation of a company seems to provide a better explanation to why executives choose to buy back shares, while signaling gives a more sufficient answer as to why the share price is usually reacting positively right after the buyback announcement.⁷⁹

However there are various pitfalls when shares are acquired due to an undervaluation. The most obvious prevailing risk is, whether or not executives are right with their statement that shares are actually undervalued. Corporations and their executives barely give insight into how they calculate the intrinsic value of their companies, which makes it hard for shareholders to validate the correctness of a repurchase decision.

Another difficulty that arises is a problem related to Agency Theory. The interests of shareholders and the management of a company originally do not align. Each party is desired to increase their own net-worth. Shareholders are eager to see their company and share price thriving, whereas managers seek for the highest possible compensation to increase their own net worth. Accordingly if repurchasing shares can raise compensation the management could be willing to even repurchase overvalued shares that destroy intrinsic value.⁸⁰

9. AGENCY THEORY

Agency Theory deals with the separation of ownership and control within a company. Usually managers (agent) raise capital from investors (principal), because they do not have sufficient funds themselves to invest, or they want to

⁷⁸ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁷⁹ Voss, J., Major Themes in Economics, Why Repurchase Stock? (2012).

⁸⁰ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

cash out on their holdings of the business. Contrary the investor possesses excess capital and needs the skills of the manager to generate a return on the capital. After having invested the capital it is at the manager's disposal. Consequently that raises the question of how the investor can be assured that the manager is acting to the investor's benefit and is not wasting the money. A lack of security that managers act in the interest of investors would result in a high risk to fund businesses and accordingly decrease investments.⁸¹

To be sure that managers act in favor of investors a contract between the parties is necessary. The optimal contract would be a contract fully aligning the interests of investor and management. It would be determined how profits are split between investor and manager and specified what is done with the capital in every imaginable situation. However in the field, contracts never proved to be optimal since a contract is not sufficient to regulate every eventuality because the future cannot be foreseen.⁸² That's why the parties have to find a solution to allocate the residual control rights. Residual control rights are needed to give a party the decision power in events not specified by the contract. But how should these control rights be distributed?

The residual control rights could be given entirely to the investors in return for providing the funding. Meaning in an event where a decision has to be made on a subject not specified in the contract the manager has to consult the investors and let them decide. But as initially mentioned the investor hires the manager for his special skills. As the manager has all the specific knowledge and insights to the company's operations he is more suitable to exercise the control rights. An information asymmetry exists. Investors are generally too uninformed to make decisions on how to allocate funds. Especially when ownership is spread among many small investors it is likely that some are not informed and don't even want to learn about the company they have invested in. Hence participating in the governing of the company is not a reasonable option. Managers therefore end up with significant power and control rights and are able to independently allocate capital.⁸³

⁸¹ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

⁸² van der Wijst, N., Agency theory and corporate governance (2013).

⁸³ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

Those extensive control rights held by managers pose significant risk to investors. In the past managers have expropriated investors, by allocating funds in a way only serving their profit. E.g. managers have sold investor's assets at a large discount to companies owned by the managers themselves. Nowadays law protects against that kind of theft, however that does not fully prevent fraud. Less obvious actions to the negative for investors are still occurring nowadays, such as managers that increase the size of the firm to an extent that hurts returns and shareholder value but benefits their own goals.⁸⁴ The loss a company takes because of self-interested manager behavior and the company's actions to prevent that behavior is referred to as agency cost. With managers being able to pursue self-interested actions with the goal of maximizing own net worth, regardless investors are benefited or harmed, additional solutions have to be found to protect investor's funds from getting wasted.⁸⁵

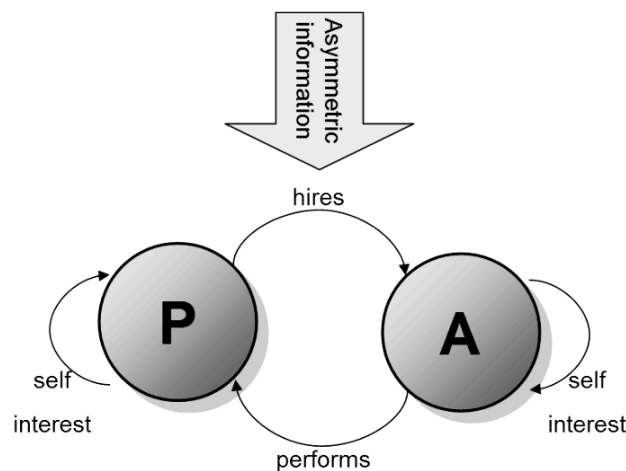


Figure 4: Agency Theory Illustration

Basically there are two major solutions to reduce agency cost. One is to give out incentive contracts to managers and the other one is the development of advanced monitoring systems to be able to better judge managerial behavior. Information systems to reveal the behavior of managers in a company are e.g. detailed reports on the operations of a business, an independent auditor and a functioning board of directors that effectively supervises the behavior of managers⁸⁶ Incentive

⁸⁴ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

⁸⁵ van der Wijst, N., Agency theory and corporate governance (2013).

⁸⁶ Eisenhardt, K. M., Academy of Management Review. , Agency Theory (1989).

contracts are attempting to align investors and managers interests. The larger the benefits are that a manager can reap from residual control the costlier incentivizing becomes. Efficient incentive contracts are tied to a ratio that reliably measures management performance. Such contracts can occur in different forms e.g. equity compensation by awarding stock options and direct ownership of shares (to make the manager an owner of the company, too) or compensation based on factors such as EPS or ROE.⁸⁷

Contracting managers always presents a tradeoff of cost to monitor, measure behavior and the cost used for incentive contracts and performance measurement. Otherwise put, information in a corporation can be viewed as a commodity that has a cost and can be purchased. When advanced information systems are purchased to effectively monitor manager behavior, less cost has to be used on incentive instruments and vice versa.⁸⁸

Summarized, efficient monitoring and effective incentive contracts help to reduce agency cost. Nevertheless if those instruments are flawed they create huge self-dealing opportunities for managers and by that pose significant risk to investors. These risks basically originate from either wrongly set up incentive contracts and flawed monitoring systems.

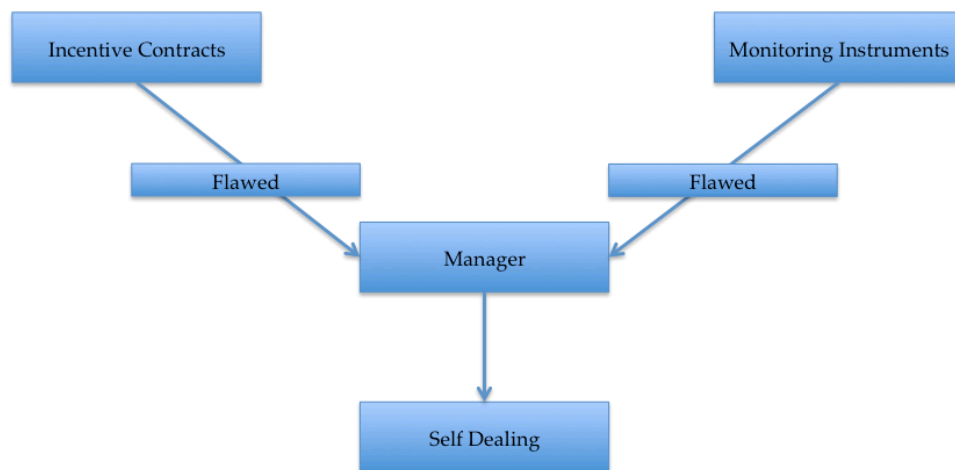


Figure 5: Manager Self-Dealing

⁸⁷ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

⁸⁸ Eisenhardt, K. M., Academy of Management Review, Agency Theory (1989).

9.1. CORPORATE GOVERNANCE

In the U.S., the Anglo-Saxon model of corporate governance presents a frameset to protect shareholder interests and to legally tackle agency problems. U.S. corporate governance puts in center shareholder interests, whereas other corporate governance codes are aiming to protect other stakeholders' interests such as employees, as well. The main bodies that U.S. corporate governance is comprised of are the Sarbanes-Oxley Act, the statues of the SEC, guidelines of the most important stock exchanges NYSE (New York Stock Exchange) and NASD (National Association of Security Dealers) and regional state law (e.g. Delaware Corporate Law).⁸⁹ Among the tasks of corporate governance are to ensure that shareholders participate in governing the company by voting on important issues at shareholder meetings and electing a board of directors to supervise managers. Further corporate governance makes sure that relevant information about key executives and the board members is disclosed.

To protect shareholder interests U.S. corporate governance defines responsibilities, structure and composure of the board of directors that observes firm executives. To follow the shareholder-centered approach of corporate governance publicly listed firms are hierarchically organized, with management at the bottom and shareholders represented by the board of directors at the top.⁹⁰

U.S. Corporate governance statues differ from state to state as each state has imposed its own acts on corporate governance. Nevertheless the key functions of the board are universal and comprise of advisory and oversight tasks. Key functions are defining a broad corporate strategy, approving yearly budgets, informing about the company's performance and ensuring independent auditing. Most important for the purpose of this paper is the function of appointing the CEO, monitor CEO performance and determining the compensation of the company executives.⁹¹

The board of directors as the highest entity of a corporation has to be elected by the shareholders. When there are board vacancies there is a nominating committee composed of board directors that nominate a candidate for the position. This

⁸⁹ Valuewalk, Corporate Governance: USA Versus Europe (2013).

⁹⁰ OECD, OECD Publishing, Board Member Nomination and Election (2012).

⁹¹ Larcker, D. F., Board of Directors: Duties & Liabilities (2011).

nominee then has to be approved by shareholder vote. According to Delaware Corporate Law shareholders have one vote per voting share unless the corporation has disclosed otherwise. Most of the publicly listed companies in the U.S. conduct a system of majority votes. A candidate requires the majority of all the votes casted at shareholder meetings to be elected a member of the board. Delaware Corporate Law requires the annual appointment of the board of directors. The company can freely choose the number of members appointed to the board. An average U.S. board is comprised of 10 to 11 directors.⁹²

U.S. boards of directors are one-tiered boards meaning both executive and non-executive directors are present in the same board. Executive directors are members of the board that also serve in the management of the company, which makes them non-independent directors. There is no specific number of independent board members required that are in no relationship to the company and its management. Only the disclosure of any kind of relation is required. The recent past shows a trend to totally independent boards or boards with the CEO as only executive serving on the board. Nevertheless there are marginal cases of boards that are comprised of a high number of non-independent directors.⁹³

9.2.AGENCY THEORY, CORPORATE GOVERNANCE AND REPURCHASES

Agency Theory deals with the separation of ownership and control. Managers controlling the company are eager to increase their own rather than the shareholder's net worth. This is why manager's have to be incentivized and monitored to assure they act according to shareholder's interests.⁹⁴ Corporate Governance provides the frameset to protect shareholder's interests.⁹⁵ Shareholders are represented by the board of directors, which oversees the management. The board determines executive incentives, compensation and monitors their performance.⁹⁶

Executives that have superior insight together with the board of directors propose share repurchase programs. Shareholders then may or may not approve the program. But usually the programs get approved since shareholders, which are not

⁹² OECD, OECD Publishing, Board Member Nomination and Election (2012).

⁹³ OECD, OECD Publishing, Board Member Nomination and Election (2012).

⁹⁴ Shleifer, A./ Vishny, R. W., Journal of Finance, A Survey of Corporate Governance (1997).

⁹⁵ OECD, OECD Publishing, Board Member Nomination and Election (2012).

⁹⁶ Larcker, D. F., Board of Directors: Duties & Liabilities (2011).

able to access inside information, trust management and the board on their ability to make a decision beneficial to shareholders.⁹⁷ Optimal is a buyback decision that creates long-term value for shareholders by acquiring undervalued shares as elaborated in the chapter dealing with the undervaluation hypothesis.

Based on the previous findings in this chapter following assumptions can be made, that are later verified by case studies. Incentive contracts and the board of directors significantly influence the buyback decision. Wrongly negotiated incentive compensation could motivate the management to propose a repurchase of overvalued shares only to increase personal net worth. A compensation based on per share targets could be such a flawed compensation. This would give the manager the opportunity to directly influence the ratios by buying back shares and raise his pay. The manager would likely purchase shares whenever he would otherwise fail to reach the set target even when shares are overvalued. Intrinsic value would then be destroyed and investor money wasted.

The board to protect shareholder's assets should not approve such repurchases of overvalued shares. A board however that does not effectively represent shareholders interests could be harmful for the owners of the firm and approve such repurchases. That could be the case when a board is consisting of a majority of non-independent directors. Furthermore such a board, with its ability to decide on management compensation could influence the repurchase decision by negotiating a doubtful compensation package as mentioned above.

10. WHAT MAKES A SUCCESSFUL SHARE REPURCHASE?

The first part of this paper discussed the different ways eligible for corporations to repurchase their shares. Among those the most important ones are the open market repurchase, the fixed price tender offer and the Dutch auction tender offer. After having explained how share buybacks are executed major theories as to why companies repurchase shares were illustrated and the impacts that these theories have on the companies were outlined. Among those reasons the most important ones were the repurchase of shares due to an undervaluation and the signaling of the same, the increase of EPS, and the optimization of the capital structure.

⁹⁷ Allen, F./ Michaely, R., Payout Policy (2002).

Several other buyback reasons such as the dividend substitution will not be discussed further, but were mentioned to provide a more complete view of the subject.

Furthermore the agency theory was explicated. Agency theory is fundamental to every corporation and its stakeholders as agency theory defines the important relationship of owner and manager. It reveals major conflicts that when left unresolved can confront the corporation with significant cost.⁹⁸

Based on these theoretical findings factors that benefit the success of share repurchases can be derived. As previously stated a successful share repurchase in this paper is defined as a buyback program that creates shareholder value over the long-term (more than five years) and not just right after the announcement of such a program. The only possibility to achieve that kind of long-term value creation is according to the undervaluation hypothesis to repurchase shares trading below intrinsic value. Repurchasing shares below intrinsic value increases intrinsic value per share, which in the long-term share prices tend to reflect.⁹⁹ Effective signaling goes hand in hand with the undervaluation of share prices. The more management can be trusted on its committed to only repurchase undervalued shares the more effective signaling becomes.¹⁰⁰ But which factors have to be given ensuring that only undervalued shares are repurchased?

In the following factors that could provide answers to that question are compiled based on assumptions derived from the theoretical findings. Agency Theory gave two major levers that encouraged self-dealing opportunities for managers when wrongly applied. One of them being the incentive compensation and the other one monitoring instruments represented by the board of directors.¹⁰¹

Derived from the prior findings incentive compensation has to align shareholders and executives interests on a long-term appreciation in shareholder value. If that is the case own shares should only be acquired when they trade below intrinsic value. To make executives acting according to those interests compensation should contain a large part of equity in form of e.g. restricted stock or ESOs that

⁹⁸ Shleifer, A./ Vishny, R. W., *Journal of Finance*, A Survey of Corporate Governance (1997).

⁹⁹ Voss, J., *Major Themes in Economics*, Why Repurchase Stock? (2012).

¹⁰⁰ Voss, J., *Major Themes in Economics*, Why Repurchase Stock? (2012).

¹⁰¹ Eisenhardt, K. M., *Academy of Management Review*, Agency Theory (1989).

have to be held over the long-term. Furthermore performance, which the level of compensation is based upon, should not be measured by per share numbers that can be influenced by share repurchases such as ROE or EPS. If that is wished anyway the performance measurements should be adjusted for the repurchased shares, to take out their effect on the numbers. Otherwise executives would repurchase as many shares as possible whether or not they are overvalued.

Second the board of directors should consist of a high number of independent directors that are in no relationship to the executives. Those independent directors grant that repurchase decisions of the management are weighed soundly and are favorable to shareholders.

Furthermore a majority shareholder pursuing other interests than the creation of long-term shareholder value could be harmful to a successful share repurchase. This is the case because a majority shareholder can control the board and thus is able to influence executives. These executives then certainly perform the repurchase decision according to the majority shareholders intentions. If these intentions do not align with other shareholders, for those such a repurchase is likely to have a negative outcome.

Another necessary requirement should be that executives exactly know the intrinsic value of their firm to make a reasonable repurchase decision. An independent board and a correct compensation do not help if the management is not aware what their company really is worth. To tackle that problem it could be useful to tie the repurchase decision to a certain ratio such as BV and an adjusted P/E that resembles the value of the company effectively.

All these assumptions are verified by the following case studies.

11. INVESTIGATION METHODOLOGY

After having elaborated the factors of success for share repurchases case studies will be presented to verify the findings. These case studies address U.S. listed companies that carried out share repurchases in the past or are still active buyers of their own stock. To verify the developed success factors both negative and positive examples of share repurchases will be put forth.

Each case study has its own purpose and validates certain factors by either showing how not respecting the factors of success negatively influences the company and shareholder returns or how acting according to the findings produce a successful share repurchase.

The repurchase decisions will be investigated using SEC-filings such as annual reports, proxy statements, and other publicly accessible corporate information.¹⁰²

Since the impact of the repurchase decisions cannot be fully isolated from other forces influencing companies the results can be diluted and may not be universally applicable to every U.S. corporation. To further strengthen the thesis of that paper and prove the universal validity of the findings an empirical study surveying a large number of companies should be conducted.

However by the investigation of three different companies the author feels comfortable to provide broad guidelines that set a frameset for future successful share repurchases that create long-term value for shareholders.

12. CASE STUDIES

The following three case studies each provide evidence for different factors of success for share repurchases. The first case study deals with flawed incentive compensation and the resulting agency cost caused by buyback decisions at International Business Machines. The second case about Weight Watchers International points out the importance of an independent board and warns of dangers associated to a majority shareholder when own shares are acquired. Finally the Berkshire Hathaway case study gives a textbook example of a successful share repurchase program.

12.1. INTERNATIONAL BUSINESS MACHINES

This case study will pay special attention to how executive incentive compensation is affecting the buyback decision. Therefore executive compensation will be analyzed and its impact on share repurchases and the overall company performance will be illustrated. It will be exhibited how executive

¹⁰² All historical share price information is gathered from Google, Google Finance (not specified).

compensation can present significant agency cost to shareholders by triggering questionable share repurchase decisions.

International Business Machines Corporation (IBM), founded in 1911 and based in Armonk, New York is a company providing information technology (IT) solutions. IBM provides solutions to establish an IT-infrastructure, offers products for data storage, cloud services, data analytics and software such as operating systems. Additionally IBM through its global finance business is active in financing activities. Since 2012 Virginia M. Rometty is IBM's CEO and chairman of the board.¹⁰³

IBM has been a constant buyer of its own equity. In the early 90's IBM had over 2 billion shares outstanding¹⁰⁴, since then through repurchases the company has reduced that count to 1,04 billion in the first quarter of 2014¹⁰⁵. The chart below shows IBM's number of outstanding shares from the year of 1996 to 2013.

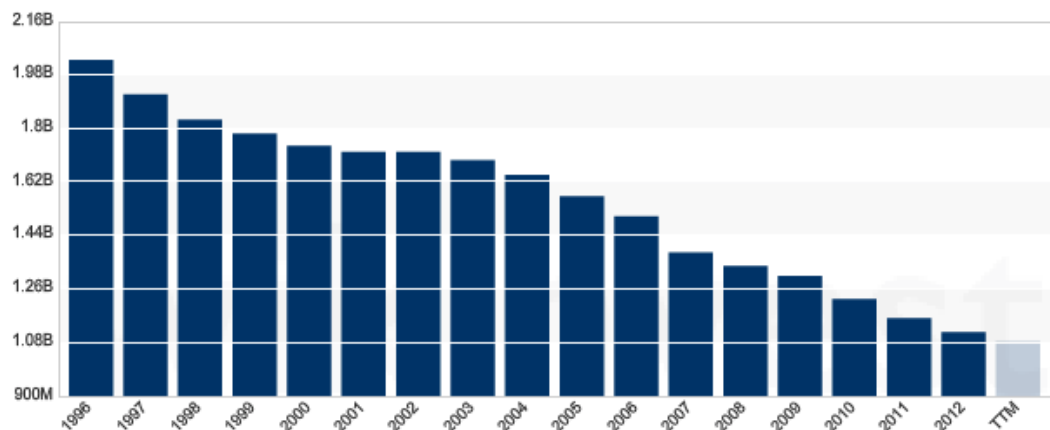


Figure 6: IBM Shares Outstanding

IBM's share price has performed very well during those years, beating the overall market by a wide margin. Figure 7 shows the performance of IBM shares in comparison to the returns of the Standard & Poor's 500 stock index (S&P500), which represents the fortune 500 listed companies in the U.S. from the beginning of 2009 to the end of 2013. IBM has outperformed the index in the period of 2009

¹⁰³ IBM Corp., Annual Report 2013 (2014).

¹⁰⁴ Berman, D. K., The Wallstreet Journal., Does IBM Love or Hate Itself? (2014).

¹⁰⁵ IBM Corp., Annual Report 2013 (2014).

to 2012. After that in 2013 things changed and IBM shares were down 2,1%, in a year where the S&P500 gained 29,7%.¹⁰⁶



Figure 7: IBM vs. S&P500 5-Year

To give a possible explanation of IBM's 2013 share price decline compensation and share repurchases are analyzed in the following. As assumed earlier unfavorable management compensation can lead to bad buyback decisions when the performance indicators are tied to per share ratios. At IBM top tier executives that perform capital allocation decisions are compensated according to such ratios.¹⁰⁷ Representative for IBM's top tier executive compensation practices the CEO's compensation for the FY2013 will be analyzed.

CEO compensation at IBM is consisting of three parts, a base salary, an annual incentive and the award of performance share units (PSU). The base salary represents a fixed amount that is not tied to performance, the annual incentive and the award of PSUs though depends on certain performance indicators. Compensation in 2013 was comprised of an 11% base salary and 89% performance based PSUs. An annual incentive was not granted (figure 8).¹⁰⁸

¹⁰⁶ Vlastelica, R., Wall St. ends best year since 1990s with moderate gains (2013).

¹⁰⁷ IBM Proxy Statement (2014).

¹⁰⁸ IBM Proxy Statement (2014).

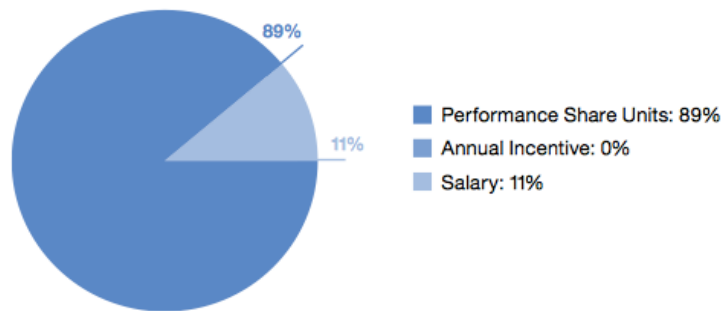


Figure 8: IBM 2013 CEO Compensation Components

The annual incentive is tied to goals regarding operating net income, revenue growth and free-cash-flow targets over a one-year period. Specific targets are not disclosed, as this information could be viable for competitors. However the annual incentive is a relatively small part when compared to the longer-term performance share units.¹⁰⁹

By far the biggest compensation component is the award of PSUs. One PSU equals one IBM share, thus the value of a PSU alters with the share price. The amount of PSUs granted is determined by the achievement of certain goals elaborated by the board of directors. Those goals are measured over a three-year period. In year one the CEO is awarded with a specific number of PSUs and three-year targets are defined. At the end of that three-year period the performance is compared to the initially set targets and PSUs are converted into shares of IBM and can then be sold for cash. If the targets are exceeded the granted amount is revised upwards, in case the performance falls short of, the number of awarded PSUs is reduced. Since PSUs represent the major element of the compensation, the CEO is strongly incentivized to meet or exceed those targets to maximize own net worth.¹¹⁰ At IBM the performance targets are tied to EPS with an 80% weight and to Free-Cash-Flow (FCF) weighted 20%¹¹¹, which makes increasing EPS the priority goal to achieve. That suggests that IBM's resources are fully dedicated to the major target of increasing EPS.¹¹²

Prior the impact of share repurchases on EPS was explained. EPS increase after a share buyback as the company's net income is divided by a now lower number of

¹⁰⁹ IBM Proxy Statement (2014).

¹¹⁰ IBM Proxy Statement (2014).

¹¹¹ FCF is comprised of the operating cash flow net the cash flow from investing

¹¹² IBM Proxy Statement (2014).

outstanding shares. Thus each share represents a bigger part of the earnings.¹¹³ Since at IBM the CEO is compensated primarily on EPS targets a safe and easy way to meet or exceed this goal is to repurchase shares.

The below cash flow statement for the last 10 years shows that share buybacks as an instrument to increase EPS have been used on a big scale. The net issuance of stock is defined as all the stock that has been issued minus the shares that have been repurchased. So the larger the negative number the more was spent on repurchases. That number so far was highest in FY11 where about net USD 15 billion were spent on repurchases. During that time EPS rose from USD 4.38 in 2004 to USD 14.94 in 2013.

Fiscal Period	Dec04	Dec05	Dec06	Dec07	Dec08	Dec09	Dec10	Dec11	Dec12	Dec13
Net Issuance of Stock	-5,361	-6,506	-6,399	-18,828	-10,578	-4,377	-11,601	-15,046	-10,455	-12,785
Net Issuance of Preferred S...	--	--	--	--	--	--	--	--	--	--
Net Issuance of Debt	-1,027	609	-122	12,112	-2,444	-7,463	2,350	2,370	2,252	6,961
Cash Flow for Dividends	-1,174	-1,250	-1,683	-2,147	-2,585	-2,860	-3,177	-3,473	-3,773	-4,058
Other Financing	--	--	--	4,123	3,773	--	-1	2,453	--	-1
Cash Flow from Financing	-7,562	-7,147	-8,204	-4,740	-11,834	-14,700	-12,429	-13,696	-11,976	-9,883
Earnings per Share (diluted) (\$)	4.38	4.87	6.11	7.18	8.89	10.01	11.52	13.06	14.37	14.94

Figure 9: IBM Cash Flow From Financing and Diluted EPS 10-Year

However as the compensation incentive is primarily to increase EPS as much as possible over a relatively short three-year period the operating business has lately suffered. To be able to fund the repurchase and buy back as much shares as possible and to achieve a high FCF during the three-year periods, capital expenditures (CAPEX) have been cut and long-term debt has risen.

CAPEX are expenditures to acquire assets that create future cash flows for the company. Usually a business needs CAPEX to grow both future revenues and earnings.¹¹⁴ However often the positive effects from CAPEX are not immediately reflecting in companies' revenues and earnings, which can be a reason why CAPEX are sacrificed in order to repurchase shares that instantly increase EPS and raise PSU awards. In the below statement CAPEX are represented as "purchase of property, plant and equipment". A high negative number indicates

¹¹³ Dobbs, R./ Rehm, W., Mc Kinsey & Company Member Edition, The value of share buybacks (2005).

¹¹⁴ Gabler, Gabler Wirtschaftslexikon CAPEX (not specified).

high CAPEX. In the last 10 years though investments at IBM were scaled back. The reduction in CAPEX also helped to grow FCF by increasing the cash flow from investing, which was the second target PSU compensation based upon.

Additionally to fund the share buybacks and increase EPS, long-term debt was used and therefore rose from USD 14,8 billion with a debt/total asset ratio of 0,13 in FY2004 to USD 32,9 billion and a debt/total asset ratio of 0,26 at the end of FY2013 as seen below.

Fiscal Period	Dec04	Dec05	Dec06	Dec07	Dec08	Dec09	Dec10	Dec11	Dec12	Dec13
Purchase Of Property, Plant...	-5056	-4634	-5166	-4630	-4171	-3447	-4185	-4108	-4082	-3623
Long-Term Debt	14828	15425	13780	23039	22689	21932	21846	22857	24088	32856

Figure 10: IBM CAPEX and Long-Term Debt 10 Year

As of late IBM's revenues started to decline and the reduction in CAPEX in favor of share buybacks could give an explanation for that (see below chart). Revenues peaked in FY2012 and are in a decline ever since. In 2013 IBM's share price followed that development, when it lost 2,1% when the S&P500 ended the year with strong gains.¹¹⁵

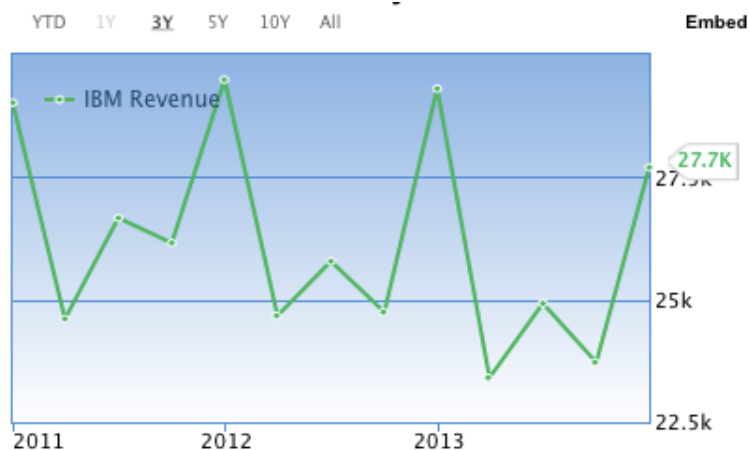


Figure 11: IBM Revenue Quarter on Quarter

¹¹⁵ Vlastelica, R., Wall St. ends best year since 1990s with moderate gains (2013).

Despite IBM's concerning negative revenue growth trend the CEO's PSU compensation in 2013 grew to USD 11,7 million, as EPS targets were reached due to the large share repurchase program.

That shows compensation based on short-term (three-year target period) EPS growth decouples the buyback decision from the creation of intrinsic value. A CEO compensated on EPS targets not only seeks to repurchase undervalued shares that increase intrinsic value, such compensation also incentivizes to repurchase overvalued shares as this is also lifting EPS. Repurchasing overvalued shares however destroys intrinsic value and harms shareholder value in the long-term.

Name And Principal Position (a)	Year (b)	Salary (\$)(c)	Bonus (\$)(d)	Performance Share Units ⁽¹⁾ (\$)(e)
V.M. Rometty	2013	\$1,500,000	\$0	\$11,703,869
Chairman, President and CEO	2012	1,500,000	0	9,259,000

Figure 12: 2013 IBM CEO Compensation

In conclusion that case study made obvious that short-term executive compensation based on EPS can present large agency cost to the shareholders of a company. EPS are positively influenced by share repurchases. Compensation on EPS thus incentivizes to repurchase as many shares as possible, whether or not they are undervalued. Furthermore the short-term focus on increasing EPS harm the business in the long-term, as CAPEX is cut back which is needed to grow a company. Such compensation also encourages using debt to fund repurchases to further boost EPS. In a crisis, when earnings decline, this additional debt could drive a company into financial distress.

Hence for a successful buyback it is essential to tie short-term compensation to numbers that cannot be influenced by share buybacks to prevent agency cost. However if EPS based compensation is wished for a particular reason, the repurchased shares should be taken out of the equation to calculate the EPS

relevant for the performance measurement. Another solution for a successful buyback despite of EPS based compensation is to equip equity compensation with long holding periods to be sure that executives do not sacrifice future growth by foregoing CAPEX for share repurchases to get an immediate EPS boost.

12.2. WEIGHT WATCHERS INTERNATIONAL

Weight Watchers International Inc. is a New York based company providing weight management services. It is best known for its Weight Watchers branded point system that is supposed to help people lose weight. It also tries to support people losing weight through group meetings by offering food plans, instructions for exercising and healthy behavior. Instructors having lost weight themselves by attending Weight Watcher meetings run these meetings. Every week about 40.000 people are attending 10.000 Weight Watchers meetings.¹¹⁶

In 1999 H.J. Heinz sold Weight Watchers to Artal Group for USD 735 million in a leveraged buyout transaction (LBO).¹¹⁷ LBO's are company deals financed by high amounts of debt, which are then paid down by the acquired company's earnings. To reap a significant profit the company is then sold out to other investors.¹¹⁸ After its acquisition Artal Group brought Weight Watchers public in a 2001 initial public offering (IPO). It then has sold almost half of its Weight Watcher stake for a large profit and is as of today holding approximately 52% ownership in the company.¹¹⁹

In 2012 Weight Watchers conducted a share buyback that will be examined in this case study. Particular interest will be paid to the agency cost related to a non-independent board of directors and to a majority shareholder such as Artal in that case.

Prior to the share buyback of 2012 Artal held a control stake in Weight Watchers of approximately 52%.¹²⁰ According to Weight Watchers corporate governance statues and its ownership stake Artal controls the board of directors since Artal is

¹¹⁶ Weight Watchers Inc. Investor Relations: Company Overview (2013).

¹¹⁷ Vardi, N., The Mystery Man Behind the Weight Watchers Deal (2012).

¹¹⁸ Investopedia, Leveraged Buyout - LBO (not specified).

¹¹⁹ Vardi, N., The Mystery Man Behind the Weight Watchers Deal (2012).

¹²⁰ Weight Watchers Inc. 10-K Annual Report 2012 (2013).

able to nominate a number of directors equal to their percentage of ownership, giving them the ability to compose the board in their favor (see below figure).¹²¹

5. Artal Nominees

Under the terms of the Corporate Agreement, dated as of November 5, 2001 (the “Corporate Agreement”), between the Company and Artal Luxembourg S.A. and its affiliates (“Artal”), so long as Artal beneficially owns 10% or more, but less than a majority of the then outstanding shares of common stock of the Company, Artal has the right to nominate for election to the Board a number of directors approximately equal to its ownership percentage multiplied by the number of directors on the Board. This right, however, does not restrict Artal from nominating a greater number of directors. Artal also has the sole right under the Corporate Agreement to fill any vacancy resulting from an Artal designee ceasing to serve on the Board. In the event that the total number of directors on the Board is increased or decreased, the number of directors that Artal has the right to nominate will be increased or decreased so that the resulting ratio of Artal designees to total directors is not less than the ratio of Artal designees to total directors immediately before such increase or decrease.

Figure 13: Weight Watchers Board of Directors Artal Nominees

Since Artal holds the majority of voting shares they are able to approve the nominated directors in a vote, which gives Artal full control over manager compensation and incentives. The below excerpt of the corporate governance guidelines that lines out the functions of the board of Weight Watchers proves that.

-
- select, evaluate and, through the Compensation and Benefits Committee and the Company’s independent directors, set the compensation of, the Chief Executive Officer (the “CEO”);
 - review and approve compensation of other executive officers through the Compensation and Benefits Committee;

Figure 14: Weight Watchers Board of Directors and CEO Compensation

The Weight Watchers board constituent of the Artal nominees has granted stock options to its CEO David Kirchoff in the years of 2005 and 2006 as an incentive. The total amount of options granted during those years accounted for 187,500 Weight Watchers shares.¹²² Artal hereby aligned its own and the CEO’s interests. In the following both parties would profit from a rising share price.

¹²¹ Weight Watchers Inc. Corporate Governance Guidelines (2014).

¹²² Weight Watchers Inc. Statement of Changes in Beneficial Ownership of Securities (2012).

Name	Age	Since	Current Position
Raymond Debbane	58	1999	Chairman of the Board
James Chambers	55	2013	President, Chief Executive Officer, Director
Nicholas Hotchkin	47	2012	Chief Financial Officer
Lesya Lysyj		2013	President, North America
Bruce Rosengarten	54	2011	President, Asia Pacific
Ann Hollins		2013	Chief Human Resource Officer
Dan Crowe		2013	Chief Technology Officer
Philippe Amouyal	54	2002	Director
Jonas Fajgenbaum	40	1999	Director
Sacha Lainovic	56	1999	Director
Christopher Sobecki		1999	Director
Steven Altschuler	59	2012	Independent Director
John Bard	71	2002	Independent Director
Cynthia Elkins	48	2014	Independent Director
Marsha Evans	65	2002	Independent Director
Corey Kinger			IR Contact Officer

Figure 15: Weight Watchers Board of Directors Composition

Weight Watchers steadily increased its revenues from USD 1.412 billion in fiscal year (FY) 2009 to USD 1.839 billion in FY 2012. Net income however peaked at the end of FY 2011 with Weight Watchers earning USD 304,9 million and significantly decreased in the following years. Revenues also followed the decline in FY 2013, as seen in the excerpt below.

	Fiscal 2013	Fiscal 2012	Fiscal 2011	Fiscal 2010	Fiscal 2009
	(\$ million)	(\$ million)	(\$ million)	(\$ million)	(\$ million)
Revenues, net ⁽¹⁾	\$ 1,724.1	\$ 1,839.4	\$ 1,832.5	\$ 1,464.1	\$ 1,412.6
Net income attributable to the Company	\$ 204.7	\$ 257.4	\$ 304.9	\$ 194.2	\$ 177.3
Working capital (deficit)	\$ (30.1)	\$ (229.9)	\$ (279.7)	\$ (348.7)	\$ (336.1)
Total assets	\$ 1,408.9	\$ 1,218.6	\$ 1,121.6	\$ 1,092.0	\$ 1,087.5
Long-term debt	\$ 2,358.0	\$ 2,291.7	\$ 926.9	\$ 1,167.6	\$ 1,238.0
Earnings per share:					
Basic	\$ 3.65	\$ 4.27	\$ 4.16	\$ 2.57	\$ 2.30
Diluted	\$ 3.63	\$ 4.23	\$ 4.11	\$ 2.56	\$ 2.30
Dividends declared per common share	\$ 0.53	\$ 0.70	\$ 0.70	\$ 0.70	\$ 0.70

Figure 16: Weight Watchers Key Numbers 2009-2013

The growth in revenues and net income was accompanied by a large increase in share price, which rose from below USD 20 in 2009 to above USD 80 in 2011. In 2012 after it became obvious for investors that net income and revenues would decrease in the following years the share price steadily declined marking a low of USD 19.50 at the beginning of this year.



Figure 17: Weight Watchers Share Price 5 Year

As common in LBO transactions the investor (Artal) wants to cash out at the highest price possible. The management equipped with stock options also profits from high share prices. This is why in 2012 the board, controlled by Artal directors, approved a Dutch auction tender offer to repurchase shares near its all time highs; even shares were significantly overvalued as the current share price (approx. USD 20) indicates.

2012 Tender Offer and Share Repurchase

On February 23, 2012, we commenced a “modified Dutch auction” tender offer for up to \$720.0 million in value of our common stock at a purchase price not less than \$72.00 and not greater than \$83.00 per share, or the Tender Offer. Prior to the Tender Offer, on February 14, 2012, we entered into an agreement, or the Purchase Agreement, with Artal Holdings whereby Artal Holdings agreed to sell to us, at the same price as was determined in the Tender Offer, such number of its shares of our common stock that, upon the closing of this purchase after the completion of the Tender Offer, Artal Holdings’ percentage ownership in the outstanding shares of our common stock would be substantially equal to its level prior to the Tender Offer. Artal Holdings also agreed not to participate in the Tender Offer so that it would not affect the determination of the purchase price of the shares in the Tender Offer. The Tender Offer expired at midnight, New York time, on March 22, 2012, and on March 28, 2012 we repurchased approximately 8.8 million shares at a purchase price of \$82.00 per share. On April 9, 2012, we repurchased approximately 9.5 million of Artal Holdings’ shares at a purchase price of \$82.00 per share pursuant to the Purchase Agreement. In March 2012, we amended and extended the WWI Credit Facility to finance these repurchases.

Figure 18: Weight Watchers Share Repurchase Conditions

In 2012 on February 23rd Weight Watchers initiated what they called a “modified Dutch auction” and asked shareholders to determine a share price upon which they would agree to sell shares worth USD 720 million to the company. A very high range was set up by the board, to Artal’s benefit, of USD 72 per share up to USD 83 per share. The auction resulted in an USD 82 price for each share tendered to Weight Watchers. Prior to the announcement of the buyback Artal as a majority shareholder agreed not to participate in the auction and the tender offer

because they did not want to influence the purchase price. Simultaneously however, the Weight Watchers board agreed to acquire for the same price determined in the tender offer (USD 82 per share) as much shares from Artal that they would hold an equal ownership stake in Weight Watchers as prior to the tender offer, as figure 18 indicates.

Consequently Weight Watchers had to buy back 8.8 million shares for USD 82 each from shareholders other than Artal for a total of about USD 720 Mio.

$$\textit{Tender offer} = 8.8 \textit{ million} * \$82 = \$721,6 \textit{ million}$$

And since they agreed on purchasing as much Artal shares as needed to keep Artal's stake in the company at 52%, Weight Watchers had to acquire another 9.5 million shares for USD 82 each costing the company USD 779 million.

$$\textit{Artal offer} = 9.5 \textit{ million} * \$82 = \$779 \textit{ million}$$

The total cost for the repurchase therefore is USD 1.500,6 million. Cash and equivalents on the balance sheet that could be used to fund the buyback accounted for USD 47,47 million and 2011 free-cash-flow (FCF) was at USD 356,68 million. Together they equaled only USD 404,15 million, by far not sufficient to cover the total repurchase cost of USD 1,5 billion. Hence Weight Watchers had to take on debt to be able to finance the buyback, which the Artal controlled board also acknowledged (figures 19,20).

$$\textit{FCF} = \textit{operating cashflow} + \textit{cash flow from financing activities}$$

$$2011 \textit{ FCF} = \$401,89 \textit{ million} - \$45,21 \textit{ million} = \mathbf{\$356,68 \textit{ million}}$$

WEIGHT WATCHERS INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS AT
(IN THOUSANDS)

December 31,
2011

ASSETS

CURRENT ASSETS

Cash and cash equivalents	\$ 47,469
---------------------------------	-----------

Figure 19: Weight Watchers Cash and Equivalents

WEIGHT WATCHERS INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE FISCAL YEARS ENDED
(IN THOUSANDS)

	<u>December 31,</u> <u>2011</u> <u>(52 Weeks)</u>	<u>January 1,</u> <u>2011</u> <u>(52 Weeks)</u>	<u>January 2,</u> <u>2010</u> <u>(52 Weeks)</u>
Operating activities:			
Cash provided by operating activities	401,889	281,484	265,506
Investing activities:			
Capital expenditures	(21,750)	(9,137)	(12,349)
Capitalized software expenditures	(23,086)	(13,057)	(11,090)
Other items, net	(374)	(6,452)	(188)
Cash used for investing activities	(45,210)	(28,646)	(23,627)

Figure 20: Weight Watchers Cash Flow Statement

At the beginning of 2012, approved by the board of directors, Weight Watchers therefore took on USD 1.449 million of debt to acquire stock from Artal and other Shareholders that participated in the tender offer for a total of USD 1.504 million (figure 21).

WEIGHT WATCHERS INTERNATIONAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE FISCAL YEARS ENDED
(IN THOUSANDS)

	<u>December 29,</u> <u>2012</u> <u>(52 Weeks)</u>	<u>December 31,</u> <u>2011</u> <u>(52 Weeks)</u>	<u>January 1,</u> <u>2011</u> <u>(52 Weeks)</u>
Financing activities:			
Proceeds from new term loans	1,449,397	0	0
Net borrowings/(payments) on revolver	30,000	(174,000)	46,000
Payments on long-term debt	(124,833)	(139,285)	(133,915)
Payment of dividends	(51,961)	(51,624)	(53,409)
Payments to acquire treasury stock	(1,504,189)	(34,924)	(106,617)

Figure 21: Weight Watchers Debt Issuance and Share Repurchase

According to the SEC 10k filing of 2012 the two buybacks were conducted March 28th and April 29th of 2012¹²³. By that time Weight Watchers revenue growth has already stalled and net income decreased 25% from 1st quarter 2011 on higher marketing and SG&A (Sales, general and administrative) expenses according to the SEC 10q filing of the 1st quarter of 2012. By that time a board that is not controlled by a majority shareholder could have questioned this debt funded buyback at that elevated price of USD 82 per share. To justify a share price of USD 82 growth was necessary. The share price chart showed earlier above provides a very good picture of the overvaluation. With the release of the 1st quarter results of 2012 on 10th of May 2012 the share price started its downward movement and in the following went down to USD 20 a share.

	Three Months Ended	
	March 31, 2012	April 2, 2011
Meeting fees, net	\$252,508	\$268,912
Product sales and other, net	124,082	142,555
Internet revenues	126,945	91,965
Revenues, net	503,535	503,432
Cost of meetings, products and other	199,444	207,189
Cost of Internet revenues	15,726	13,101
Cost of revenues	215,170	220,290
Gross profit	288,365	283,142
Marketing expenses	130,318	95,665
Selling, general and administrative expenses	55,273	51,746
Operating income	102,774	135,731
Interest expense	13,167	18,173
Other income, net	(509)	(470)
Early extinguishment of debt	1,328	0
Income before income taxes	88,788	118,028
Provision for income taxes	34,183	44,851
Net income	54,605	73,177

Figure 22: Weight Watchers Income Statement Q1 2012

But not only Artal and other share holders that sold their shares to the repurchase program profited. Also Weight Watchers CEO David Kirchhoff used the self-created opportunity to exercise a part of his stock options that were granted to him as part of an incentive contract and sold the acquired shares on March 16th 2012. The form below filed with SEC shows the CEO's trades. Stock options to acquire a total of 80.275 shares were exercised, and disposed for USD 80,68 and respectively USD 81,28 a share. With the cost to acquire those shares of USD

¹²³ Weight Watchers Inc., 10-K Annual Report 2011 (2012).

42,08 to USD 53,03 the CEO made a large profit from those transactions (figure 23).

2. Trans. Date	2A. Deemed Execution Date, if any	3. Trans. Code (Instr. 8)		4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		
		Code	V	Amount	(A) or (D)	Price
3/16/2012		M		37500	A	\$53.03
3/16/2012		M		37500	A	\$42.08
3/16/2012		M		5275	A	\$52.12
3/16/2012		S ⁽¹⁾		61165	D	\$80.68 ⁽²⁾
3/16/2012		S ⁽¹⁾		300	D	\$81.28 ⁽³⁾

Figure 23: Weight Watchers CEO-dealings

The previous findings clearly show that Artal and its executives profited largely from the share buyback at overvalued prices by selling equity holdings. The equity compensation granted to the CEO by the Artal controlled board of directors incentivized to drive up the share price by buying back, overvalued stock.

However there are shareholders other than Artal that continued to hold on to their shares in Weight Watchers. Those shareholders, until the beginning of April 2014, lost about 80% on their stock if they had bought into the company when the repurchase was conducted. Instead of a positive return due to the repurchase that usually signals an undervaluation they would have lost almost their entire investment and now hold shares of a highly levered company with negative equity. Earnings and revenues further decreased in 2013 and showed no sign of returning to growth so far. Reaching share prices north of USD 82 in the future seems very unlikely.

LIABILITIES AND TOTAL DEFICIT	
CURRENT LIABILITIES	
Portion of long-term debt due within one year	\$ 114,695
Accounts payable	49,349
Salaries and wages payable	56,490
UK self-employment liability	7,272
Derivative payable	13,871
Accrued marketing and advertising	27,437
Other accrued liabilities	92,580
Deferred revenue	86,161
TOTAL CURRENT LIABILITIES	447,855
Long-term debt	2,291,669
Deferred income taxes	129,431
Other	15,111
TOTAL LIABILITIES	2,884,066
Commitments and contingencies (Note 13)	
TOTAL DEFICIT	
Common stock, \$0 par value; 1,000,000 shares authorized; 111,988 shares issued	0
Treasury stock, at cost, 56,234 shares at December 29, 2012 and 38,390 shares at December 31, 2011	(3,281,831)
Retained earnings	1,603,513
Accumulated other comprehensive income	12,859
TOTAL DEFICIT	(1,665,459)
TOTAL LIABILITIES AND TOTAL DEFICIT	\$ 1,218,607

Figure 24: Weight Watchers Balance Sheet After the Buyback

Summarized continuing shareholders that did not participate in the repurchase had to pay for Artal's and the executives' profit. The share repurchase destroyed a lot of value as each Weight Watchers share is now worth significantly less than prior to the buyback.

Major shareholders at first glance seem like a good thing as they can strongly represent shareholder's interest in the board of the company. But if there is a majority shareholder that fully controls the board, which is in significant conflict of interests with the other shareholders, such as Artal, can bear large agency costs for the minority shareholders. The conflict of interests at Weight Watchers was based and still bases on the fact that Artal has short term profit interest in Weight Watchers. They want to cash out as quickly and at a high as possible share price, whereas other shareholders are likely to have long-term interest in the company.

But not only a majority shareholder that is in control of the board poses a threat of large agency cost in association with share repurchases, also a board with a majority of non-independent directors nominated contains that risk. If that is the

case and the board is controlled by a high number of executive directors, that are both manager and director, the company is very likely to pursue interests of the executives. For the buyback decision that implies buybacks wouldn't be used as an instrument to increase long-term value for the continuing shareholder but to raise compensation of executives.

Hence for successful buybacks an independent board that has committed itself to the goal of increasing long-term shareholder value is essential.

12.3. BERKSHIRE HATHAWAY

The previous case studies suggested that a non-independent board and incentive compensation based on per share ratios such as EPS is contradictory to a successful share buyback.

Berkshire Hathaway, a holding company, makes a good example of how to extract long-term value for shareholders by buying back stock.

Berkshire Hathaway Inc. is an Omaha, Nebraska based holding company. The firm holds subsidiaries active in various industries. These include insurance and reinsurance, transportation, energy utilities, financial, manufacturing and services and retail businesses. The managers of the Berkshire Hathaway subsidiaries make operating decisions for the companies they are running. Investment decisions and decisions on capital allocation for Berkshire Hathaway and its subsidiaries are made by or after consultation with CEO and chairman of the board and Warren E. Buffett and Vice Chairman of the board Charles T. Munger.¹²⁴

Buffett as of July 5th 2013 owns 336.000 common Class A, and 1.567.907 common Class B shares in Berkshire Hathaway giving him a voting power of 34,08% and a 20,5% economic interest in the company (figure 25). Those values differ as class B shares have inferior voting power when compared to the class A share (1 class B shares represents 1/1.500th class A share, but 1 class B shares only has 1/10.000th of the voting rights of a class A share)¹²⁵. Buffett as the CEO

¹²⁴ Berkshire Hathaway Inc. Annual Report 2013 (2014).

¹²⁵ Buffett, W. E., Berkshire Class A and Class B Stock (1999).

of the company holds that many shares, as he was the founder of the partnership that was Berkshire Hathaway Inc.'s predecessor.¹²⁶

The market capitalization (CAP) of Berkshire Hathaway, which is shares outstanding times share price, is about USD 300 billion as of April 10th 2014.

$$CAP = \text{Shares Outstanding} * \text{Share Price}$$

$$CAP = 1.643.613 (\text{Class A}) * \$183.212 = \$301,13 \text{ billion}$$

According to the current share price of USD 183.212 (Class A) and USD 122,29 (Class B) as of April 15th 2014 the CEO's personal holdings equal USD 61,75 billion.

$$\text{Personal Holdings CEO} = 336.000 * \$183.212 + 1.567 \text{ million} * \$122,29$$

$$= \$61,75 \text{ billion}$$

Unlike with the Weight Watchers case this very large holding does not represent a majority of voting rights (34,08%) and hence prevents the board of directors from being controlled by a single large shareholder.

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7	SOLE VOTING POWER 336,000 shares of Class A Common Stock owned directly and beneficially by Mr. Buffett 1,567,907 shares of Class B Common Stock owned directly and beneficially by Mr. Buffett
	8	SHARED VOTING POWER 0
	9	SOLE DISPOSITIVE POWER 336,000 shares of Class A Common Stock owned directly and beneficially by Mr. Buffett 1,567,907 shares of Class B Common Stock owned directly and beneficially by Mr. Buffett
	10	SHARED DISPOSITIVE POWER 0
11	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 336,000 shares of Class A Common Stock 1,567,907 shares of Class B Common Stock	
12	CHECK IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES <input type="checkbox"/>	
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 38.60% of the outstanding shares of Class A Common Stock 0.14% of the outstanding shares of Class B Common Stock 34.08% of the aggregate voting power of the outstanding shares of Class A Common Stock and Class B Common Stock 20.50% of the economic interest of the outstanding shares of Class A Common Stock and Class B Common Stock	

Figure 25: Berkshire Hathaway, Mr. Buffett Personal Holdings

¹²⁶ Livy, J., Warren Buffett: a short biography (2013).

Berkshires’ board of directors consists of 12 members of which 8 are independent (Figure 26). Therefore Berkshire Hathaway’s board, which is approved by shareholder vote, can be trusted to defend the interests of shareholders in the decision making process.

Name	Age	Since	Current Position
Warren Buffett	84	1970	Chairman of the Board, Chief Executive Officer
Charles Munger	89	1978	Vice Chairman of the Board
Marc Hamburg	64	2008	Senior Vice President
Howard Buffett	59	1993	Director
Ronald Olson	73	1997	Director
Stephen Burke	55	2009	Independent Director
Susan Decker	51	2007	Independent Director
William Gates	58	2005	Independent Director
David Gottesman	87	2003	Independent Director
Charlotte Guyman	56	2003	Independent Director
Donald Keough	86	2003	Independent Director
Thomas Murphy	53	2003	Independent Director
Walter Scott	81	1988	Independent Director

Figure 26: Berkshire Hathaway Board of Directors Composition

Both the large equity holding in the company by the CEO and Chairman and the independent board of directors provide an optimal frameset for the generation of long-term shareholder value.

On the one hand the equity stake of the CEO is not large enough for him to be able to take over full control of the board and on the other hand the stake is too big to realize short-term profits by selling out a significant part of the holdings on the market. That is the case because selling out a large part of the holding would drive down the share price sharply as there would be an excess of supply of shares that would not find a buyer. The inability to quickly take profit from short-term share price appreciation provides the optimal incentive contract for a CEO to deal in the interest of shareholders. Any action that is harming intrinsic value in the long-term also negatively impacts the CEO’s net worth.

Prior to 2011 Berkshire Hathaway has never made a commitment repurchase its own stock. Therefore Berkshire Hathaway according to CEO Buffett has ceased some chances to increase the company's per share intrinsic value by repurchasing shares. In September 2011 that changed. Berkshire Hathaway announced its first share repurchase program. The company approved to repurchase own stock every time the share price would fall below 110% of book value. It was announced that the repurchase would stop should cash reserves fall below USD 20 billion.¹²⁷

It was explicated earlier that only repurchases of shares below intrinsic value increase intrinsic value per share. As an insider with all of the company's information at hand the CEO explained that when shares are traded below that 110% threshold they are priced at a large discount to a conservatively calculated intrinsic value. Thus below or at that price share repurchases significantly benefit shareholders long-term.¹²⁸ The chart below is strengthening that thesis. The average price-to-book value from 1999 to 2012 indicated by the red line in the below chart suggests that the company is fair intrinsic value is at about 1.5 times book value. So a share price, which is 110% of book value, represents a meaningful discount to intrinsic value and a favorable repurchasing price.

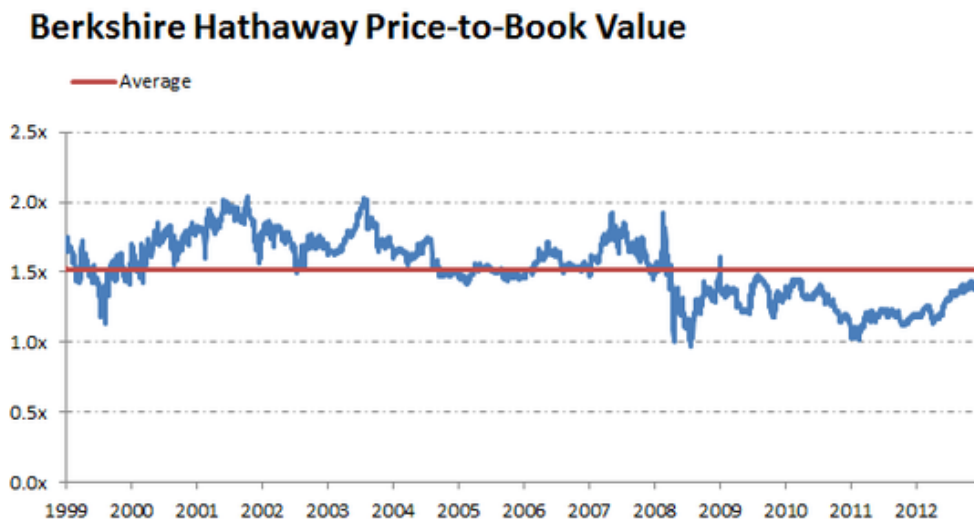


Figure 27: Berkshire Hathaway Price-to-Book Value

¹²⁷ Buffett, W. E., Letter to Shareholders 2011 (2012).

¹²⁸ Buffett, W. E., Letter to Shareholders 2011 (2012).

Following to the buyback announcement the company was able to repurchase stock worth USD 67 million before the share price went back above the 110% book value threshold, which would equal about 670 class A shares assumed an average price of USD 100.000.¹²⁹ However 670 shares less outstanding hardly increase intrinsic value of the business. Furthermore the repurchase effect was offset by the issuance of shares worth USD 355 million.

This is also the reason why at the end of 2012 the threshold for repurchasing shares was lowered to 120% book value. At 1.2 times book value per share the Berkshire management still saw shares undervalued.¹³⁰ Given the average share price was about at 1.5 price-to-book from the years of 1999 to 2012 that seems credible. Following to that announcement the company could repurchase shares for USD 1.296 million below the threshold of 1.2 times book value per share as seen in the statement of changes in equity below.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY						
<i>(dollars in millions)</i>						
	Berkshire Hathaway shareholders' equity					
	Common stock and capital in excess of par value	Accumulated other comprehensive income	Retained earnings	Treasury stock	Non-controlling interests	Total
Balance at December 31, 2010	\$37,541	\$20,583	\$ 99,194	\$ —	\$ 5,616	\$162,934
Net earnings	—	—	10,254	—	492	10,746
Other comprehensive income, net	—	(3,005)	—	—	(107)	(3,112)
Issuance (repurchase) of common stock	355	—	—	(67)	—	288
Transactions with noncontrolling interests	(81)	76	—	—	(1,890)	(1,895)
Balance at December 31, 2011	37,815	17,654	109,448	(67)	4,111	168,961
Net earnings	—	—	14,824	—	488	15,312
Other comprehensive income, net	—	9,846	—	—	15	9,861
Issuance (repurchase) of common stock	118	—	—	(1,296)	—	(1,178)
Transactions with noncontrolling interests	(695)	—	—	—	(673)	(1,368)
Balance at December 31, 2012	37,238	27,500	124,272	(1,363)	3,941	191,588
Net earnings	—	—	19,476	—	369	19,845
Other comprehensive income, net	—	16,546	—	—	25	16,571
Issuance of common stock	92	—	—	—	—	92
Transactions with noncontrolling interests	(1,850)	(21)	—	—	(1,740)	(3,611)
Balance at December 31, 2013	<u>\$35,480</u>	<u>\$44,025</u>	<u>\$143,748</u>	<u>\$(1,363)</u>	<u>\$ 2,595</u>	<u>\$224,485</u>

Figure 28: Berkshire Hathaway Statements of Changes in Shareholders' Equity

The USD 1.296 million reduced the company's share count by a total of 9.879 class A shares¹³¹. After the repurchase, as seen in the statement of changes in

¹²⁹ Buffett, W. E., Letter to Shareholders 2011 (2012).

¹³⁰ Buffett, W. E., Letter to Shareholders 2012 (2013).

¹³¹ 606.499 Class B shares were repurchased, which equal 404 Class A shares are factored into the number

equity the company wasn't able to repurchase any shares below its threshold in FY 2013 as its share price advanced well above that level¹³².

The diagram below illustrates the whole buyback program starting in December 2011 until today. Shares were bought back whenever the blue share price line crossed below the red threshold line (red marks). The green line shows the book value per share. After December 2012 the 120% book value level has never been crossed hence no additional repurchases were executed.

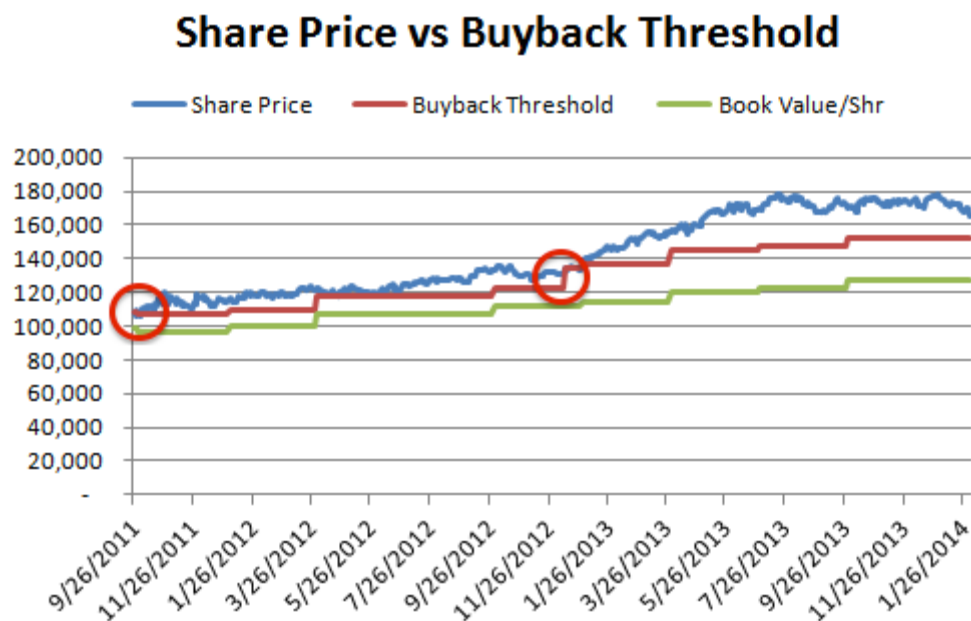


Figure 29: Berkshire Hathaway Repurchase Threshold

Setting a threshold above which shares cannot be repurchased not only prevents from overpaying for shares and destroying intrinsic value it is also an effective signal to markets. The commitment to repurchase shares below that threshold communicates a minimum value that the executives think the company is worth. Consequently short after the repurchase announcements in 2011 and late 2012 the share price pushed higher. Markets highly valued the signaling of the company as the CEO who decided on the buyback and the threshold has significant interest in buying undervalued shares because of his large personal equity stake.

In the following an estimate of the approximate impact that the share repurchase of late 2012 has had on the intrinsic value of the company will be given. The

¹³² Berkshire Hathaway Inc. Annual Report 2013 (2014).

calculation is based on the assumption that intrinsic or fair value of the company is at 1.4 times the company's book value. This is below the average price of 1.5 times book value from 1999-2012 and thus a conservative number. The annual report of 2013 shows that 9879 class A shares worth USD 1.296 million have been repurchased in 2012.¹³³ That makes an average repurchase price of 131.187 per class A share.

$$\text{Average Repurchase Price} = \$1.296 \text{ million} / 9879 = 131.187$$

As the repurchase occurred in December 2012, the book value by end of FY2012 plus the amount spent on the repurchase will be used to calculate the estimated intrinsic value prior to the buyback. This has to be done as repurchases reduce shareholders equity and consequently reduce book value. Book value at the end of FY2012 was USD 191.588 million, after adding back the USD 1.296 million for repurchases the adjusted book value is USD 192.884 million. In per share numbers that equals USD 116.807 per share calculated with an average of 1.651.294 Class A shares outstanding in FY2012. 1.651.294 will also be used as the number of shares outstanding before the buyback. However the number should be slightly higher as the average outstanding share count of FY2012 includes one month with the reduced shares outstanding after the buyback.¹³⁴

The company's estimated intrinsic value conservatively calculated is USD 270.037 million.

$$\text{Intrinsic Value} = BV * 1,4$$

$$\text{Intrinsic Value} = \$192.884 \text{ million} * 1,4 = \$270.037$$

After the repurchase intrinsic value decreases as USD 1.296 million were spent on the buyback. However as low yielding cash was used to fund the buyback the interest payments that are foregone do not significantly reduce the businesses intrinsic value.¹³⁵ Nevertheless to be on the conservative side the present value of

¹³³ Berkshire Hathaway Inc. Annual Report 2013 (2014).

¹³⁴ Berkshire Hathaway Inc. Annual Report 2013 (2014).

¹³⁵ Buffett, W. E., Letter to Shareholders 2011 (2012).

the cash spent on the buyback will be subtracted of the intrinsic value. To estimate the present value a yield on the funds of 2% and WACC are 10% assumed. Berkshire Hathaway's intrinsic value after the buyback therefore is \$269.713 million.

$$PV\ Cash = \frac{\$1.296\ million * 0,02}{0,1 - 0,02} = \$324\ million$$

$$\begin{aligned} Intrinsic\ Value\ After &= \$270.037\ million - \$324\ million \\ &= \$269.713\ million \end{aligned}$$

To arrive at the number of outstanding shares after the buyback the ante buyback share count has to be reduced by 9879. That makes 1.641.415 post buyback shares outstanding and is almost in line with the numbers from the annual report.

USD	Before Buyback	After Buyback
Intrinsic Value (1,4 BV)	270.037 million	269.713 million
Shares Outstanding	1.651.294	1.641.415
Intrinsic Value / Share	163.531	164.317
Repurchase Price	131.187	
Shares Repurchased	9.879	

Table 11: Berkshire Hathaway Intrinsic Value per Share

Computed on a conservative basis the repurchase increased the intrinsic value per share from USD 163.531 to USD 164.317. As of April 2014 the share price has significantly surpassed that level and is now trading at USD 185.640 a share (16.04.14), which is another increase that shares have been acquired below intrinsic value.

Summarizing the findings of the Berkshire Hathaway buyback several success factors for share buybacks can be derived. It is beneficial for the buyback decision when the CEO and other executives have a major exposure to the equity of the company. A large position helps to focus the executives on long-term value creation instead of short-term self-dealing, as holdings cannot be cashed out

quickly. An alternative to a very large direct stake in the equity would be the award of RSUs or ESOs equipped with selling restrictions of several years (more than 5), which would also incentivize managers to pursue repurchases that increase the firms' intrinsic value and consequently increase the share price.

Another finding is that the holders of the large equity stake should not have total control of the board. Berkshire Hathaway has a mostly independent board of directors, which can assess the management decisions in favor of all shareholders. Such a board can compensate the management adequately in order to pursue long-term value creation (e.g. awarding RSUs or ESOs with long holding periods) or it can hinder the management from proceeding with repurchases of overvalued stock and other value destroying activities.

Beneficial and very helpful for the repurchase decision is the determination of a threshold above which shares cannot be repurchased anymore. The management should have a clear opinion on what its company is worth. It therefore should tie the repurchase decision closely to an appropriate ratio that best reflects the value of the business. Price-to-book is a telling ratio for holding companies, other companies would fare better with different ratios such as P/E. Anytime the ratio threshold is undercut shares should be repurchased. By that the management would make sure that every time shares are repurchased intrinsic value is increased. Such a repurchase tied to a threshold is also an effective signal to markets as it sets a floor to the share price. The firm communicates it is worth at least the amount at which it starts repurchasing shares. Executives holding large equity positions enhance the strength of that signal, as they would suffer along with other shareholders from bad buyback decisions.

13. RESULTS AND CONCLUSIONS

The three case studies strengthen the significance of the elaborated factors of success for share repurchases.

This paper developed several main drivers for successful share repurchases. Critical is an independent board that freely determines management compensation and monitors behavior, executive compensation has to incentivize long-term value creation and should not be increasable by share repurchases. Additionally a majority shareholder that has differing interests from the other owners of a

company hinders the successful execution of share repurchases. Ultimately to further prevent an acquisition of overvalued stock setting thresholds, tied to ratios reflecting the company value, above which shares do not qualify for a repurchase benefits the buyback decision and effectively communicates a minimum company value to the markets.

The findings of this paper provide strong evidence whether or not future share repurchase programs create long-term value for shareholders. Assuming a company, which initiates a share repurchase, respects all of the above success factors chances are high that shareholder value increases in the long-term. However if none of those factors prevail at company that buys back its equity, long-term shareholders should be aware of the high risk of an unfavorable outcome and are advised to critically question the repurchase decision.

14. BIBLIOGRAPHY

Literature:

- Allen, F. & Michaely, R. 2002. Payout Policy. <http://fic.wharton.upenn.edu/fic/papers/01/0121.pdf> (Accessed 10.04.2014).
- Amromin, G., Harrison, P., Liang, N., et al. 2005. How Did the 2003 Dividend Tax Cut Affect Stock Prices and Corporate Payout Policy? *Finance and Economics Discussion Series* (Online), <http://www.federalreserve.gov/pubs/feds/2005/200557/200557pap.pdf> (Accessed 29.04.2014).
- Apple Inc. 2013. Apple Inc., 10-K Annual Report 2013. <http://investor.apple.com/secfiling.cfm?filingID=1193125-13-416534&CIK=320193> (Accessed 28.11.2013).
- Apple Inc. 2014. Apple Press Info: Apple Expands Capital Return Program to Over \$130 Billion. <http://www.apple.com/pr/library/2014/04/23Apple-Expands-Capital-Return-Program-to-Over-130-Billion.html> (Accessed 29.04.2014).
- Barth, M. E., Elliott, J. A. & Finn, M. W. 1999. Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research*, 37, 387-413.
- Berkshire Hathaway Inc. 2014. Berkshire Hathaway Inc. Annual Report 2013. <http://www.berkshirehathaway.com/2013ar/2013ar.pdf> (Accessed 14.04.2014).
- Berman, D. K. 2014. Does IBM Love or Hate Itself? *The Wallstreet Journal*. (Online), <http://online.wsj.com/news/articles/SB10001424052702304027204579334081811064124> (Accessed 18.04.2014).
- Blieffert, C. 2008. *Der Aktienrückkauf aus empirischer Sicht - Eine Analyse der Kurseffekte mit der Signal- und Free Cash Flow Hypothese für den deutschen Kapitalmarkt*, Saarbrücken, VDM Verlag Dr. Müller.
- Brav, A., Graham, J. R., Harvey, C. R., et al. 2005. Payout policy in the 21st century. *Tuck Contemporary Corporate Finance Issues III Conference Paper* (Online), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=571046 (Accessed 10.12.13).
- Buffett, W. E. 1999. Comparative Rights and Relative prices of Berkshire Class A and Class B Stock. <http://www.berkshirehathaway.com/compab.pdf> (Accessed 14.04.14).

- Buffett, W. E. 2012. Berkshire Hathaway Inc. Letter to Shareholders 2011. <http://www.berkshirehathaway.com/letters/2011ltr.pdf> (Accessed 11.12.13).
- Buffett, W. E. 2013. Berkshire Hathaway Inc. Letter to Shareholders 2012. <http://www.berkshirehathaway.com/letters/2012ltr.pdf> (Accessed 11.12.13).
- Buhl, K. 2011. Kennzahlen: Der Return on Equity (ROE). <http://www.investor-verlag.de/value-analyse/grundlagen-der-fundamentalanalyse/kennzahlen-der-return-on-equity-roe/109101632/> (Accessed 30.04.2014).
- Copeland, T. E., Weston, J. F. & Shastri, K. 2008. *Finanzierungstheorie und Unternehmenspolitik - Konzepte der kapitalmarktorientierten Unternehmensfinanzierung*, 4, München.
- Damodaran, A. 2002. Corporate Finance: Capital Structure and Financing Decisions. <http://people.stern.nyu.edu/adamodar/pdfiles/country/Brcapstr.pdf> (Accessed 29.04.2014).
- Damodaran, A. 2003. The Debt-Equity Trade Off: The Capital Structure Decision. <http://people.stern.nyu.edu/adamodar/pdfiles/ovhds/ch7.pdf> (Accessed 27.04.2014).
- De la Merced, M. J. & Hardy, Q. 2013. Long Battle for Dell Ends in Victory for Founder. *The New York Times* (Online), http://dealbook.nytimes.com/2013/09/12/dell-shareholders-approve-24-9-billion-buyout/?_php=true&type=blogs&r=0 (Accessed 26.04.2014).
- Demos, T., Russolillo, S. & Jarzemsky, M. 2013. Firms Send Record Cash Back to Investors. *The Wallstreet Journal*. (Online), <http://online.wsj.com/news/articles/SB10001424127887324034804578346772977321576> (Accessed 28.11.13).
- Dobbs, R. & Rehm, W. 2005. The value of share buybacks. *Mc Kinsey & Company Member Edition* (Online), [http://www.uic.edu/classes/actg/actg516rtr/Readings/Markets/The value of share buybacks.htm](http://www.uic.edu/classes/actg/actg516rtr/Readings/Markets/The%20value%20of%20share%20buybacks.htm) (Accessed 29.11.13).

- Earnst and Young LLP. 2013. E&Y, Financial reporting developments A comprehensive guide: Earnings per share.
http://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=17&ved=0CG4QFjAG0Ao&url=http%3A%2F%2Fwww.ey.com%2Fpublication%2Fvwluassetsdld%2Ffinancialreportingdevelopments_bb1971_earningspershare_17october2013%2F%24file%2Ffinancialreportingdevelopments_bb1971_earningspershare_17october2013.pdf%3FOpenElement&ei=LgRdU738EsbPtAa9_YGABA&usq=AFQjCNFyCLskoX1NnQovjpFbdM8wLiFjlQ&sig2=DCAPcEmg0QTyBgNRT_MFmg
 (Accessed 27.04.2014).
- Eisenhardt, K. M. 1989. Agency Theory: An Assessment and Review. *Academy of Management Review.* , 14, 57-74.
- Gabler. not specified. Gabler Wirtschaftslexikon CAPEX.
<http://wirtschaftslexikon.gabler.de/Archiv/569814/capex-v1.html>
 (Accessed 29.04.2014).
- Gartzke, C., Hedemann, K. & Schütt-Schnoor, K. 2013. Methoden der Unternehmensbewertung im Vergleich. <http://www.uni-hamburg.de/fachbereiche-einrichtungen/fb03/iwp/rut/Prasentation6.pdf> (Accessed 13.03.2014).
- Google. not specified. Google Finance.
<http://www.google.com/finance?ei=409iU4ibBMSowAOFZA>
 (Accessed 01.05.2014).
- Graham, B. 2005. *Intelligent Investieren*, 6, München, Finanz Buch Verlag.
- Grullon, G. & Michaely, R. 2002. Dividends, Share Repurchases, and the Substitution Hypothesis. *Journal of Finance*, 57, 1649-1648.
- Harjani, A. 2013. *Apple now hoards 10% of US corporate cash* (Online). CNBC.
<http://www.cnbc.com/id/101079261> (Accessed 28.11.13).
- Howell, R. 2013. The Two Most-Important Words for a CEO: Intrinsic Value. *The Wallstreet Journal*. (Online),
<http://blogs.wsj.com/experts/2013/11/25/the-two-most-important-words-for-a-ceo-intrinsic-value/> (Accessed 11.12.13).
- Hribar, P., Jenkins, N. T. & Johnson, W. B. 2006. Stock Repurchases as an Earnings Management Device. *Journal of Accounting and Economics*, 41, 3-27.
- International Business Machines Corporation. 2014. IBM Corp., Annual Report 2013.
http://www.ibm.com/annualreport/2013/bin/assets/2013_ibm_annual.pdf (Accessed 26.04.2014).

- International Business Machines Corp. 2014. IBM Inc. Notice of 2014 Annual Meeting and Proxy Statement.
http://www.ibm.com/annualreport/2013/bin/assets/2014_ibm_proxy.pdf (Accessed 29.04.2014).
- Investopedia. 2009. What happens when a company buys back its shares? ,
<http://www.investopedia.com/ask/answers/05/retiredstock.asp>
 (Accessed 26.04.2014).
- Investopedia. not specified. Leveraged Buyout - LBO.
<http://www.investopedia.com/terms/l/leveragedbuyout.asp>
 (Accessed 20.03.2014).
- Jagannathan, M., Stephens, C. P. & Weisbach, M. S. 2000. Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics*, 57, 355-384.
- Jolls, C. 1998. Stock Repurchases and Incentive Compensation.
http://www.nber.org/papers/w6467.pdf?new_window=1 (Accessed 26.03.2014).
- Lahart, J. 2010. U.S. Firms Build Up Record Cash Piles. *The Wallstreet Journal*. (Online),
<http://online.wsj.com/news/articles/SB10001424052748704312104575298652567988246> (Accessed 27.11.2013).
- Larcker, D. F. 2011. Board of Directors: Duties & Liabilities.
http://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=8&ved=0CJIBEBYwBw&url=http%3A%2F%2Fwww.gsb.stanford.edu%2Fsites%2Fdefault%2Ffiles%2Fdocuments%2F03.BoardDuties.pdf&ei=TnFeU_3PJMONtAayi4GQBg&usg=AFQjCNHeuI9FitT23Djj7-3IYx617Fturw&sig2=jQS5oe3AU_04J_OD0I5grg&bvm=bv.65397613,d.Yms (Accessed 28.04.2014).
- Little, K. not specified. Understanding Book Value.
<http://stocks.about.com/od/evaluatingstocks/a/bv.htm> (Accessed 30.04.2014).
- Livy, J. 2013. Warren Buffett: a short biography.
<http://www.buffettsecrets.com/warren-buffett-biography.htm>
 (Accessed 29.04.2014).
- Miller, M. H. & Modigliani, F. 1961. Dividend Policy, Growth, and the Valuation of Shares. *Journal of Business*, 34, 411-433.
- Modigliani, F. & Miller, M. H. 1958. The Cost of Capital, Corporate Finance and the Theory of Investment. *American Economic Review*, XLVIII, 291-296.

- Neus, W. 2009. *Einführung in die Betriebswirtschaftslehre aus institutionenökonomischer Sicht*, 6, Tübingen.
- OECD. 2012. Board Member Nomination and Election. *OECD Publishing* (Online),
<http://www.oecd.org/daf/ca/BoardMemberNominationElection2012.pdf> (Accessed 07.04.2014).
- Schoenenberger, C. R. 2013. Scarred by Financial Crisis, U.S. Companies Continue to Hoard Cash. *The Wallstreet Journal*. (Online),
<http://online.wsj.com/news/articles/SB10001424127887323419604578573881623377200> (Accessed 28.11.2013).
- Shleifer, A. & Vishny, R. W. 1997. A Survey of Corporate Governance. *Journal of Finance*, 52, 737-783.
- Skadden. 2013. Share Repurchases. *Corporate Finance Alert* (Online),
http://www.skadden.com/newsletters/Corporate_Finance_Alert_Share_Repurchases.pdf (Accessed 29.04.2014).
- Skinner, D. J. & Sloan, R. G. 1999. Earnings Surprises, Growth Expectations, and Stock Returns or Don't Let an Earnings Torpedo Sink Your Portfolio.
http://papers.ssrn.com/sol3/papers.cfm?abstract_id=172060 (Accessed 27.04.2014).
- Summa, J. 2009. Employee Stock Options.
<http://www.investopedia.com/university/employee-stock-options-eso/> (Accessed 22.03.14).
- S&P Dow Jones Indices. 2014. Press Release: S&P 500 Stock Buybacks Up 19% in 2013. <http://www.cnbc.com/id/101526856> (Accessed 24.04.2014).
- Tax Foundation.org. 2013. Tax Foundation, Federal Capital Gains Tax Rates, 1988-2013. <http://taxfoundation.org/article/federal-capital-gains-tax-rates-1988-2013> (Accessed 30.04.2014).
- Value-Aktien. 2012. Aktienrückkäufe aus Sicht der Aktionäre.
<http://valueaktien.wordpress.com/2012/12/20/aktienruckkaufe-aus-sicht-der-aktionare/> (Accessed 30.04.2014).
- Valuwalk. 2013. Corporate Governance: USA Versus Europe.
<http://www.valuwalk.com/2013/01/corporate-governance-usa-versus-europe/> (Accessed 07.04.2014).

- van der Wijst, N. 2013. Agency theory and corporate governance.
http://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CDUQFjAA&url=http%3A%2F%2Fwww.cambridge.org%2Fve%2Fdownload_file%2F789244%2F&ei=Oig3U46S08XUtQbW1oH4BQ&usg=AFQjCNGxagGZZwdRblwK0mXuJh147qKcpA&sig2=VPXGAiBqlLfpA10LggKKw&bvm=bv.63808443,d.Yms (Accessed 29.03.2014).
- Vardi, N. 2012. The Mystery Man Behind Weight Watchers And The Private Equity Deal Of The Century.
<http://www.forbes.com/sites/nathanvardi/2012/09/04/the-mystery-man-behind-weight-watchers-and-the-private-equity-deal-of-the-century/> (Accessed 09.04.2014).
- Vermaelen, T. 2005. Share Repurchases. *Foundations and Trends in Finance*, 1, 171-268.
- Villamil, A. P. 2012. The Modigliani-Miller Theorem.
http://www.econ.uiuc.edu/~avillami/course-files/PalgraveRev_ModiglianiMiller_Villamil.pdf (Accessed 09.03.2014).
- Vlastelica, R. 2013. Wall St. ends best year since 1990s with moderate gains.
<http://www.reuters.com/article/2013/12/31/us-markets-stocks-idUSBRE9BT0D720131231> (Accessed 18.04.2014).
- Voss, J. 2012. Why do Firms Repurchase Stock? *Major Themes in Economics*, Spring 2012, 55-75.
- Weight Watchers International Inc. 2012. Weight Watchers Inc. Statement of Changes in Beneficial Ownership of Securities.
<http://google.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=8495760-1147-13478&type=sect&TabIndex=2&companyid=69668&ppu=%2fdefault.aspx%3fsym%3dWTW> (Accessed 20.02.2014).
- Weight Watchers International Inc. 2012. Weight Watchers Inc., 10-K Annual Report 2011.
<http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Weight Watchers International Inc. 2013. Weight Watchers Inc. 10-K Annual Report 2012.
<http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 09.04.2014).
- Weight Watchers International Inc. 2013. Weight Watchers Inc. Investor Relations: Company Overview.
<http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-IRHome> (Accessed 09.04.2014).

Weight Watchers International Inc. 2014. Weight Watchers Inc. Corporate Governance Guidelines. http://media.corporate-ir.net/media_files/nys/wtw/corp_gov/governance_guidelines.pdf (Accessed 10.04.2014).

Weil, R., Schipper, K. & Francis, J. 2012. *Financial Accounting: An Introduction to Concepts, Methods and Uses*, Mason, Ohio, Cengage Learning.

Wells Fargo & Co. 2013. Wells Fargo, Tax Treatment of Dividend Income. <https://http://www.wellsfargoadvisors.com/market-economy/financial-articles/investing/dividend-income-tax.htm> (Accessed 30.04.2014).

Weisbenner, S. J. 2000. Corporate Share Repurchases in the 1990s: What Role Do Stock Options Play. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=234164 (Accessed 25.03.2014).

Figures

Figure 1: Payout Instruments, Standard and Poor's. 2012. Dividends And Buybacks Soar. http://www.investors.com/image/A1div_131218.png.cms (Accessed 29.04.2014).

Figure 2: IBM Treasury Stock. IBM. 2014. IBM Annual Report 2013.

Figure 3: WACC and Debt/Equity Ratio, Compiled by the author

Figure 4: Agency Theory Illustration. Wikipedia. http://en.wikipedia.org/wiki/Principal-agent_problem (Accessed 29.04.2014)

Figure 5: Manager Self-Dealing. Compiled by the author

Figure 6: IBM Shares Outstanding. Rizzi Capital. 2013. IBM Shrinks - Analysts Hate It. <http://seekingalpha.com/article/1876891-ibm-shrinks-analysts-hate-itnding>. (Accessed 29.04.2014).

Figure 7: IBM vs. S&P500 5-Year. Google Finance. <http://www.google.com/finance?q=ibm&ei=vAxgU6DIPKiAwAPF3AE> (Accessed 29.04.2014).

Figure 8: IBM 2013 CEO Compensation Components. IBM. 2014. IBM Notice of 2014 Annual Meeting and Proxy Statement. http://www.ibm.com/annualreport/2013/bin/assets/2014_ibm_proxy.pdf (Accessed 29.04.2014).

Figure 9: IBM Cash Flow from Financing and Diluted EPS 10-Year. Gurufocus. <http://www.gurufocus.com/financials/IBM> (Accessed 29.04.2014).

- Figure 10: IBM CAPEX and Long-term Debt 10-Year. Gurufocus <http://www.gurufocus.com/financials/IBM> (Accessed 29.04.2014).
- Figure 11: IBM Revenue Quarter on Quarter. Gurufocus. <http://www.gurufocus.com/financials/IBM> (Accessed 29.04.2014).
- Figure 12: IBM CEO Compensation. IBM. 2014. IBM Notice of 2014 Annual Meeting and Proxy Statement. http://www.ibm.com/annualreport/2013/bin/assets/2014_ibm_proxy.pdf (Accessed 29.04.2014).
- Figure 13: Weight Watchers Board of Directors Artal Nominees. Weight Watchers Int. Inc. 2004. Corporate Governance Guidelines. http://media.corporate-ir.net/media_files/nys/wtw/corp_gov/governance_guidelines.pdf (Accessed 29.04.2014).
- Figure 14: Weight Watchers Board of Directors and CEO Compensation. Weight Watchers Int. Inc. 2004. Corporate Governance Guidelines. http://media.corporate-ir.net/media_files/nys/wtw/corp_gov/governance_guidelines.pdf (Accessed 29.04.2014).
- Figure 15: Weight Watchers Board of Directors Composition. Reuters. People: Weight Watchers International Inc. (WTWN) <http://www.reuters.com/finance/stocks/companyOfficers?symbol=WTWN> (Accessed 29.04.2014).
- Figure 16: Weight Watchers Key Numbers 2009-2013. Weight Watchers Int. Inc. 2014. 10-K Annual Report 2013. <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Figure 17: Weight Watchers Share Price 5-Year. WTW. Google Finance. <http://www.google.com/finance?q=wtw&ei=BuxfU5CbEaWKwAPrwAE> (Accessed 29.04.2014).
- Figure 18: Weight Watchers Share Repurchase Conditions. Weight Watchers Int. Inc. 2013. 10-K Annual Report 2012. <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Figure 19: Weight Watchers Cash and Equivalents. Weight Watchers Int. Inc. 2012. 10-K Annual Report 2011 <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).

- Figure 20: Weight Watchers Cash Flow Statement. Weight Watchers Int. Inc. 2012. 10-K Annual Report 2011. <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Figure 21: Weight Watchers Debt Issuance and Share Repurchase. Weight Watchers Int. Inc. 2013. 10-K Annual Report 2012. <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Figure 22: Weight Watchers Income Statement Q1 2012. Weight Watchers Int. Inc. 2012. 10-Q Quarterly Report Pursuant to Sections 13 or 15(d). <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsOther> (Accessed 29.04.2014).
- Figure 23: Weight Watchers CEO-dealings. Weight Watchers Int. Inc. 2012. Statement of Changes in Beneficial Ownership of Securities. <http://google.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=8495760-1147-13478&type=sect&TabIndex=2&companyid=69668&ppu=%252fdefault.aspx%253fsym%253dWTW> (Accessed 29.04.2014).
- Figure 24: Weight Watchers Balance Sheet After the Buyback. Weight Watchers Int. Inc. 2013. 10-K Annual Report 2012. <http://www.weightwatchersinternational.com/phoenix.zhtml?c=130178&p=irol-reportsAnnual> (Accessed 29.04.2014).
- Figure 25: Berkshire Hathaway, Mr. Buffett Personal Holdings. W. E. Buffett. 2013. SEC Schedule 13D/A. <http://yahoo.brand.edgar-online.com/displayfilinginfo.aspx?FilingID=9391461-1364-12903&type=sect&TabIndex=2&companyid=54239&ppu=%252fdefault.aspx%253fcik%253d1067983> (Accessed 29.04.2014).
- Figure 26: Berkshire Hathaway Board of Directors Composition. Reuters. People: Berkshire Hathaway Inc. <http://www.reuters.com/finance/stocks/companyOfficers?symbol=BRKaN> (Accessed 29.04.2014).
- Figure 27: Berkshire Hathaway Price-to-Book Value. S&P Capital IQ. 2013. http://g.foolcdn.com/editorial/images/62906/brkpb1_large.png (Accessed 29.04.2014)
- Figure 28: Berkshire Hathaway Statements of Changes in Shareholder's Equity. Berkshire Hathaway. 2013. 10-K Annual Report. <http://www.berkshirehathaway.com/2013ar/201310-K.pdf> (Accessed 29.04.2014)
- Figure 29: Berkshire Hathaway Repurchase Threshold. The Rational Walk. 2014. Berkshire Hathaway Stock Repurchase Odds Increase. <http://www.rationalwalk.com/?p=13467> (Accessed 29.04.2014)

15. WORD OF HONOR STATEMENT IN GERMAN

Hiermit versichere ich, die vorliegende Bachelorthesis selbstständig verfasst, keine anderen Quellen als die angegebenen verwendet, sowie alle wörtlich oder sinngemäß übernommenen Stellen in der Arbeit gekennzeichnet zu haben. Diese Arbeit hat in gleicher oder ähnlicher Form noch keiner Prüfungsbehörde vorgelegen.

Stuttgart, 30.04.2014

Philip Hettich